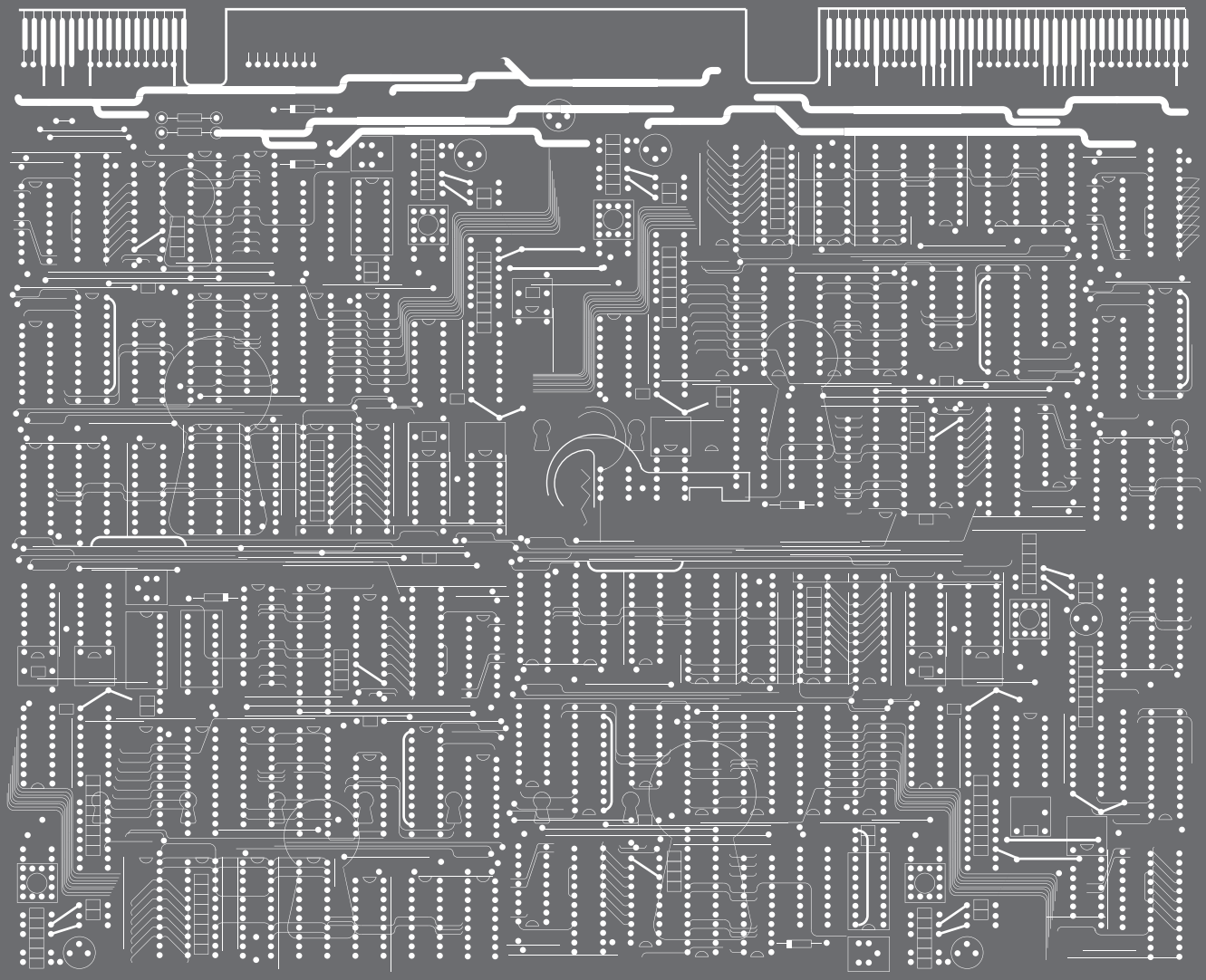
Danish Agency for
Trade and Industry
Ministry of Trade
and Industry

A GUIDELINE FOR INTELLECTUAL CAPITAL STATEMENTS

- A KEY TO KNOWLEDGE MANAGEMENT



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This guideline for intellectual capital statements signifies a major R&D achievement of a project co-ordinated by the Danish Agency for Trade and Industry started in 1998. 17 Danish companies have contributed to the project by preparing two sets of intellectual capital statements each. Arthur Andersen has consulted on the process and the Copenhagen Business School and The Aarhus School of Business have been co-responsible for the research element of this project.

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ATP

Byggecentrum

Byggeplandata A/S

Carl Bro Group

Coloplast A/S

COWI

Dansk System Industri A/S

Dator A/S

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Hotel Impala A/S

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Danish Agency for Trade and Industry
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Society is undergoing deep changes at the moment. We talk of the 'new economy', the 'knowledge economy' or the 'knowledge society'. There are many explanations for what will be included in these concepts and what the new demands of development on people, companies and society will be. Whatever we choose to call it, this development is characterised by increased digitalisation, globalisation and application of knowledge.

Up to now we have been used to considering natural resources, technical equipment, machinery and land as a basis for the creation of added value. The challenge of the knowledge economy will be to find new ways of creating values, both tangible and intangible, in all processes of our society, based on the development, sharing and application of knowledge. It means that companies are also facing a major challenge in the years to come.

The Danish government has launched several initiatives to improve the framework of conditions for business in the new circumstances. One of them is developing this guideline for preparing intellectual capital statements.

An intellectual capital statement can be used for managing and bringing focus to the development of the company's knowledge resources. The statement and the guideline are therefore useful as tools for companies wishing to work systematically with its knowledge resources. Being able to take optimal advantage of one's knowledge resources will be a decisive competitive parameter for the present and for the future.

With this initiative, Denmark has taken the international lead in being the first country to develop a guideline for preparing intellectual capital statements, based on the concrete experience of 17 companies. Danish companies now have the opportunity of being at the forefront as regards using knowledge strategically. The international community monitors the progress of the work in Denmark with great interest.

This guideline is a result of a unique collaboration of researchers, companies, industrial organisations, consultants and government officials. It is based on practical experience as well as on solid research into this field.

I wish to express my gratitude to all those who contributed their thoughts, advice and remarks. Last, but not least, my special thanks go to the companies that took part in experimenting with these ideas.

I hope that this guideline will help a still wider range of organisations to start working systematically and strategically with their knowledge resources. In this way Danish companies will be well prepared for some of the challenges of the knowledge society. You are in for a good read, and I feel sure it will prove meaningful for your continued progress.

Ole Stavad
Minister for Trade and Industry

INTRODUCTION

In the last few years an increasing number of companies have come to realise that the conditions for running a competitive business are undergoing rapid change. To take a few examples: innovative capacity and short lead times have become a 'must' in order to survive in a turbulent market. An increasing part of the product value consists of the knowledge resources that are put into the products. And a company's strategic development may depend on the whole organisation being ready to make use of novel technology.

Such insights spur companies' need to develop their knowledge resources, i.e. their employees, customers, processes and technologies. It raises a demand for them to employ the best tools and methods to support and structure knowledge management. The development of intellectual capital statements is to be understood against this background, and this guideline should be read in this light.

It is by no means a coincidence that intellectual capital statements are receiving increasing international attention precisely at this moment. Some even talk of a 'knowledge society' or a global 'knowledge economy', where winners are separated from losers by their ability to acquire, share and apply new knowledge. This raises new issues for nearly all companies: how to manage the part of their resources that deals with knowledge broadly defined. The intellectual capital statement clearly provides the chance of working more systematically and comprehensively with many initiatives in knowledge management, on which most companies have already embarked. The intellectual capital statement is thus a part of the company's strategic knowledge management.

An intellectual capital statement can for example help to stimulate the development of new products, strengthen relations with business partners and ensure more ready application of new technologies in production. By far the majority of companies are well aware that knowledge management will be one of the absolute key challenges in the years to come. Many companies have already initiated actions in this field, and Danish trades and industries are quickly incorporating regular intellectual capital statements.

As visible proof of this, 17 organisations have participated in the last two or three years in the Danish Agency for Trade and Industry's project on intellectual capital statements. During this period each company prepared two sets of intellectual capital statements. The experience gained by the participants thus created the basis for this guideline, whose purpose is to help other organisations to start preparing intellectual capital statements. The guideline does not provide the ultimate answers, but attempts to extract the most useful experience from practices so far. It thus provides recommendations on how to work with the intellectual capital statement on a practical level and on how to present an intellectual capital statement for external publication.

MANY KINDS OF BENEFITS

As the project proceeded the participants gained considerable and varied experience that depended on the benefits derived from working with intellectual capital statements. Some of the most important benefits will be stated below.

Above all, a key benefit of experience from working with intellectual capital statements is that it works as a tool for managing knowledge resources and thus creating added value in organisations. In preparing an intellectual capital statement, an organisation undergoes a process that prompts it to work out a strategy for knowledge management. In particular, this arises out of discussions as to how the organisation's mission, vision and overall strategy are to be reflected in the management of its knowledge resources.

Intellectual capital statements can serve to structure and assign priorities to knowledge management efforts within the organisation. The statement helps the organisation to focus on what it actually does to

to develop its knowledge resources and what the effects are of such activities. These might include for instance satisfied employees and customers, higher sales figures for novel products or easier management of the orga-nisation. Allowing the intellectual capital statement to structure the knowledge management can thus lead to better-focused efforts. This could lead to increased awareness that the actions actually lead to results.

Another key benefit is that the process of preparing an intellectual capital statement can help to create a culture of knowledge sharing. This is important, as it will support the efforts in many organisations to apply and consolidate know-how. A part of such culture is the exchange of experience, being able to locate the right person that possesses the requisite competencies within the organisation, etc. Many companies have thus been able to use the intellectual capital statement to focus on the importance of having an open knowledge-sharing culture.

A common identity can be yet another benefit from working with intellectual capital statements, telling the organisation what it must know and what it must excel at. This can be relevant for organisational development, a merger or in other contexts. Some companies have used the intellectual capital statement in connection with succession or fast growth.

The publication of intellectual capital statements can lead to better communication. It can signal the principles of knowledge management practised by a company, to both internal and external stakeholders. And it might act as an open invitation to take part in developing the knowledge resources of the company. One reason for the importance of communication is that it furthers balanced expectations and motivates employees, customers and other company-sphere players to become involved in the development of the company.

The intellectual capital statement can also help to attract new employees – a task that IT companies especially are struggling to solve. Potential candidates might find a company with an intellectual capital statement interesting, because it proves that the company is working seriously with its knowledge resources, including human resource development and the development of competencies. Records seem to suggest that companies working with intellectual capital statement tend to receive a higher number of unsolicited job applications.

Finally, the intellectual capital statement can also improve the communication between the company and its customers. From reading the company's intellectual capital statement, they can gain a better insight into the activities of the company, which will in turn create a better basis for dialogue. Some companies also obtain contact with new customers and have increased their business with existing customers via the intellectual capital statement, because it clearly indicates the company's capabilities.

ABOUT THIS GUIDELINE

This guideline focuses on the preparation of intellectual capital statements for external publication. It does not offer special directions as to how to read, analyse or compare intellectual capital statements. But to users of such statements it may of course also be useful to know the principles of their composition.

The guideline is primarily based on the experience of the 17 companies in the process of each preparing two sets of intellectual capital statements. The individual experience of all companies has been incorporated into the preparatory work on this guideline. However, because of the limited space, only examples from a few of the companies involved are included. The intellectual capital statements are all available for in-depth study on **www.efs.dk/icaccounts**

None of the 17 companies believe that they have yet defined the ultimate form of their intellectual capital statements. They are still developing and experimenting. Apart from reproducing the previous experience

of these companies, the guideline makes it clearer in which direction the intellectual capital statement is heading. The descriptions rendered in this guideline are thus based on dialogue with the companies and have been developed on the basis of the guideline philosophy. Thus, the examples in this guideline are not all reproduced as concrete examples in the latest intellectual capital statements of the 17 companies.

The 17 participants are not a representative sample of the Danish industrial sector. Therefore, the guideline probably has to be adjusted as more companies contribute further experience with intellectual capital statements.

THE GUIDELINE IN SIX CHAPTERS

Chapter 1 offers a brief introduction to the concept of the intellectual capital statement. The following five chapters explain the individual components of the intellectual capital statement, along with recommendations for preparing such a statement.

Chapters 2 to 5 describe the process of formulating and prioritising the key elements in the management of company knowledge resources. Chapter 2 deals with the so-called knowledge narrative, discussing users and knowledge resources. Chapter 3 shows how to move on from the knowledge narrative to the challenges in knowledge management. Chapter 4 provides three examples of how to present the knowledge narrative and management challenges as a coherent knowledge management strategy. Chapter 5 suggests how to translate management challenges into actions and indicators.

Chapter 6 provides guidance on how to prepare the intellectual capital statement for external publication. It includes recommendations for issues to be considered in structuring the statement and discusses credibility and accounting policies to be adopted for the intellectual capital statement.

Appendix 1 provides three examples of how to approach the process of preparing intellectual capital statements. By way of inspiration, Appendix 2 contains a survey of many indicators that could be considered for inclusion in an intellectual capital statement. Appendix 3 provides a summary account of the difference between intellectual capital statements, green or social statements and stakeholder statements. Appendix 4 is a list of terminology including concepts often encountered in working with knowledge management and intellectual capital statements. Appendix 5 describes – in brief – the 17 companies participating in the project on intellectual capital statements.

WHAT IS AN INTELLECTUAL CAPITAL STATEMENT?

The intellectual capital statement forms an integral part of working with knowledge management within a company. It reports on the company's efforts to obtain, develop, share and anchor the knowledge resources required to ensure future results. The intellectual capital statement can contribute to creating value for the company by improving the basis for growth, flexibility and innovation. Its merits lie in expressing the company's strategy for what it must excel at in order to deliver satisfactory products or services.

WHAT IS AN INTELLECTUAL CAPITAL STATEMENT

THE INTELLECTUAL CAPITAL STATEMENT AND KNOWLEDGE MANAGEMENT

The intellectual capital statement supports the company's knowledge management, i.e. 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.

The intellectual capital statement is both a strategic tool for adding value to the company and a communication tool for inducing employees, customers and others to engage in this process. The intellectual capital statement thus points to the future and is not primarily intended to account for the current portfolio of knowledge resources at any particular time.

The objective of an intellectual capital statement is not to calculate the value of the company's knowledge in financial terms. Also, this is probably not feasible. Thus, an intellectual capital statement cannot be used to explain the difference between a company's book value and its market value, although this is sometimes the stated purpose of intellectual capital statements. Such use of the statement is for several reasons meaningless. Firstly, the difference would depend on accounting standards and on market developments generally. Secondly, it would require that the market already knew the true value of the company, thus eliminating the need for calculating this.

ELEMENTS OF THE INTELLECTUAL CAPITAL STATEMENT

The intellectual capital statement consists of three elements: a knowledge narrative, management challenges and reporting. Preparing the intellectual capital statement in this order is useful, although in practice you tend to jump back and forth many times.

THE KNOWLEDGE NARRATIVE

The knowledge narrative describes how the company ensures that its products or services accommodate the customer's requirements, and specifies how the company has organised its resources to achieve this. The knowledge narrative comprises the following elements:

1. The company's mission with special regard to the user.
2. The use value of the company's products or services:
   - 2a. The user's situation and his need for and use of the company's product or service.
   - 2b. The special features of the product or the ser vice with regard to how these will benefit the user.
3. The company's basic conditions of production disclosing the knowledge resources required to meet user needs.

In fact, an intellectual capital statement is not merely a physical document. It is a centre around which the company's entire knowledge management revolves. The intellectual capital statement thus serves to express and implement the corporate strategy for exploiting its know-how to supply useful products and services. This strategy ties up with corporate strategies in other areas such as competition, pricing, organisational structure, responsibilities, internationalising, etc.

THE KNOWLEDGE NARRATIVE

The term 'knowledge narrative' may perhaps have a somewhat exotic ring. Yet the point of this concept is that narratives contain a plot - an idea involving a whole chain of events, in which many interdependent individuals and problem situations are put together and ultimately become resolved in some acceptable solution. The knowledge narrative tells how products or services help the user, and how the company has organised its resources to achieve this. A knowledge narrative should therefore establish the connection between the user and the company's know-how.

The product or service in question must be tied to the knowledge resources, which should be structured so as to support the use value of the product or the service. In other words, the knowledge narrative reflects the ambition of matching user needs and company performance.

MANAGEMENT CHALLENGES
– or, to be more precise, knowledge management challenges

Management challenges are a well-defined set of challenges derived from the knowledge narrative. They are further translated into actions for implementing the ambition of the knowledge narrative:

- Management challenges that, on the basis of the knowledge narrative, represent logical challenges within knowledge management, and that the company must implement.

- A list of actions illustrating necessary or rational approaches in response to management challenges. These actions are related to knowledge resources in connection with customers, employees, processes and technologies. Each action is tied to one or more indicators.

REPORTING
When the knowledge narrative and the management challenges have been defined, they are put together in a report. Apart from the external intellectual capital statement, more detailed internal reports might be needed.

The external intellectual capital statement is the document reporting on the company strategy for knowledge management in text, figures and illustrations.

- The text relates to the knowledge narrative, the management challenges and the specific actions.

- The figures document the initiatives launched to address management challenges, all actions being tied to one or more indicators.

- The illustrations are photos, charts or other graphics used to communicate the knowledge narrative and the management challenges, and to give the reader an impression of the company's style, character and identity.

MANAGEMENT CHALLENGES
Management challenges are the series of challenges within knowledge management that the company has to master in order to implement the knowledge narrative. Translating the knowledge narrative into management challenges is a creative exercise in which the company strategies for the creation of use value are defined. These may be challenges primarily relating to individual skills such as project management, but more often they have to do with working processes, routines, systems and trouble-shooting approaches.

The management challenges are further extended into actions that each has to do with customers, employees, processes or technologies – very often in combination. These actions are typically targeted on everyday matters such as quality assurance, employee training, customer interviews concerning the product, customer service, etc.

REPORTING
An intellectual capital statement can take the form of both internal and external reporting. This guideline deals with the external intellectual capital statement as a means of communication with current as well as potential customers, employees and other stakeholders. In taking an interest in the intellectual capital statement these people help to strengthen the company's knowledge management. Employees, customers and others who are actively engaged in the development of the company are crucial to the company's competitive power. The intellectual capital statement is a way of advising them how to exert their motivated interest. This is why the intellectual capital statement creates value and this is why it should be publicly available.

WHAT IS AN INTELLECTUAL CAPITAL STATEMENT

Figure 1: The process of preparing intellectual capital statements

Figure 1 shows the four phases in the process leading to an intellectual capital statement, all of which are necessary to ensure good results.

