

LAPPEENRANTA  
UNIVERSITY OF TECHNOLOGY  
School of Business  
International marketing

**THE ROLE OF KNOWLEDGE MANAGEMENT IN DEVELOPING  
COMMON BUSINESS MINDSET IN A FIRM**

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## **TIIVISTELMÄ**

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Yrityksen yhteisellä liiketoimintanäkemyksellä tarkoitetaan organisaation kykyä ymmärtää liiketoiminnan olennaiset elementit, ja varmistaa, että työntekijöillä ja yrityksen asiakkailla on positiivinen ja yhdenmukainen kuva ja kokemus kyseisestä organisaatiosta.

Tämän Pro-gradu – tutkielman tuloksena kehitettiin mittari, jolla yhteisen liiketoimintanäkemyksen tilaa voidaan yrityksessä mitata. Lisäksi tutkielma selvittää tietojohtamisen merkitystä yhteisen liiketoimintanäkemyksen kehityksessä. Tutkimusaineisto kerättiin Internet -kyselytutkimuksella, johon saatiin 158 vastausta. Aineisto analysoitiin tilastollisilla menetelmillä.

Tutkimustulokset viittaavat vahvasti siihen, että tiedon jakamisella ja verkostoitumisella on tilastollisesti merkittävä vaikutus yhteisen liiketoimintanäkemyksen kehittymisessä. Tästä syystä yritysten tulisi integroida tietojohtamisen periaatteet strategioihinsa ja luoda systemaattinen malli, joka kannustaa organisaatiota tiedon jakamiseen ja verkostoitumiseen.

## **ABSTRACT**

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Common business mindset (CBM) means the organisation's capability to common understanding of the essential elements of the business and ensuring that employees and customers have positive and consistent images of and experiences with this organisation.

In the course of this thesis a measure for assessing the level of CBM in a firm was developed. In addition, this thesis clarifies the role of knowledge management in developing CBM. The data was collected with Internet-based survey, which resulted in 158 responses. The data was analysed using statistical methods.

The empirical findings indicate strongly that knowledge transfer and networking have significant impact on CBM. Therefore firms should integrate principles of knowledge management into their strategies, and create a knowledge system, which encourages knowledge transfer and networking in their organisation.

## **KIITOSSANAT**

Nelisen vuotta sitten istui noin 30 aikuista Lappeenrannassa aloittamassa Kati 10 täydennyskoulutusohjelmaa. Silloin päätin, että vien tämän homman loppuun. Nyt se on tehty.

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Anja Rautsia 6.7. 2011

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## **1 INTRODUCTION**

This study aims to examine how managers can benefit from the ideas of knowledge management in creating and developing common business mindset within their organisation. In addition, to better capture the idea of common business mindset a small-scale measure will be developed. The study has been conducted as a case study in Nordea Finance Ltd (referred later in this thesis as Nordea Finance or a case firm).

The current chapter will establish the basic constitution of the work proceeding hereafter by first elaborating the background and purpose of the study and presenting the key research problems to be solved. A brief literature review will explain the background theories and a theoretical framework will further illustrate the basic focus of the work. Next, delimitations and definitions of the main concepts will be explained, and finally in the end of this chapter a brief description of the research methodology used in the study will be given.

### **1.1 Background of the research**

Preconditions for competitive advantage have changed during recent years due to global integration of markets and the immense speed of development of new technology. In addition, production has become more intangible when machine based production processes have been replaced with knowledge, which has become the productive resource of firms. (Ståhle and Wilenius, 2006).

To survive and prosper in the new economy of knowledge firms must reconsider their sources of competitive advantage. Existing research prove that sources of success are to be searched from creativity, ability for renewal and firms' intellectual capital (Barney, 1991; Nonaka, 1991; Porter, 1991; Grant, 1997; Ståhle and Grönroos, 2000; Ståhle and Wilenius, 2006). Firms must be able to adapt to the changes in their business envi-



ronment, and to be ready to flexibly modify or rewrite existing strategies and develop new earning logics.

In their search for new sources of competitive advantage firms may however, face many unexpected difficulties and hindrances. For example, existing structures and management practices may not provide support for handling issues derived from enormous flow of knowledge. Secondly, managers may lack skills and tools for identifying and assessing the firm's intellectual assets; the idea of the dynamic nature of capabilities or the concept of intellectual capital may not be known, thus a firm miss the opportunity connected with the firm's current resource base, especially the intellectual part of it (Nonaka, 1991; Ståhle and Wilenius, 2006; Kianto, 2008; 2011). Thirdly, the firm's strategy may not provide support for knowledge-based view as the strategies are usually concentrating on matters like market share, product range, funding and cost effectiveness, whereas the ideas of managing knowledge and firm's intellectual capital is not integrated in their strategies (Helfat et al. 2007).

Finally, the actions of employees depend on their absorptive capacity, meaning their ability to recognise the value of new information, assimilate it, and apply it to daily work (Cohen and Levinthal, 1990; Zahra and George, 2002), how they interpret and understand the strategies and what their own expectations are (Mathibe, 2008; Pettersson et al. 2009). Therefore, to create better foundation for the desired attitudes, firms must be able to create common understanding of the strategic elements and the expectations that the management have concerning individual behaviour and organisational climate.

The given examples of managerial difficulties focused on perspectives of knowledge and organisation's mindset in creating competitive advantage, as this study is mainly concerned about these issues. It is however understood, that also other kinds of difficulties and challenges may arise, but those are delimited outside the scope of this work.

Global competition or technology boom has not left finance companies outside their influence either. Moreover, global desire to reform finance market since years of financial crisis during 2007-2009, has started a new era of regulation, which is causing a lot of challenges for financiers. In order to sustain their competitiveness in the changing environment finance companies have to recreate answers for the crucial questions: what kind of investments future customers will make and what would be the most valued services that finance companies could, within the limits of regulation, provide to support customer needs, and what could be the competitive edge to win their competitors. Hence, also finance companies must be able to adapt to and exploit changes and develop their skills and competences to better fit the changing competitive environment.

To speed-up attitudinal and behavioural change to better fit new strategy, Nordea Finance initiated a sizeable training process for its sales force during 2008-2010 as part of its strategy implementation process. The goal of the training was to create a strong foundation for winning the market in the coming years, and to develop organisational mindset that would make the change happen in reality. The desired mindset consisted of understanding and adopting of common business processes, common working models and common customer approach and it was called common business mindset.

The term common business mindset may have been used initially as just a general expression without any intentions for further elaboration or specific definition. However, common business mindset as a phenomenon with potential influence in performance appeared to be important and thus worth studying more. Common business mindset as a goal was however problematic, because no usable tools existed for assessing the present state of this phenomenon. Thus, it was not possible to evaluate its development either. The generally known saying "You get what you measure" might in a reverse case mean, that no results of building common business mindset could be gained or recognised. Consequently, the purpose

of this thesis is to create a clear definition for the construct CBM and to develop a tool for measuring CBM. Ultimately, this thesis attempts to explore the effect of knowledge management in creating CBM in a firm. The practical purpose is to bring some ideas for managers in their efforts for enhancing common business mindset.

New ideas and usable tools were examined within the field of knowledge management because of new challenges in creating competitive advantage are in many ways concerned with the increasing flow of information and creation of new knowledge. In addition, as will be discussed in this study, also CBM was considered as knowledge, thus it could be managed as such.

The conceptual framework employed in elaborating the idea of CBM was derived initially from the definition of Nordea Finance, which quite naturally was chosen as a case firm for this study. The concept was further viewed from the perspectives of resource-based and knowledge-based theories but maybe the strongest influence was received from the theories of intellectual capital and dynamic capabilities. Additional support was received from prior research dealing with organisational behaviour, organisational culture, and communication management.

The discipline of knowledge management (KM) started to evolve since the 1990's, thus it is a fairly new approach to management. Neither the concept nor the discipline is very well understood in corporate environment. Hence, its scope is still often limited to information management merely (Stähle and Grönroos, 2000). However, KM could benefit organisations and managers in great deal, specifically in case of Nordea Finance where multinational structure of the firm may cause additional communication and knowledge transfer challenges. For these reasons, usable ideas of knowledge management (KM) will be explored and discussed in more detail, and suggestions of how KM approach could be exploited in developing CBM will be made. Moreover, it will be suggested, that KM actually has

a positive effect on creating CBM. For the sake of clarity the aim is not to assess the case firm's vision, strategy, operating models, culture or its success in past or in the future.

## **1.2 Research problem and the objectives of the research**

The aim of this research is to explore the usability of the ideas of KM in creating and enhancing CBM in a firm, more specifically in the case firm used in the study. Furthermore, the aim is to develop a definition and a measure for the construct CBM.

The main research problem is:

- What is the role of knowledge management in creating common business mindset in a firm?

The sub problems are:

- What is common business mindset and how can it be measured?
- What kind of ideas, tools and practices of KM can be used in enhancing CBM?

## **1.3 Literature review**

### **1.3.1 Concepts of mindset and common understanding**

In search of literature for this study direct discoveries of exactly the same concept or term as common business mindset were not made. Instead, the search resulted in finding the theories of corporate mindset (Talke, 2007), shared mindset (Ulrich and Smallwood, 2004) and common understanding (Jaatinen and Lavikka, 2008), which seemed to be good starting points in elaborating the construct of CBM further.

Corporate mindset, defined as long-term, difficult to alter determinant of firm behaviour (Talke, 2007), was built on the conceptual model of strategic orientation and findings from cognitive psychology on character traits

and resource based view. The construct consisted of four dimensions: analysis, proactiveness, aggressiveness and riskiness, and all these dimensions had both technology and market perspectives. Talke's (2007) theory of corporate mindset however appeared to focus more on orientation towards market, whereas the viewpoint in exploring CBM was more behavioural and CBM was viewed rather as additional resource of the firm, its intangible asset and intellectual capital.

Ulrich and Smallwood's (2004) concept of shared mindset was defined as "something" that individuals within the organisation have and feel. In addition the concept captured the idea: "We are good at ensuring that employees and customers have positive and consistent images of and experiences with our organisation". Although the concept of shared mindset seemed to have similar goals than the concept of common business mindset it was not very accurately defined. Anyhow, the concept of shared mindset provided some contribution to defining CBM, as will be discussed in Chapter 2.

Theory of common understanding (Jaatinen and Lavikka, 2008) offered important basis for developing the idea of CBM. The concept was defined as a kind of ideal state or goal to which collaborators are striving, which resembled the first ideas of CBM. The authors built the theory of common understanding on a foundation of sense-making consisting of a three-step process of enactment, selection and retention. The findings of Jaatinen and Lavikka (2008) suggest that common understanding is an important mechanism of coordination in business networks, and that the creation of shared meanings lays the ground for collaboration.

The framework of common understanding consisted of such elements as shared ways of thinking (common concepts, language, symbols, norms, and values), shared environment, shared goals (common objectives and expectations), shared business model (shared understanding about the way a network is responding to the needs of the common customers and

the earning logic behind it), shared operating model (roles and responsibilities and common process of planning), shared knowledge, and shared competences and resources. Many of these elements (e.g. shared goals, shared operating models, and shared customer approach) were also aspects of CBM by the definition of Nordea Finance's top management.

Nonaka (1991) stated that successful organisations have something that can be seen as the organisational equivalent of self-knowledge: a shared understanding of what the company stands for, where it is going, what kind of world it wants to live in, and how to make that world a reality. This statement seems to support the idea of common understanding and its importance to a firm's success.

### **1.3.2 Attitudes and culture**

Many researchers agree that a strong corporate culture influences a firm's financial performance by first affecting to behavioural consistency of the employees which in turn enhances coordination and control, improve goal alignment, and increase employee effort. (Sadri and Lees, 2001; Schein, 2004; Flatt & Kowalczyk, 2008). Groups gradually develop routine ways of behaving and these learned habits will be taught to new members as the correct way to perceive, think, and feel in relation to the group in question (Schein, 2004). According to the theory of critically reflective work behaviour employees also learn by reflecting in interaction with others and while doing so they aim at optimising individual or collective practices, or critically analysing and trying to change organisational or individual values (Van Woerkom and Croon, 2008). From the firm's point of view the concern is, whether these invented formal and informal routines affect positively or negatively to performance, and therefore it would be necessary for managers to recognise how these routines are developed.

Culture is a complex phenomenon and appears in various ways: Schein (2004) describes cultural levels as artefacts (visible structures and proc-

esses), expressed values (strategies, objectives and philosophies, which represent the expressed reasons for existence) and basic assumptions (invisible, taken for granted beliefs, assumptions, thoughts and feelings, which represent the deepest basic source of values and operations). In addition different cultural types may rely on power, task, role or a person (Brooks, 1999).

When firms are planning strategic changes managers may require some kind of changes also in the attitudes and behaviour of people. Then firms need to consider different layers of culture: values, beliefs, behaviours and finally the taken-for-granted assumptions, which make up the paradigm (Johnson et al. 2006). Behaviours and attitudes may be difficult to change and those hidden assumptions may even add this difficulty. Therefore Schein's (2004) statement, according to which it may not be the culture that is problematic or wrong, may be relieving for managers.

Schein (2004) further claims that it is difficult or even impossible to measure culture, but in order to expose the hidden cultural assumptions and paradigms firms could exploit a strategic tool called The Cultural Web, designed by Johnson et Scholes (Johnson et al. 2006). The Cultural Web comprises hard structural and systems characteristics of organisations together with soft symbolic features. It may be applied in examining the possible hidden paradigms of culture affecting organisational behaviour (Johnson et al. 2006). By analysing both structural and soft characteristics, it is possible to see the bigger picture of the organisation's culture: what is working, what is not working, and what needs to be changed. (Brooks 1999).

### **1.3.3 Sources of sustainable competitive advantage**

The basic idea of the resource based theory is that a firm's assets, skills and capabilities create value that bring sustainable competitive advantage and superior financial performance for the firm (Barney, 1991;Kyläheiko,

2006; Flatt and Kowalczyk, 2008). To have the potential for creating sustainable competitive advantage the resources must be valuable, rare, inimitable and non-substitutable (VRIN attributes) that is resources, that competitors cannot easily duplicate or buy (Barney, 1991). Thus the core concern of the modern resource based view is how firms can create strategic firewalls that enable them to hinder replication and build competitive advantage through its VRIN resources. Barney (1991) includes all assets, capabilities, organisational processes, firm attributes, information and knowledge to firm resources. Similarly also other scholars include skills and capabilities in a firm's resources (Porter, 1991; Kyläheiko, 2006; Helfat, 2007).

Capabilities have been defined as the ability to perform a particular task or activity (Helfat et al. 2007). Capabilities can be static (or operational) or dynamic; static capabilities enable an organisation to earn its living in the present, dynamic capabilities enable an organisation to purposefully create, extend or modify its resource base for future (Kyläheiko, 2006; Helfat et al. 2007). According to Kyläheiko (2006) organisations are learning and reciprocal networks, which are constructed of knowledge capital, static and dynamic routines and connecting capabilities. The author further defines that the routines include individual skills, capabilities and habits, which form a foundation for emergence of more collective organisational capabilities. In fact capabilities can be considered as piles of routines, through which the knowledge of an organisation is connected with other resources (Kyläheiko, 2006).

The knowledge based theory of the firm views knowledge as a pre-eminent resource of the firm, which should be exploited to create competitive advantage (Grant, 1997). According to the knowledge based theory knowledge is a productive resource including both tacit and explicit knowledge. Tacit knowledge consists of "something" that an individual can do or knows but it cannot be easily transferred, and thus it is a resource for other activities (Nonaka and Takeuchi 1995; Leonard and Sensiper, 1998;



Ståhle and Grönroos 2000). In order to create competitive advantage with knowledge firms should first identify the knowledge available in the firm and then create a mechanism for combining different types of knowledge, meaning a mechanism of integration, which enables building new capabilities (Grant, 1997; Sveiby, 2001).