THE PROCESS

One would typically start with the knowledge narrative and then proceed to define the ma-nagement challenges before eventually designing the intellectual capital statement. This approach has the advantage of setting up all the premises for the ensuing phases before taking the next step. This often proves to be a difficult process because it involves finding out what knowledge narrative to tell in the first place, what the management challenges are, what the actions are, and what indicators are available. The interactive character of these elements makes it hard not to consider them all at once. In practice, the process is found to have considerable interaction between phases.

Planning how to produce the intellectual capital statement represents the first challenge. In this context it is important to realise that it is not all about preparing a document for publication. The intellectual capital statement often acts as a catalyst for knowledge management. It enables communication between management, employees and customers on the company's development and structuring of knowledge resources. Knowledge management and the intellectual capital statement are thus inapt in a management vacuum. They both form an integral part of the company's general management and steering processes. Thus, knowledge management becomes integrated into the company's competitive strategy, product development strategy and organisational structure. The process of prepa-ring the intellectual capital statement throws light on the significance of knowledge resources to the company and provides insights into the efforts at developing, sharing and anchoring knowledge resources in the management processes. At the same time, it gives style and identity to the company, thus promoting dynamism.

"INTELLECTUAL CAPITAL" AND "STATEMENT

The intellectual capital at the core of the intellectual capital statement shows the organisation's ability and potential for action. What is interesting to an intellectual capital statement, therefore, is knowledge concerning practice. It is about knowledge in action and not so much about knowledge in a philosophical sense. Knowledge is thus concerned with the insights,

INTELLECTUAL CAPITAL AND THE DIVERSITY OF KNOWLEDGE

Intellectual capital hosts the concept of knowledge, which is by no means limited to academic or other formal skills, as shown in the list below. The list is not exhaustive and some of the items may overlap:

- Insight into the users' situation.
- Awareness of the competencies of colleagues and understanding how interpersonal skills can be developed.
- Practical skills of, say, a craftsman: from knowing how to develop and improve production methods to being able to handle information technology etc.
- Know-how as to the company's processes and systems and how these can be exploited to improve the quality of products or services.
- Motivation or commitment as regards the further development of the company's products or services.
- Understanding how the need for knowledge is heading and insight into how to further it.
- Skills, competencies and qualifications that can make a difference to the company.

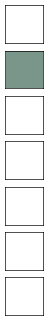
practical actions, the interaction between man, machine and technology, etc, that make it possible for a company to deliver a service or a product to users.

The diversity of knowledge encompasses a person's insight into a particular trade or profession, his attitude, his practical skills in applying and improving production methods or his team spirit in participating in interdisciplinary co-operation. Knowledge can also be the ability to link all of these elements together in a creative solution for the common benefit of the company's users. Much of the knowledge of particular interest in an intellectual capital statement thus lies "in between" the various elements of the company's productive network, i.e. "in between" people, processes and technologies, and "in between" employees and customers.

Knowledge is thus a fundamental, everyday asset that is obtained, shared, developed and anchored through ordinary activities – in recruiting and developing employees, in enhancing and developing customer relations, in stabilising and renewing processes and in acquiring and applying new technology.

Typically, the word "statement" is used synonymously with the financial statement. But it can be used for knowledge resources with the same right. As an accounting tool, the intellectual capital statement serves to keep track of actual improvements in developing and managing knowledge resources. Its capacity "to keep an eye on its efforts and its results" thus makes it a truly financial statement in the traditional sense of the word. The statement explains whether the management and the development of knowledge resources are on the right track. So the intellectual capital statement is a practical way of making the company accountable for its knowledge management strategy.

In recent years other supplementary statements, besides the intellectual capital statement, have seen the light of day. Appendix 3 briefly discusses the differences and similarities of the intellectual capital statement, the stakeholder statement and the green or social statements.



THE KNOWLEDGE NARRATIVE

The knowledge narrative pinpoints the ambition of the company's knowledge management by describing the value of products or services to users, and by defining the demands for the company's knowledge resources to create this value. The knowledge narrative not only accounts for the company's present performance; it also formulates a strategy for the company's know-how in the future – an ambition.

The knowledge narrative

CONTENT OF THE KNOWLEDGE NARRATIVE

A good knowledge narrative tells the tale of how the company's products or services benefit the users and how they improve their situation. The knowledge narrative explains what it takes to create this improvement and what resources are required within the company in order to achieve it. The leitmotif in the knowledge narrative is the explanation of the chosen knowledge management strategy behind structuring, applying and developing the company's knowledge resources. Also why it is, precisely, that this strategy will eventually lead to the desired improvement in the user situation. In other words the knowledge narrative brings into focus what the company and its employees must excel at in order to create value for those who use their products and services. The knowledge narrative thus helps to define the basic values of the company, its raison d'être.

The knowledge narrative is not only an account of the company's present performance. There is a powerful strategic dimension to it: the ambition to make a difference through knowledge management.

Formulating the company's knowledge narrative is a creative process. It is quite different from presenting more conventional strategic objectives in a few words, such as how to become the market leader on a specific market or how to become the preferred supplier within a particular industry.

A knowledge narrative is a longer, structured tale. But the well-formulated knowledge narrative can be condensed into a message of how the strategic work builds on precise conceptions for the use value of the product, i.e. the relation between the user's situation and the product or service.

HOW TO IDENTIFY THE KNOWLEDGE NARRATIVE. TRY ANSWERING THE FOLLOWING FOUR QUESTIONS:

- What product or service value, based on the mission statement, should the company create for and offer to the user?
- What is the situation of the user and what aspects hereof can the company improve?
- What are the key product or service features to create the desired improvement in the user situation?

These three questions are all about what use value the company offers to its customers. A fourth question has to be taken into consideration:

- What are the particular conditions of production and how do they interact with special demands for knowledge resources to be structured through knowledge management?

DEVELOPING THE KNOWLEDGE NARRATIVE

The 17 companies involved in this project wrote the knowledge narrative using different approaches. Only a minority managed to put the narrative together right from the start, and most companies used creative processes: brainstorming, external dialogue, contact to researchers, advisers and others.

After a time companies typically moved on to the concepts of management challenges, actions and indicators, only to revert with a more precise formulation later.

Three of the project participants have provided the following examples to illustrate this process.

USE VALUE

The use value of a product or a service is the difference this makes to the consumer when put to use. The user and the user's situation are the point around which considerations regarding the use value of a product revolves. Use value is a key concept for a company in determining its knowledge management.

HOW TO DEFINE THE USE VALUE OF A PRODUCT OR A SERVICE. TRY ANSWERING THE FOLLOWING QUESTIONS:

- What is the user's situation?
- How will the product or the service be used?
- What makes the company's products or services useful? What is improved by using it?
- What are the characteristic features of the product or the service?
- What relation exists between these features and the improvement in the situation of the user?

Such questions focus sharply on how the product or the service has to work in practice in order to create the most beneficial customer value. Here is where the requirements are defined as to what the company should excel at, i.e. what production process and what knowledge resources are required in order to support this process.

To pin down use value, looking at the company's main products or core services makes a good start. Coloplast's main product is ostomy bags designed to receive body excretions. These bags are taped on to the body of individuals who have undergone surgery. Actually they are only plastic bags, but seen from the point of view of the user, the product tells an entirely different story. The use value of the bag is this: it makes it possible for the disabled person to meet other people in a social and professional context in close to normal circumstances. The product is in other words creating quality of life for example by preventing the spread of body odours from the disability. The ostomy bag must constantly be relied upon to function properly, allow change without discomfort and not show through clothing, etc. In this way the use value is tied closely to the life of the user. Without the ostomy bag the disability would lead to awkward si-tuations and seriously constrain the user's everyday life.

This description is more than a clinical analysis of the function of the ostomy bag. It is also a story with the plot that Coloplast does not merely sell plastic bags, but above all quality of life.

In defining use value, it can be important to make a distinction between customers and users. Not all users are customers. Customers pay for the product or the service, while users consume it. To Coloplast, this is an important distinction, as the customer is often a health service paying the larger share of the product price, while the user is partially or fully compensated for his costs.

The distinction can prove decisive, and knowledge management must concentrate on the user. This is the only way for the company to realise how the product or the service makes a difference. And this is the only way for a company to realise what knowledge resources and what skills are essential for the company's knowledge management. Other issues such as for example pricing can be relevant too, but it does not determine use value. It concerns the financial value of the product or the service.

Another definition of use value may be found in the following example from Nellemann Konsulenterne. This organisation offers a broad range of consulting services, especially to the public sector. As distinct from many other consultants they not only focus on solving specific problems such as planning, evaluation and analysing, but also emphasise the use of dialogue as a

means of creating development for clients and end-users.

The product is the consultant's specific solution to the problem while the use value enables the user to solve similar problems actively in the future. The ambition is not limited to merely solving a problem for the user, but to leaving the users with sufficient skills in their jobs and functions to handle future tasks.

A third example is from Byggeplandata, who is a different kind of consultant than Nellemann Konsulenterne. Byggeplandata offers consulting services that relieve a client of co-ordination and supervision of building projects and provide the requisite expertise during the planning stage. Independent advice and competency are thus at hand whenever needed. The consultants ensure delivery of projects on time, on budget and of the required standard. The use value is the user's peace of mind from not having to worry about the actual task.

For all of the above three companies, it is possible to come close to their supplied use value by describing their products and services. Although these formulations of use value are very briefly set out, they demonstrate in all three examples how the user may benefit from their products or services. At the same time they give an idea of what knowledge resources the company must combine, apply and develop in order to produce the optimum use value. This insight is fundamental to the second part of the knowledge narrative.

CONDITIONS OF PRODUCTION

From analysing the use value with the user in focus, we now move to looking at the characteristics of the system of knowledge and competencies supposed to generate products and services with the desired use value. On this point there are major variations in the situations of different companies. The differences are between service providers and product manufacturers, between large and small companies, between capital-intensive and labour-intensive enterprises, etc. As a result of these differences, the types of knowledge resources required for the particular companies are also very different.

To Coloplast, for example, it has proved important to have a highly integrated industrial production system and mass production. For this the company needs knowledge resources that will support collective efforts, for instance through coherent systems, procedures and organisational routines. This fundamental condition presupposes coherence in production systems, which at Coloplast are even integrated with the sales and marketing activities in many places abroad.

The conditions of production are somewhat different at Nellemann Konsulenterne and at Byggeplandata, because co-ordination between consultants is much easier. Although each consultant depends on systems and routines for his performance and knowledge sharing with other consultants, actual planning is fairly independent of how the other consultants work. The conditions of production are even more individualistic than at Coloplast.

In view of such divergences, knowledge management in the three companies has to concentrate on different types of knowledge resources. As a starting point, Coloplast links employees, customers, technologies and processes. Knowledge management is primarily about collective skills, from which the requirements for individual skills are derived. Conversely, the key knowledge resources at Nellemann Konsulenterne and at Byggeplandata are much more reflected in the

HOW TO IDENTIFY THE COMPANY'S PARTICULAR CONDITIONS OF PRODUCTION. TRY ANSWERING THE FOLLOWING QUESTIONS:

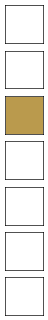
- What are the company's particular conditions of production?
- What type of business is it ? (service, manufacturing, etc.)
- What processing methods are applied?
- How is the distribution and delivery system organised?
- What demands do the conditions of production make on knowledge resources?
- What individual skills are needed?
- What organisational resources are required?
- How are resources co-ordinated?

individual consultant's personal competencies, which are then co-ordinated through organisational processes and routines. At these companies, knowledge management is especially concerned with the development of individual skills and combining these by way of organisational processes.

Juxtaposing the objective to create a certain use value and the company's particular conditions of production makes it possible to pinpoint the ambition of the company's composition, application and development of its knowledge resources. In other words it becomes possible to determine an overall strategy for the company's knowledge management.

THE MANAGEMENT CHALLENGES

The ambition of the company's knowledge management is to be translated into specific management challenges. These are the challenges to be addressed in order to develop and realise the ambition defined in the knowledge narrative. This activity involves a number of strategic choices in implementing the knowledge narrative.



THE MANAGEMENT CHALLENGES

FROM KNOWLEDGE NARRATIVE TO MANAGEMENT CHALLENGES

The knowledge narrative represents the company's knowledge management strategy. In order to be able to turn the plot of the knowledge narrative to account, it has to be translated into critical management challenges. This translating process is strategic because there are several ways to do it, and because of the many alternative choices and priorities.

Identifying management challenges means defining critical relationships. This process is made up of choices linking use value to knowledge resources and aiming at the future. Thus, it involves assessing the consequences of different types of actions. Such assessment is often based on the belief or confidence that a particular action will have positive effects.

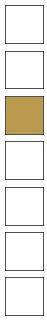
Some companies are convinced that increased job satisfaction will seep through to higher customer satisfaction, and will in turn raise profitability. In other cases companies imagine that recruiting candidates with the right skills will lead to a bright future for the company. Others consider that a low employee turnover rate signifies stability in the company. Such conceptions of causal relations are expectations and not easily proven to be exactly right. As such they are strategic formulations of how the company can be expected to work. These kinds of formulation are necessary for a company to be able to act as one organisation.

Taking this as a starting point, the relationship between the knowledge narrative and the management challenges can be illustrated as shown in the matrix overleaf.

How to formulate management challenges. Try answering the following questions:

- What are the constraints of formulating the knowledge narrative with regard to, for example:
- Achieving the right insight into relevant matters such as user situations or particular technologies.
- Designing and acquiring the right mix of knowledge resources.
- Upgrading or developing existing knowledge resources.
- How do these issues interact?

Company	Knowledge narrative: use value and conditions of production	Management challenges
Coloplast	The products offer quality of life enabling the disabled to live a "normal" life, both socially and professionally. This is accomplished by creating products that minimise the effects of the disability. The conditions of production are those of an industrialised society, i.e. mass production, which makes collective efforts particularly critical.	• Product development improving the match between the product and user wishes and situations. • Insight into user wishes and situations is crucial to developing products aimed at quality of life. • Systematic QA procedures with direct impact on quality of life, especially when this is lacking. Top quality is a critical parameter, as product failure will reduce the quality of life for the patient. • Staff development as an independent asset and as a QA prerequisite.
Nellemann Konsulenterne	Consulting empowers the user in not only resolving his problem technically but in upgrading his skills to handle similar problems in the future. The service is provided in direct contact with the user, and "the production" is the result of individual project activities.	• Developing skilled and highly competent employees with psychological maturity and with an aptitude to act as catalysts in the process. • Supporting teamwork spirit among staff members; joint task forces will increase job satisfaction and ensure the transfer of job skills.
Byggeplandata	Consulting creates peace of mind for clients by relieving them of the legal, technical and financial supervision of building projects. The service provided resides in individual projects and is at some physical distance from the user.	• Ensuring a high level of technical skills for regular updating by further training as required. • Supporting knowledge sharing by building up systems for recording purposes and for rational procedures. • Ensuring project management of the commitment and communication throughout the process. • Visualising what the project involves and means to the client.



THE MANAGEMENT CHALLENGES

Plot translations differ in nature from one company to another, largely because of the underlying differences in use value and fundamental conditions of production, but also because these plot translations reflect strategic choices. The matrix shows how there are different management challenges. Some challenges concern insights (e.g. knowing what the customer wants) for developing the product or the service. Other challenges focus on the right mix of knowledge resources (legal advisers, engineers, financial advisers or experienced consultants) or on business processes or procedures (project management or quality management systems). Other varieties specify mastering particular technologies (such as know-how concerning adhesion to body skin). Without being exhaustive, these examples show how management challenges can be expressed in various ways.

How can management challenges be developed for, say Coloplast? In considering use value, one has to reflect on how it is possible to actually realise, in a practical sense, the quality of life, i.e. the ability to engage in social contact under quasi-normal conditions. The first requirement is to prevent the bags from leaking, and the next is to make sure the bag will not be in the way of daily routines. Coloplast is engaged in mass production, which suggests that the challenge is two-fold: quality assurance and knowledge about user situations. Implicitly, this indicates a need for R&D efforts aimed at turning knowledge about users into products. Out of consideration for quality assurance alone, the company relies on a dedicated and highly skilled staff as a guarantee of each individual carrying out independent self-checks.

In fact, Coloplast has to have a considerable insight into the attitudes of users as well as into the product ideas and their applications. The quality of the product must not be deficient. Product development is a necessity in response to constantly arising user needs and wishes. And finally, quality control is not merely a matter of monitoring the actual rejection rate but of establishing an organisation that motivates the staff and upgrades its qualifications to focus on quality standards.

In the case of Nellemann Konsulenterne the highly interactive form of consulting with users presupposes a need for more experienced and highly skilled consultants. They are required by virtue of their mature psychological background to be able to handle critical situations and use their own discretion on the spur of the moment. For the purpose of further developing and anchoring the consulting competency, Nellemann Konsulenterne also focuses on setting up systems for evaluation of its consulting services and project management.

These management challenges begin with the skills of employees, whose experience, flair and calm are the very prerequisites of Nellemann Konsulenterne's product. Improvisation is another key word, as the particular situation will be a guide to what will happen in the actual consulting process. Since the company's skills depend on mostly intuitive insights, knowledge sharing is a question of learning from participation and observation, for example in joint task forces.

Byggeplandata has decided to focus, in particular, on narrowly defined skills, with the aim of being able to pin down user problems within a very limited field, before the user realises the urgency of such problems. The employees therefore need to be highly qualified with specialist knowledge of legal, engineering or financial aspects of supervision and project management. They need to work together in a way to make

their technical, professional and project management competencies available in every project. Furthermore, critical procedures need to be systematised to provide systematic and reliable assistance and to ensure that experience is transferred to other projects.

Both Byggeplandata and Nellemann Konsulenterne provide consulting services, but their knowledge narratives are different. Byggeplandata supplies peace of mind for the user, who has delegated supervision and project management, which leaves the client free to focus his attention elsewhere. Technical issues must therefore be fully mastered. Byggeplandata's services are furthermore partially invisible to the user, precisely because the client sets up a subcontract in order not to have to worry. These services are in effect "technical". However, in the broad-spectred services of Nellemann Konsulenterne there is a perception of close contact as part of the service is to empower the user. This is why the management challenges of these two consulting companies differ.

Thus, by choosing from strategic alternatives, it is possible to translate the knowledge narrative into management challenges that are crucial to realising the company's knowledge management strategy. It must be a logical and well-argued translation based on the knowledge narrative. Nevertheless, there is more than one way of doing this, since it is not only a description of the company. It is also a suggestion for a useful knowledge management strategy. It thus represents a strategic choice for how the company intends to work, for assumed relationships and for perceptions of what a "good" company is like.

The full-length knowledge narratives of the three companies are unfolded in Chapter 4, where it will be demonstrated in more detail how these tales lead up to three different sets of management challenges which, added together, result in coherent knowledge management strategies.

A COHERENT KNOWLEDGE MANAGEMENT STRATEGY

Tempting as it might be, formulating the knowledge narrative and the management challenges in brief points falls short of creating and communicating the idea behind the company's knowledge management strategy. The knowledge narrative and the management challenges have to take the form of a coherent tale.

A COHERENT KNOWLEDGE MANAGEMENT STRATEGY

FROM ANALYSIS TO NARRATIVE

The analytical approach in describing the elements of the intellectual capital statement (chapters 2 and 3) may seem odd and far-fetched, precisely because of their analytical presentation. A knowledge narrative is, however, not (only) an analytical activity. It is – as the word says – a narrative, in which the analytical elements are held together by a plot to produce a coherent, meaningful story. For the intellectual capital statement to communicate it needs to take the form of a narrative. Only within this framework will the translations between use value, conditions of production and management challenges appear logical and clear.

In Chapter 2 the core message of the knowledge narrative was expressed in one or two sentences, almost like a slogan. Although a slogan has direct power, this is far from enough to carry through the knowledge narrative. This requires more space and more details. They have to explain the essence of the knowledge narrative by underlining the unique aspects of the company's knowledge resources, based on a particular set of management challenges and actions.

The following descriptions of the three companies' knowledge narratives and management challenges build on the points set forth in Chapters 2 and 3, only here they are allowed more space for elaboration and fluency. This is necessary if they are to communicate the ambition of knowledge management, or more exactly, of knowledge management strategy.

The coherent strategy for knowledge management relies on the same formula that guided the analytical development of the knowledge narrative and the management challenges:

- The use value that is to be created based on the company's mission statement
- The user's situation
- The particular characteristics of the product or the service
- The fundamental conditions of production
- The management challenges

The following knowledge narratives are based on the above five-point formula.

Please note that these are in fact interpretations based on the companies' own work with intellectual capital statements. The following texts have been prepared for separate use with this guideline based on actual work performed in connection with intellectual capital statements. As accepted by the companies involved, these statements have been adapted to fit the model of this guideline for intellectual capital statements.

COLOPLAST'S KNOWLEDGE MANAGEMENT STRATEGY

To improve the quality of life for the disabled

HELPING PEOPLE VIA DISPOSABLE CARE PRODUCTS

Coloplast's mission is to develop, produce and market disposable care products that help the disabled to a better quality of life.

Based on skin-friendly adhesives Coloplast develops innovative, knowledge-intensive and safe products. These include ostomy care products to people who have had part of their colon removed and their intestine re-routed to an outlet (the stoma) in the abdominal wall, continence care products for people with involuntary urination and wound care products for people suffering from chronic wounds. We also make preventive and curative skin care products, special dressings for the OTC market as well as breast forms and textile pads for women after breast surgery.

A PHYSICAL HANDICAP LIMITS SELF-REALISATION

Living with a physical disability means having to accept constraints on self-realisation. Many things get far more complicated when somebody is physically disabled. Living a close to normal life takes practice, and in many situations the disabled person depends on the help of others. Vulnerability, lack of self-confidence and worrying are often experienced, and these feelings sometimes take predominance over life. As a result of unnecessary constraints the disabled individual is prevented from enjoying the positive and rich life to which all human should be entitled.

SAFE PRODUCTS THAT ARE EASY TO USE YIELD FREEDOM

In order to help improve the quality of life of the physically disabled, Coloplast must be able to produce and deliver disposable care products that are safe and easy to use. Easy to use so that the product requires as little attention as possible from its users. And safe to use in order that users should not have to worry about possible leaks and any ensuing inconvenience or physical and psychological discomfort. In other words, our overall concern in trying to help the physically disabled to an improved quality of life is to offer convenient and reliable products. Thus, users should be able to live their life without being constantly reminded of the product and their disability. Coloplast aims to reduce as much as possible the physical and psychological constraints of our disabled users.

HOW TO GET TO KNOW THE USER AND MAP OUT HIS NEEDS

For Coloplast to develop and bring out the products that will help the disabled obtain an improved quality of life, we must acquire a deep understanding of the physical as well as the psychological aspects of living with a disability. This insight is created through dialogue groups of users and health professionals based on our attitude that it takes personal experience to convince. We firmly believe that only by building on personal experience will we be able to separate the essential information to be used for planning our innovative and developmental activities. In continuation of this proximity with users, it is clear that research and development in products, processes and high technology are crucial to our endeavours to help the physically disabled obtain

A COHERENT KNOWLEDGE MANAGEMENT STRATEGY

an improved quality of life. There is a great potential for further improvement in the quality of life of our users by developing new materials, and by putting more and more knowledge into our products. Likewise, there are many more disabilities whose constraints and discomforts can be relieved through disposable care products based on the skin-adhesive technology if only these products are developed. The point of departure for process development is our work with quality issues, for which we obtained not only a quality award, but which structures the development of our manufacturing processes. Quality is at the centre of all our efforts to match every development of the production processes, the organisation and staff with getting it right each and every time.

QUALITY IS THE KEY ISSUE IN OUR EFFORTS

If quality, innovation and understanding of the daily issues of users are so crucial to our efforts to help the physically disabled to obtain an improved quality of life, it presupposes the support of a culture of delegated responsibilities that rewards individual initiative. It is also essential that our ability to interpret user needs is widely appreciated and that we are recognised as a reliable business partner. In our culture we emphasise innovation and support knowledge sharing, for example by means of interdisciplinary project groups, self-managed teams and job rotation.

Our desire to improve the quality of life for the physically disabled raises central management challenges to Coloplast in developing a strategy for our intellectual capital. More specifically, our management challenges at Coloplast focus on:

- Being able to understand the most important physical and psychological needs of users. This is achieved by establishing dialogue groups and personal contact to users and health professionals.

- Ensuring low rejection rates and reliable delivery through comprehensive QA for standardised processes, process improvement and development activities.

- Creating a culture to sustain knowledge sharing and to support product and process development.

- Building a working environment that will ensure the best development of staff by means of job rotation, self-managed teams, supplementary training and social responsibility to ensure the best development of our employees.

NELLEMANN KONSULENTERNE'S KNOWLEDGE MANAGEMENT STRATEGY

Improving the framework for people's life

TEACHING PEOPLE HOW TO FISH RATHER THAN SERVING THEM FISH

Nellemann Konsulenterne has as its mission to help people manage change and negotiations themselves, and to start a learning process based on the client's own premises.

With services such as consulting, evaluation, planning and coaching, the objective is to help clients in the public and private sectors to create permanent improvements in the social, organisational, cultural and physical frameworks of people's life.

At Nellemann Konsulenterne we see ourselves as catalysts for development processes. Instead of a turnkey solution - a railroad bridge or an ERP system for the client to use as best he can, we wish to develop the client's and the end user's ability to take charge of problem-solving. We solve the problem together with the user and not on behalf of the user.

The focus of our mission is thus to improve frameworks for self-realisation; it is not to build a reputation for ourselves for being the best in the market or to generate economic growth for growth's sake.

Improvement is what counts, i.e. qualitative rather than quantitative development. Not every organisational change is an improvement. We define, as a benchmark for quality, covering the needs of our clients and the fully achieved potential and exploitation of talent – within our clients, their stakeholders and ourselves.

This is the mission that guides our work for strategic development of our knowledge resources.

CUTTING ACROSS WORKPLACES OR TRADE UNIONS, LOCAL OR NATIONAL AUTHORITIES, AND THE EUROPEAN UNION

As a result of the division of labour in society, the life of every citizen is administered by many different entities: one's workplace or the trade union, the local or national authorities, or even the European Union. Each manages a portion of every citizen's life, and the consequence is often that his life is sliced up in terms of economy, housing, health, social security and culture. Our clients are mostly local authorities and other public agencies administering the life of the ordinary citizen. In the course of time we have designed solutions within local planning, industrial development, strategy, organisational issues, evaluation and analysis, especially in the cultural and social areas.

Slicing up a citizen's life makes it more difficult for our clients to take a global view of the citizen's daily life. In other words, the frameworks within which our clients work makes combating fragmentation quite a challenge.

RECIPES RATHER THAN REPORTS

In order to create as well as to impact on the public system's many frameworks, and to establish coherence in the citizen's life, our analyses and evaluations must enhance the skills of those involved and their ability to apply problem solving techniques to situations in the future. Our services must never end up as static reports on

A COHERENT KNOWLEDGE MANAGEMENT STRATEGY

finished projects. Instead they should be seen to contribute reinforcement of competencies and proactive skills to those who have to function and act in these settings, to help them as far as possible to design these frameworks themselves. Our services, such as for example evaluations, should - metaphorically speaking – be more like a recipe than a report.

MULTIPLE SKILLS AND EXPERIENCE IN LIFE

We must be able to deliver consulting, evaluation, planning and training that will cover people's needs, help them realise their potentials and unfold their talents. Nellemann Konsulenterne is thus required to be capable of bringing several types of professional skills into working with our clients. The foundation for improving the frameworks for self-realisation to create coherence and unification is the humanistic spirit guiding the work of our experts. We have a keen will to create practical organisational results combined with an interest in the people that have to commit their body and soul to the results. Our interdisciplinary project teams are based on this concept. In these teams we focus on listening to the client and on involving the client in a common effort to permanently improve the frameworks of people's life.

FOCUS ON INSIGHT, LEARNING AND INTERDISCIPLINARITY

Our knowledge and experience concerning better practices in organisations and improved interpersonal contact are at the core of our activities. Thus, it is vital that in our daily work we are supported by a humanistic culture, where dialogue, an open mind, sparring with colleagues and in-depth task analysis are the main features. This culture also accommodates the constant need for horizontal and vertical development of the employees' professional skills, always respecting, however, their individuality, self-development and need for challenge.

Overall, the intentions of this knowledge narrative and these visions for knowledge and skills demand that Nellemann Konsulenterne as an organisation addresses the management challenges based on the strategic development of our intellectual capital. These challenges are essentially:

- Having access to competent and socially experienced employees who master professional skills and who possess a certain amount of social intelligence that give them special process qualifications.

- Ensuring ongoing development of the skills of our employees to the extent that everybody feels constantly engaged in personal and professional development. These are the basic conditions for being capable of providing consulting services for others.

- Providing a stimulating learning environment with time for reflection, evaluation and inspiration in a professional context.

- Developing an effective teamwork culture with emphasis on interdisciplinary co-operation and sparring with colleagues.

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 as 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 co-ordination 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.

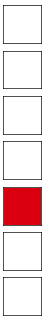
OTHER POSSIBLE KNOWLEDGE MANAGEMENT STRATEGIES

The three examples demonstrate how use value is linked to conditions of production and leads to the definition of management challenges. It is true that the knowledge narrative explains what the company does, but it is not a mere description. The knowledge narrative is also a goal, a strategy and thus an ambition as to what the company wants to be.

The knowledge narratives for each of the three companies presented as examples in this chapter do not exclude other possibilities. As the knowledge narrative presents the company's strategy for the present and future company identity, the three knowledge narratives might have been formulated differently. This holds true both with regard to definition of the use value and to translating this definition into demands for the combination, application and development of the company's knowledge resources. The methods with which to support the implementation and the anchoring of the knowledge narrative are to be derived from the management challenges.

With regard to environment, history, knowledge resources, management and competitive path, all companies are different. Not only is their present situation different, they can also have widely differing interpretations of which way to develop, what strategy for knowledge management to pursue and thus also what course the knowledge narrative should plot. This means that companies which at first glance look very similar can develop very different knowledge narratives, even though they may be in the same industry, employ the same type of staff, compete for the same clients, etc.

ACTIONS AND INDICATORS



A series of actions are identified for translating management challenges into concrete activities. Specific indicators linked to each respective action will be used to measure how far these actions have been implemented.

ACTIONS AND INDICATORS

Four types of actions

- What actions are important in a customer perspective?
- What actions vis-à-vis employees should be emphasised?
- What processes are crucial to the action?
- What technologies are important to the action?

A management challenge never has only one possible action attached to it. Typically, there are many possible actions and often even more possible indicators to show whether the company implements its actions and thus addresses its challenges.

One of Coloplast's management challenges is quality assurance. An obvious action here is to develop precisely the QA system. Or the goal could be reached by supplementary courses, by the introduction of new routines, by investment in new production technologies, or indeed any combination thereof.

The management challenge "product development" could be met by increased R&D investments, by focusing on generating turnover from new products or by intensified recruiting of new product developers. When it comes to compiling knowledge about customers' needs and wishes – yet another management challenge – options include relying mostly on user satisfaction surveys or, alternatively, setting up focus or user groups for feedback on the use value of products.

These examples only serve to demonstrate the many ways of translating management challenges into actions. This is also what makes it extremely difficult to find only one quantitative indicator for a specific management challenge. The task is much easier when it comes to finding figures corresponding to each action. It is usually possible to find, if not one, then at least a limited number of indicators for each action. Thus, there is only a short distance between indicator and action, while the distance is longer between management challenge and indicator.

The actions can be classified in several ways, for example according to type of resource: employees, customers, processes or technologies. Or they can be differentiated according to the impact of actions on resources: are they for example intended to change the company's resource mix, upgrade resources or estimate the effect of a definite utilisation? In the following the actions are divided into the four types of resources below.

Employees are basically defined as company staff. Some companies may however want to consider whether employees whose principal occupation is elsewhere should come under this heading.

Customers may seem easy to identify, however there can be users who are "customers' customers". For this reason it should occasionally be considered whether the customer is also the actual user. If the answer is "no", including both of them may be warranted.

Processes are activities of a somewhat collective nature. A process combines a plurality of individuals, materials and technologies in a unified concept. A process will often contain elements from some of the other resource categories, however its scope is delimited and it should essentially be regarded and described as the interrelationship of the resources involved.

Technology is about information and production technologies or about the infrastructure creating the setting for such technologies.

Note: It is possible that some companies – depending on type – may consider applying a broader definition of "customers" to include external business partners and thus bring in, for instance, suppliers as a customer resource. The delimitations of the knowledge resources and competencies above are those applied by the 17 participating companies, who did not include external business partners in their intellectual capital statements to any particular extent. It may be a question of time before these companies decide to apply a wider concept, and it is not unlikely that other types of companies may have settled for a different priority.

To the extent it is possible to generalise on intellectual capital statements from the experience held by the 17 participating companies, all actions and all indicators seem to actually fit into one of these four categories. One might well ask what happened to some of the key concepts of the knowledge economy: innovation, customer orientation, flexibility, growth-oriented strategies, high tech investment, etc? The answer is that these are more in keeping with the knowledge narrative than with categories of indicators. For example, taking a concept like innovation can lead to many types of actions and indicators: turnover from new products, number of product developers, R&D investment, etc. The translations of innovation that are more operational in nature easily become engaged with customers, employees, processes and technology.

Using an approach from management challenges through actions it is possible to narrow down the type of data to be reported in an intellectual capital statement, i.e. the figures of the highest informative value to illustrate the company's knowledge management. The actions are the mechanism linking the management challenges and the indicators. The indicators must make visible whether the actual actions initiated will bring the company closer to the solution of its management challenges or not.

For Coloplast these contexts could be expressed as shown in the opposite table. It testifies to the feasibility of developing a series of figures that can reasonably well reflect the dimensions of a management challenge. Taken separately, these figures are not exceptional, but added together a story emerges of how the company works with its knowledge resources. It is possible to tie each management challenge to several types of action and, consequently, to specific indicators. Quality assurance for example may be a question of trimming the QA system to report on the precise spot of trouble. Quality assurance could also find an outlet in the organisation of work, in which quality depends on a motivating working environment created through supplementary training, self-managing groups, and participation in the planning of work. Quality can also be a question of appropriate production technology. The mechanisms needed to develop quality can be found everywhere within the company. The specific management challenge is thus realised by a combination of such mechanisms.

The main elements of this presentation are illustrated in Coloplast's recent intellectual capital statement and a summary is reproduced here for the purpose of this guideline.

ACTIONS AND INDICATORS

Coloplast

Use value	Management challenges	Actions	Indicators
Deliver quality of life by alleviating and reducing the constraints of a physical disability	Product development	R&D investments Patenting New products	• R&D expenditure • Total number of patent rights • Products according to product development model • New and improved products • New products' share of turnover • Patent applications filed for the year
			• Meetings with users, nurses and physicians (index) • Total customer satisfaction
	Compile data on user situation	Satisfaction surveys Focus groups	• Complaints (indexed) • Internal auditors/internal audits • Lloyds audits per year • Non-compliance at Lloyds audits • Clinical documentation expenses (indexed) • Orders delivered within 24 hours/on time • Production workers in self-managing groups • Internal training - days per employee • External costs of training per employee • Absence of production workers (%) • Average hours on order processing
	Ensuring high quality in products	QA system and processes	• Staff turnover by salaried staff and production workers (%) • No. and share of employees with min. 3 years of further education (same number as share of salaried staff) • Employee shareholders • Average no. of employees per manager in production and in administration • Apprentices and trainees • Job rotation, promotion and relocation of salaried staff • Development talks as at 1 Oct. 1999 • Job and educational fairs • No. of unsolicited applications, salaried employees and hourly employees • Job advertisement response • Employee satisfaction abroad • Industrial accidents causing lost working days per million working hours
	Employee development	Self-managing groups Job rotation Development talks Relocation	

Backgroundinformation

- Employees in Denmark and abroad
- IT supporters and super users
- Persons in work trials
- Persons passing work trials and hired after probationary period
- Total persons in work trials since 1993
- Job advertisements
- Internships
- Students and problem-solvers
- Turnover by product lines
- Geographical distribution of turnover
- Export share
- IT costs in % of turnover

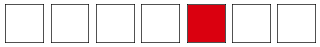
Such illustrations may serve to present the essential elements of the knowledge narrative and how to translate it into indicators.

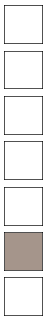
At Nellemann Konsulenterne and Byggeplandata the knowledge resources were developed in other ways. Either by recruiting competent consultants or by developing the existing staff. There are however nuances. Nellemann Konsulenterne is particularly aware of the personal qualities of each individual being acquired and built up through a lifetime. Byggeplandata emphasises professional expertise above all, and thus focuses on describing its knowledge resources as engineers, designers, architects and legal advisers. The relation between knowledge narrative, management challenges, actions and indicators for the two companies is reflected in the following tables.

All elements of the company's strategy for knowledge management have thus been presented and analysed in the foregoing chapters. Communicating this strategy to the public is a separate task, and internal or external documents for the intellectual capital statement can be used for this purpose. How to structure the external intellectual capital statement will be presented in the next chapter.