#### **1.3.4 Intellectual capital**

The theories of knowledge and dynamic capabilities lead to the theories of intellectual capital, which are important bases for discussing and developing the idea of CBM further.

Firm's resources include tangible (e.g. financial assets, capital, production capability, etc.) intangible (e.g. intellectual property, trade secrets, corporate reputation, culture, employee know-how, etc.) and human assets (or human resources). (Ståhle and Grönroos, 2000; Ståhle and Wilenius, 2006; Helfat et al. 2007; Flatt and Kowalczyk, 2008).

The intangible part of the resources has been discussed using various concepts. At least the following terms have been traced: intangible assets, intellectual capital, and knowledge assets (Kujansivu et al. 2007). In addition, many definitions and frameworks exist about Intellectual capital but perhaps the most common definition is to divide it to relational capital, human capital and structural capital (Ståhle and Wilenius, 2006; Kujansivu et al. 2007). Human capital refers to individual capabilities, competencies and special talents of a firm's employees. Structural capital refers to systems, processes and operating models and finally relational capital refers to customer, partner and stakeholder relations. (Ståhle and Wilenius, 2006; Kujansivu et al. 2007).

Intellectual capital can be described as all those assets that are needed to make a firm's business possible, thus being the organisation's dynamic competitive power emerging from individuals' talent, ability to cooperate

and ability to look forward into the future, which is hard for competitors to imitate. (Kaplan and Norton, 2004; Ståhle and Wilenius, 2006; Kujansivu et al.2007). Furthermore, intellectual capital is dynamic in nature as it is constantly changing and developing (Kujansivu et al. 2007).

### **1.3.5 Measuring intellectual capital**

Measuring or even acknowledgement of intellectual capital is difficult, yet there are many arguments supporting measuring. Kujansivu et al. (2007) suggest a few arguments as follows: firstly, clear objectives can be placed for developing intellectual capital. Secondly, measurement acts as a tool for directing employees' actions. Thirdly, measurement enables follow-up and reporting to stakeholders. Hence, measuring is important as it enables control, reporting and rewarding. In addition measurement helps in assessing value of intellectual capital, comparing it and learning about it.

A lot of methods for measuring intellectual capital exist, but none of them has really become a standard model (Kujansivu et al.2007). The measures of intellectual capital have been categorised in six types: firm level measures, monetary value measures, multidimensional measures, non-financial KPIs, management processes and reporting models (Lönnqvist, 2004; Kujansivu et al.2007). Multidimensional scales are large measures that include several subscales. These measures include similar components to The Balanced scorecard (BSC), which is a widely known measure of financial performance. For example Kianto's (2008) ORCI™, a tool for measuring organisational renewal capability, represents this category. In the category of management processes the idea is to integrate intellectual capital with a firm's strategy. This type includes also the needs of intellectual capital development. Reporting models describe a firm's competences, explaining the context in which intellectual capital is assessed. Key performance indicators try to disclose the status of intellectual capital with one single KPI. They are measures that aim at defining the euro value for intellectual capital. (Lönnqvist, 2004; Kujansivu et al.2007).

In addition to the above summarised measures Van Buren's (1999) Intellectual Capital Management Model, Ulrich and Smallwood's (2004) Capabilities Audit, and Talke's (2007) measure of corporate mindset and a measure for evolutionary fitness, created by Helfat et al. (2007) were reviewed.

Although many tools and validated measures exist they are mostly aimed for measuring all and very general intangible assets of a firm, and they do not fit directly for measuring a firm specific single construct like CBM. However, they may contribute to this work by supporting the idea that measuring of such an abstract construct is possible and by giving direction and guidance to developing a new measure.

### **1.3.6 Theory of Knowledge Management**

Already in the 1990's some Japanese companies (e.g. Honda, Canon and Matsushita) became famous for their ability to respond quickly to customers, create new markets, rapidly develop new products, and dominate emergent technologies (Nonaka, 1991). The secret of the success of those companies was their unique approach to managing the creation of new knowledge and specifically the way of which knowledge creation was organised. It was not a responsibility of a specific unit or department, but it was a way of behaving in every day work resulting in a kind of spiral of learning (Nonaka, 1991). Since the 1990's there has been a significant increase in literature discussing knowledge management, and today most scholars seem to agree that managing knowledge is crucial for the success of the firms (Nonaka, 1991; Nonaka and Takeuchi, 1995; Grant, 1997; Leonard and Sensiper, 1998; Ståhle and Grönroos, 2000; Probst et al. 2002). Scholars also seem to agree that knowledge management should be seen as a supplementary view to management, and it should be integrated in the firm's strategy (Earl, 2001; Probst et al., 2002).

Nonaka's (1991) article about knowledge creating company lays foundation for the knowledge management system including knowledge creation, sharing, utilising and storing of knowledge. The emphasis is on integrative, systematic and consistent structures, which enable reciprocity and the efficient flow of knowledge. (Ståhle and Grönroos, 2000; Earl, 2001; Probst et al. 2002; Goh, 2005).

Knowledge creation requires creating structures for interaction and identification of potential knowledge (Nonaka, 1991; Grant, 1997; Probst et al. 2002; Goh, 2005). Moreover, effective knowledge transfer requires openness, reciprocity and specific skills for understanding the drivers and barriers of efficient knowledge transfer (Ståhle and Grönroos 2000; Guzman and Wilson, 2005; Minbaeva, 2007; Li and Hsien, 2009). Managers need to distinguish with different types and characteristics of knowledge as complexity and specificity along with tacitness of knowledge may cause a barrier to the effective knowledge transfer process (Minbaeva, 2007). The author states further that also characteristics of senders and receivers of knowledge are key determinants of successful knowledge transfer. It has been stated that managers have to see personal relevance in sparing any effort to knowledge managing issues (Bailey and Clarke, 2001; Ulrich and Smallwood, 2004), thus this refers to systems of goal setting and rewarding, which should be part of the firms' knowledge systems (Probst et al. 2002).

#### **1.4 Theoretical framework**

The preliminary theoretical framework (Figure 1) demonstrates the main research question about the role of KM in creating CBM as well as the background theories. The dimensions of CBM: common understanding of vision, strategy and goals, operating models and organisational culture are visible in the framework. Even though the positive outcome of CBM (financial performance) is not in the scope of this study it is shown in the framework in order to keep in mind the eventual benefit of CBM.

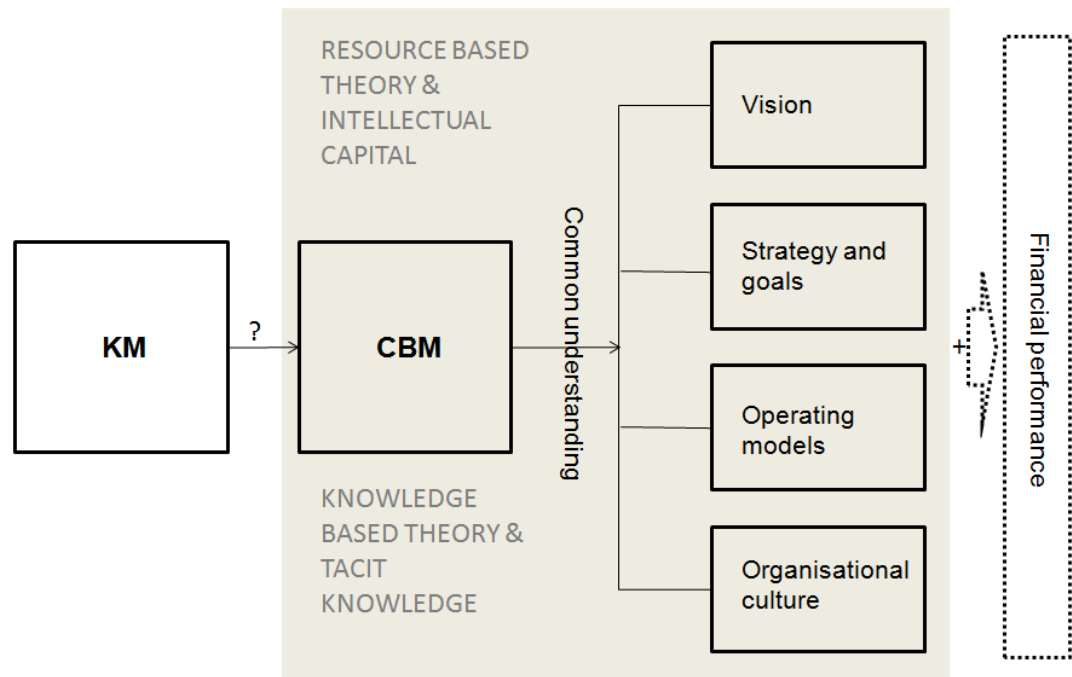


Figure 1: Preliminary theoretical framework of the study

## 1.5 Definitions of the key concepts

### 1.5.1 Common understanding

Common understanding means a state of consensus where members of an organisation use shared meanings and understandings on the environment, identity, and actions of the organisation to coordinate their actions. Thus, common understanding can be seen as an ideal state or goal to which collaborators are striving. (Jaatinen and Lavikka, 2008).

### 1.5.2 Common business mindset

Common business mindset (CBM) means the organisation's capability to common understanding of the essential elements of the business, and ensuring that employees and customers have positive and consistent images of and experiences with this organisation.

### **1.5.3 Intellectual capital**

Intellectual capital (IC) is a firm's intangible asset consisting of knowledge and skills of individuals, relations, contacts and networks that are crucial for a firm's success. IC is thus knowledge that can be converted into profits. (Ståhle and Wilenius, 2006; Kujansivu et al. 2007).

### **1.5.4 Vision**

Vision is the desired future state of the organisation. It is an aspiration around which a strategist, perhaps a chief executive, might seek to focus the attention and energies of members of the organisation. (Johnson et al. 2006, 13).

### **1.5.5 Strategy and goals**

Strategy means the direction and scope of an organisation over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations. (Johnson et al. 2006, 9).

Mintzberg et al. (1998,11-14) define strategy with several terms: a plan or direction into the future, a pattern meaning consistency in behaviour over time, a position meaning locating particular products in particular markets, a perspective meaning organisation's fundamental way or philosophy of doing things, or a ploy meaning a specific manoeuvre to outwit an opponent or creditor.

Goal is defined as a general statement of aim or purpose, whereas objective includes also quantification or more precise statement of goal. (Johnson et al. 2006, 13).

### **1.5.6 Operating model**

Operating models in this study mean a way of doing business and specifically operational structures of handling relationships with customers and partners, including that the members of an organisation speak the same language, that is understand each other (Bang, 2009). Shared operating model includes roles and responsibilities and common process of planning (Jaatinen & Lavikka, 2008).

For the sake of clarity, in this study operating model is not regarded as a synonym of business model, which according to Johnson et al. (2006, 13) means how products, services and information flow between participating parties.

### **1.5.7 Organisational culture**

Organisational culture (or corporate culture) is the organisation's mind, the shared beliefs that are reflected in traditions and habits as well as more tangible manifestations like stories, symbols, even buildings and products (Mintzberg et al. 1998, 265)

The very core of culture is the basic, common, unobservable assumptions that people base their behaviours on. This results to what is meant by saying "this is the way of doing things here". These learned habits have worked well enough to be considered valid and therefore, to be taught to new members as the correct way to perceive, think and feel in relation to the group in question. (Schein, 2004).

### **1.5.8 Knowledge**

Data become information when put in context and information becomes knowledge when it is interpreted meaningfully in relation to the situation and user. (Ståhle and Grönroos, 2000).

Knowledge can be in explicit or tacit form. Explicit knowledge can be communicated to others in an understandable form. Tacit knowledge is something that an individual can do or knows but it cannot be easily transferred. (Nonaka and Takeuchi, 1995; Ståhle and Grönroos, 2000).

If our behaviour in a certain situation, and the manner or process whereby we solve problems is included in tacit knowledge, then explicit knowledge may be only the peak of an iceberg when thinking of knowledge as a holistic concept. (Ståhle and Grönroos, 2000, 32).

### **1.5.9 Knowledge management**

Knowledge management (KM) is the discipline to enable individuals, teams, organisations and communities more collectively and systematically capture, store, share and apply their knowledge to achieve their objectives. (Knowledge-management-online, 2011).

Nonaka and Takeuchi (1995) have formulated KM as the set of processes that permits the use of knowledge to generate and add organisational value.

Bailey and Clarke (2000) provide a similar definition stating that KM means how managers can generate, communicate and exploit knowledge for personal and organisational benefit.

According to Ståhle (2010) KM is leadership with which knowledge, capabilities and intangible assets can be transformed to economic value for the organisation.

## **1.6 Delimitations**

Construct of CBM was developed based on the ideas emerging from the specific firm, with back up from theories that consider firm's mindset as resource. It was understood that for instance theories of strategic management could have provided an interesting viewpoint to CBM but the de-



cision was made to keep focus on the chosen area of resource based and knowledge based views and intellectual capital. These back-up theories as well as theories of KM, could however be covered only partly because theories of intellectual capital and knowledge management as a whole, seem to be far too wide and complex areas to be covered totally within the constraints of one thesis.

## **1.7 Research Methodology**

This study was conducted using a combination of qualitative and quantitative methods. Qualitative methods were utilised in building the context for CBM and in gathering information for the hypotheses of the study. This choice was made in order to collect rich data for conceptualisation of the rather abstract construct of CBM. Measurement is fundamentally quantitative, therefore quantitative methods were chosen for measure development. Quantitative methods provide accurate methods for analysis, which enable development of a reliable and valid measure and testing of the hypotheses. (Metsämuuronen, 2006; Lee and Lings, 2008).

The aspects of CBM were identified inductively based on the interviews of the case firm's top management, followed by a literature review and deductive elaboration of the construct based on prior theories. The case study design consisted of a multinational finance company, Nordea Finance and its sales force in eight countries. The data was collected among the sales force in the case firm, the sample was 265 people and 158 responses were received, the response rate being thus 59, 6 %. Existing models of Churchill (1979), Metsämuuronen (2006) and Lee and Lings (2008) were utilised in the process of operationalising the construct CBM, as well as in developing the measurement of CBM. Data analyses were executed using quantitative analysis methods in SPSS –solution. Finally, the usable ideas of knowledge management were explored and discussed based on earlier studies within the discipline of knowledge management.

Research methods and the process of the empirical part of this study will be explained and discussed in more detail in Chapter 5.

## **1.8 The structure of the work**

This study is structured in seven chapters each of them having several subchapters. The following chapter (Chapter 2) starts with a detailed explanation of the process of defining the construct CBM and explaining its meaning. Thereafter, the importance of CBM, challenges in creating CBM and measuring CBM are explained and discussed. Chapter 3 consists of general description of knowledge management system and taxonomy of KM that could help managers in initiating KM practices. The discussion about managerial challenges is also included in this chapter. The role of KM in developing CBM will be explained and discussed in Chapter 4, including the hypotheses concerning the impact of KM on CBM. Chapter 5 consists of descriptions of the research methods used in this work, the measure development and the data collection processes. Also assessment of validity and reliability are included. The empirical findings are summarised in Chapter 6. Finally, Chapter 7 consists of summary and the analysis of the results together with some managerial implications. Also the limitations and ideas for further research are suggested.