ACTIONS AND INDICATORS

Management Challenges	Actions	Indicators (examples)
NELLEMANN KONSULENTERNE		
Recruiting and developing employees with experience in life	• Recruiting of employees with broad experience	• External experience, years • Proportion of working hours considered challenging and developing
	• System for learning through project participation	• Share of workers participating in projects • Proportion of working time used in another department
	• Development of professional competencies	• Hours spent reading relevant journals • Days spent on supplementary training
Supporting teamwork	• Establishing evaluation systems	• Minutes spent on evaluating completed projects • Number of times evaluating the work of a colleague • Number of projects evaluated • Number of employees with development talks • Interviews with customers • Number of sparring sessions with colleagues
BYGGEPLANDATA		
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	• Portfolio of qualifications • Proportion of employees with development talks
	• Setting up supplementary training programmes	• Supplementary training costs per employee
Knowledge sharing	• Intranet • Konowledge 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





THE EXTERNAL STATEMENT

The external intellectual capital statement is a presentation of the company's efforts with respect to its knowledge management in text, figures and illustrations. The statement communicates the knowledge narrative and the management challenges, and it documents the actions that have been implemented. In keeping with best practice the statement also sets out the applied accounting policies and reflects on the credibility of the intellectual capital statement.

THE EXTERNAL STATEMENT

REPORTING FORMAT OF THE INTELLECTUAL CAPITAL STATEMENT

Working with the strategy for knowledge management helps to formulate a knowledge narrative and a set of challenges for knowledge management and actions. However, these do not in themselves constitute the intellectual capital statement. The external intellectual capital statement shows a combination of text, figures and illustrations aimed at communicating the knowledge narrative, the management challenges and the actions, and at lending them credibility.

The statement should comply with general principles for logic presentation, readability and good layout. Thus, both on content and on structure it should be clear and easy to comprehend. Often the intellectual capital statement will consist of elements as described in the chart below. Some of these elements hold a fixed position. For example, "Contents" usually comes first, while the "Audit Report" usually comes at the end of the statement. Also, "Accounting Policies" is usually placed rather late in the document while the "Directors' Report" is placed at the beginning. In this way the intellectual capital statement is quite similar to a financial statement. There is no fixed position for the other elements.

Some companies place data opposite the management challenges they refer to. Other companies concentrate all data on one sheet. One's preference depends on how the intellectual capital statement is otherwise presented. If there are many figures, it is probably recommendable to place them in connection with the themes to which they refer. There is no rule that says that many figures placed in a separate data document will present a clear overview.

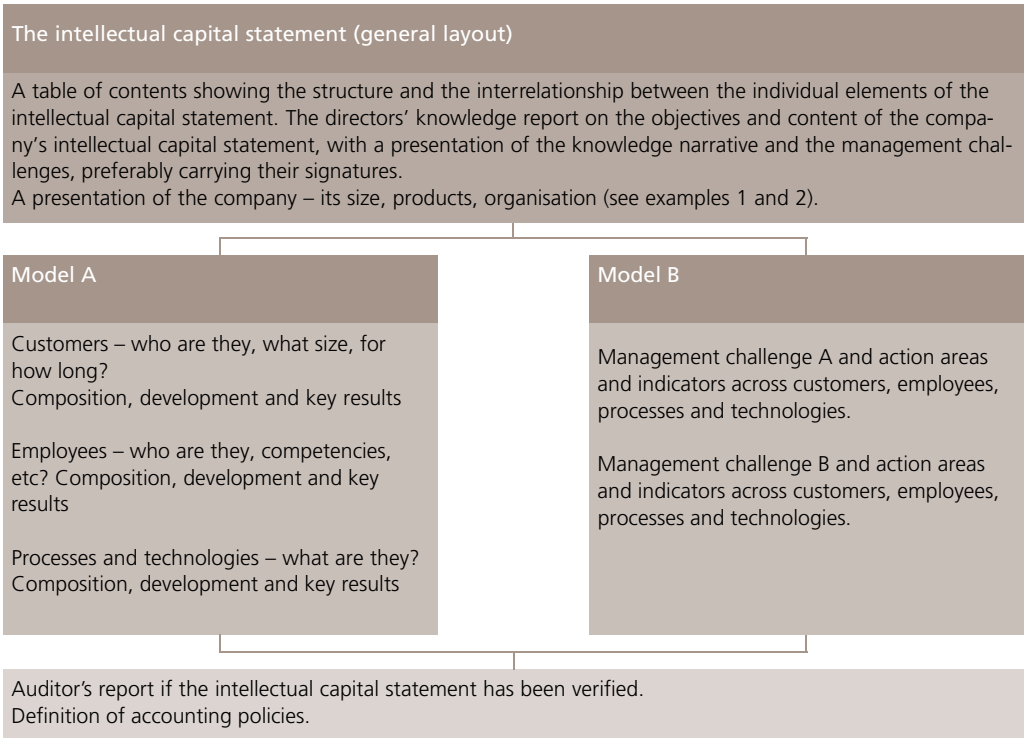
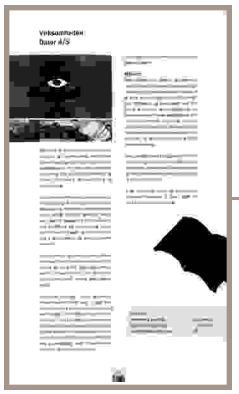


Figure 2: How to structure the intellectual capital statement



Dator A/S is an engineering firm that develops and implements high quality software solutions for integrated process and logistics control. We offer consulting services in anything from project definition and start-up to final implementation and operation.

A common denominator for our solutions is the tracking and steering of objects, i.e. locating, recognising and steering objects. Dator's competencies are an integral part of many solutions world-wide – from baggage and information control in airports, sorting control for mail and package distributors, production control in newspaper packing to warehouse control in distribution centres.

Dator's fully developed solutions operate in functions where performance failures can be disastrous. "Mission critical" is the first concern for systems that have to function all 24 hours non-stop.

Dator was founded in 1978 and has grown steadily since then. In 1999 we supplemented our main office at Hadsund with a new branch office in Aalborg situated on the newly renovated waterfront. Dator currently employs almost 90 people, who own up to 25% of its shares. Other shares are controlled by one of the founders, or owned by members of the board of management and by the chairman of the board of directors.

Example 1: Dator's presentation profile

Quick facts

- Specialists in application integration, communications and data security
- Pioneer in products for military interoperability and EDI (elec tronic data interchange)
- Established in 1985, privately owned by the management as its main shareholder
- ISO 9001 certification since 1992
- Main office in Aarhus and a branch office in Copenhagen, Denmark, subsidiaries in the UK and the USA
- Turnover of DKK88m, and net profits of DKK1.7m in 1998/99
- 167 employees in the group (137 in Denmark) as of 30 September 1999
- 64% of all staff in Denmark hold a Master's degree or a PhD

Example 2: Facts from Systematic

THE EXTERNAL STATEMENT

A company has to consider how to handle specific elements for integration into the overall composition of the intellectual capital statement.

As will appear from Figure 2 there are at least two possible ways in which to present the key data of the intellectual capital statement. One way is to use the different categories of knowledge resources as a basis. The argument in favour of this approach is that the management challenges may structure knowledge management work, but they do not have to structure the intellectual capital statement. Readers may be more interested in fields that cut across the categories of the management challenges. A new employee may take an interest in employee policies, a potential customer may want to take a look at business activities, etc.

Another way is to let the management challenges determine the structure of the intellectual capital statement. This structuring principle makes it possible to obtain maximum focus on the company's special position.

The statement is based on the relationship between the knowledge narrative and the management challenges from which the actions are derived. Next, figures are brought in to document that these actions have actually been launched. The knowledge narrative, the management challenges and the actions do not in themselves constitute the intellectual capital statement. They are the pillars of support in preparing a statement that has text to describe the knowledge narrative and the management challenges, figures to describe the actions launched and charts and other graphics to communicate the knowledge narrative and the management challenges even better.

THE TEXT OF THE INTELLECTUAL CAPITAL STATEMENT
The text of the intellectual capital statement should be evaluated in terms of the following issues:

- Is the use value defined?
- Are the company's knowledge resources presented and characterised?
- Are the management challenges and the actions being communicated?

The figures of the intellectual capital statement
A "good" figure depends on an evaluation of whether it:

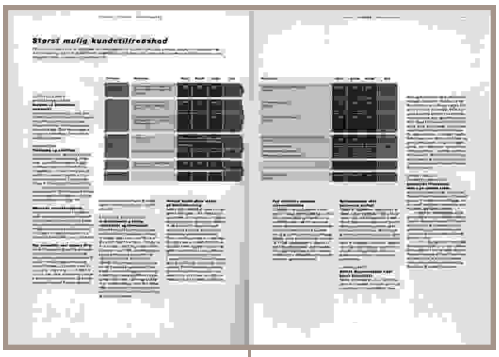
- Shows how it is derived and what it refers to.
- Is logically related to actions that may affect it.
- Is embedded in administrative systems.
- Explains events not otherwise reflected in the other figures in an intellectual capital statement.
- Is interpreted in the text of the statement, thus it is not an isolated figure.
- Indicates a future trend.

Examples of figures:

- Investment in staff training programmes
- Employee resource mix
- Customer and employee satisfaction indicators.
- Customer resource mix.
- Investment in product or process improvements.

THE TEXT OF THE INTELLECTUAL CAPITAL STATEMENT

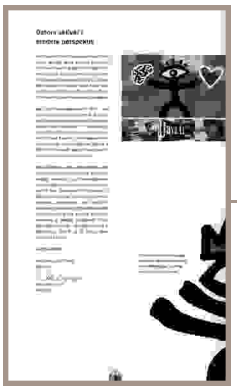
The text of the intellectual capital statement serves to communicate the company's knowledge narrative, its management challenges and actions as well as to provide a general description of the company. The purpose of the text is to explain how the knowledge narrative is translated into the actions that have to be documented in the intellectual capital statement.


Störst möjlig kundtillfredsh

Mission	Enablers	96/97	97/98	98/99	Objective
Practise empathy for user needs	Groups of professional carers and users engaged in cooperation with Coloplast (index=figures)	100	128	280	Maintain current level
Innovation	R&D expenditure in % of turnover (Group)	4.2 %	5 %	4.8 %	5% of turnover
	Projects completed in compliance with product development model (Coloplast A/S & Consumer Products)			40	Ensure that the right products are accelerated to market
Reliable supplier	Order handling	A cross-organizational group is reviewing all steps in the order handling processes			
	No. of internal audits/audits	25/75	26/79	28/67	More efficient
Quality of life	Costs of clinical documentation (index=figures)	100	103	113	Maintain current level
Maximum customer satisfaction					

Results	96/97	97/98	98/99	Objective
Share of new products in % of turnover (Group)	33.5 %	36.3 %	22.3 %	20%
No. of patent applications (Group)	26	24	26	Maintain current level
Patent rights held (Group)	122	143	167	
Average order handling time, hours (Group)	12.2	10.2		
Delivery on time (Group)	98.5 %	98.5 %	97.3 %	98.5 %
Non-compliances at Lloyds audits	3	1	0	0
Complaints (index=figures) or (Group)	100	132	153	
Overall customer satisfaction (Group)	90.8 %	94.8 %	92 %	

Example 3: Figure from Coloplast



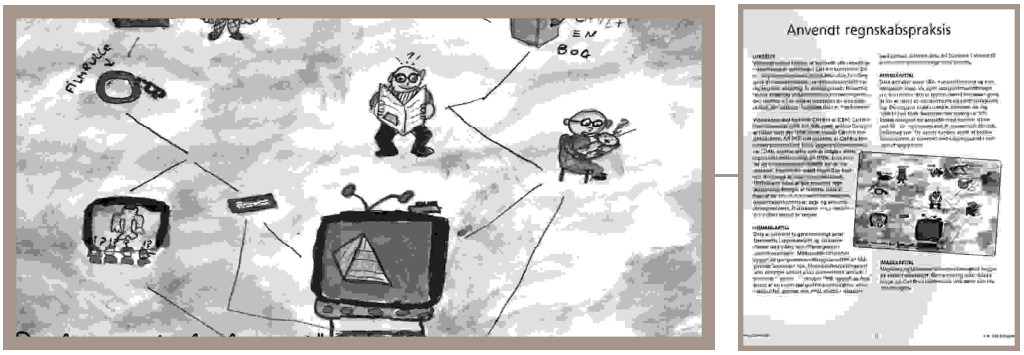
Example 4: Illustration from Dator

THE EXTERNAL STATEMENT

THE ILLUSTRATIONS OF THE INTELLECTUAL CAPITAL STATEMENT

The good illustration:

- Illustrates the knowledge narrative and /or the management challenges
- Visualises the style, atmosphere and identity profile of the company
- Captures the reader's attention
- Inspires the reader to reflect on, or to contribute an opinion on which way the company may be heading.
- Motivates the reader to take an active part in creating and in developing the knowledge narrative.



Example 5: Children's drawing from Carl Bro.

The intellectual capital statement should also account for essential components in the use value of the product or the service to provide the reader with better insight. The knowledge narrative is the hypothesis about the company's products and services that interests a reader. The intellectual capital statement as a whole only makes sense if it has a good description of the use value. And the management challenges will only be understood if the statement clearly specifies what knowledge resources are vital to the company. The text is therefore founded on the analysis of the knowledge narrative and the management challenges.

THE FIGURES OF THE INTELLECTUAL CAPITAL STATEMENT

The figures and the text of the knowledge report toget-her form a whole. Using figures to illustrate the text, the company documents how the management challenges are being implemented. Seen in isolation, figures seldom manage to carry the full message embodied in the text. Once compiled and commented on, however, these figures lend authority to the knowledge narrative and the management challenges and the communication about them thus become serious and credible.

For a message about for example product development to be perceived as credible, pointing out one indicator, say resources invested in R&D efforts, is typically not enough. To provide an overall view, other details may be relevant such as the recruitment of designers, the number of new patents and how knowledge about customers, their needs and preferences is currently acquired.

Example 6: Employees at Systematic stating their functions and spare time commitments

Similarly, the quality assurance efforts should be documented. The figures to be used range from information of current quality levels to indicators for staff motivation and employee development. For a description of more indicators and their relationship to actions please see Appendix 2. The figures included in the intellectual capital statement should be presented as time series to show tendency in indicators. Readers will thus be in a better position to assess how well the management challenges are being implemented.

The figures in the intellectual capital statement may be based on the management challenges they relate to, or be supplied as backgroundinformation, which provides interesting reading in offering a more general description of the company's knowledge resources. These figures are consequently not inter-related so as to explain or predict any others. Their only purpose is to support the text and increase its credibility. Example 3 shows how to set up figures and relate them to management challenges.

Most intellectual capital statements display figures that could be categorised within one of four categories: employees, customers/users, processes and technologies. With these it is possible to define a reasonably consistent set of concepts – a kind of accounting system – which makes it easy to trace individual figures.

Some companies employ their own models for displaying figures, while others choose existing models like balanced scorecard or the EFQM model. These models differ and serve different purposes. But they are also used by companies working with intellectual capital statements, and seem to serve as a framework for the presentation of indicators and figures.

Experience from the participating companies shows that as long as the management challenges have substance and precision, the model selected for the presentation of data is less important. If a special model for the intellectual capital statement is chosen, it is important that it should be an integral part of the company's management procedures. Otherwise the intellectual capital statement can be less easy to access, or it may even lose its credibility in the view of employees and others with close relations to the company.

THE ILLUSTRATIONS OF THE INTELLECTUAL CAPITAL STATEMENT

In addition to text and figures, the intellectual capital statement often includes different types of illustrations. This is a collective expression for graphic elements such as photos, models, colours and charts supporting and communicating the knowledge narrative of the management challenges. Several companies choose types of graphics that in each case illustrates an element of the knowledge resources. Dator has a drawing of a person whose brain and heart are exaggerated, see example 4. In this company knowledge means recruiting competent employees and creating a culture for knowledge sharing.

Carl Bro has included some children's drawings in its intellectual capital statement. One of them is the work of Ernst, aged 11, and shows an extended network of activities required to put pyramids on TV and thus be "carried" from Egypt to Denmark, see example 5. The drawing is supposed to bring associations with Carl Bro's knowledge narrative, "intelligent solutions", involving the collaborative effort of different types of experts.

Some illustrate their intellectual capital statements with photos from within and outside the company. Others use snapshots of the staff or customers, having them tell the story of how it is to be an employee or how it is to be a customer. Coloplast has reproduced several pages of short stories in which users explain the significant value of the product - the knowledge narrative about quality of life. There are also examples of statements containing photos and details of the employees as colleagues, such as their hobbies and other leisure activities, see example 6.

It is necessary to take a critical view of the application of such visual effects. They should not be used for merely ornamental purposes. To be effective, they must be able to tell more about the knowledge narrative than the text and the figures alone can tell. The good illustration is – just as the figures - a way of documenting the seriousness of the knowledge narrative. The illustration should help the reader along the path of understanding by adding clarity and substance to the knowledge narrative. It succeeds if it reflects the ambition of the knowledge narrative, the components of the management challenges or the actions.

ABOUT AUDITING, VERIFICATION AND AUDITOR'S REPORT

- Auditing is normally used in connection with annual accounts. It is a systematic process whereby an independent external expert seeks to obtain and consider objective evidence in respect of the claimed (financial) transactions and events in order to verify their accordance with generally accepted accounting standards. The results are then communicated to interested users.

- Verification is often used in controlling new types of accounts. It is an external, independent and objective trial of claims made, for example, in the form of an intellectual capital statement. There are no practices or standards for the form, the extent or content of verification procedures. Verification can thus mean control, analysis, review and audit. The results of the verification are normally stated in the auditor's report.

- The auditor's report is the auditor's / verifier's communication of the results of his audit to interested users. The report should be clearly phrased and easy to understand. It should identify the statement that has been audited or verified, and should set out its objective as well as its scope, in addition to any supplementary remarks or qualifications, together with the opinion, date, name and signature.

Source : Jens Frederiksen , KPMG

Illustrations not merely add zest to a document such as the intellectual capital statement. They may even structure it and thus improve its communicative quality.

CREDIBILITY OF THE INTELLECTUAL CAPITAL STATEMENT – QUALITY ASSESSMENT CRITERIA

To be effective, an intellectual capital statement must qualify as being credible. The question is therefore what is required in order to make it trustworthy.

In the last many years a number of recognised quality assessment criteria have been developed for the financial statement. They are also relevant for the intellectual capital statement and can be used to increase the coherence and quality of intellectual capital statements. The basic quality assessment criteria are described below and may be used as a checklist in preparing an intellectual capital statement.

- RELEVANCE

All information of relevance to decision-making by the users of the intellectual capital statement must be incorporated in the reporting. In an intellectual capital statement, the relevance criterion demands a logical relationship between the figures or the measurements on the one hand and the knowledge narrative, the management challenge and the actions on the other. This will enable a reader to decide whether the knowledge narrative has been formulated in a reasonable manner, and whether it has regard for the reader's perception of what the company's knowledge narrative ought be like.