## **2 COMMON BUSINESS MINDSET (CBM)**

### **2.1 What is CBM?**

CBM has been defined during this study as *the organisation's capability to common understanding of the essential elements of the business and ensuring that employees and customers have positive and consistent images of and experiences with this organisation.*

The theory of common understanding (Jaatinen and Lavikka, 2008) provided a natural foundation to developing the idea of CBM further as CBM already initially included the idea of common understanding of doing business, when used in Nordea Finance sales force training. Concept of common understanding was defined by Jaatinen and Lavikka (2008) as *a kind of ideal state or goal to which collaborators are striving*. According to the authors common understanding was founded on the theory of sense-making, which is grounded in identity construction, meaning that when people make sense of different events, issues, questions, problems and practices they do it by constructing meanings for themselves. (Vaara et al. 2003; Jaatinen and Lavikka, 2008).

Part of the definition was adapted from Ulrich and Smallwood's (2004) concept of shared mindset. The authors assessed skills and capabilities from the functional viewpoint, meaning that organisational capabilities emerge when a company delivers on the combined competencies and abilities of its individuals. Thus, *"we are good at ensuring that employees and customer have positive and consistent images of and experiences with our organisation"*, captures the idea of the organisation's capacity to act, which may be seen as the ultimate purpose of CBM.

In addition to theories of common understanding and shared mindset, CBM was built on the theories of corporate mindset (Talke, 2007), intellectual capital (Ståhle and Grönroos, 2000; Helfat et al. 2007; Ståhle and Wilenius, 2006) and corporate culture (Schein, 2004; Brooks, 1999). These theories helped to understand the abstract nature of CBM and also to identify different dimensions of CBM. Theories of intellectual capital made a significant contribution to measuring CBM, as they allow viewing CBM as a firm's dynamic, intangible asset that can be converted into profits. CBM as an organisational phenomenon will be discussed further in this chapter, whereas the process of operationalisation of the construct will be reported in detail in Chapter 5.

Even though some support for the ideas of CBM can be found from prior theories, CBM as defined in this thesis should be regarded as a very firm specific construct. In this study CBM is discussed in the context of Nordea Finance, which provided the starting point for the definition of the construct. CBM may however have different meanings depending on the context where it is used.

As may be recalled from the introductory part of this study, term common business mindset was used in Nordea Finance in connection with a training program for the firm's sales force during the implementation process of a new and challenging strategy in 2008 - 2010. The program was based on values: "One Nordea Team", "Great customer experience" and "It's all about people" (Bang, 2009). The goal for the training was to create common business mindset including common understanding of doing business, a common terminology, an agreed operational structure of handling pan-regional and large local partners and an ability to convert overall values into daily operational execution (Bang, 2009).

The review of Bang's (2009) presentation material of the training program revealed additional goals embedded in the desired common business mindset. Firstly, there was a need for acquiring and exploiting knowledge in order to gain more competitive power. This included both knowledge of own organisation, its possibilities, products and services, and knowledge of partners, prospects and competitors. Secondly, there was a need for knowledge sharing by networking and reciprocity; sales force was encouraged to get to know own company well and take advantage of knowledge of all colleagues within the whole Nordea group. It was also suggested that partners should be involved into the discussions concerning future development in order to create innovative solutions for partners' value chain. Thirdly, it was seen important to have a common understanding of the firm's vision, strategy and goals.

Based on the training material and additional interviews and discussions with the top management of Nordea Finance, and with support of prior theories, four dimensions of CBM were agreed. The dimensions were: common understanding of vision, common understanding of strategy and goals, common understanding of operating models and common understanding of organisational culture. However, during the measure development process, as will be explained in Chapter 5, the dimension of organisational culture was removed as a result of the exploratory factor analysis, and the dimension of customer approach was added. Consequently, the theoretical framework of the study was modified to correspond to these changes. The modified framework is illustrated in Figure 2.

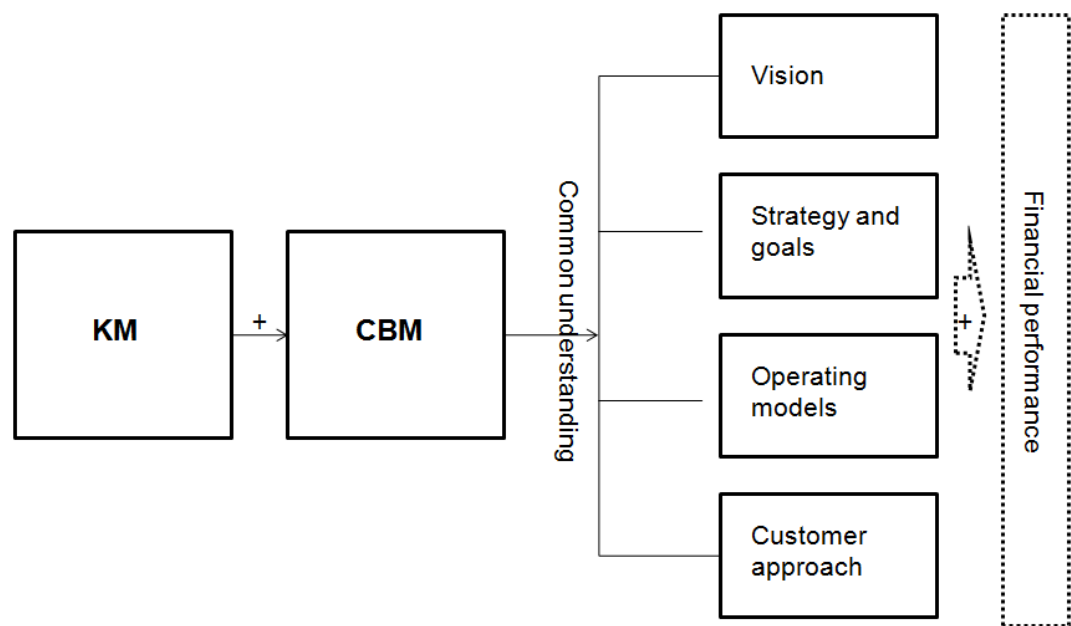


Figure 2: Modified theoretical framework

The first dimension of CBM, *Common understanding of vision*, refers to that employees make sense of and internalise the firm's vision. "*Companies fail to create the future not because they fail to predict it but because they fail to imagine it*" (Hamel, 2002). Hence, top managers try to express their aspiration of the future explicitly in order to make clear what they hope the firm's future to be. This explicit statement is then shared to the organisation, which hopefully will understand and make sense of it in the

way that makes them work for the vision come true. Existing literature seem to agree that successful companies have a culture in which visions are made explicit and employees are deeply aware of and have internalised the vision and company values that are needed to execute the firm's strategy (Nonaka, 1991; Kaplan and Norton, 2004; Ståhle and Wilenius, 2006). Visions should motivate all employees and create the feeling that the firm has not only the purpose of making profits but also some kind of social task, in which every individual may influence (Ståhle and Wilenius, 2006).

*Common understanding of strategy and goals* is crucial for most organisations in order to focus effort. The strategies show the course of an organisation, helping it to navigate through its environment. Strategies also promote coordination of activity and provide meaning and a way to understand what a firm does. Furthermore, strategies are needed to reduce ambiguity and provide order. Employees need to understand the strategies and make sense of them in order to build strategic unity. Unfortunately, too strict strategic unity may have a reverse side as well; when strategic focus is too strict, a firm may miss possibilities and lose its creativity as a given strategy can become too heavily embedded in the organisation. (Minzberg et al. 1998; Kaplan and Norton, 2004; Ulrich and Smallwood, 2004). This warning suggests also that CBM should not serve as a set of blinders to hide potential dangers from the eyes and ears of the employees.

*Common understanding of common operating models* refers to that employees make sense of and adopt the processes, concepts and working models developed to gain better results and efficiency. Thus it means that employees have a common understanding of how business should be done and customers taken care of by the firm. It also includes that employees have a common language that they understand in the similar way. (Jaatinen and Lavikka, 2008).

Removing of the culture dimension was first somewhat disturbing as the items included in this dimension were initially considered important. Existing literature seem to agree that culture affects to behavioural consistency of the employees, which in turn enhances coordination and control, improves goal alignment, and increases employee effort. (Sadri and Lees, 2001; Schein, 2004; Flatt & Kowalczyk, 2008; Jaatinen and Lavikka, 2008). Culture has however proved to be a difficult phenomenon to measure. Schein (2004, 102) has actually claimed that it is impossible to measure culture by research or surveys because the responses may give a picture of the cultural artefacts and organisational climate, but they do not tell about values or shared assumptions that influence deeper in the background. Hence, Schein's claim makes it easier to understand why the culture dimension was dropped out during the factor analysis. The individual items of the culture dimension were however not totally deleted from the measure of CBM as based on factor analyses, some of the items seemed to measure better other dimensions, thus these items were transferred into other dimensions. The process of transfer of items will be explained further in Chapter 5.

The new dimension of *Common understanding of customer approach* was originally mentioned in the training program material as a goal for CBM. Furthermore, both concepts of corporate mindset and common understanding include responding to customer needs as an important element, providing additional support to customer approach as a dimension of CBM.

All four dimensions of CBM were tested statistically during the measure development process, by calculating the Cronbach's Alphas on factors formulated through the explorative factor analysis. All Alphas exceeded the minimum level of reliability value, thus supporting the use of these dimension as reliable indicators of CBM.

The theories of intellectual capital (IC) provided a broader perspective for exploring the phenomenon of CBM. According to scholars, firms' resource base includes both tangible and intangible assets (Ståhle and Grönroos, 2000; Ståhle and Wilenius, 2006; Helfat et al. 2007; Flatt and Kowalczyk, 2008) as already briefly explained in the literature review of this work in Chapter 1. Therefore, tangible assets should not be only assets in focus of managers when considering the value of a firm.

It is generally approved by scholars that intellectual capital includes all the assets that are needed to make a firm's business possible, for example human skills and capabilities, competences, tacit knowledge, processes and systems and business models are regarded as IC (Kaplan and Norton, 2004; Ulrich and Smallwood, 2004; Ståhle and Wilenius, 2006; Helfat et al. 2007; Kujansivu et al. 2007; Flatt and Kowalczyk, 2008). Moreover, also culture is regarded as IC (Kaplan and Norton, 2004; Flatt and Kowalczyk, 2008). Kaplan and Norton (2004) even include into IC leadership, employees' ability to share knowledge and their alignment with the firm's strategic goals.

Hence, based on prior theories and the definition of CBM provided in this study, it may be agreed that CBM is part of a firm's IC, because it refers to organisation's capability to interpret a firm's statements of its vision, strategy and goals, operating models and customer approach and furthermore, because it enables cooperation and capacity to act to reach firm's strategic goals, which in turn make a firm's business possible.

Additionally, based on prior theories of dynamic IC (Ståhle and Wilenius, 2006; Kujansivu et al. 2007) CBM may be considered dynamic in nature, because it is constantly changing and developing and because strong CBM within the organisation enables a firm to adapt to changes and look forward into the future, thus enhancing the firm's capability of renewal.



## 2.2 Why is CBM important?

When management teams create strategies for the future they are usually also seeking some kind of behavioural change in the organisation (Robertson, 1994; Roberts and Ward, 2008). The basic message of the literature discussing implementation of strategies is that every member of the organisation has to see what kind of vision is directing the organisation, and to get the information of the content of the firm's strategy, to know the main themes of the strategy and in addition, how these themes are affecting individual jobs (Kaplan and Norton, 2004; Ståhle and Wilenius, 2006). Ståhle and Wilenius (2006) further state that employees need to have opportunities to discuss and internalise the ideas of strategy in order to understand the decisions of top management and to commit to it.

The aspect of change management needs additional attention in connection with the importance of CBM, as high level of CBM could prevent or at least decrease resistance to change. Mintzberg et al. (1998) argues that change cannot actually be managed, but the best way to control change is to allow for it to happen by setting up the conditions whereby people will follow their natural instincts to experiment and transform their behaviours. Hence, to deal with change, organisations should focus on improving these conditions. It is suggested that good conditions for realising the change could be created by improving CBM, aiming to that employees share a common understanding of the desired state. It has been proved that a firm operates best as a coherent team, exploiting same strategy and individual skills and capabilities of its employees in reaching towards the target (Ståhle and Wilenius, 2006). When CBM level is high, it indicates that employees know what is expected from them and consequently they are more likely to follow the strategic themes and behave in a way that is encouraged by the management of the firm, creating the conditions fit for the desired future. Thus, encouraged by existing literature CBM may be

regarded essential in reaching towards the strategic goals, as well as in preparing for change in the firm.

Based on prior theories, as discussed in Chapter 2.1, CBM is regarded as a firm's dynamic intellectual capital and means of building difficult-to-imitate competitive advantage. As a result it may be accepted that when a firm succeeds in developing high CBM it is actually creating VRIN capabilities (i.e. valuable, rare, inimitable and non-substitutable capabilities) creating value for a firm as sources of differentiation and because no other firms have it. According to the resource based theory this is how a firm is creating sustainable competitive advantage for itself (Barney, 1991).

Competition for customers is fierce and firms are constantly looking for new ways to win the market. Researchers in the field of intellectual capital generally agree that this can be done only by directing the firm's intellectual capital to solve the question of how to better understand customers and competitors and how to do things in a new way (Kyläheiko, 2006; Ståhle and Wilenius, 2006; Helfat et al. 2007). Therefore, CBM is needed to ensure that the whole organisation has a common understanding of the requirements of the modern competitive environment.

According to Ståhle and Wilenius (2006), intellectual capital is very much like market value, it changes when the situation changes and different characteristics produce competitive advantage in different competitive situations. The authors have claimed further that strengths may rapidly turn to weaknesses and vice versa. This statement indicates that it is very important to take CBM into consideration already during strategic planning and specifically when planning the actions for change within the organisation. It might cause an invincible hindrance for the strategy implementation process if, for some reason, individuals in the organisation would not adopt the ideas of management and would behave according their own perceptions, other than the management would expect.

One goal among others in Nordea Finance's sales force training was to create CBM in order to enhance knowledge creation, exploitation and sharing within the organisation. It is suggested that CBM could enhance knowledge sharing and exploitation, because CBM includes that employees have common understanding of the essential elements of the firms' strategy and goals. It is actually a question of how knowledge issues are integrated in the strategy (Probst et al. 2002; Kaplan and Norton, 2004). When knowledge issues are not fully integrated in strategies knowledge sharing may be blocked and in addition, as Sveiby (2001) argues, if employees are competing with each other instead of collaboration, then only trash will be shared. In better case, when knowledge issues are integrated in the strategy managers would have a motive to improve conditions for open knowledge sharing and more efficient exploitation of knowledge.

Existing literature shows that a firm needs systematic processes, consistency and organising capabilities to prepare for the future (Hamel, 2002; Ståhle and Wilenius, 2006). As defined CBM includes common understanding of common operating models, thus CBM may be considered as glue that combines the resources, skills and capabilities to perform in a more consistent way. Jaatinen and Lavikka (2008) suggest further that common understanding is an important mechanism of coordination. Hence, CBM may be seen as a prerequisite for systematic processes, consistency and collaboration and therefore it is crucial for the success of the firm. CBM should however not create a climate of blindness that prevents people to see the rapid changes in their environment. .

Based on the above discussion it may be agreed that CBM is necessary for strategic change and adds value to a firm's competitive advantage, eventually affecting its financial performance. However, keeping in mind Kaplan and Norton's (2004) theory, intangible assets (including also CBM), seldom affect financial performance directly but instead, they work indirectly through complex chains of cause and effect. Thus, it is suggested that CBM affects the firm's financial performance in connection

with other resources of the firm, because it creates the climate of collaboration, open knowledge sharing and consistent way of working together.

### **2.3 Challenges in building CBM**

Various forces affect creation of CBM within an organisation. Changes in the business environment and the way these changes affect a firm create uncertainty and unclear situations, which in turn may result in unclear focus or uncertainty about the interpretation of goals (Ståhle and Wilenius, 2006).

Organisation's ability to build CBM is in great deal concerned with its ability to create, transfer and exploit knowledge concerning the firm's vision, strategy and goals, operating models and customer approaches. If these concerns are not integrated in the structures it may be a mission impossible to build CBM that covers the whole organisation. Structures mean for example integration of IC and knowledge goals into the overall strategy, systems for motivating and rewarding managers as well as employees for their success in building IC, knowledge sharing system, handling of distance between teams and also systems for measurement (Minzberg et al. 1998; Bailey and Clarke, 2001; Probst et al. 2002; Kaplan and Norton, 2004). The challenges regarding knowledge management will be discussed further in Chapter 3.

Because knowledge sharing is crucial for creation of CBM all obstacles that block effective flow of information should be removed. Structural obstacles may be easy to start with, compared with more abstract hindrances, such as employee behaviour, attitudes and organisational culture. Despite of the possible difficulties concerning cultural changes, managers should recognise effects of their actions enforcing behaviours, because prior research proves that non-supportive, non-encouraging organisational culture can effectively hinder knowledge transfer (Sveiby, 2007). Sveiby (2001) even claims that reward systems that encourage in-

dividual competition will effectively block efforts to enhance knowledge sharing, thus also CBM could be in danger.

When assessing cultural aspect towards organisational behaviour during the literature review for this study, it was observed that groups tend to develop routine ways of doing things over time and that these habits are very difficult to change. These learned habits are transferred to new employees, which adopt them through group pressure rather quickly and efficiently. (Schein, 2004; Johnson et al. 2006; Van Woerkom and Croon, 2008).

If the culture with the learned habits is not supporting the current strategy it may have a negative influence hindering the expected performance. In a multinational organisation even national cultures may affect behaviours and cause discrepancy (Brooks, 1999; Schein, 2004). Furthermore, language may be a challenge as it affects the interpretation of management's messages. It is difficult if not even impossible to measure the state of culture as claimed by Schein (2004), but still it would be crucial for further development of CBM to make possible cultural paradigms visible in order to focus on them as issues of development.

Attitudes of employees may also be derived from the critically reflective work behaviour according to which individuals learn in interaction with others (Van Woerkom and Croon, 2008); unfortunately this may happen in good and in bad. Even group behaviour that is not desired may in short-term lead to high performance; hence it may be overlooked by managers as long as the result is positive. Therefore, understanding the relationship between individual behaviours, organisational culture and strategic goals is crucial for managers in their efforts in managing employees' behaviour (Johnson et al. 2006), and consequently also in trying to enhance CBM.

People differ from each other in regards of how they are able and willing to participate in knowledge sharing process (Minbaeva, 2007). Thus, chal-

Challenges in CBM creation may derive from the characteristics of employees. The willingness or capability of participating in the knowledge sharing process is dependent on various factors, for example individual values and culture, as discussed in this chapter already, openness for new ideas and individual identity (Ståhle and Wilenius, 2006). Minbaeva (2007) has proved that characteristics of knowledge receivers have a strong positive effect on the degree of knowledge transfer. People have different absorptive capacities (Cohen and Levinthal, 1990; Zahra and George, 2002), which may affect knowledge sharing, the greater the absorptive capacity, the higher the level of knowledge transfer is, and vice versa (Minbaeva, 2007). Thus, the ability to exploit knowledge depends a great deal on the skills and motivation of the receiver of the knowledge. In addition, Vaara et al. (2003) state that people need to understand what the received new idea or piece of knowledge means to themselves and their organisation, and additionally that emotional and political elements are involved in the sense-making process. Thus the feeling of “not invented here” might hinder effective knowledge transfer (Vaara et al. 2003).

It has also been proved that the distance and the differences between subsidiaries, as well as between individuals, affect the level of internal knowledge transfer (Minbaeva 2003; Kalla, 2006). However, the empirical study in hand did not indicate significant differences between CBM levels in different locations.

The construct of CBM is rather abstract and difficult to make sense of. Therefore also managers' absorptive capacity and individual attitudes may prevent creation of CBM. In addition, effective knowledge sharing depends also on the disseminative capacity of the knowledge sender (Minbaeva 2003), thus if managers do not have capacity to understand what is to be shared they probably are not able to disseminate it further either (Vaara et al. 2003). It has also been proved by prior studies that relationship between knowledge senders and knowledge receivers may affect the

efficiency of knowledge sharing (Minbaeva, 2003; Ståhle and Wilenius, 2006).

As discussed in the beginning of this chapter, firms need structures that encourage knowledge sharing and building of CBM. Until this study, construct of CBM has not been defined clearly and no tools for assessing its current state have existed. In addition, there may be no rewards or incentives connected to developing CBM, thus managers may easily overlook CBM as irrelevant for their own success; what is not measured is not taken seriously.

#### **2.4 Assessing the level of CBM**

A common saying “If you cannot measure it, you cannot manage it” may become true when trying to get managers to focus on CBM. It may be argued that managers have failed in creating CBM when they are showing weak financial performance, but as weak financial performance may be caused by multiple other reasons as well, it would not be a very reliable measure. To really assess the level of CBM a specific measure would be needed. Frequent assessment of CBM might be seen important in firms if it could wake managers up to act before financial performance is affected. Furthermore, as Kaplan and Norton (2004) claim, even if the measures are imprecise, the simple act of attempting to gauge the status of an issue subjected to measurement would communicate to all that this issue is important for the firm’s value creation.

The absence of good instruments for measuring intellectual capital may efficiently hinder reaching of any knowledge goals (Probst et al. 2002) and therefore it is crucial to find a simple tool for managers, firstly to identify the present status and secondly, to be able to decide the steps for improvement.

In order to find a suitable model for measuring CBM, the existing frameworks were explored as summarised in Subchapter 1.3.5. Most of the measures examined seemed to assess intellectual capital as stocks of asset meaning a straightforward enumeration of a firm's IC, for example: patents, level of education and amount of qualified employees, contracts and customer relations (Van Buren, 1999; Kianto, 2008). However, also measures that assess effectiveness as the economic value that IC produces were found (e.g. Van Buren, 1999; Kianto, 2008). Some measures try to assess effectiveness with financial performance indicators, whereas others assess the effectiveness of IC with non-financial indicators (Van Buren, 1999; Lönnqvist, 2004; Ulrich and Smallwood, 2004; Kujansivu et al. 2007; Kianto, 2008). The problem with these measures in regards with measuring CBM is that they are all-inclusive IC measures that do not fit for measuring a single, rather firm specific construct. In any case, prior models could be used as guides for developing a new measure for CBM.

Sometimes it may be reasonable to prioritise a single asset in order to focus management efforts on exploitation of this asset for organisational benefit (Kujansivu et al. 2007). Needs for prioritising single assets may arise from different sources; in case of Nordea Finance the need for developing CBM emerged from the business strategies, which required change in organisation's attitudes and working models. Furthermore, if managers truly desire to improve CBM, measurement would be a simple act of communicating its importance to value creation, thus giving a clear message to the organisation of what is wanted (Kaplan and Norton, 2004).

Regardless from the origin, the assessment of a single intellectual success factor has to be started with careful defining of the construct (Kujansivu et al. 2007). CBM was defined on the basis of the case firm's goals and therefore the questions had to be formulated from those premises. The basic phases in developing and exploiting the CBM measure are illustrated in Figure 3.



The starting point for the development of CBM measure was the need for CBM recognised by the management of Nordea Finance. As no suitable tools for measuring CBM were found, the process moved to measure development phase, which will be explained in more detail in Chapter 5.

As a result of the development phases the CBM measure was produced.

Next phase would then be taking the measure into use. Exploitation of the measure will be determined by managers interested in initiating managerial actions in improving CBM within their organisation, therefore in the scope of this study this last phase cannot be discussed further, even though it would be interesting to follow-up the changes in CBM.

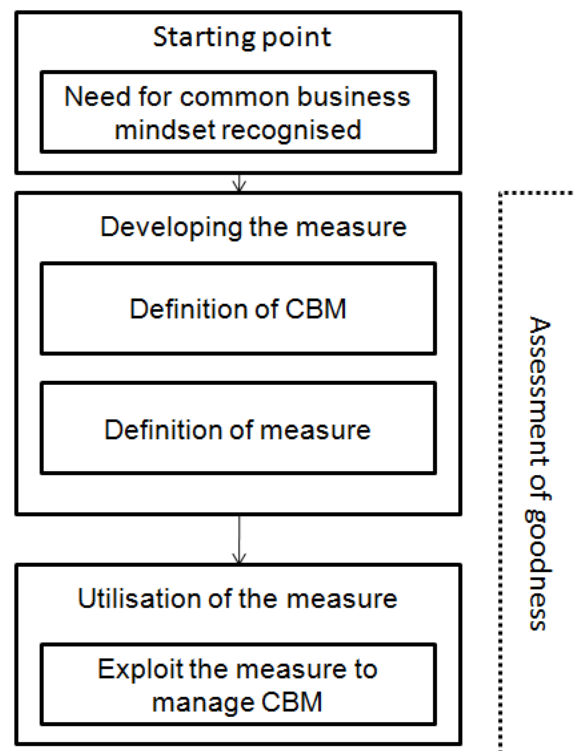


Figure 3: Phases of developing the CBM measure (adapted based on Kujansivu et al. 2007).

### **3 DEFINING KNOWLEDGE MANAGEMENT (KM)**

#### **3.1 Types of knowledge**

In order to understand the principles of KM, how a firm can benefit from KM, and specifically how KM links with CBM, it is essential to make sense of the nature of knowledge and the distinction between knowledge, information and data.

Data is of course crucial, but it is useless for most of the people until someone puts it into the context and gives a meaning to it. Only data which is understood can be information and likewise, also information is useless until someone interprets it meaningfully in relation to the situation and user. Thus, information becomes knowledge when it can be utilised and turned into action. This requires skills and often a great deal of creativity. (Bailey and Clarke, 2000; Ståhle and Grönroos, 2000). Knowledge is dynamic and personal, and actually an individual competence or a capacity-to-act (Sveiby, 2001).

Different forms of knowledge were shortly defined in Chapter 1.5.8 as explicit and tacit knowledge. Explicit knowledge can easily be communicated and shared for example in forms of instructions, product and process descriptions, and handbooks. Tacit knowledge is highly personal; it is something that a person knows or is capable of doing, but it is hard, or sometimes even impossible to formalise in words or figures, and therefore not easy to be transferred. (Nonaka, 1991; Nonaka and Takeuchi 1995; Ståhle and Grönroos, 2000). The authors state further that tacit knowledge is deeply rooted in action and in an individual's profession, a particular technology or product, or the activities of a work group or team. Tacit knowledge includes technical skills, know-how and expertise but at the same time tacit knowledge has an important cognitive dimension. It consists of mental models, beliefs, and perspectives so ingrained that they are taken for granted and therefore they cannot be easily articulated. (Nonaka, 1991; Nonaka and Takeuchi 1995; Ståhle and Grönroos, 2000).

Furthermore, Nonaka (1991) compares companies with living organisms, which can have a collective sense of identity and fundamental purpose, that may be considered the organisational equivalent of self-knowledge – a shared understanding of what the company stands for, where it is going, what kind of world it wants to live in, and, most important, how to make that world a reality. Similarly, as discussed in Chapter 2.1, CBM is regarded as shared (of common) understanding of the essential elements of the firm, organisational capability and part of its intellectual capital. Hence, CBM can also be regarded as tacit knowledge.

When CBM is regarded as tacit knowledge, it may be better understood why it is meaningful to explore the system of knowledge management and its relevancy in improving CBM in a firm.

### **3.2 The core of knowledge management**

The amount of information is increasing with enormous speed. Therefore, the key question is to distinguish with valuable information and trash; this is why knowledge management is needed (Kyläheiko, 2010). However, KM is much more than just managing the flood of information and therefore it is worth more profound discussion.

KM is an interdisciplinary approach to the knowledge area and can be viewed from many perspectives. For example: philosophy, organisation, network, business management and technology. KM has been defined in numerous ways, but based on the literature review for this study most definitions are built on Nonaka's (1991) theories of knowledge creating company, including processes of knowledge creation, sharing, utilising and storing. Scholars have added on this foundation since, resulting in various definitions, many of them having in common that KM is a process or a set of processes that permits the use of knowledge to generate and add organisational value. (Nonaka and Takeuchi, 1995; Bailey and Clarke, 2000; Ståhle and Grönroos, 2000; Probst et al. 2002; Kianto, 2011).

Hence, KM is about much more than just information management or technology that enables data warehousing. If the wide perspective of knowledge is kept in mind, then KM may be defined as broadly as a management approach that enables transforming of firm's knowledge, competences, skills and intellectual capital to economic value (Ståhle, 2010; Kianto, 2011).

Probst et al. (2002) provide a clarifying model of the knowledge management system of the firm (Figure 4) describing the different elements or processes included in a systematic KM approach. Also interactions between these elements or processes are visible.

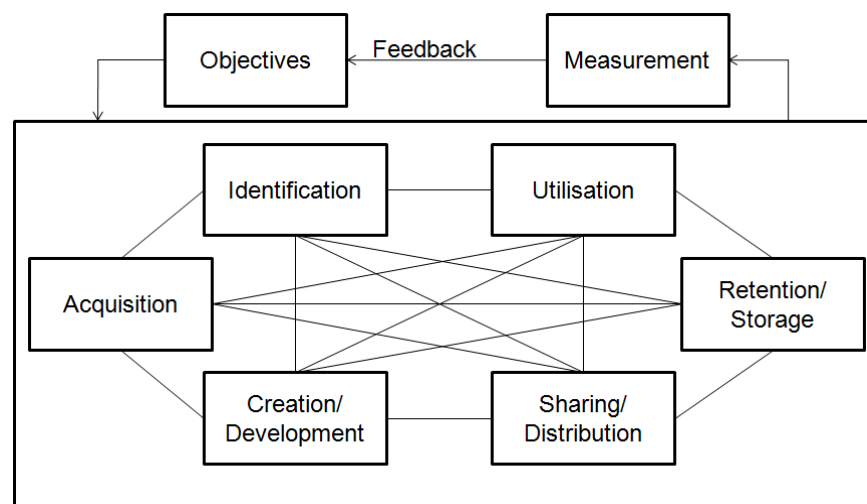


Figure 4: Knowledge Management System (Probst et al. 2002)

*Objectives* refer to goal setting, which is one of the core tasks of management. By setting the goals the management is giving direction to the essential processes of the firm. (Probst et al. 2002; Johnson et al. 2006). Firms create visions to express their strategic intent and desired future state (Johnson et al. 2006). Thus, vision statement should outline what the organisation wants to be, or how it wants its customers and other stakeholders to see the firm and to think about it. To enable the organisation to make the vision reality in every day work, a firm should define the type of knowledge that the strategy of reaching the aimed vision would require.

However, goals at the levels of corporate strategy and business strategy are usually concerned with markets and competition (i.e. desired position, market share, product range) but they do not specify what areas of knowledge should be developed (Probst et al. 2002). The authors state that setting knowledge goals on all goal levels could contribute jointly to the realisation of the firm goals. As knowledge is always linked with people managers should concentrate on the soft side of human resource management, thus setting knowledge goals that would focus on encouraging desired behaviour (Johnson et al. 2006).