- RELIABILITY

The reported information must allow for verification. Disclosure of the accounting policies makes it possible to trace a particular figure to its original source and check whether it is correct. The knowledge narrative and the management challenges can only be "verified" by testing their coherence and their consistency.

- CLARITY

The intellectual capital statement must be clearly structured and easy to read. It must also satisfy a need for coherence in juxtaposing text, figures and illustrations. Essential information must not be engulfed by other information that will distract the attention of the reader from relevant issues. The intellectual capital statement must pursue one line of thought.

• MATERIALITY

All intellectual capital items must be included unless they are insignificant. Figures and measurements that for reasons of the knowledge narrative and in the management challenges are important to the company must be included, yet the volume of details should be kept down. Including too many figures is often a risk, especially if they tend to illustrate the same points.

• COMPLETENESS

The reported figures must provide a full and complete view of the company's situation. The intellectual capital statement must include figures illustrating the company's actions. These should illustrate key issues and not subordinate aspects.

• SUBSTANCE

Real issues, not formality without substance, are the points of concern. The intellectual capital statement must include information of importance to understanding the particular company's knowledge management, rather than produce figures and measurements according to a model that is at variance with the company. The figures and measurements must be compatible with the company's current type of management.

• GROSS MEASUREMENTS

All measurements must be reported separately. No two indicators must be added together for the risk of blurring tendencies. However, developing indices from different measurements is allowed as long as this is not done to conceal less impressive results.

• NEUTRALITY

All relevant measurements must be stated as objectively as possible, regardless of their impact on the overall view of the company. Indeed there can be no manipulating results, or leaving out relevant facts or figures merely because they project an undesirable picture of the company's efforts in knowledge management.

• COMPARABILITY

The information must allow comparison from one year to the next. There can thus be no changing of the accounting period, layout, database or method of measurement, except to improve the quality of the intellectual capital statement. Continuity is required in these statements in order to explain and communicate the company's development over time. Time series are especially important. The accounting policies must also be disclosed.

These quality criteria may be conflicting on certain points. The overall criterion is therefore whether the intellectual capital statement is able to strike a balance between relevance and reliability. The above criteria may be used to attribute quality dimensions to the intellectual capital statement similar to those of the financial statement. This is important for published and unpublished intellectual capital statements alike.

ACCOUNTING POLICIES

The intellectual capital statement must specify its adopted measuring methods. The accounting quality requirements and the basis for their reported weighting should also be included. Such details are of paramount importance to the reader in understanding and interpreting the intellectual capital statement content correctly.

Throughout the data compiling process the basis for measurements must be described. It must be possible to establish, briefly, how the individual figures and calculations have been arrived at. For a prompt overview,

it is recommended to state the accounting policies together on one page in the intellectual capital statement.

It is hardly possible to meet all of the quality requirements at the same time as these may be prove to be in conflict. It must be stated, therefore, what quality requirements have been emphasised and how they have been weighted against each other.

The time period for the intellectual capital statement must also be specified as part of the accounting policies. An intellectual capital statement can cover a year to make the cut-off period correspond with the annual report. But there is no demanding that an intellectual capital statement be published simultaneously with the annual report even if it covers the same period or that the intellectual capital statement be issued every year.

It is open to choice whether to publish the intellectual capital statement some months after the financial statement to prevent administrative overload. For some companies it may also be more convenient to put off the work of preparing the intellectual capital statement till after finishing the annual report. If it is decided to make a combined print of the annual report, the annual accounts and the intellectual capital statement, attention is drawn to the requirements of the new company accounts act pending publication.

AUDITING THE INTELLECTUAL CAPITAL STATEMENT

Some companies have decided to have an auditor verify their intellectual capital statements for the dual purpose of being aided to set up a coherent internal system to record data and of creating increased external credibility through verification.

No audit standard is available for intellectual capital statements. Verification procedures may include:

1. Reviewing data, i.e. checking documentation for the existence of a particular figure and whether the value is stated correctly.

2. Analysing data capture methods, i.e. checking how figures are generated, including examining whether administrative procedures and internal controls support data.

3. Whether the attitudes expressed in the intellectual capital statement are embedded in the company.

4. Assessing the relevance and reliability of the information in the company context.

The first and the second points lie within an auditor's usual sphere of work, and auditors are typically qualified for such reviews. However, auditors alone can hardly handle the last two points. This part of the intellectual capital statement cannot be audited in the proper sense of this word, but the chances are that an "interdisciplinary team" can be put in charge of such verification. The scope of review and the verification procedures should appear from a verifier's report.

At the moment there are no statutory requirements for the verification or auditing of intellectual capital statements. It is therefore up to the company to decide whether such procedures will lead to improved and more credible intellectual capital statements – considering the resources required.

APPENDIX /1

The previous examples given in this guideline were taken from Coloplast, Nellemann Konsulenterne and Byggeplandata, which make up only three out of the 17 companies providing material for this guideline.

The 17 companies are all profiled at **www.efs.dk/icaccounts** according to the model applied in this Appendix for Carl Bro Group, Systematic Software Engineering and ATP (Pension Fund). These short cases demonstrate, above all, a series of considerations in connection with the intellectual capital statement: what principles decided the structure, what factors determined the efforts to prepare it, and what impact did it have. The three cases also demonstrate the usefulness of the basic structure recommended in the present guideline, namely the knowledge narrative, management challenges, the actions and the indicators to companies in different situations. The six companies presented in this guideline were not selected because they were unique in addressing the issue. There are still numerous good ideas to pick from the other 11 companies and their solutions. Thus, there is every reason to not only download the cases of each participant, but to send for their intellectual capital statements as well.

The three cases are mostly based on the intellectual capital statements for 1999/2000. As this guideline was not available at the time when they went to press, naturally the companies did not have the opportunity of using it for their statements. Hence, it is not possible to find an explicit description of the knowledge narrative or the management challenges in the companies' intellectual capital statements. However, using the guideline in analysing these statements will allow the reconstruction of the companies' knowledge narratives and the management challenges. The results of this analysis are stated overleaf in three survey charts.

APPENDIX /1: THE EXPERIENCE OF INTELLECTUAL CAPITAL STATEMENTS THREE CASES

THE CARL BRO GROUP

The Carl Bro Group (CBG) is an international consulting engineering firm, offering services in building, transportation, energy, agriculture, environment, industry, marine, telecommunications and management. The company has over 2,200 employees in more than 80 offices in Europe, Asia, Africa and South America and yearly sales of DKK1,500 million for the group. CBG is especially known for its expertise in construction, and has future aspirations of developing telecommunications and management as core services. Another feature of CBG is the large range of variable skills of the growing number of the employees by which they can offer a broader field of expertise and increased flexibility.

CARL BRO'S INTELLECTUAL CAPITAL STATEMENT

Carl Bro has published its second intellectual capital statement both in its annual report and as a separate booklet. The annual report includes a nine-page intellectual capital statement placed after the group report and a short description of CBG's solution management. The separate issue is a booklet of 19 pages and differs from the intellectual capital statement contained in the annual accounts by being illustrated with children's drawings from a knowledge theme drawing contest. Each drawing is accompanied by a handwritten text about the subject. In addition to the printed annual accounts and the booklet, CBG's intellectual capital statement can also be downloaded from the company's web site at **www.carlbro.dk.**

The intellectual capital is described as six different types of capital resources: human capital, customer capital, image capital, innovation capital, process capital and IT capital. These types of capital are structured as shown in Figure 1. The structure was modelled on the Swedish insurance company Skandia. According to Carl Bro, the choice of the model is due to the way it supported its management style based on Mission, Vision and Seven Values (MVV). In the future CBG intends to incorporate an ethical dimension in the model.

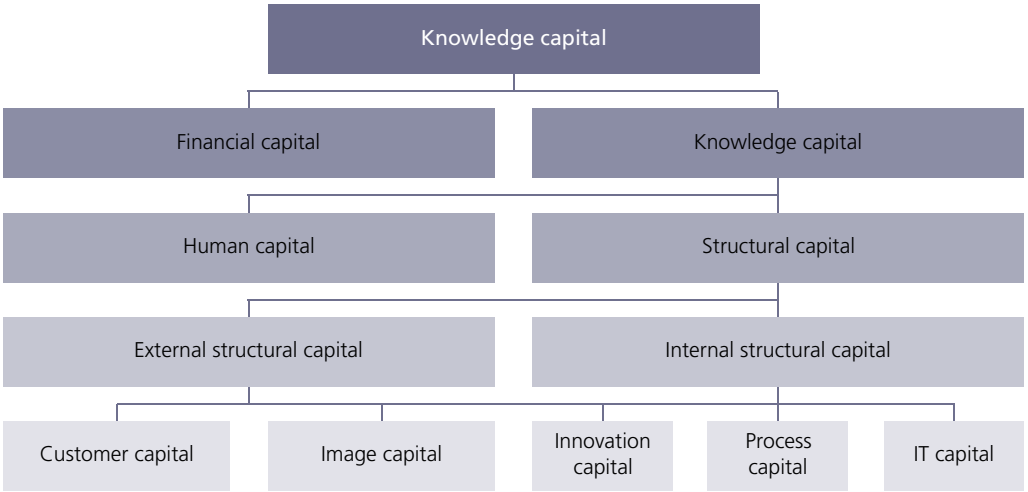


Figure 1: Carl Bro's intellectual capitals

CBG's intellectual capital statement is constructed as two parallel stories:

- Firstly, a documentation of how well the company follows its working principles. This is measured by way of the most recent employee satisfaction survey.

- Secondly, there is evidence to suggest that intellectual capital is available as a company resource. This is substantiated by a series of indicators that are structured as shown by Figure 2.

MOTIVATION FOR PREPARING AN INTELLECTUAL CAPITAL STATEMENT

In 1996, CBG defined and published its Mission, Vision and seven Values (MVV), which since then have been the basis for the company's development. By taking stock of the current state of its intellectual capital included in the intellectual capital statement, the company intends to consider how far they have succeeded in moving in the right direction relative to its MVV statements.

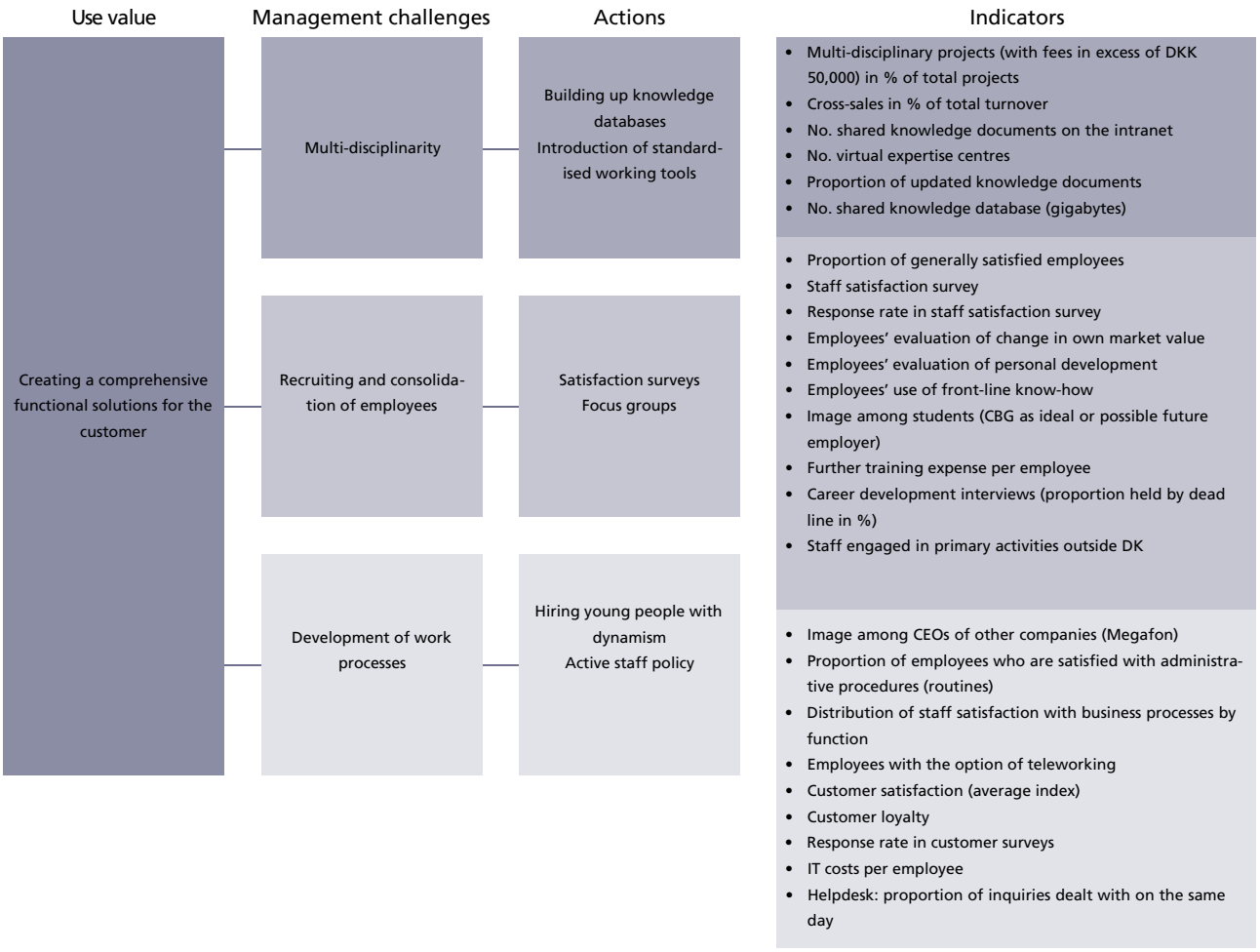
In addition, intellectual capital is regarded as an important basis for future revenue, and through the intellectual capital statement, the intention is to show that the company moves forward and is able to absorb the necessary knowledge capital.

SURVEY OF THE CONTENT OF THE INTELLECTUAL CAPITAL STATEMENT

CBG's overall intellectual capital statement can be illustrated as follows, which clearly shows the relations between the knowledge narrative, the management challenges, the actions, the indicators and backgroundinformation.

APPENDIX /1: THE EXPERIENCE OF INTELLECTUAL CAPITAL STATEMENTS THREE CASES

CARL BRO



Backgroundinformation

- No. of employees in CBG
- Total number of employees
- Breakdown by sex
- Age distribution
- Education distribution
- Turnover by private/public customers
- Turnover by expertise area
- Five largest customers' share of production volume
- Ten largest customers' share of production volume
- No. development projects (innovation activity)
- No. development projects (innovation activity) per employee
- No. distribution of development projects by customer, internal development and R&D
- No. web site page openings per month

Figure 2: Use value, management challenges, actions, indicators and backgroundinformation of the Carl Bro Group

IMPACTS OF THE INTELLECTUAL CAPITAL STATEMENT

The publication of the intellectual capital statement attracted the attention of many stakeholders - just as the Carl Bro Group had expected, and in this way created additional company value. Its rather dusty engineering enterprise image has been replaced by public interest in a forward, dynamic and innovative enterprise with a keen eye for new developments.

Internally, the ambition is to have the intellectual capital statement contribute to better dialogue and thus to an improved knowledge transfer among present and future employees. In connection with this project they have established virtual knowledge centres, a knowledge database and tools enabling employees to draw on experience from similar projects. Together with preparing the intellectual capital statement, these actions are expected to stimulate further the readiness for change within the organisation.

The process of preparing our first external statement also gave rise to specific considerations and management initiatives regarding IT capital as well as recruiting policy and how to market the company to students.

In order to develop the intellectual capital statement in the future, Carl Bro have appointed six so-called capital developers with responsibility to develop each type of capital involved still further. There are several reasons for this appointment of capital developers. Firstly, it is to identify the precise indicators describing the different types of capital. This involves improving the existing indicators and developing new ones. Secondly, it is to integrate the focus on, and responsibility for, improvement in the various types of capital into the daily management of the organisation. Furthermore, the intellectual capital statement claims that the company by setting its own targets for what indicators are to be improved it challenges itself to achieve even better results in the years to come. In addition to the external intellectual capital statement, internal ones have been prepared at departmental level for each of the 38 departments in building and transportation, two of CBG´s largest areas of expertise. These statements are not published.

In the coming years, Carl Bro will further evaluate and adjust the intellectual capital statement in content and form. It will be done in the light of there own experience as well as any inspiration from international new creations likely to take place in this area. The company intends to complement its intellectual capital statement with a balanced scorecard for internal use for the purpose of monthly reports in selected areas.

SYSTEMATIC SOFTWARE ENGINEERING

Systematic Software Engineering is a Danish privately owned software and system integrator, developing and selling technical system solutions, products and support to the defence forces as well as the industrial, transport and service sectors. As a group Systematic employs approximately 160 people, of which about 85 per cent are located in Denmark. The group sales amount to around DKK 88 million. The company have subsidiary companies in the UK and in the US responsible for sales, marketing and support outside of Germany and Scandinavia.

The core area is the development of defence systems for the armed forces; however, Systematic wants to increase the number of customers outside of defence forces in the future. Plans are entertained to achieve this by offering for instance solutions for electronic data exchange (EDI), electronic security and system integration. Systematic is certified according to the ISO 9001 standard and is approved under similar standards applicable to defence suppliers (AQAP). The company aims to be among the top ten per cent of international software engineers before the end of 2000 –according to the US Capability Maturing Model (CMM) and its European counterpart, BOOTSTRAP.

SYSTEMATIC'S INTELLECTUAL CAPITAL STATEMENT

Systematic is owned by a closed circle of owners, among them is the founder of the company, who is still the CEO. As the customers are few in number Systematic has no need to publish its annual accounts besides the statutory statement to the Danish Commerce and Companies Agency.

As an alternative, an intellectual capital statement is issued every year as a brochure with a description of the company, its intellectual capital and an extract from the annual report and accounts. The two intellectual capital statements published in 1999 and 2000 comprised 16 and 20 pages, respectively. Systematic publishes its statements in Danish as well as in English, and both versions are accessible at the company's web site address **www.systematic.dk.**

Systematic's second intellectual capital statement opens with a management report and a description of the company, its vision, values and objectives. The intellectual capital statement is presented as two stories evolving in parallel:

- The first story illustrates the company's intellectual capital in words and in figures. Within the areas of customers, employees, processes and infrastructure, innovation and external relationships, the intellectual capital statement accounts for Systematic's performance in achieving its goals for the year.

- The second story presents the "theme" of the intellectual capital statement as knowledge management. Graphics are used to separate the two stories: the theme has a different format and paper quality than the other parts of the intellectual capital statement. In describing the various actions and ongoing activities, the theme inserts demonstrate how Systematic practices knowledge management.