*Identification of knowledge* refers to maintaining a general picture of a firm's internal and external data, knowledge, skills and networks that can be used for development of the firm's competencies. This includes that managers know what kind of experts they have and can distinguish with useful and useless information, trying to make knowledge more visible. In addition identification of knowledge includes that managers realise what benefits networks may provide to the firm. (Probst et al. 2002)

*Acquisition of knowledge* refers to the knowledge and skills that come from outside sources, from customers, suppliers, competitors and partners. Also recruitment of new employees is a way of acquiring knowledge. Furthermore, knowledge can be bought. (Probst et al. 2002). In knowledge systems acquisition of information is the responsibility of an individual employee, as only individual employee know what kind of information is needed (Stähle and Grönroos, 2000).

*Knowledge development* refers to knowledge creation, generating new skills, more efficient processes, new ideas, products and services (Probst et al. 2002), and the knowledge creation process occurs in a spiral of interaction between tacit and explicit knowledge (Nonaka and Takeuchi, 1995). In addition, knowledge development refers to a firm's capability of renewal using its dynamic intellectual capabilities (Stähle and Wilenius, 2006; Helfat et al. 2007; Kianto, 2008).

*Knowledge sharing* may be the most vital process for a firm in order to get the information and knowledge to the right place (Probst et al. 2002). The knowledge based theory considers knowledge as an important productive resource as it contributes to value added and because it is significant from the strategic perspective (Grant, 1997). Firms' value creation is in great deal dependent on how effective communications and transfer of knowledge are. Different types of knowledge (explicit and tacit knowledge) and different characteristics of individuals make knowledge sharing a very challenging task, which however is one of the key processes of KM according to most authors reviewed for this study (e.g. Nonaka, 1991; Grant, 1997; Ståhle and Grönroos, 2000; Sveiby, 2001).

*Knowledge utilisation* refers to using information, knowledge and skills for the benefit of the firm (Probst et al. 2002). As employees usually have to make use of many types of knowledge the firm should create a mechanism of integration so that individuals' knowledge can be combined with each other and with many separate knowledge bases (Grant, 1997). To enhance knowledge utilisation firms should thus consider how the massive IT enabled information flood could be connected with tacit knowledge of the employees in order to create true competitive value (Johnson et al. 2006).

*Knowledge storage* means that firms carefully organise the processes for selecting, storing and updating knowledge of potential future value in order to make sure valuable knowledge is not lost. (Probst et al. 2002).

Earl (2001) presents different approaches, or schools of KM, which look at KM from different perspectives: These schools have different focus, aim, unit and success factors, through which for example firms can determine which approach would have best fit for the specific firm. Technocratic schools concentrate on technology and their basic idea is to form a kind of gateway to knowledge, collecting the individuals' knowledge to knowledge bases, directories and maps where only specialists have access. Organi-

sations benefit from this school as all key knowledge areas are covered and for example prior work, accurate sales data and competitor information have been captured and stored for future use. IT is essential for this school as it has to enable building knowledge bases and the access to them by knowledge workers throughout the whole firm. The primary success factor of the economic school of KM is the development of a specialist team to manage the firm's intellectual property, usually including patents, trademarks, copyrights and know-how. Behavioural schools consist of three schools: organisational, spatial and strategic schools, which focus on networks, space and mindset. These schools are concerned about using organisational structures or networks to share and pool knowledge efficiently and broadly. They view knowledge as a strategic issue the aim being to deploy knowledge to a variety of situation. The focus of these schools is in creation of networks and eventually mindset, where knowledge sharing occurs naturally. Specifically the spatial school centres on the use of space to facilitate knowledge transfer. (Earl, 2001).

The knowledge system of Probst et al. (2002) presented in Figure 4 seems to view KM from perspectives of organisation and strategy, focusing on mindset and knowledge sharing, but it also has features from other schools. Therefore the knowledge system can be viewed as a holistic model in which different schools of KM have integrated.

The main focus of this study is the firm's mindset, specifically CBM, which is suggested to create value for the firm. Prior literature state that the value creation is primarily determined by the tacit and explicit transfer of knowledge between individuals and in the conversion of knowledge from one type to another (Nonaka and Takeuchi, 1995; Grant, 1997). Knowledge transfer is one element in the knowledge system (Figure 4) and even though its meaning was explained shortly already it may be useful to point out a few more issues connected with knowledge sharing.

Knowledge-based theory of the firm makes an important distinction between knowledge and other resources of the firm in one specific aspect: knowledge cannot be used up like other resources (Grant, 1997). On the contrary knowledge grows when used and knowledge shared is knowledge doubled (Sveiby, 2001). Thus, knowledge transfer between individuals improves competence and moreover, when tacit and explicit knowledge interact, it makes a powerful contribution to organisational learning (Nonaka, 1991). Managers have a central role in vertical and horizontal information sharing process as they influence directly to how employees understand and make sense of the company vision, and how this vision becomes the reality (Nonaka 1991). Knowledge sharing may however become ineffective if the process relies only on managers, therefore KM is needed to enhance knowledge sharing between teams and individual employees. Teams are natural structures for sharing tacit knowledge as in teams people engage with constant dialogue on which effective reflection depends. (Nonaka, 1991; Van Woerkom and Croon, 2008). The principles of knowledge management can play an important role in optimising the design of organisations and linking of the various subsystems in a firm (Grant, 1997).

Sharing of tacit knowledge may be a great managerial challenge and it seems to be a general topic of discussion in KM literature. In the knowledge-creating company, knowledge is transformed from tacit to explicit, from explicit to explicit, from explicit to tacit and from tacit to tacit in dynamic interaction, as a kind of spiral of knowledge (Nonaka, 1991; Nonaka and Takeuchi, 1995).

The process of making tacit knowledge to explicit and thus easier to transfer may be applied when sharing visions and communicating strategies to employees. The use of exceptional methods may help in articulating tacit knowledge into explicit concepts: use of figurative language, model building, metaphors and analogies has been suggested (Nonaka, 1991; Johnson et al. 2006). In other words imaginal metaphors would help em-



employees to understand future statements, which may be rather abstract, but they must be linked with real life, how they are alike and how they are different. Nonaka (1991) suggests that visions and strategies should be crystallised into concepts, operating models, goals and rewarding systems, which can then be explicitly shared with the rest of the organisation.

Scholars generally agree that frequent dialogue and communication are preconditions of knowledge sharing and that conscious, excessive flow of company information helps employees to better capture the meaning of messages. In addition, Nonaka (1991) states that overlapping information enhances dialogue and also helps employees make sense of what others are trying to say. The importance of informal systems of knowledge sharing is supported by Johnson et al. (2006) who point out that informal systems are forums of social interaction and trust, where tacit knowledge is learned in a complex process between people. Sometimes management's concern about inefficiency may lead to more formal systems, thus putting an end to this kind of culture, which in fact may result in blocking the sense-making process that naturally occurred in the social interaction (Johnson et al. 2006). Furthermore, according to the authors, a firm that encourages informal interaction between employees will gradually create the culture where knowledge sharing occurs naturally through multiple systems, routines and activities across the organisation. As a conclusion it may be accepted that firms need both formal and informal systems for efficient knowledge sharing and that dialogue and communication should be encouraged by the firm's management.

### **3.3 How to start KM practices?**

Earl's (2001) taxonomy of knowledge management may be applied to determining how to start KM practices or how to choose the knowledge management strategy for the firm. The taxonomy suggests that a firm's vision should encapsulate the contribution that KM could make for a firm's success. If KM is not embedded in the vision, the firm should consider defin-

ing knowledge goals as suggested by Probst et al. (2002) and Johnson et al. (2006). Step two includes discovering of business performance gaps. According to Earl (2001) these might be for example: quality problems, customer service issues, product development issues, or other weaknesses in desired performance. The performance gaps might also include lack of CBM in general, or in certain specific point (e.g. use of common operating models).

In step three the firm should ask how KM would improve the performance gaps discovered (Earl, 2001). At this phase the firm should explore the knowledge system as a whole, from knowledge acquisition to usage, sharing and storage and then decide how better exploitation of the knowledge system could help the organisation to perform better. The CBM measure developed during this study could provide a usable tool for assessing the performance gap regarding CBM, as it could point out the possible problems in understanding of the firm's essential strategic elements.

Step four in the KM taxonomy includes identifying and examining possible KM initiatives. Earl (2001) suggests that the different schools of KM could be helpful at this phase providing different views in regards of philosophy, focus and aim of each school. For example, if a firm needs to focus on developing CBM, it is in terms of the taxonomy of KM, focusing on mind-set. It follows that the firm could define its aim as enhancing knowledge exchange within the organisation, and thus it would be discussing the philosophy of behavioural schools, trying to create better consciousness of the desired state of CBM.

Step five tests how the initiatives fit the firm's strategy and culture. Earl (2001) suggests that the critical success factors of different schools of KM could guide at this phase. Based on the study in hand, the level of CBM is in great deal dependent on reciprocity, information sharing and networking, thus at least technocratic schools and behavioural schools should be explored further in order to determine whether the firm's strategy and cul-

ture allow exploiting the ideas of these schools or whether the firm should modify its strategy or try to influence in the culture. At this phase the firm should also consider how managers gain personal relevance to commit themselves to these new or supplementary approaches. Managers should have a feeling that efforts made are supported and encouraged by the top management, otherwise challenges in adopting KM principles may emerge as will be discussed in Subchapter 3.4.

In the final step six the firm should confirm the program and decide plans of actions to be executed and in addition allocate resources to it.

### **3.4 Challenges in initiating KM practices**

Based on prior research and also on the empirical findings of this study KM approach could be beneficial for a firm, but at the same time it may be difficult if firms and managers are not familiar with KM and its usable models, hence not knowing where to start. Managerial challenges regarding initiating KM approach in a firm are very much linked with challenges in building CBM, which were discussed in Chapter 2.3. However it may be worthwhile to consider the possible difficulties also from the perspective of KM because the recognition of these difficulties may help managers to avoid them.

Existing literature seem to agree that KM should be integrated in firms' strategies (Nonaka, 1991; Grant, 1997; Kaplan and Norton, 2004; Ståhle and Wilenius, 2006). However, it may be difficult for senior management to see how intangible assets, like knowledge or CBM, add value to the firm, because their effects are indirect and cannot be read in the firms' result reports as clearly as the value of tangible assets. (Nonaka, 1991; Kaplan and Norton, 2004). It follows that managers may overlook setting any knowledge goals at the strategic level, and consequently the relevancy of KM remains unclear for most middle managers (Bailey and Clarke 2001).

No goals may in most organisations mean not important, hence the effort will be focused on the areas that are measured and rewarded.

Furthermore, knowledge management may be seen too complex and time consuming. Tacitness of knowledge requires extra effort from managers in their task of knowledge sharing. In many organisations tacit knowledge may not be identified or the organisation may not have expertise in moving from tacit knowledge to explicit knowledge. In addition to lack of relevancy, individual managers may have inadequate skills and competences to perform KM initiatives. For example, are they able to create stories and link them to reality? Or are they able to create structures that enhance dialogue and interaction? Do the managers have disseminative capacity? Skills of knowledge receivers may also be inadequate. Do employees have absorptive capacity? (Abell, 2000; Bailey and Clarke, 2001; Minbaeva, 2007).

Even though all schools of KM are not specifically focused on IT, technology and systems do have their role in each school (Earl, 2001; Goh, 2005). IT may be needed in building shared databases, directories, intranets or accessibility to company information. Absence of IT tools may form a good reason for overlooking KM initiatives even if IT would not really prevent action.

#### **4 ROLE OF KM IN DEVELOPING CBM**

The purpose of this chapter is to elaborate on discussion of KM and the possible association it may have on developing CBM. Moreover, the hypotheses will be developed and stated for empirical testing.

#### 4.1 KM and CBM

CBM was defined in Chapter 2 as a firm's dynamic intellectual capital and as such a firm's tacit knowledge. Dynamic intellectual capital was further described as the organisation's dynamic competitive power emerging from individual's talent, ability to cooperate and ability to look forward into the future (Kaplan and Norton, 2004; Ståhle and Wilenius, 2006). Based on knowledge based view of a firm, competitive advantage can be created by systematically building new capabilities through mechanism of integration of knowledge, which means the system that enables combining of separate knowledge bases. (Grant, 1997; Ståhle and Wilenius, 2006). Furthermore, Johnson et al. (2006) states that how the firm employs and deploys its resources matters at least as much as what resources the firm has. Hence, there seem to be many reasons why CBM should be managed as well as a firm's tangible assets.

The knowledge management system may be seen as the engine that makes knowledge flow in a firm enabling the acquired, identified and created knowledge to be shared further, utilised and stored in order to gain benefit for a firm and increase the firm's intellectual capital. CBM development requires making sense of the tacit knowledge of management teams and in this process KM would be beneficial.

Vaara et al. (2003) state that sense-making is the key to better understand the socio-psychological processes through which people make sense of and interpret organisational phenomena. Sense-making process is grounded in identity construction. In other words, people need to understand what this new idea or piece of knowledge means to themselves and their organisation (Vaara et al. 2003). Using of metaphors may help the sense-making process, thus managers should practice usage of stories together with analogy with employees' daily work. Nonaka (1991) even states that successful firms have integrated KM in their strategies in order to create a learning organisation.

Consequently, the first hypothesis is derived from the assumption that KM has a positive effect on knowledge creation in a firm, which in turn enhances CBM. The formal hypothesis is:

H1: KM will have a positive association with CBM.

## **4.2 KM and understanding of vision, strategy and goals**

Visions, strategies and goals, have been created to show the direction and scope of actions of the employees (Johnson et al. 2006). Managers must distribute their ideas to the organisation and build structures, concepts and models that make knowledge of vision, strategies and goals explicit to employees (Nonaka, 1991; Ståhle and Wilenius, 2006).

Transforming tacit knowledge to explicit is vital when communicating firm's vision and strategies. When top management is discussing the firm's vision and strategies within management team, the managers absorb and internalise the ideas gradually creating strong commitment, a kind of mental model and common mindset about the future direction of the firm. Thus they have a capability which no one else in the organisation yet has; in terms of KM they have tacit knowledge. The given task for the managers is usually then to effectively implement new vision and strategies in the organisation. This however is a very challenging process which, if not planned and executed carefully, may end up being a failure. Distribution of the tacit knowledge that the top management team created over time may be a tough task for most managers as they are asked to disseminate something that is clear in the heads of people involved in the creation process but that is not explicitly communicable. Furthermore, the absorptive capacity of employees may be limited, which will increase the challenge in successful execution of the dissemination task.

A lot of creativity and imagination is required in trying to transform visions and strategies into explicitly communicable information and knowledge, also logical thinking is required. Referring to Nonaka's (1991) theory there is firstly a need for metaphors in creating stories that make tacit knowledge of top management explicit for the rest of the organisation, and secondly there is a need for analogy to link imaginary stories to reality. This linkage of the imaginary stories to real life is important, as otherwise these stories do not reach the target, telling nothing to people or providing space for different interpretations (Nonaka, 1991). Different interpretations may lead to different mindsets depending on the unit or team, whereas CBM covering the whole firm would lead to better collaboration in solving business challenges and developing new ways of serving customers.

Dissemination of strategies and knowledge goals aims at alignment of goals, meaning that all employees have a shared vision, and an understanding of how their personal role and efforts support the strategy (Kaplan and Norton, 2004). Prior literature shows that effective dissemination of strategy and goals requires first of all free flow of knowledge, which can be achieved by multiple methods: meetings, orientation and training programs, and executive talks, company intranets, brochures (Kaplan and Norton, 2004). Nonaka (1991) suggests that firms should build organisations of redundancy in regards with information, as overlapping information will enhance understanding of messages. Mere distribution of information is however not enough because interaction of tacit and explicit knowledge is crucial for learning, as already discussed in this chapter. It is precisely this exchange between tacit and explicit knowledge where the possibilities in implementing CBM lie. It is the question about, how do the metaphors, norms, rules, behaviour and actions combine?