MOTIVATION FOR PREPARING AN INTELLECTUAL CAPITAL STATEMENT

Systematic sees itself as a knowledge-based company developing complex IT solutions within information and communication systems. Intangible assets such as the employees' know-how, customer loyalty, efficient processes, and intellectual property rights are considered decisive for its future competitive power and

development. In Systematic's opinion the tangible assets are not essential for the company's future development.

In preparing its intellectual capital statement Systematic intends to visualise the company's knowledge resources and its core expertise, and also to expose the efforts made by its management to develop these resources. The purpose of this is to provide a better background for internal and external stakeholders to assess the company's future potential. The process of preparing the first intellectual capital statement has sharpened the focus on the external benefits from measuring and reporting its intellectual capital. The intellectual capital statement is now to an even greater extent considered as a tool for presentation of the company to customers, employees, business partners and other stakeholders. This is the result of Systematic realising the advantages from publication of its intellectual capital statement.

REVIEW OF THE CONTENT OF THE INTELLECTUAL CAPITAL STATEMENT

Figure 3 shows the inter-relationship between Systematic's knowledge narrative, the management challenges, actions, indicators and backgroundinformation.

IMPACTS OF THE INTELLECTUAL CAPITAL STATEMENT

Systematic intends to use the intellectual capital statement to define a mission-oriented management concept of developing its intellectual capital. It is to form the basis for the future development of the company through improved knowledge management that both makes knowledge sharing more efficient and promotes knowledge development. Furthermore, the publication of satisfaction surveys, good or bad, provokes Systematic to take action in order to improve unsatisfactory results. Systematic has experienced a great deal of interest in its intellectual capital statement. There has been a significant increase in requests to receive a copy of the intellectual capital statement as compared to last year. Systematic has also become a name to the scientific community, with the press and local entities such as local authorities and county councils and the Employment Service. The publication of the intellectual capital statement has thus contributed to creating new contacts both to future job candidates and to organisations and enterprises that Systematic does not normally reach.

APPENDIX /1: THE EXPERIENCE OF INTELLECTUAL CAPITAL STATEMENTS THREE CASES

SYSTEMATIC

Use value	Management challenges	Actions	Indicators
Creating development and providing a basis for rational decision-making with the customer by developing future-oriented and reliable software	Recruiting and retaining employees	Presentations at institutions of further education Initiatives in staff policy	• Proportion of staff with a university degree • No. unsolicited applications • Employee satisfaction • Employee perceiving Systematic as a satisfactory or very satisfactory workplace • Employee satisfaction with working environment • Absence due to illness • Intake or reduction of software engineers • Professional software competency (for the year and per engineer)
	Process improvement and project management	Implementation of business manual Knowledge agents in processes Documentation of projects	• Average or growth in average maturity level according to the Bootstrap model • Total Bootstrap process assessment • Employee satisfaction with quality and efficiency in work processes • No. internal hours spent on process improvement • Investment in process improvement • ISO 9001 and AQUAP certification
	Competency development	External project management training Internal staff training programme	• Training days per employee • Training investment per employee • Costs of external training courses • Proportion employees undergoing 15 days of intensive training
	Customer relationship development	Close contact with customer during specification of requirements Advising the customer during the entire collaborative process	• Distribution of existing customer relationship duration in years • Total active project customers and by defence and by industry • No. new strategic project customers • No. guests participating in "Solvejg's" lunch buffet • No. customer representatives at IRIS conference

Backgroundinformation

- No. of employees (DK and total group)
- No. part-time and full-time employees
- Employees by function
- Average age
- Proportion of employees below the age of 40
- Cola/carrot/pizza index
- Turnover and growth in turnover
- Turnover by project/product
- Project and licence assignment, % of total turnover by defence and by industrial customer
- Five largest project and licence customers in % of project and licence turnover
- Project turnover to civil customers
- Licences sold
- Investment in product development
- Total innovation investment, and % of group turnover
- Total telephone service index
- Average response time for calls to switchboard
- New products for the year
- PCs/workstations per employee
- Number of servers in network
- m2 office space
- Bicycle index

Figure 3: Systematic's use value, management challenges, actions, indicators and backgroundinformation

ATP – THE DANISH LABOUR MARKET SUPPLEMENTARY PENSION SCHEME

ATP - the Danish Labour Market Supplementary Pension Scheme is a co-operative administrative body for various labour market pension schemes and other collective pension schemes. At the end of 1999, ATP had 653 full-time employees and managed funds of around DKK 240 billion, distributed by a dozen different schemes. These pension schemes were created over the years since the company started managing the ATP scheme about 36 years ago. All these funds draw on the expertise that is ATP's core product: IT-based fund administration and its property management expertise. In practice, all Danes having been in contact with the labour market at some time or other are members of one or more of the schemes managed by ATP.

ATP'S INTELLECTUAL CAPITAL STATEMENT

For the years 1996 and 1997, ATP included a section on intellectual capital in its annual report. As from 1998 a proper intellectual capital statement visualised ATP's knowledge resources. ATP's second intellectual capital statement was included as a seven-page insert in the annual report and accounts, placed just before the financial review. The intellectual capital statement as well as the annual report and accounts are available at the web site address **www.atp.dk**

The intellectual capital statement is structured according to the Danish model for business excellence, as this model in ATP's opinion allows a comprehensive view of the organisation. In this model results reflect the visions and objectives, the place to start for future learning and renewal.

ATP has chosen to structure the intellectual capital statement so as to put results first. These are followed by actions performed to achieve the results. Not all dimensions of the business excellence model are treated under results. For instance, ATP is still working on how to measure the "Societal impact" and this was not included in the intellectual capital statement.

MOTIVATION FOR PREPARING AN INTELLECTUAL CAPITAL STATEMENT

ATP motivates the development of the intellectual capital statement by a wish to strengthen the internal management of resources in order to fulfil customer's needs. ATP further aims to create an organisation and staff ready to face the challenge of change and well prepared to play an active part in development and renewal.

ATP emphasises that, externally, the intellectual capital statement will provide stakeholders with essential information about the organisation's resources. As these resources are essentially IT and employees, they are only exposed to a limited extent in the traditional accounts. ATP has itself called for this type of non-financial information, when, as an investor, it had to evaluate the possible development of other companies.

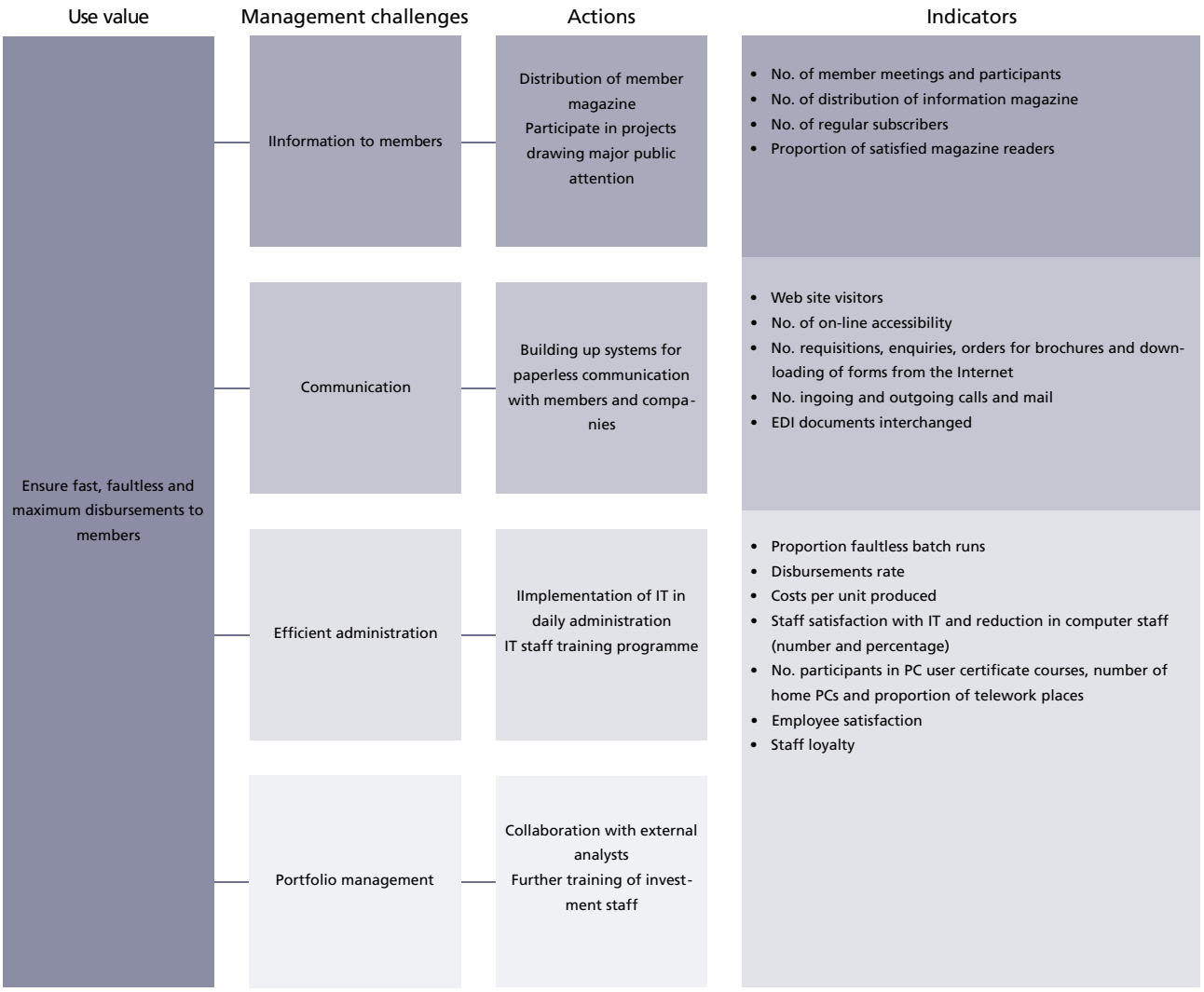
SURVEY OF THE CONTENT OF THE INTELLECTUAL CAPITAL STATEMENT

Figure 4 shows the inter-relationship between the use value, management challenges, actions and indicators.

For ATP it is important to report the development in the portfolio and the overall investment strategy. These details are separated from the intellectual capital statement and dealt with in the annual report. This competency is essential to the evaluation of ATP as a capital administrator, but as a consequence of the lay-out of the annual report the information is not contained in the intellectual capital statement.

APPENDIX /1: THE EXPERIENCE OF INTELLECTUAL CAPITAL STATEMENTS THREE CASES

ATP



Backgroundinformation

- Number of staff
- Gender distribution
- Age distribution, years on average
- Seniority distribution, years on aver age
- Distribution by / average educational level
- Distribution by full-time and part-time employees
- No. new employees
- Staff distribution by function
- Average sickness absence
- No. participants in MOVE "motivation and well-being"
- Proportion of employees leaving ATP
- Training investment per full-time employee
- No. training days per full-time employee
- No. participants in internal training
- No. workplace visits by physiotherapist
- Proportion competency discovery interviews in caseworker group
- No. training days per manager
- Proportion managers having participated in internal manager training
- Proportion employees having participated in satisfaction survey
- No. adjustable desk-top tables

Figure 4: ATP's use value, management challenges, actions, indicators and backgroundinformation

IMPACTS OF THE INTELLECTUAL CAPITAL STATEMENT

ATP expects the intellectual capital statement to contribute to improving the internal management of resources to satisfy the needs of users needs. The management has brought focus to some particular action areas that had been ignored previously. To take an example, awareness has increased that the age distribution in some areas may create a generation problem.

Internally, the intellectual capital statement is also expected to support the systematic building up of knowledge and skills, thus boosting staff motivation. The internal intellectual capital statement is not prepared as a special document, but the information generated from preparing the external intellectual capital statement is being used. The intellectual capital statement is also being considered for developing ATP as a learning organisation.

Externally ATP's intellectual capital statement is expected to generally improve its image. The intention is to show stakeholders, particularly the parties of the labour market, that ATP is an efficient and modern undertaking and to indicate quality in the working environment.

In preparing the intellectual capital statement the company realised that there was a complete lack of external effect goals for customers. A survey was conducted to find out whether information published in the member magazine Horisont was satisfactory. Such surveys were previously carried out on a needs basis, however these surveys now take place systematically for the benefit of the intellectual capital statement. The second statement thus presents a customer satisfaction survey for the first time. In future, regular surveys will be organised to use the information in connection with the external intellectual capital statement and to define targets and action areas internally.

APPENDIX /2

This Appendix shows examples of indicators that may be included in an intellectual capital statement. The examples were selected as an inspiration for the creative process of picking the right figures to support actions and management challenges. The figures may also sometimes serve as backgroundinformation.

All figures included in the table were used at least in one if not several of the 17 companies' intellectual ca-pital statements. In other situations and meeting other management challenges, the same figures can most probably be used in other ways.

The table is split into four categories: employees, customers, processes and technologies. The indicators are then subdivided according to what characteristics they reflect: resource mix, upgrade or impacts.

APPENDIX /2: INDICATORS

Note*: Please note that for all calculations using total number of employees, it should clearly be specified whether the calculation is based on the total payroll staff or whether this number was converted into full-time positions. In the latter case, the weighting factor and conversion methods should appear from the "Accounting Policy".

Note **: A scale-based method is mentioned in relation to some of the calculations. This could for example be a Likert scale from 1-5, where 1 is "Strongly disagree", 3 is "Undecided" and 5 is "Strongly agree ".

EMPLOYEES – RESOURCE MIX

Indicator	Calculation	Objective
Number of employees	Number of employees Number of employees should be converted into full-time positions* For some companies it could also be relevant to state total payroll staff	The number of employees is often backgroundinformation indicative of the size of the company. Development over time may also reflect the growth strategy of a company.
Age distribution	Employees distributed by age groups / total employees* Age groups can be, for instance, ages 0-25, 25-40, 40+ and can be subdivided into trade or professional groups and/or into functions	The age distribution indicates the composition of employees with age. It shows the most frequent age interval and indirectly describes the mix of young, dynamic forces co-operating with more mature and experienced colleagues. The age distribution is most often backgroundinformation.
Average age	Employees' total age / total employees*	The average age is typically used as backgroundinformation, although it is less informative than the age distribution.

EMPLOYEES – RESOURCE MIX – CONTINUED

Indicator	Calculation	Objective
Average seniority in the company	Employees' total number of seniority / total employees*	The average seniority in the company indicates the time employees have worked for the company on average. This figure is linked to the company's ability to retain its employees, reflecting such factors as the working environment, job satisfaction and loyalty. The figure should also be viewed in the light of the company's ability to attract new employees, thereby adding to its knowledge resources and pool of competencies. For some companies it will be necessary to show how job seniority is distributed rather than showing its average value. The number is typically related to management challenges such as development of competencies, recruiting and retaining employees, and integrating newcomers.
Average seniority in the industry	Total number of months in the industry / total employees*	The average seniority in the industry indicates the employees' overall experience in the industry. It is most often a better indicator than seniority in the company, since a major part of employee experience was often achieved while working for another company. This figure may be used in the context of management challenges, as for example when wishing to develop the competencies and skills of a facilitator. Also, if average seniority in the company is compared with average seniority in the industry, this will reflect the company's ability to attract new knowledge.
Sex distribution	Number of male and female employees, respectively / total employees* OR number of male and female employees. Further split is possible by function or other parameters. The sex distribution shows the male/female mix. The figure may be used as backgroundinformation.	The sex distribution shows the male/female mix. The figure can also serve as backgroundinformation.

EMPLOYEES – RESOURCE MIX – CONTINUED

Indicator	Calculation	Objective
Level and type of education	Number of employees by level or type of education / total employees* OR number of employees by level or type of education The education of employees may be distributed according to the following categories: unskilled, skilled, office, technical college or graduate and postgraduate level. Number of IT staff / total employees* OR number of IT staff.	The level or type of education reflects the employees' average length of education and its direction. The indicator may be used to give a survey of the resources and competencies of company staff and how this suits customers' requirements. The level or type of education is typically used as backgroundinformation reflecting the ability of the company to acquire new knowledge. The figure may also be related to management challenges such as development of competencies, recruiting and retaining employees, maintaining high standards etc.
IT employees	Number of IT employees OR proportion of IT employees / total employees*	The number of IT employees or their proportion reflects the size of this support function. The number may be seen as an indicator of the extent to which the company relies on this essential tool for its day-to-day operations, and also its degree of emphasis on IT. The figure is used as backgroundinformation. Its development over time may illustrate the company's IT strategy.
Employees' IT skills (PC user certificates)	The number of employees with specific IT skills. For example the level of skills may be distributed by number of employees with PC user certificates, years of experience in IT, etc. It will often be interesting to view this indicator together with the age distribution, since younger employees usually possess IT skills over and above those of mature employees.	Employees' IT skills (PC user certificates) are normally used as backgroundinformation, but can be related to management challenges like efficient administration, improved productivity, etc. The employees' IT skills can also show how well equipped the company is to implement future IT strategies.

EMPLOYEES – RESOURCE MIX – CONTINUED

Indicator	Objective	Objective
IT supporters and IT super users	Number of IT supporters and number of IT super users / total employees* OR number of IT supporters and number of IT super users.	IT supporters and IT super users are backgroundinformation, describing indirectly the extent to which the company makes use of IT tools.
Employees trained as project managers	Number of employees trained as project managers / total employees* OR number of employees trained as project managers	Employees trained as project managers are typically used as backgroundinformation to indicate the company's ability to manage future projects.
Employees acting as project managers	Number of acting project managers	Employees acting as project managers are usually used as backgroundinformation. Compared to the number of employees fully trained as project managers, this may indicate how the company handles project work.
Employees by department	Number of employees by department / total employees* OR number of employees by department	The distribution by department reflects which part of the organisation is emphasised the most. The development over time may show which departments receive most investment resources. The figure may be used as backgroundinformation.
Distribution by professional skills	Number of employees distributed by professional skills / total employees* OR number of employees distributed by professional skills.	The distribution by professional skills is mostly stated as backgroundinformation, and the figure is thus very similar to the employees by departments.

APPENDIX /2: INDICATORS

EMPLOYEES – UPGRADE

Indicator	Calculation	Objective
Appraisal interviews	Number of appraisal interviews / total appraisal interviews agreed OR number of appraisal interviews / total employees* OR number of appraisal interviews held	The number of appraisal interviews is an indicator of the company's staff development attitude. The figure is typically related to knowledge challenges such as continuous updating of knowledge, recruitment, retention of employees, etc. The figure can also serve as a background indicator.
Competency and career planning	Number of employees with a competency development plan / total employees* OR number of employees with a competency development plan	The competency and career planning describes individual development plans and shows that the company focuses on the individual employee's know-ledge development, professional know-how, competency and responsibility. The figure may be used as backgroundinformation and to support a management challenge, as for example attracting and retaining employees or competency development.
Employees being trained as project managers	Number of employees being trained as project managers / total employees* OR number of employees being trained as project managers	The number of employees being trained as project managers shows the company's efforts to develop employees and to prepare for future projects. The figure may be used as backgroundinformation and to support a management challenge in connection with competency development, recruitment and retention of employees, etc.
Education and training costs	Total education and training costs / total payroll expenses OR total education and training costs / total employees* OR total education and training costs.	The education and training costs indicate how much the company is willing to invest in retaining its employees by providing supplementary training, and how the company prepares for future challenges by developing the competencies of its staff. Educational costs can thus be a competitive parameter in recruiting new staff. Training costs are closely related to staff intake whenever the job requires an introductory course.