Successful companies have systems and a culture in which visions, strategies and goals are made explicit through formal and informal processes of knowledge sharing (Nonaka, 1991; Kaplan and Norton, 2004; Johnson et al. 2006). In addition, successful firms have integrated knowl-

edge goals in their strategy (Probst et al. 2002; Johnson et al. 2006). According to Probst et al. (2002) integration of knowledge goals and building structures for efficient knowledge sharing are elements of KM.

Based on the theories explained in this chapter, knowledge creation, transformation of tacit knowledge to explicit knowledge and knowledge sharing are essential elements of KM. Effective flow of knowledge is also a requirement for internalising the firm's vision, strategies and goals, thus the next two hypotheses can be derived. The formal hypotheses are:

H2: KM will have a positive association with common understanding of firm's vision.

H3: KM s will have a positive association with common understanding of firm's strategy and goals.

### **4.3 KM and understanding of operating models and customer approach**

Operating models, including ways of doing business, operational structures of handling relationships with customers and partners, roles and responsibilities and common process of planning and a common language to better understand each other are issues of importance for coherent and efficient operations (Jaatinen & Lavikka, 2008). Johnson et al. (2006) stated that different activities that are consistent with each other create value because they are pulling in the same direction rather than opposing each other. The authors state further that consistency enables different activities to reinforce each other and create difficult-to-imitate competitive advantage. Some scholars however warn about missing possibilities and losing creativity if the strategies and models are too embedded in the organisation, thus the firm should be aware of not becoming blind towards changes in the environment (Minzberg et al. 1998; Kaplan and Norton, 2004; Ulrich and Smallwood, 2004). Hence, it may be agreed, that a firm needs to be concerned about and to make initiatives to create conditions



where consistency in operating models is commonly understood and the shared models are used to create value but not blindness towards environment. As the knowledge system of a firm (Probst et al. 2002) is about creating the conditions needed in developing consistency the additional two hypotheses may be derived. Thus, the formal hypotheses are:

H4: KM will have a positive association with common understanding of common operating models

H5: KM will have a positive association with common understanding of common customer approach

## **5 RESEARCH METHODS, MEASURE DEVELOPMENT AND DATA COLLECTION**

The process of the empirical part of this study included two parts:

Firstly, the development of the measure for CBM, which was mainly based on instructions of Fowler (1995), Hinkin (1995), Metsämuuronen (2006) and Lee and Lings (2008) including the following steps:

1. Identifying and testing of the items for the measure
2. Developing of the questionnaire
3. Data collection and responding
4. Data analysis and purification of the measure
5. Assessment of reliability and validity

Second part included the following steps:

6. Analysing of associations between variables
7. Reviewing of literature in the area of knowledge management and
8. Final discussion and conclusions.

The research is quantitative in nature, with supplementing qualitative methods used in exploring theories of knowledge management. In addition, this research is based on a case study design.

The idea generation as well as the generation of items for the measure started as an inductive process moving from specific observation to a more general theory. Inductive process was utilised as there seemed to be little research of the phenomenon to be investigated and as the whole starting point for this study was a concept used in one specific firm. Researchers usually develop scales inductively by asking a sample of respondents to provide descriptions of their feelings about their organisation (Hinkin, 1995). In this study the scale development started by asking from the case firm's management how they would describe the construct of CBM. However, like in most real-world research contexts where induction and deduction tend to be linked together (Lee and Lings, 2008, 7), also this study alternated between induction and deduction during the process of developing the measure further.

### **5.1 Identifying and testing of the items for the measure**

Measurement is the process of assigning numbers to represent the amount of any given attribute which is present (Lee and Lings, 2008).

A measurement (or measure) aims to measure an existing phenomenon and the reliability of a research is exactly as good as the reliability of the measure. The reliability of a measure is the same as successful operationalisation of the constructs. (Metsämuuronen, 2006).

Usable measures were first searched by exploring prior theories, but as the literature review revealed no suitable measures for CBM the development continued with operationalisation of construct CBM. A multi-item scale was created as it is suggested to increase the reliability of the measure (Metsämuuronen, 2006). In addition Fowler (1995, p. 70) states that at least two reasons exist why a multi-item measure can provide bet-

ter measurement than a single item: “They can produce detailed measurement across a larger spectrum of a continuum than a single question and by diluting item-specific effects, and they can produce a better measure of what a set of items has in common”.

In the first phase, the indicators of CBM were specified. Interviews of the members of the senior management were the most important starting point. The question asked was: “What kind of behaviours do you expect to see in the organisation when your people have common business mind-set?” In addition, material from management’s presentations and road shows in the company’s intranet was reviewed in order to isolate clauses concerning CBM. Finally, previous research and theories were reviewed.

As a result of the first phase four indicators of CBM was specified:

- common understanding of the company’s vision
- common understanding of the company’s strategy and goals
- common understanding and use of common operating models
- common understanding of the organisational culture

In the second phase an item bank for the measure was created. This meant developing statements that would measure the behaviours which were identified in the first phase. Again, many different sources were used including own imagination (as suggested by Professor John Cadogan in Lee and Lings, 2008). In addition to discussions with the management team members and colleagues, and reviewing previous studies, internal communication was observed to find out what kind of topics had been presented by the management recently and what kind of items would rise from those.

Hinkin (1995) states that both deductively and inductively created items may be subjected to a sorting process that will serve as a pre-test. In the third phase of the item selection, the items were tested by discussing them with the CEO of the case firm and sending out a test survey to eight em-

ployees in different countries. Furthermore, two members from the local country management team in Finland and one member from the Retail Finance operative management team re-categorized the items according to their own interpretation, into the four categories labelled as the four indicators of CBM. The result was then compared with the original categorization. Those items, which were placed in many different categories, were removed from the item bank as it was obvious that they were confusing and not clear measures for the wanted indicator. Some items were also modified in order to clarify the item's meaning and thus make it easier to understand and to answer. Furthermore, some new items were added based on suggestions of the testers. The item pool was quite large in the beginning, consisting of 75 research questions and seven background questions. In the end the question pool consisted of 56 questions of which, six were background questions, ten questions were about the understanding of vision, ten about the understanding of strategy and goals, nine of operating models and ten of the organisational culture. Eleven questions concerned knowledge sharing.

## **5.2 Developing the CBM –questionnaire**

A Likert–scale was exploited as it is often used in measuring attitudes or subjective feelings, which people to some extent agree or disagree (Metsämuuronen, 2006, 60). In addition, Likert–scale is regarded as good ordinal scale giving the possibility to use statistical tests developed for the interval scales (Metsämuuronen, 2006, 60; Lee and Lings, 2008). In this study, a six step-scale was used. A middle category between agreeing and disagreeing was purposely left out as the respondents should know the answers, and thus they could be forced to expose their opinion to all questions (Fowler, 1995, 65). To avoid the emotional effect in the response task the scale completely agree or disagree was chosen, instead of the scale strongly agree or disagree (Fowler, 1995, 65).

### 5.3 Data collection and responding

The sample consisted of the whole sales force in the case firm's companies in eight countries and included 265 people. This choice was made because the concept CBM was originally launched only to sales people and to groups close to sales (e.g. sales support). In addition, the language skills among the sales people were assumed to be better than among other groups in average, which was essential in order to receive right kind of information from the survey.

The data was collected in September 2010 using the Digium Enterprise-software, which was known in the company as an easy-to-use tool. The web link to the questionnaire was sent out to the respondents in an introductory email explaining the purpose of the study.

Two reminders were sent during the survey, first one after a week and the second one after 12 days of the opening of the survey. 158 responses were received, ending up to the response rate of 59, 6 per cent. The reminders increased the response rate by 5, 6 percentage points. Both the number of responses and the response rate can be considered acceptable. Responses were received from all countries except Poland, as there seemed to be technical problems with email-addresses resulting that Polish employees could not be reached. Table 1 reveals the descriptive data of the respondents in more detail.

Table 1: Descriptive data of the respondents

|                     | DK | EST | FI | LT | LIT | NO | SE | Total |
|---------------------|----|-----|----|----|-----|----|----|-------|
| Respondents         | 29 | 8   | 56 | 4  | 5   | 29 | 27 | 158   |
| Unit:               |    |     |    |    |     |    |    |       |
| EF                  | 6  | 2   | 24 | 0  | 1   | 8  | 8  | 49    |
| NS                  | 9  | 3   | 11 | 4  | 2   | 13 | 11 | 53    |
| RF                  | 9  | 3   | 13 | 0  | 2   | 6  | 7  | 40    |
| SS                  | 5  | 0   | 8  | 0  | 0   | 2  | 1  | 16    |
| Employee            | 10 | 1   | 9  | 0  | 2   | 13 | 15 | 50    |
| Spec/manager        | 14 | 5   | 40 | 3  | 2   | 8  | 7  | 79    |
| Manager with subord | 5  | 2   | 7  | 1  | 1   | 8  | 5  | 29    |
| Female              | 6  | 5   | 23 | 2  | 1   | 6  | 3  | 46    |
| Male                | 23 | 3   | 33 | 2  | 4   | 23 | 24 | 112   |
| Age:                |    |     |    |    |     |    |    |       |
| <= 35               | 9  | 5   | 12 | 3  | 4   | 5  | 5  | 43    |
| 36 - 43             | 10 | 3   | 13 | 1  | 1   | 6  | 2  | 36    |
| 44 - 49             | 6  | 0   | 18 | 0  | 0   | 11 | 9  | 44    |
| 50+                 | 4  | 0   | 13 | 0  | 0   | 7  | 11 | 35    |
| Years in NF         |    |     |    |    |     |    |    |       |
| <= 5                | 19 | 7   | 14 | 3  | 3   | 12 | 7  | 65    |
| 6 - 10              | 5  | 1   | 12 | 0  | 2   | 9  | 4  | 33    |
| 11 - 24             | 5  | 0   | 27 | 1  | 0   | 8  | 12 | 53    |
| 25+                 | 0  | 0   | 3  | 0  | 0   | 0  | 4  | 7     |

#### 5.4 Data analyses and purification of the measure

Data analyses were conducted using the SPSS –solution (PASW 18), therefore the data was loaded from Digium –solution into SPSS. Before starting of any analyses, some preparations for the data were made. Firstly, in order to make the interpretation of this study and the SPSS tables easier for readers, the variables were codified with short-codes V7-V16, S17-S26, O27-O35, C36-C45 and K46-K56. The letter denotes the category (V=vision, S=strategy, O=operating models, C=culture, K=

knowledge issues) and the number is the same as the original variable number. The full list of items, with original labels and short-codes is enclosed to this study as Appendix 1. Secondly the items V16, S24 and O34 with negative wordings were reversed to positive in order to make them suitable for analyses. New variables were short-coded as V16R, S24R and O34R.

The exploring of the data started by descriptive statistics and the distribution test using one-sample non-parametric tests. SPSS automatically chooses binomial, chi square or Kolmogorov-Smirnov test based on the data. The observation was that most variables were not normally distributed. Distribution tests tend to reject hypothesis of normality too easily, therefore testing by eye, is recommended (Metsämuuronen, 2006, 577). The actual shape of the distribution was thus viewed in the Histograms. The Histograms revealed some skewness in the curves. SPSS has many non-parametric alternatives for analysing not normally distributed data; these tests were used when parametric tests were not appropriate.

In order to test if the items group naturally together in the four categories defined in the preliminary framework the exploratory factor analysis (EFA) was used. According to Hinkin (1995) the sample size of 150 observations can be considered sufficient to obtain an accurate solution in exploratory factor analysis as long as item inter-correlations are reasonably strong.

EFA was chosen also because it is suggested to be specifically fit for situations where a researcher has an idea of the theory and the factors combining the variables (Metsämuuronen, 2006). Maximum likelihood was used as extraction method and varimax as rotation method.

All items that were meant to measure the four categories of CBM (VAR0007-VAR0045) were subjected to EFA.

The basic idea is that all items of the measure should correlate with each other and as a rule of thumb the correlation should exceed 0.30 (Metsämuuronen, 2006, 497; Pallant, 2010). Hinkin (1995) however proves in his study that most commonly mentioned criterion for retaining items was a 0.40 loading. Inspection of the correlation matrix (Appendix 2) revealed some zero correlations and even negative correlations, which indicated that these items may not be the best variables for this analysis.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the data (Metsämuuronen, 2006). According to the KMO –test (Table 2) the KMO value was 0.837, indicating that the correlation matrix is suitable for factor analysis. Furthermore, the significance level  $p < 0.001$  indicates that a factor analysis may be useful with the data.

Table 2: KMO and Bartlett's Test

|  |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .837     |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 2661.557 |
|  | df                 | 741      |
|  | Sig.               | .000     |

Initial communalities are, for correlation analyses, the proportion of variance accounted for in each variable by the rest of the variables.

Small values indicate variables that do not fit well with the factor solution, and should possibly be dropped from the analysis. The nearer the value is to 1.0 the better. (Metsämuuronen, 2006). Lowest initial communality in the matrix shown in Table 3, is 0.374 (item O33) and 13 items loaded less than 0.5. This result indicates that these variables do not measure the factors very reliably.



Table 3: Communalities

| Var. | Initial | Extraction | Var. | Initial | Extraction | Var. | Initial | Extraction |
|------|---------|------------|------|---------|------------|------|---------|------------|
| V7.  | 0,492   | 0,45       | S21. | 0,5     | 0,42       | C36. | 0,536   | 0,35       |
| V8.  | 0,449   | 0,315      | S22. | 0,578   | 0,398      | C37. | 0,416   | 0,287      |
| V9.  | 0,561   | 0,411      | S24. | 0,523   | 0,296      | C38. | 0,455   | 0,199      |
| V10. | 0,56    | 0,438      | S25. | 0,527   | 0,333      | C39. | 0,578   | 0,401      |
| V11. | 0,541   | 0,431      | S26. | 0,415   | 0,223      | C40. | 0,454   | 0,182      |
| V12. | 0,678   | 0,572      | O27. | 0,526   | 0,279      | C41. | 0,404   | 0,276      |
| V13. | 0,55    | 0,362      | O28. | 0,662   | 0,604      | C42. | 0,603   | 0,445      |
| V14. | 0,656   | 0,689      | O29. | 0,624   | 0,486      | C43. | 0,459   | 0,37       |
| V15. | 0,62    | 0,645      | O30. | 0,624   | 0,372      | C44. | 0,468   | 0,36       |
| S17. | 0,5     | 0,312      | O31. | 0,658   | 0,612      | C45. | 0,547   | 0,409      |
| S18. | 0,642   | 0,406      | O32. | 0,455   | 0,229      | V16R | 0,462   | 0,164      |
| S19. | 0,668   | 0,613      | O33. | 0,374   | 0,292      | S23R | 0,402   | 0,142      |
| S20. | 0,53    | 0,461      | O35. | 0,51    | 0,327      | O34R | 0,435   | 0,062      |

Table 4: Initial eigenvalues

| Factor | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
|        | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1      | 10,641              | 27,285        | 27,285       | 10,027                              | 25,71         | 25,71        |
| 2      | 2,708               | 6,944         | 34,229       | 2,083                               | 5,34          | 31,05        |
| 3      | 2,058               | 5,277         | 39,505       | 1,217                               | 3,12          | 34,171       |
| 4      | 1,708               | 4,379         | 43,884       | 1,298                               | 3,327         | 37,498       |
| 5      | 1,569               | 4,023         | 47,907       |                                     |               |              |
| 6      | 1,43                | 3,668         | 51,575       |                                     |               |              |
| 7      | 1,264               | 3,24          | 54,814       |                                     |               |              |
| 8      | 1,254               | 3,216         | 58,03        |                                     |               |              |
| 9      | 1,104               | 2,83          | 60,86        |                                     |               |              |
| 10     | 1,014               | 2,6           | 63,46        |                                     |               |              |

Initial eigenvalues in Table 4, show that ten factors have eigenvalues greater than 1.0 and these factors can explain 63.5 % of total variance. Factors 1-4 can only explain 43.9 % of total variance, which indicates that more than four factors should be needed.

In order to have more support for possible deletion or retention of items, additional factor analyses were executed with the four initial categories, vision, strategy and goals, operating model, and culture (Appendix 3).

Based on the factor analyses 14 weak or confusing items (loadings less than 0.40 or fair loadings on more than one factor) were deleted. A 0.40 loading was used as a criterion as some consistency exists in the method used to determine the appropriate loadings, and with 0.40 being the most commonly mentioned criterion in previous studies (Hinkin, 1995). The deleted items were V12, V16R, S18, S23R, O27, O29, O30, O33, O34R, C36, C39, C40, C44, and C45. EFA per category confirmed that some of the items seemed to better measure another category, and thus these items were transferred to the categories that they measured better. Deletion and transfer of items also resulted in removing the category of common understanding of organisational culture from the CBM measure.

A reliability analysis with Cronbach Alpha was then conducted with the remaining items. Alpha value was 0.886, as can be seen in Table 5, being still on a good and acceptable level. This means that deleting weak items did not decrease the reliability of the scale dramatically and the scale can be considered reliable.

Table 5: Cronbach's Alphas purified scale

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .886             | .888   | 25         |

The purified item matrix (Appendix 4) shows that the items loaded quite understandably on four factors even though some of the items had to be transferred into a new category. The four categories were renamed with new subscale names as: "operating model", "strategy and goals", "vision", "customer approach".

Hinkin's study (1995) indicates that five or six items in subscales that utilise five to seven point Likert-scales would be adequate for most measures. Three of the final subscales of CBM comprised of more than five

items where as “customer approach” comprised of two items only. But based on high Cronbach’s Alpha also this subscale may be considered a reliable measure in this context.

Cronbach’s Alphas were calculated to the summated variables in the four subscales. Table 6 shows, that all Alphas got values over 0.60, thus it may be accepted that the purified scale with the four subscales is at least a fair measure for CBM when used in the case firm’s context.

Table 6: Cronbach’s Alphas summated scales

|                  | Opermod | Strategy | Vision | Customer |
|------------------|---------|----------|--------|----------|
| Cronbach’s Alpha | .823    | .771     | .771   | .797     |
| Nr of items      | 10      | 6        | 7      | 2        |

## 5.5 Assessment of validity and reliability of the measure

Content validity refers to the adequacy with which a measure assesses the domain of interest (Hinkin, 1995) being concerned with the questions: are the concepts based on theory and are they operationalised right. Additionally, do the concepts cover the phenomena widely enough (Metsämuuronen, 2006). According to Hinkin (1995) inductive approach may easily be influenced by problems at the item generation stage. To avoid this, particular care was taken with the item generation process as described in Chapter 5.1.

The sample consisted of respondents from different countries and the level of language skills varied, thus the questions had to be easy to understand. The wording was chosen carefully in order to ensure that the meaning of the questions were right and to get the right kind of information back. To select right wording, the case firm’s sales force training material, intranet vocabulary and internal newsletters were used as reference.

Even though some researchers may argue against using reverse-scoring of items (Hinkin, 1995) some negatively worded items were included in the question pool because this might strengthen the measure and give one line of defence against the common method bias criticism (Metsämuuronen, 2006; Lee and Lings, 2008).

Common method bias occurs when the method of data collection somehow influences the scores of respondents (Lee and Lings, 2008). Method biases are a problem because they are one of the main sources of measurement error. Measurement error threatens the validity of the conclusions about the relationships between measures and is widely recognised to have both a random and a systematic component (Podsakoff et al. 2003). According to Podsakoff et al. (2003) sources of common method biases arise from having a common rater, meaning that respondents deliberately answer questions in a socially desirable way rather than what they really think, a common measurement context, meaning that respondents answer all questions belonging to both independent and dependent constructs at one time, a common item context, or from the characteristics of the items themselves. Malhotra et al. (2006) however claim that common method biases are likely to be less of a problem when the construct is concrete and well-defined and that although researchers generally agree that common method bias has the potential to affect the results of a single-method study no consensus exists about the seriousness of such biases.

Respondents of this study came from different locations and different business units, which may reduce effects caused by the common rater. In addition the construct CBM was defined through a strict process resulting in a rather clear construct, which also may decrease the possible effects of common method bias. Furthermore, the effects caused by item characteristics were also taken into consideration. Chapter 5.1 includes the explanation of how the items were developed by careful wording and keeping the statements as clear and simple as possible for everyone to understand.

The mail surveys have been criticized for non-response bias, referring to that persons who respond differ substantially from those who do not respond (Armstrong and Overton, 1977). The authors state that the best way of avoiding non-response bias is to reduce non-response itself, but the problem can also be approached by estimating the effects of non-response. This study reached the response rate of nearly 60 %, which can be considered good but in order to estimate non-response bias the extrapolation method of time trends was used as suggested by Armstrong and Overton (1977). According to the authors, the persons responding later are assumed to be more similar to non-respondents. The data was split into three based on the week when answering happened and the means of these groups were compared to locate possible significant differences. No significant differences were found.

Construct validity is concerned with the relationship of the measure to the underlying attributes it is attempting to assess (Hinkin, 1995). That is, do the items measure the right phenomena (Metsämuuronen, 2006)? As explained in Chapter 5.1 special care was taken in the operationalisation process of the concept CBM and its sub concepts, in order to capture the idea of CBM as well as possible. However, it should be understood that CBM in other environments and other organisations may have different content and meaning and different indicators may be valid. Therefore, the measure of CBM should be considered as a firm specific tool, which may not be exploited without modification in other organisations.

The reliability of the measure was tested by Cronbach's Alpha. All 39 variables of the four dimensions of CBM were included in the calculation. Cronbach's Alpha can get values between 0 and 1. In general, the higher the value is the more reliable the scale is. It has been said, that 0.60 would be the lowest acceptable value (Metsämuuronen 2006, 497) though Hinkin (1995) states that an Alpha of 0.70 would be the minimum acceptable standard for demonstrating internal consistency. The Alpha value of the purified CBM measure was well above the accepted minimum. The

Cronbach's' Alpha for the purified CBM measure (25 items) got the value of 0.886 (Table 5 on page 59). This means that the true scores explain over 88 % of the variance of the observed scores, hence the measure could be accepted for use immediately (Nummenmaa et al. 1997).

Nummenmaa et al. (1997) suggested that different aspects of a latent construct can be tested by calculating Cronbach's Alpha into summated scales. To follow this suggestion the summated variables of operating model, strategy and goals, vision and customer approach were formed and Alphas calculated. All Cronbach's Alphas exceeded the minimum level of 0.70 and are thus acceptable (Table 6).

## **5.6 Analysing associations between variables**

To explore if the variables in the CBM measure were associated with each other additional tests were executed.

Associations between variables were tested by using both parametric and non-parametric tests. Mann-Whitney and Kruskal-Wallis Tests were used to compare the means across the groups: gender, position, unit, and location. Also means by age groups and NFyears- groups were first compared with Kruskal-Wallis test but as these variables could also be tested using the parametric Pearson product-moment correlation coefficient (the Pearson correlation) this was done in order to have stronger proof of association. The Pearson correlation is traditionally used for interval data, but it can also be calculated and inferred for good ordinal data like Likert-type scales (Metsämuuronen, 2006). According to Tarkiainen (2008) Likert is sometimes even considered interval scale. Pearson correlation was additionally used in testing if any association between KM items and CBMi existed.

The CBM questionnaire included eleven questions about knowledge sharing. This part of the questionnaire was named as KM issues. To explore if KM issues could be grouped into clear categories all eleven KM items were subjected to an exploratory factor analysis. According to suggestions of Costello and Osborne (2005) Principal Axis Factoring was chosen as extraction method because the KM data were significantly non-normal. Direct oblimin was used as rotation method in order to retain as much information as possible. Costello and Osborne (2005) suggest that oblique rotation should theoretically render a more accurate solution than orthogonal rotation.

The KMO –test showed KMO value of 0.794 indicating that the correlation matrix was suitable for factor analysis. Furthermore, the significance level  $p < 0.001$  indicated that a factor analysis might be useful with the data. KMO and Bartlett's test is visible in Appendix 5 together with the KM correlation matrix.

Table 7: Initial eigenvalues (KM)

| Factor | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              |
|--------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
|        | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % |
| 1      | 3,686               | 36,858        | 36,858       | 3,094                               | 30,937        | 30,937       |
| 2      | 1,184               | 11,839        | 48,697       | ,597                                | 5,967         | 36,904       |
| 3      | ,990                | 9,899         | 58,596       |                                     |               |              |
| 4      | ,916                | 9,160         | 67,756       |                                     |               |              |
| 5      | ,751                | 7,511         | 75,267       |                                     |               |              |
| 6      | ,662                | 6,615         | 81,882       |                                     |               |              |
| 7      | ,590                | 5,896         | 87,778       |                                     |               |              |
| 8      | ,510                | 5,095         | 92,873       |                                     |               |              |
| 9      | ,419                | 4,191         | 97,064       |                                     |               |              |
| 10     | ,294                | 2,936         | 100,000      |                                     |               |              |

Initial eigenvalues in Table 7, show that two factors have eigenvalues greater than 1.0 and these factors can explain only 48.7 % of total va-

riance, with factor 1 contributing 36.9 % and factor 2 contributing 11.8 %. An additional test was conducted to explore how using 0.09 as the limit of eigenvalue would influence in the amount of factors, but this resulted in four unclear and confusing factors and was thus neglected.

Table 8: Pattern and structure matrix for EFA Oblimin rotation

| Item                         | Pattern coefficients |      | Structure coefficients |      | Communalities |
|------------------------------|----------------------|------|------------------------|------|---------------|
|                              | 1                    | 2    | 1                      | 2    |               |
| K56 I have many opport       | ,762                 |      | ,642                   |      | ,309          |
| K47 Our office is organiz    | ,679                 |      | ,710                   | ,405 | ,465          |
| K53 The information about    | ,529                 |      | ,574                   | ,357 | ,307          |
| K48 I have access to all     | ,482                 |      | ,508                   |      | ,324          |
| K52 I attend top managem     | ,473                 |      | ,580                   | ,451 | ,345          |
| K49 I frequently use my go   |                      | ,644 | ,369                   | ,665 | ,375          |
| K50 My colleagues often      |                      | ,611 |                        | ,597 | ,271          |
| K46 I often discuss the str  | ,385                 | ,486 | ,633                   | ,682 | ,546          |
| K55 Our team meetings are    |                      | ,332 | ,456                   | ,478 | ,292          |
| k51 I frequently search info |                      |      | ,306                   |      | ,141          |

The rotated solution revealed a clear two factor structure with loadings greater than 0.40 on two factors. Only one item (K46) loaded on both factors. The pattern matrix and the structure matrix are presented in Table 8, including also communality values. Three items had low values (less than 0.3), indicating that these items may not fit well with other items in its factor.

The two factors were labelled based on the items having the strongest loadings. Consequently factor 1 was named as knowledge transfer and factor 2 was named as networking. Based on prior theories both factors seem to be relevant; knowledge sharing, as a set of processes that permits the use of knowledge to generate and add organisational value, is a vital part of KM (Nonaka, 1991; Nonaka and Takeuchi, 1995; Bailey and Clarke, 2000; Ståhle and Grönroos, 2000; Probst et al. 2002) and so is networking, which refers to organisational structures and networks that



can be used to share and pool knowledge efficiently and broadly and to combine knowledge with separate knowledge sources (Earl, 2001; Probst et al. 2002).

The following step was to form summated variables from the two KM factors by computing the means of the variables into new variables: knowledge transfer (knowltra) and networking (network). Also the means of all KM items in the questionnaire were computed into new summated variable meansKM. The distribution test confirmed that the new variables knowltra, network and meansKM were normally distributed.

Based on the reliability analyses it was decided to retain the item K46 in the networking scale, as deletion of the item would have decreased the reliability of the scale. The Alpha value of knowledge transfer was 0.74 and the Alpha for Networking was 0.71, thus both exceeded the minimum of 0.70 and could be considered acceptable.

One more summated variable was needed for CBM, and this was formed by computing the means of all CBM items into new variable CBMi. Also the distribution of variable CBMi seemed to be acceptably normal in order to execute parametric tests. Forming of summated variables of the four factors of CBM, opermod, strategy, vision and customer was already explained in Chapter 5.4.

Pearson correlations measure correlation between variables but not causality between them (Lee and Lings, 2008) therefore, regression analyses were executed in order to confirm associations or causality between KM and CBM. The basic idea of regression is that a straight line can summarise the association between a dependent variable (outcome) and a predictor (Lee and Lings, 2008).

Firstly, a standard multiple regression analysis was used to answer the question of how well do the two aspects of KM, knowledge transfer (knowltra) and networking (network), predict CBMi. Secondly, a hierarchical multiple regression analysis was conducted to find out if the KM aspects are

still able to predict a significant amount of the variance in CBMi after controlling for the possible effect of age, gender, years in NF, unit, location and position.

## **6 EMPIRICAL FINDINGS**

### **6.1 Main findings**

Deletion and transfer of items resulted in removing the total category of common understanding of organisational culture from the preliminary CBM measure, and bringing in the new category of customer approach. However, removing of the culture category does not mean that issues concerning the organisational culture would not matter. This rather indicates that little theoretical basis exists for deriving the dimensions of the construct (Venkatraman, 1989), which in this case resulted in rather 'theory-free' and case firm driven operationalising of the construct. The consequence from such cases may be that the dimensions may not be interpretable for use in other research settings (Venkatraman, 1989). This delimitation was considered when discussing the validity of this study in Chapter 5.5.

The analyses of data in the purified CBM measure indicated first that the level of common business mindset (CBMi) could be associated with the respondents' position and their current unit but no significant association was found between other grouping variables (gender, location, age of the respondents, years in NF) and CBMi. Regression analyses however revealed that neither the effect of position nor unit were statistically significant when KM issues were included in the analyses. After controlling for the effect of position and the unit and also other grouping variables (gender, location, age of the respondents, and years in NF) only KM issues had a statistically significant effect on the CBMi. In the following subchapters these findings are discussed in more detail.

## 6.2 Level of CBM and difference between groups

The CBM index (CBMi) was calculated simply by computing the means of all variables grouped in the four categories of CBM in the purified measure. Hence, it is suggested that CBMi could be used as an indicator of the CBM level of an organisation.

In Nordea Finance CBMi in total was 4.69, which may be considered a good level. The Kruskal-Wallis test showed significant association between respondents' position and CBMi as well as between their current unit and CBMi. The additional test however proved that the influence of these grouping variables was not significant, when KM issues were entered in the analyses. The actual means of different positions and units can be compared in the means report in the Table 9.