EMPLOYEES – UPGRADE – CONTINUED

Indicator	Calculation	Objective
	In some cases it will be better to split the total costs into introduction course, supplementary training, internal and external. Alternatively, it is possible to calculate the number of days spent on education and training.	The educational and training costs can be used as backgroundinformation. However, they are most often related to management challenges such as continuous updating of knowledge, recruiting and developing competencies, attracting and retaining employees, checking knowledge and competency development against objectives and strategy, integrating newcomers and creating a flexible and contemporary working environments.
Education days	Number of training and education days per year/ total employees* OR number of training and education days per year Alternatively, the education and training costs can be calculated.	The number of training days and the training costs can typically be used in the same situations. Both may thus be used as backgroundinformation, however the figure is most often related to management challenges, cf. "Training costs".
Knowledge-building resources	Number of hours spent on knowledge building per month / total monthly hours OR number of hours spent on knowledge building per month. Knowledge building includes participation in courses and in seminars, participation in R&D activities, reading books and articles, targeted use of the Internet, etc.	Resources spent on knowledge building may indicate how well the company prepares its employees for the future by involving them actively in development and renewal processes. The figure is often related to management challenges such as the continuous updating of knowledge, knowledge sharing and co-operation, attracting and retaining employees, supporting teamwork, etc. The figure can also be used as backgroundinformation.

EMPLOYEES – UPGRADE – CONTINUED

Indicator	Calculation	Objective
Job rotation, promotion and stationing	Number of employees that are on rotation, promoted or stationing / total employees* OR number of employees that are on rotation, promoted or stationing	Job rotation, promotions and relocations are indicative of staff flexibility and mobility, development of employee competencies through new challenges, retention and dissemination of knowledge. Taking into consideration the age of employees, their educational level and their job seniority, this shows where the challenge lies when it comes to holding on to valuable information. Job rotation, promotion and relocation are often related to management challenges such as attracting and retaining employees, flexibility, development of competencies, etc.
Social events including theme days	Number of social events OR costs per employee for social events	Social events including theme days show what the company does to increase the social network of individual employees. The figure might be one of several job satisfaction indicators. Social events can be used as backgroundinformation and supportive of a management challenge related to attracting and retaining employees.
Experience exchange meetings	Number of experience exchange group meetings. This indicator could profitably be split into internal and external experience exchange group meetings.	The number of meetings indicates how experience and knowledge can be shared across different companies or internally in the organisation. The figure will typically be presented in the context of management challenges such as knowledge sharing, collaboration, teamwork support, etc.

EMPLOYEES – IMPACTS

Indicator	Calculation	Objective
Employee satisfaction	Number of employees who are satisfied or very satisfied / total employees*. Based on a scale**. Measurements should take place at regular intervals (for instance once a year). They should not be at too brief intervals as the actions to be launched must have some time to work. Measuring employee satisfaction is often the combined product of a number of measurements within such themes as the physical and psychological working environment, personal development, pay deals and perks.	Employee satisfaction shows whether the company lives up to the employees' requirements and expectations. Comparing employee satisfaction to customer satisfaction is interesting as they often interrelate. The figure is used in conjunction with management challenges such as recruiting and development of competencies, attracting and retaining employees, etc.
Staff turnover	Number of employees leaving the company / total employees*.	The staff turnover reflects the rate at which employees leave the company. As with seniority, this rate is an expression of the company's ability to retain valuable knowledge. Low turnover rates may also, just as with high seniority, reflect a lack of renewal and ensuing lack of new knowledge brought in by newcomers. The figure is often related to management challenges such as recruiting, attracting and retaining staff, development of competencies, etc. It is also useful in the context of quality assurance and rejection rates, as it is relatively expensive to train new employees, just as more errors, other thing being equal, are likely to take place during the introductory period.
Staff intake and reduction; retaining staff, integrating newcomers, maintaining good standards etc.	Number of employees hired and number of employees leaving / total employees* OR number of employees hired and number of employees leaving.	The staff intake and reduction reflect the same as the staff turnover, namely the extent to which knowledge is retained and renewed. The figures may be used both as backgroundinformation and as key indicators in conjunction with management challenges such as recruiting, attracting and retaining staff.

EMPLOYEES – IMPACTS – CONTINUED

Indicators	Calculation	Objective
Customer satisfaction with staff	Number of customers who are satisfied or very satisfied with staff / total customers Based on a scale**	Customers' satisfaction with employees will typically be a management challenge in the context of ensuring high quality, maintaining good standards, customer-orientation etc.
Absence	Number of days of absence / total working days OR number of days of absence / total employees*. It is often relevant to split this key indicator, thus separating absence due to sickness from periods of training, education, children's sickness, work-related injuries, etc.	Absence is an indicator of working environment, employee satisfaction, routine and non-routine work, etc. The figures can thus serve both as backgroundinformation and relate to management challenges in connection with ensuring high quality of products, attracting and retaining employees, recruitment, etc.
Image among students	Percentage of students mentioning the organisation as an ideal future employer. This may for example be reflected in the public survey by Universum with the title, "The Danish Graduate Survey", or in similar surveys.	The image among students is an indicator of the extent to which the organisation can attract newly qualified labour. This figure is related to management challenges such as recruiting and retaining staff, etc.
Unsolicited applications	Number of unsolicited applications or enquiries It may be an advantage to split them into hourly paid employees and salaried employees, or to classify them into employees with particular skills or educational backgrounds.	Unsolicited applications signify the company's ability to attract new staff. It also reflects the image more generally. The figure is related to management challenges such as attracting and retaining staff, recruitment, etc.

CUSTOMERS – RESOURCE MIX

Indicators	Calculation	Objective
Turnover by segments and products	Turnover of a segment or a group of products / total turnover	The turnover distributed by segments and products can reflect the diversification of risk as well as point to areas that should be focused on in the future.
Dependence on key customers	The five or ten top customers' proportion of total turnover	The figure is used as backgroundinformation. Dependence on few customers is typically backgroundinformation, but can also be related to management challenges developed in co-operation with the customer, building up a partnership, etc. The figure gives information of the company's risk profile.

APPENDIX /2: INDICATORS

CUSTOMERS - UPGRADE

Indicator	Calculation	Objective
Customer-focused teams and innovative groups	Number of groups	Customer-focused teams and innovative groups are typically related to management challenges such as knowledge about customer needs, wishes and problems, visibility to the customer, meetings with users, customers, etc.
Co-operation agreements with universities and business schools	Number of relationships	Co-operation agreements entered with institutions of higher education reflect the company's access to specialists and thus to the latest research. For instance, the company may invite students to write their assignments on a company issue, or may agree to sponsor work performed by a PhD. Co-operation supports the corporate image within the educational institution, and the company may be seen as proactively engaged in recruiting new employees. The figure is related typically to management challenges as knowledge sharing and collaboration, recruiting employees, etc. But it may also act as backgroundinformation.

CUSTOMERS – IMPACTS

Indicator	Calculation	Objective
Customer satisfaction	Number of customers who are satisfied or very satisfied, respectively / total customers Based on a scale** It might be relevant for some companies to use weighted measurements in a customer survey, based on the importance of questions.	Customer satisfaction shows whether the company is able to meet customer expectations as to product quality, delivery and service etc. The figure is often related to management challenges such as visibility vis-à-vis the customer, development of work processes, high quality standards, customer orientation, etc.
Longevity of customer relationships	Number of years in which relationships have existed between the company and its customers. The longevity of relationships may be defined in intervals of: less than a year, 1-3 years, 4-6 years, and 7+ years, where zero typically reflects one-time customers.	The longevity of relationships reflects a customer's loyalty to the company. On the one hand a high average longevity can be a good sign, as it may indicate close customer relations, on the other the figure should not be too high, as this may indicate a lack of ability to acquire new customers. The figure may be related to the management challenge development of the relationship with the customer.
Ambassadors	Number of customers ready to recommend the company to others. Can profitably be stated as a percentage of total customers.	Ambassadors are most often very satisfied customers. This may also connote corporate image. The figure is typically related to management challenges such as knowledge about customers' needs, wishes and problems, visibility vis-à-vis the customer, developing work processes, developing the relationship with the customer, etc.
Entry of new customers	Number of new customers OR (entry of new customer minus loss of old customers) / total customers. The latter reflects total customer growth.	The entry of new customers will typically be related to management challenges describing how well the company fulfils customers' needs, development of customer relationship, etc.
Repeat customers	Number of repeat customers buying the brand / total customers. A fixed period must be set for brand customers dependent upon the product life cycle.	The rate of repeat customers expresses the brand loyalty behaviour of customers. It implicitly reflects the price-quality fit of the product and the ability of the company to market the product. The figure will typically be used in the context of management challenges such as development of the customer relationship.

APPENDIX /2: INDICATORS

PROCESSES – RESOURCE MIX

Indicator	Calculation	Objective
Standard operating procedures	Number of procedures described; OR Number of instructions described What is understood by a process should be clearly defined.	The standard operating procedures reflect the company's infrastructure in terms of data registration and dissemination of knowledge. The figure is most often used in relation to management challenges such as project management, production efficiency, etc.
Internal knowledge and information sharing	Proportion of updated knowledge documents on the intranet OR number of virtual expertise centres	Internal knowledge and information sharing is typically related to the management challenge interdisciplinarity.
Shared knowledge documents on the intranet	Number of knowledge documents on the intranet Alternatively, this indicator can be measured as Gigabytes of shared knowledge databases, depicting the capacity to share knowledge via the intranet (see also Technology –resource mix).	Shared knowledge documents on the intranet may serve to explain the company efforts to promote the sharing and development of knowledge and competencies. The figure may also indicate how far the company is able to reuse knowledge, namely previous procedures and solutions from similar tasks rather than creating new solutions from scratch each time. This figure is used for example in the context of management challenges such as embedding individual know-how in the organisation, interdisciplinary collaboration and integrating newcomers.
Interdisciplinary projects	Number of projects with team members from more than one professional domain / total projects OR Cross-sales / total sales	The number of interdisciplinary projects can reflect the competitive edge of the company, because combinations of resources and competencies are more difficult to imitate than single skills or single-resource products and services. This figure is related to management challenges such as knowledge sharing and collaboration, interdisciplinary teamwork, etc.

PROCESSES – RESOURCE MIX – CONTINUED

Indicator	Calculation	Objective
Average order processing time	Total time used to process orders / total orders	The average order processing time indicates the speed and reliability in deliveries as effectuated by the company. The figure is used in the context of management challenges such as effectiveness, the optimisation of production processes, etc.
Production costs	Costs per unit produced	Production costs are related to management challenges such as effectiveness, optimisation of production processes, efficiency of administration, etc. The development over time of this indicator and comparisons with the overall cost structure of the industrial sector provides a view of the level of costs.
Portfolio of patent rights	Number of currently approved patents	The portfolio of patent rights is used in relation to management challenges such as innovative capacity. It also reflects the position of the company in the near future.

APPENDIX /2: INDICATORS

PROCESSES – UPGRADE

Indicator	Calculation	Objective
R&D costs	The costs of research and development / total turnover OR R&D costs	The costs of R&D indicate the price at which the company has achieved its current level of competency as well as what competencies the company are building. It also shows the extent to which the company is looking ahead, and whether the company is preparing itself to meet future requirements. The figure is most often used in the context of management challenges such as innovative capacity, creating flexible and up-to-date environments, developing and improving advanced distribution systems and process improvement and project management. The figure may also be used as backgroundinformation.
Patent claims	Number of patent claims	Number of patent claims shows the company's innovative potential. The figure may be used in the context of management challenges such as innovative capacity or it may be used as backgroundinformation.
Employees' CV database requests	Number of times employees access the CV database per month / total employees* OR number of times employees access the CV database per month	The employees' use of the CV database shows how often employees require "know-who", meaning information to locate the right person with the right skills and experience in conjunction with specific problem solving. The figure may for example support management challenges related to teamwork and interdisciplinary projects.

PROCESSES – IMPACTS

Indicator	Calculation	Objective
Employees' satisfaction with quality and efficiency in work processes	Based on a scale** Alternatively, the figure can be expressed as a percentage calculated from the scale value	Employees' satisfaction with quality and efficiency in work processes shows where the company should focus in order to improve or change its processes. The figure is related to management challenges concerning process improvement and project management.
Complaints rate	Number of orders with ensuing complaints / total orders OR number of complaints	The complaints rate indicates the customers' perception of defective products. The figure is typically related to management challenges such as ensuring high quality standards for products, developing and improving advanced distribution systems, etc.
Quality assurance	Based on a scale**	Quality assurance often depends on the company's branch or industrial sector. Some companies are certified within different areas: hotels are awarded stars, others use indices such as Lloyds, ISO standards, etc.
Precise delivery	Number of orders delivered on time, at the right place, and in the correct volume and quality / total orders.	This figure is related to management challenges concerning high quality standards, process improvement, etc. Precise delivery indicates the credibility and reliability of the company's deliveries and thus the number of orders that meet the set standards. The figure can for instance be related to management challenges as ensuring a high product quality standard.

PROCESSES – IMPACTS – CONTINUED

Indicator	Calculation	Objective
Proportion of new products of total turnover	Turnover of new products / total turnover OR total sales in units of new products sold / total unit sales. New product may for example be defined as products with less than four years on the market.	The proportion of new products as a percentage of total turnover reflects the ability of the company to develop and market new products and whether the market has "accepted" the new products. The figure could for example be related to management challenges and to innovative capacity.
Service efficiency	Number of telephone calls answered within 10 seconds / total calls OR number of letters answered within the time limit / total mail OR total waiting time for calls placed to the switchboard / total calls to the switchboard, etc.	Service efficiency represents many different functions that may impact upon customers and how they experience the company on first impression. The figure is related to the management challenge efficiency, but may also be used in relation to customer-oriented management challenges.
Product innovation rate	Number of new products introduced during the past 12 months / total products.	The product innovation rate indicates whether in terms of products the company moves with the times, which again is related to the lead time in product development. The figure is typically used in relation to management challenges such as product development, efficiency, etc.

TECHNOLOGY – RESOURCE MIX

Indicator	Calculation	Objective
PCs per employee	Number of PC's / total employees* Some enterprises may find it expedient to further split this indicator into desktop PCs and portable PCs as portable PCs demonstrate more flexibility and mobility	PCs per employee shows whether the company is technologically updated and prepared for electronic data interchange via the intranet and the Internet. The figure is used as backgroundinformation.
Home PCs	Number of home PCs	The number of home PCs may indirectly reflect how many employees are interested in spending part of their leisure time to improve their IT skills (for example to qualify for a PC user certificate) or are engaged in telework. Home PCs are used as backgroundinformation.
Telework	Percentage of employees with home-based offices OR number of employees with home-based offices	Teleworking is possible from the home or from business centres with office rental, etc. The telework option indicates what the company does to achieve operational flexibility and to retain and attract qualified employees, as it is a gesture of accommodation for the employee's specific situation. The figure is related to management challenges such as recruiting and retaining staff and is also backgroundinformation. This will depend on the company's focus.

APPENDIX /2: INDICATORS

TECHNOLOGY – UPGRADE

Indicator	Calculation	Objective
IT costs	IT costs / total turnover OR IT costs.	The IT costs to some extent reflect the company's emphasis on keeping up-to-date in IT investments, so as to support processes, to create a framework for employees to perform in their jobs, and to provide customers with access to the company. The IT costs are an indicator used both as backgroundinformation and in connection with management challenges such as improvement in work processes, efficient production, etc.
Increased capacity from new computer installations	Percentage increase in capacity from new computer installations.	Increased capacity from new computer installations results in faster hardware and reduces space requirements and electricity expenditure, mainly as new technology in new computers is more compact. The figure is typically backgroundinformation but may also support a management challenge related to utilisation of capacity.
Investment in office space and equipment	Office space and equipment expenses / total employees* OR office space and equipment expenses	Investment in office space and equipment shows how the company supports processes and establishes a physical framework for its office employees and for customers' access to the company. The figure is typically backgroundinformation.

TECHNOLOGY – IMPACTS

Indicator	Calculation	Objective
Web site activity	Number of web site visitors	The web site activity indicates how many internal and external visitors daily surf the Internet. The number of visitors on the web site is also a good indicator for how well the company is known. The figure may be used as backgroundinformation and also as a management challenge related to communication.
E-mails via web site	Number of e-mails received directly via the web site	E-mails via web site show the questions that may arise in connection with the web site or the company profile. It may be an indicator of the company's image. The figure may also be related to the management challenge of communication.
Inquiries, brochure requests, downloads of forms from the Net, etc	Number of enquiries, requests, downloads of forms from the Internet, etc	Inquiries, brochure requests, downloads etc. may reflect the company's connection to the external environment. It may be part of the company's strategy to increase its customer service. The figure can be related to the management challenge of communication or, alternatively, it can be used as backgroundinformation.
Employee satisfaction with physical environment	Based on a scale** Alternatively, the figure can be stated as a percentage based on the scale value	Employees' satisfaction with the physical environment shows the company where to focus in order to provide the employees with an improved physical framework in which to function. The figure may be related to management challenges such as recruiting and retaining employees.

APPENDIX /3

In recent years, companies, consultants and researchers have delivered many interesting suggestions for the accounting statement of the future. A series of supplementary statements have appeared, and they seemingly resemble one another in that all report new types of figures. This appendix provides a quick survey of differences and similarities between intellectual capital statements, stakeholder statements and green and social statements.

APPENDIX /3: OTHER SUPPLEMENTARY ACCOUNTING STATEMENTS

None of these supplementary accounting statements have yet found their ultimate format or model of presentation, and new denominations and designs are constantly emerging. These various types of statements share a common feature of reporting figures, just as the financial statement. However, these figures are not entered into a clearly integrated bottom-line result. Each company's accounting statement thus has to include a description and arguments to make figures coherent with company challenges and to express the results achieved by the company within this context.

However, the following section will show how these types of statements differ on the point of principle. It is important to underline that the assessment of these differences is based on literature surveys concerning the three types of statements in question. The assessment is not addressing the dawning practice that has been initiated in the area, for example, by the Ernst & Young stakeholder statement, or Rambøll 's holistic statement or Spar Nord's quality and ethics statement.

Looking at the mainstreams in the literature concerning the recent statements, a tentative label can be applied to them based on the core issues addressed by each. The table opposite summarises three different types of supplementary accounting statements found in the literature on the subject.

Green and social statements explain how the company handles and addresses problems such as the possible discharge of undesirable substances, or work fatigue. The **stakeholder statement** is targeting the dialogue between the company and its stakeholders, while the **intellectual capital statement** reflects the company's ability to build up, develop and boost the effectiveness of the knowledge resources. All three forms of statements aim to develop the company in order to improve its ability to address future issues, but each statement has a different angle and similar issues are given different priorities.

The three types of statements expand the focus of the financial statement, each in their own way. Although they each constitute more than the financial statement, they can hardly be said to be comprehensive reports, as they address three different issues, at least according to the literature. Whether the three different types of statements can be integrated into a single format is an open question that deserves an investigation of its own.

	Intellectual capital statements	Stakeholder statements	Green and social statements
Objective	The objective of the intellectual capital statement is to state the company's resource basis and explain the activities the management puts into action to develop it.	The objective of the stakeholder statement is to explain the company's co-operation with selected stakeholders.	The objective of the green and social statements is to explain how to handle any undesired impacts of the company on its environment.
Content	The content of the statement regards the structure of the company and the building and development of resources, for example in the form of relations to and between employees, customers, technologies and processes.	The content of the statement concerns the flow of actions and the ensuing benefits reaped by the company from the different stakeholders and vice versa. Typically, what is described are the benefits accruing to the state, the employees and the local community.	The content of the statement regards the actions of the company to ensure balance in its ecological and social space.
Strategic perspective	The strategic perspective of the intellectual capital statement is the development of the company value by supporting the development, utilisation and sharing of knowledge resources and competencies. This is how the company's intangible assets and the knowledge management of the company are supported.	The strategic perspective of the stakeholder statement is to support the development of company value by creating a balance between what is concretely requested from and granted to the company. This reduces the uncertainty concerning the behaviour of the stakeholders.	The strategic perspective of the green and social statements is to develop the company by entering into a broad dialogue about the role of the company in a societal context. In this way the company shows its relevance to society.

Table 1: Survey of different types of accounting statements

APPENDIX /4

This list of terminology was prepared to present and explain the most frequent concepts used in the context of the intellectual capital statement. Several of the concepts are currently challenged by the ongoing academic debate on the subject, so not all are universally agreed upon.

APPENDIX /4: TERMINOLOGY

Annual statement of activities

The annual statement of activities is used by public corporations and contains a condensed financial and technical report outlining the performances and activities of the government institution. It includes the following items: chairman's report, statement of revenue and expenditure, results analysis, staff and organisation, cost analysis for market-driven and commercial activity areas as well as information as to grants and fixed assets. The annual statement of activities also includes the explanatory notes to the National Audit Office of Denmark.

Auditing

Normally used in conjunction with annual financial statements about the systematic process whereby an external and impartial expert objectively seeks to verify and assess information documenting the claimed financial transactions and events, in order to establish whether the results stated are in compliance with generally accepted accounting standards.

Auditor's report

Means by which the auditor or verifier communicates the results of the auditing or verification conducted to the users. It typically identifies the statement under review, the objectives and scope of the review, comments and qualifications, if any, and the opinion, date and signature.

Balanced scorecard

The balanced scorecard is an accounting method used in the context of financial management of the company and a model for strategic management. The method adopts nonfinancial key figures identified on the basis of their causal relationship. The figures are reported usually in the domains of "finance", "markets", "processes" and "learning and growth".

Benchmarking

A systematic comparison of performances based on measurements. The objective is often to identify the so-called best practice as a referential norm for the process(es) to be benchmarked.

Book-to-market value

The relation between the book value of a company (i.e. the value of the assets entered in the annual financial statement) and its market value (i.e. market capitalisation).

Brand equity

The assets and liabilities related to the brand, its name and symbol and how these may increase or reduce the value of a product or a service to a customer or to a user.

Business excellence model

A model enabling management to ensure the achievement of the company's strategic goals. The model shows the relation between strategic management decisions, allocation of resources, the implementing of manufacturing processes, the degree of satisfaction of employees, customers and society.

Competency

There might be two different types of theory as to what competencies are:
• Used as an expression of how technology, employees, formal management and governance systems, culture, etc in a complex interaction enable an organisation to execute tasks, undertake assignments or provide products or services.
• Used more restrictively to refer to the professional, experience-based and social competencies of individuals.

Competency account

The term competency account is applied to broad statements regarding society competencies at the national level. It is usually applied in the context of the Danish National Council of Competency and its publicised by The National Competency Account.

Comprehensive report

See holistic report. This term was coined by the Danish industrial concern Grundfos.

The Copenhagen Charter

A management guide to stakeholder reporting, published by the Danish offices of Ernst & Young, KPMG, PriceWaterhouseCoopers and the House of Mandag Morgen. This publication includes the following definition: stakeholder reporting is the process of reporting about the company's creation of value for its key stakeholders. Stakeholder reporting is the responsibility of management and is based on dialogue with stakeholders.

Core competency

The competencies endowing the company with a competitive advantage. Core competencies are typically built up over a prolonged period and are difficult to imitate.

APPENDIX /4: TERMINOLOGY

Corporate identity

The perceptions shared among staff as to (a) what is required to be essential to the organisation, (b) what differentiates this particular company from the others, and (c) what are the core capabilities connecting the company's past and present and leading to its future development.

Critical success factors

Activities or conditions regarded as essential and decisive for the accomplishment of a specific objective.

Customer capital

Refers to the part of the intellectual capital that may be assigned to customers.

Customer satisfaction survey

An external analysis measuring how the customer experiences the overall value of the supplier, the product programme or the marketing initiatives, etc. Can also be described as an attitudinal survey.

Disclosure

Communicating information. Often used as a generic term for all of the information that is disclosed in a report externally published.

EFQM

See Business Excellence

Environmental report, green report

The green report is intended for inducing statements from companies with a heavy impact on the environment, so that their consumption of energy, water and raw material will be known. Also required are statements concerning pollutants entering the production process and emissions of toxic substances into the environment or discharged with products and with waste disposal.

Ethical report

A report published externally displaying measurements of the extent to which the organisation is able to live up to the shared values to which it has committed itself. Representatives of the relevant stakeholders provide the precise definitions of the values. Spar Nord is a pioneer in this domain together with the researchers Peter Pruzan and Ole Thyssen of the Copenhagen Business School.

Explicit knowledge

Knowledge that can be verbalised and expressed in a set of sentences. Used as the antonym to tacit knowledge (see tacit knowledge).

External structure

The external structure is made of the relations woven between the company and its customers and suppliers, normally including brands, trademarks and the company's image or reputation.

Goodwill

The difference between the book value of the company and its purchase price.

Holistic report

The holistic report is mostly known in the context of the Danish engineering company Rambøll who have been engaged in developing the report format since the 1990s. Based on the Business Excellence model, the figures of the intellectual capital statement are systematised into actions (strategic, human, structural and process resources) as well as results (in relation to customers, employees, society and finance).

Human capital

Used in relation to human resource accounting and synonymous with the individual capital, however in the context of intellectual capital statements the term often also refers to company values and company culture.

Human resource accounting

The activities related to identifying and measuring financial aspects relative to staff. Typically involving determination of the costs of recruiting, selecting, hiring, training and developing human resources and of assessing their financial value to the company.

Individual capital

For instance, part of the intellectual capital attributable to the employees' skills and com petencies. Individual capital is used for example as an inclusive term for all the indicators concerning employees.

Intellectual capital

The market value of the company (i.e. market capitalisation) minus the book value. In conjunction with intellectual capital statements, the intellectual capital is often constituted by the grand total of customers, organisation and individual capital. It is also named knowledge capital. See also book-to-market value.

APPENDIX /4: TERMINOLOGY

Intangible assets

Assets composed of rights not immediately related to physical objects.

Invisible assets

The company's market value (for example market capitalisation) minus the value of the company's total book assets. Is in the literature of knowledge management often regarded as "intangible assets" or "invisible assets". Accounting standards, typically, operate with distinct definitions of invisible assets and intellectual capital.

Intellectual capital statement (or report)

A method of reporting that shows the company's efforts aimed at building up, developing and increasing the effectiveness of its knowledge resources in the context of employees, customers, technologies and processes. The intellectual capital statement is intended to support and communicate the development of the company's knowledge management strategy. Normally, and in this guideline as well, this definition is used about the statement as such and not only about the quantitative indicators.

Internal structure

Usually comprises patents, concepts, models, computers and administrative systems that, although created by the employees (or acquired) are owned by the company. Equivalent of organisational capital.

Knowledge management

Concerns what activities are launched to improve the company's ability to develop, share, embed and use knowledge. The main purpose of intellectual capital statement will often be to report on the company's knowledge management.

Mission

A statement of the connection between the company's visions, values and strategy in order to communicate the future course to the employees and other stakeholders.

Non-financial key indicators

Are used as measurements of performance, partially or entirely calculated using information that is not part of the financial accounting.

Organisational capital

See internal structure.

Human resource management accounting

A type of intellectual capital accounting designed to measure the financial aspects of human resource management. By assessing the financial consequences of human resource development, re-orientation, relocation, acquisition and turnover, the ties between financial management and human resource management are established. This makes it easier to answer questions such as "what are the costs of recruiting new employees?", "how do absenteeism and illness impact on the financial result?", etc.

Quality accounting

Used about reports structured according to the business excellence model and more specifically by Spar Nord about a more management-oriented extension of the ethical accounting method. It is essential that the quality report is made public, as the purpose is to enhance the dialogue with the company stakeholders.

Relational capital

Is often used about external structure.

Social report

An external report measuring the extent to which the company or institution implements its own strategy within the context of the social dimension, and communicating the company values or institutional values in this domain to the general public.

Stakeholder

The persons, group of persons or institutions that impact on the company's ability to pursue and implement its objectives. The stakeholders of a company usually include customers, employees, suppliers, owners and society.

Stakeholder report

An external report showing how the company's stakeholders have been identified and what they require of the company. Also showing how the company fulfils the wishes of the stakeholders. (See also The Copenhagen Charter).

APPENDIX /4: TERMINOLOGY

Structural capital

Used of the part of the intellectual capital that is owned by the company. Leif Edvinsson defines the term as: "Hardware, software, databases, organisational structure, patents, trademarks and everything else of organisational 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".

Tacit knowledge

Tacit knowledge defines the knowledge that is not explicitly expressed but is related to senses, perceptions, rule of thumb, intuition or physical abilities as well as movements. This type of knowledge is regarded as difficult to describe or to embed in an organisation or to transfer to others.

Tobin's q

The relation between (a) the company value to shareholders, i.e. its projected future earnings and (b) the value of assets measured by the replacement cost. Tobin's q was conceived as a support to strategic decisions about whether a company should continue investing. However the figure is applied also at sector level to evaluate whether the market is currently overrating or underrating companies.

TQM model

See Business Excellence model.

Verification

Often used in the context of controlling new accounting methods. It is an independent and objective validation of statements, as for example the claims of an intellectual capital statement. Neither practice nor standards have been established as to form, scope or substance. May at times be synonymous with control, examination, reviewing or auditing.

Vision

A statement of the objectives of the company, including the rationale that lies behind its foundation and guides its development.

Value added

The value created by the company once all externalities are deducted.

APPENDIX /5

Brief information about the 17 companies involved in the intellectual capital statement project initiated by the Danish Agency for Trade and Industry.

APPENDIX /5: LIST OF COMPANIES

A/S DANISH SHELL

Kampmannsgade 2

DK-1780 Copenhagen V

Tel.: +45 3337 2000

www.shell.dk

App. 530 employees working at the main offices located at the House of Shell in Copenhagen, at the refinery in Fredericia, at a local centre in Silkeborg and at another centre in Hedehusene, the logistic node for the Shell drivers and haulage contractors in the Eastern half of Denmark. The app. 3,500 employees working at Shell gas stations are not employees directly hired by Shell, but are still mentioned in the Chairman's report. As representatives of the company Shell they are subject to company general business principles.

ATP (THE DANISH LABOUR MARKET SUPPLEMENTARY PENSION SCHEME)

Kongens Vænge 8

DK-3400 Hillerød

Tel.: +45 4820 4820

www.atp.dk

As per December 31, 1999 there were 653 employees. The ATP Pension Fund is an independent orga-nisation and is together with the two recent funds the Temporary Pension Savings Scheme (DMP) and the Special Pension Savings Scheme (SP) part of the pension system, working to ensure wage earners a higher basic pension allowance. ATP is also the administrative framework to numerous other pension schemes.

BYGGECENTRUM

Dr. Neergaards Vej 15

DK-2970 Hørsholm

Tel.: +45 4576 7373

www.byggecentrum.dk

There are 130 employees and departments in Hørsholm, Bella Center (Business Centre and Exhibition Halls outside Copenhagen City) and Middelfart. Byggecentrum is the information centre for housing and construction, providing information about construction, energy and the environment to professionals as well as to privates. The company are active within the fields of publishing and selling books, information about construction provided on the Internet, course facilities, project services and building components exhibition.

BYGGEPLANDATA A/S

Guldsmedgade 1

DK-8000 Aarhus C

Tel.: +45 8613 1722

There are 23 employees. The company offers independent consulting to clients in connection with any type of construction projects. Main areas of activity: the building function, including drawing up construction programmes, project planning, financial management, tenders and subcontracting, EU tenders, building maintenance, technical support for property acquisition, and conducting 1-year and 5-year inspections.

CARL BRO GROUP

Granskoven 8

DK-2600 Glostrup

Tel.: +45 4348 6060

www.carlbro.dk

The Carl Bro Group is an international consulting engineering company with approximately 2,100 employees. Of these around 1,500 employees at Danish companies are comprised by the intellectual capital statement at the moment.

COLOPLAST A/S

Holtedam 1

DK-3050 Humlebæk

Tel.: +45 4911 1111

www.coloplast.com

Coloplast manufactures and distributes care products for the hospital and nursing care sector. Approximately 3,700 employees are working in 30 countries including Europe, the US, Australia, Japan, South American countries, Costa Rica and China.

COWI

Parallelvej 15

DK-2800 Lyngby

Tel.: +45 4597 2211

www.cowi.dk

Around 1,500 employees are working for COWI in Denmark. COWI are consulting engineers with a very wide range of expertise. There are 2,100 employees and activities undertaken in Norway, Spain, Thailand, Sweden, the Middle East, Eastern Asia, South America, Germany, Russia, the US, Poland and elsewhere.

DANSK SYSTEM INDUSTRI A/S

Kokkedal Industripark 2

DK-2980 Kokkedal

Tel.: +45 4914 3600

www.dsias.dk

Dansk System Industri has about 65 employees. Dansk System Industri provides software and IT solutions.

DATOR A/S

Stadionvej 2A

DK-9560 Hadsund

Tel.: +45 9653 1000

www.dator.dk

Dator employs about 90 employees. The company develops and implements high quality software solutions for integrated process and logistics management.

THE DANISH INSURANCE INSTITUTE RUNGSTEDGAARD A/S

Rungsted Strandvej 107

DK-2960 Rungsted Kyst

Tel.: +45 4586 4422

www.fh.dk

The Institute has 79 staff and around 330 part-time teachers and external examiners. It is the educational centre of the insurance industry in Denmark, and operates a publishing house and a course facility centre with 100 rooms. The owners are insurance companies, pension funds, insurance brokers and banks.

HOFMAN-BANG A/S

Hans Bekkevolds Allé 7

DK-2900 Hellerup

Tel.: +45 3948 8000

www.hofman-bang.dk

The company, with about 130 employees in Copenhagen and in Aarhus, offers counselling with regard to securing, maintaining, employing and defending intellectual property rights to clients in Denmark and abroad.

HOTEL IMPALA A/S

Vestre Ringvej 53

DK-8600 Silkeborg

Tel.: +45 8682 0300

www.impala.dk

The hotel has a staff of 35 employees, and offers conference facility and business centre services. A member of Best Western, the hotel has a capacity of 60 rooms.

KOMMUNEDATA A/S

Lautrupparken 40

DK-2750 Ballerup

Tel.: +45 4460 1000

www.kmd.dk

Kommunedata has a staff of 2,500 employees. There are local branch offices in Denmark at Ballerup, Brøndby, Valby, Fladså, Ikast, Odense, Ribe, Aarhus and Aalborg. Kommunedata operates IT systems, develops software, network services and offers consulting to Danish local authorities, county councils, government institutions and the private sector.

NELLEMANN KONSULENTERNE A/S

Sortemosevej 2

DK-3450 Allerød

Tel.: +45 4814 0466

www.nelkon.dk

Nellemann Konsulenterne has about 40 employees. It offers consultancy, planning and analysis to the public and private sector.

MEKU A/S

Mekuvej 9

DK-7171 Uldum

Tel.: +45 7690 1100

Meku has about 65 employees. Meku produces and markets veterinary medicines, dietary foods and pet care products world-wide.

SYSTEMATIC SOFTWARE ENGINEERING A/S

Frichsparken, Søren Frichs Vej 28 K

DK-8230 Åbyhøj

Tel.: +45 8943 2000

www.systematic.dk

Systematic Software Engineering has about 170 employees. The software and system integrator focuses on providing complex IT solutions for information and communication systems. Its main office is situated in Aarhus, with a regional office in Copenhagen and subsidiaries in the UK and in the US.

TELE & DATA

Østerbrogade 14

DK-6000 Kolding

Tel.: +45 7550 5402

www.teledata.dk

There are about 600 employees at Tele & Data. It is an umbrella organisation for independent Tele & Data branch offices. The organisation is responsible for the sales and marketing efforts as well as organisational development services for the Tele & Data branch offices and maintains a national network of Tele & Data service.

Intellectual capital statements in practice

This guideline represents the first key to knowledge management in the world to be based on the experience gained by a major group of companies in preparing intellectual capital statements.

The guideline is the result of the unique collaboration of companies, consultants, government officials and researchers over several years.

Its objective is to act as a source of inspiration to other companies in preparing intellectual capital statements by demonstrating a practical approach.

The increased interest in intellectual capital statements reflects the concern of more and more companies in realising the strategic importance of knowledge management in the broadest sense. They are aware of the growing need for developing their knowledge resources still further. Moreover, they want to be able to communicate this development in a comprehensible and credible manner.

Experience from the participating companies shows that the task is quite a challenge, but not an impossible one. They also found that the intellectual capital statement leads to impressive results – both within the organisation and externally in relation to customers, investors and society.

The guideline presents a systematic review of the phases of preparing and structuring an intellectual capital statement. To illustrate the principles, concrete examples are provided based on the experience of several of the companies involved.

For further reading about intellectual capital statements please visit **www.efs.dk/icaccounts**