Table 9: Comparison of means between groups

| Independent variable | Group                               | Mean        | N          |
|----------------------|-------------------------------------|-------------|------------|
| Position             | Employee                            | 4.62        | 50         |
|                      | Specialist/Manager, no subordinates | 4.64        | 79         |
|                      | Manager with subordinates           | 4.98        | 29         |
|                      | <b>TOTAL</b>                        | <b>4.69</b> | <b>158</b> |
| Unit                 | EF                                  | 4.61        | 49         |
|                      | NF                                  | 4.70        | 53         |
|                      | RF                                  | 4.86        | 40         |
|                      | SS                                  | 4.51        | 16         |
|                      | <b>TOTAL</b>                        | <b>4.69</b> | <b>158</b> |

Based on Kruskal Wallis test it seemed that managers with subordinates have higher CBMi than employees, even though also employees' CBMi is still on a good level (4.62). The comparison between units showed that Retail Finance (RF) scored highest (4.86), while Sales Support (SS)

scored lowest (4.51). Both SS and Equipment Finance (EF) scored below the total CBMi (4.69).

### 6.3 Testing of the hypotheses

The standard multiple regression analysis confirmed the results of non-parametric Spearman's rho –test about the association between knowledge management issues and CBMi. Before the actual test, preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollineriaty and homoscedasticity. The results of the regression analysis, presented in Table 10 show that the model, which contains two independent variables, knowledge transfer and networking can explain 52.5 % of the variance in CBMi.

Table 10: The effect of KM issues on CBMi

| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted R<sup>2</sup></b> | <b>F</b>    | <b>Sig</b>      |
|------------------------------|-------------|----------------------|-------------------------------|-------------|-----------------|
| CBMi                         | .724        | .525                 | .519                          | 85.575      | .000            |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>                   | <b>Tol.</b> | <b>Part.cor</b> |
| Networking                   | .461        | 6.966                | .000                          | .701        | .386            |
| Knowledge transfer           | .361        | 5.457                | .000                          | .701        | .302            |

Furthermore Table 10 reveals that networking made the largest unique contribution (beta = .461) although also knowledge transfer made a statistically significant contribution (beta = .361).

Hierarchical multiple regression was used to assess the ability of the model, including knowledge transfer and networking, to predict CBMi after controlling for the influence of position, unit, gender, location, age and years in NF. Also this time preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollineriaty and homoscedasticity.

The results of the multiple regression are visible in Table 11 showing that position, unit, gender, location, age and years in NF were entered at step 1, explaining 5.6 per cent of the variance in CBMi. After entry of knowledge transfer and networking at step 2 the total variance explained by the model as a whole was 53.8 per cent,  $F(8, 149) = 21.725$ ,  $p > 0.001$ .

Table 11: The effect of KM issues and grouping variables on CBMi

| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted R<sup>2</sup></b> | <b>R<sup>2</sup> change</b> | <b>F</b>        | <b>Sig F change</b> |
|------------------------------|-------------|----------------------|-------------------------------|-----------------------------|-----------------|---------------------|
| <b>CBMi</b>                  |             |                      |                               |                             |                 |                     |
| Step 1                       | .237        | .056                 | .019                          | .056                        | 1.499           | .182                |
| Step 2                       | .734        | .538                 | .514                          | .482                        | 21.725          | .000                |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>                   | <b>Tol.</b>                 | <b>Part.cor</b> |                     |
| <b>Step 2</b>                |             |                      |                               |                             |                 |                     |
| Position                     | .050        | .847                 | .399                          | .877                        | .047            |                     |
| Unit                         | .065        | 1.162                | .247                          | .977                        | .065            |                     |
| Gender                       | -.013       | -.218                | .828                          | .907                        | -.012           |                     |
| Location                     | -.049       | -.812                | .418                          | .855                        | -.045           |                     |
| Age                          | .019        | .280                 | .780                          | .676                        | .016            |                     |
| Years in NF                  | -.059       | -.871                | .385                          | .665                        | -.048           |                     |
| Networking                   | .470        | 6.835                | .000                          | .655                        | .380            |                     |
| Knowledge transfer           | .344        | 5.057                | .000                          | .668                        | .281            |                     |

Table 11 also shows that knowledge transfer and networking, explained an additional 48.2 per cent of the variance in CBMi, after the effects of position, unit, gender, location, age and years in NF, were removed,  $R^2$  Squared change = 0.482,  $F$  change (2, 149) = 77.824,  $p < 0.001$ . In the final model both networking and knowledge transfer were statistically significant, with networking recording a higher beta-value of 0.47 ( $p < 0.001$ ) than knowledge transfer (beta 0.34,  $p < 0.001$ ), leading to the conclusion that the first hypothesis H1 was supported.

All four dimensions of CBM were finally subjected to a multiple regression analysis which revealed, as shown in Tables 12 and 13, that after controlling for the influence of position, unit, gender, location, age and years in NF both KM factors made a statistically significant contribution to common understanding of vision (Vis), networking with beta 0.287 and knowledge transfer with beta 0.223, thus H2 was supported.

Knowledge sharing made statistically significant unique contribution to the prediction of common understanding of strategy and goals (Strat) with beta-value of 0.464, and also the influence of networking on this dimension was statistically significant. Hypothesis H3 was thus supported.

The influence of networking was better predictor of common understanding of operating models (Oper) recording beta-value of 0.494 than knowledge transfer, which recorded beta-value of .318. Consequently hypothesis H4 was supported.

Finally, networking made statistically significant unique contribution to the prediction of common customer approach with beta-value of 0.444, whereas the influence of knowledge transfer was not significant on this dimension. Hypothesis H5 was however supported.

MeansKM was finally subjected to regression in order to check that all KM issues together would have the assumed association with CBM. The results supported all the hypotheses as shown in the summary in Table 14.

Table 12: The effect of KM issues on VIS and STRAT

| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted R<sup>2</sup></b> | <b>R<sup>2</sup> change</b> | <b>F</b>        | <b>Sig F</b> |
|------------------------------|-------------|----------------------|-------------------------------|-----------------------------|-----------------|--------------|
| <b>OPER</b>                  |             |                      |                               |                             |                 |              |
| Step 1                       | .195        | .038                 | .000                          | .038                        | .996            | .430         |
| Step 2                       | .721        | .521                 | .495                          | .482                        | 20.221          | .000         |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>                   | <b>Tol.</b>                 | <b>Part.cor</b> |              |
| <b>Step 2</b>                |             |                      |                               |                             |                 |              |
| Position                     | -.015       | -.242                | .809                          | .855                        | -.014           |              |
| Unit                         | .072        | .261                 | .209                          | .977                        | .072            |              |
| Gender                       | .007        | .114                 | .909                          | .877                        | .006            |              |
| Location                     | -.045       | -.761                | .448                          | .907                        | -.043           |              |
| Age                          | .039        | .566                 | .573                          | .676                        | .032            |              |
| Years in NF                  | -.074       | -1.065               | .289                          | .665                        | -.060           |              |
| Networking                   | .494        | 7.051                | .000                          | .655                        | .400            |              |
| Knowledge transfer           | .318        | 4.582                | .000                          | .668                        | .260            |              |
| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted R<sup>2</sup></b> | <b>R<sup>2</sup> change</b> | <b>F</b>        | <b>Sig F</b> |
| <b>STRAT</b>                 |             |                      |                               |                             |                 |              |
| Step 1                       | .201        | .040                 | .002                          | .040                        | 1.058           | .390         |
| Step 2                       | .594        | .353                 | .318                          | .313                        | 10.171          | .000         |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>                   | <b>Tol.</b>                 | <b>Part.cor</b> |              |
| <b>Step 2</b>                |             |                      |                               |                             |                 |              |
| Position                     | -.028       | -.396                | .693                          | .855                        | -.026           |              |
| Unit                         | -.008       | -.120                | .905                          | .977                        | -.008           |              |
| Gender                       | .018        | .254                 | .800                          | .877                        | .017            |              |
| Location                     | .070        | 1.017                | .311                          | .907                        | .067            |              |
| Age                          | .069        | .865                 | .388                          | .676                        | .057            |              |
| Years in NF                  | -.029       | -.363                | .717                          | .665                        | -.024           |              |
| Networking                   | .172        | 2.112                | .036                          | .655                        | .139            |              |
| Knowledge transfer           | .464        | 5.760                | .000                          | .668                        | .380            |              |

Table 13: The effect of KM issues on OPER and CUSTOMER

| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted</b>      | <b>R<sup>2</sup></b>        | <b>F</b>        | <b>Sig F</b>  |
|------------------------------|-------------|----------------------|----------------------|-----------------------------|-----------------|---------------|
| <b>VIS</b>                   |             |                      | <b>R<sup>2</sup></b> | <b>change</b>               |                 | <b>change</b> |
| Step 1                       | .335        | .112                 | .077                 | .112                        | 3.87            | .006          |
| Step 2                       | .549        | .301                 | .264                 | .189                        | 8.039           | .000          |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>          | <b>Tol.</b>                 | <b>Part.cor</b> |               |
| <b>Step 2</b>                |             |                      |                      |                             |                 |               |
| Position                     | -,058       | -,778                | ,438                 | ,855                        | -,053           |               |
| Unit                         | ,084        | 1,209                | ,229                 | ,977                        | ,083            |               |
| Gender                       | ,210        | 2,878                | ,005                 | ,877                        | ,197            |               |
| Location                     | -,067       | -,933                | ,352                 | ,907                        | -,064           |               |
| Age                          | ,079        | ,952                 | ,343                 | ,676                        | ,065            |               |
| Years in NF                  | -,071       | -,847                | ,398                 | ,665                        | -,058           |               |
| Networking                   | ,287        | 3,395                | ,001                 | ,655                        | ,232            |               |
| Knowledge transfer           | ,223        | 2,666                | ,009                 | ,668                        | ,183            |               |
| <b>Dependent variable</b>    | <b>R</b>    | <b>R<sup>2</sup></b> | <b>Adjusted</b>      | <b>R<sup>2</sup> change</b> | <b>F</b>        | <b>Sig F</b>  |
| <b>CUSTOMER</b>              |             |                      | <b>R<sup>2</sup></b> |                             |                 | <b>change</b> |
| Step 1                       | .149        | .022                 | -,017                | .022                        | .573            | .751          |
| Step 2                       | .489        | .240                 | .199                 | .217                        | 5.867           | .000          |
| <b>Independent variables</b> | <b>Beta</b> | <b>t</b>             | <b>Sig.</b>          | <b>Tol.</b>                 | <b>Part.cor</b> |               |
| <b>Step 2</b>                |             |                      |                      |                             |                 |               |
| Position                     | -,049       | -,636                | ,526                 | ,855                        | -,045           |               |
| Unit                         | ,059        | ,810                 | ,419                 | ,977                        | ,058            |               |
| Gender                       | -,028       | -,364                | ,716                 | ,877                        | -,026           |               |
| Location                     | -,013       | -,171                | ,864                 | ,907                        | -,012           |               |
| Age                          | -,092       | -1,062               | ,290                 | ,676                        | -,076           |               |
| Years in NF                  | -,019       | -,215                | ,830                 | ,665                        | -,015           |               |
| Networking                   | ,444        | 5,031                | ,000                 | ,655                        | ,359            |               |
| Knowledge transfer           | ,066        | ,759                 | ,449                 | ,668                        | ,054            |               |



Table 14: Summary

|                  | CBM       |      | VIS       |      | STRAT     |      | OPER      |      | CUST      |      |
|------------------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
|                  | Beta      | Sig  | Beta      | Sig  | Beta      | Sig  | Beta      | Sig  | Beta      | Sig  |
| Networking       | .470      | .000 | .287      | .001 | .172      | .036 | .494      | .000 | .444      | .000 |
| Knowltransfrer   | .344      | .000 | .223      | .009 | .464      | .000 | .318      | .000 | .066      | .449 |
| <b>KM issues</b> | .699      | .000 | .457      | .000 | .543      | .000 | .700      | .000 | .426      | .000 |
|                  | H1        |      | H2        |      | H3        |      | H4        |      | H5        |      |
|                  | supported |      | supported |      | supported |      | supported |      | supported |      |

H1-H5 supported at 1% risk level

## 7 DISCUSSION AND CONCLUSIONS

This study had initially three goals: Firstly, to examine the phenomenon of common business mindset and to develop a usable definition for the construct. Secondly, to develop a tool for measuring CBM and thirdly, to explore what role KM could play in creating CBM within a firm. An additional aim was to provide some usable ideas for managers in their efforts to enhance CBM in their organisations.

### 7.1 Summary and the analysis of the results

CBM was first examined in the context of Nordea Finance that provided a good research environment as CBM had been discussed in the company during their sales force training and because it had been considered important for the success of the firm. Prior research made an important contribution to developing the definition and the measure for the construct as based on existing theories (e.g. Ståhle and Grönroos, 2000; Kaplan and Norton, 2004; Ståhle and Wilenius, 2006; Helfat et al. 2007; Kujansivu et al. 2007) CBM could be considered as tacit knowledge and a firm's intangible, dynamic intellectual capital, which could and should be managed as

an important resource building sustainable competitive advantage for a firm. CBM was defined as the organisation's capability to common understanding of the essential elements of the business and ensuring that employees and customers have positive and consistent images of and experiences with this organisation.

Existing measures for assessing intellectual capital were examined to discover a usable measure for CBM. However, the identified measures seemed to focus on intellectual assets as a whole, whereas they could not be used for assessing a single asset. Therefore a new measure had to be created.

The measure development process was conducted strictly following the processes used by experienced scholars (e.g. Churchill, 1978; Hinkin, 1995; Metsämuuronen, 2006; Kujansivu et al. 2007; Lee and Lings, 2008) in order to provide a reliable and valid tool for measuring CBM. The final CBM measure included four subscales: common understanding of vision, common understanding of strategy and goals, common understanding of operating models and common understanding of customer approach. These subscales emerged firstly from the ideas of the case firm but they were also supported by theories of Nonaka, (1991), Minzberg et al. (1998), Kaplan and Norton (2004), Ulrich and Smallwood (2004), Ståhle and Wilenius (2006) and Jaatinen and Lavikka (2008).

According to Hinkin (1995) the minimum Cronbach's Alpha value for demonstrating internal consistency is 0.70. CBM measure exceeded this level with an Alpha value of 0.89. In addition, all subscales exceeded the minimum Alpha level. Thus, it may be accepted that this study could provide some contribution to the theories of measuring intellectual capital and at least a fair tool for measuring such an abstract phenomenon as CBM.

The CBM questionnaire contained an additional section regarding knowledge flow and knowledge channels. This enabled further assessment of

the impact of knowledge issues in the level of CBM. The statistical analyses indicated that KM issues, which in this study were grouped into knowledge transfer and networking, have significant impact on CBM, as could be expected based on prior literature (e.g. Nonaka, 1991; Nonaka and Takeuchi, 1995; Bailey and Clarke, 2000; Ståhle and Grönroos, 2000; Earl, 2001; Probst et al. 2002). Moreover, the results show that knowledge transfer and networking as separate subscales have significant impact on the different dimensions of CBM, with one clear exception: knowledge transfer was not a significant predictor of common customer approach, whereas networking was significant. Thus it seems that interaction with others is an effective incentive, when deciding own actions, but merely knowing how one should act, does not generate desired action towards common customers. Furthermore, it was shown that the respondents' position, unit, age, gender, country or years of employment did not have a significant influence on total level of CBM, even though the impact of gender on one dimension of CBM (common understanding of vision) seemed to be significant. Thus, this study could provide support to all five hypotheses concerning the effect of KM on the dimension of CBM.

The review of KM literature revealed further that by integrating KM into a firm's strategy and management approach, the firm could improve conditions that in turn encourage knowledge transfer and networking, finally affecting the firm's financial performance.

## **7.2 Managerial implications**

Several managerial implications follow from the findings of this study. Nonaka's (1991) spiral of knowledge, Grant's (1997) knowledge based theory and mechanism of interaction as well as the knowledge management systems of Probst et al. (2002) provide usable foundation that firms could apply in initiating a systematic model for CBM creation.

When drafting the suitable model for a specific firm at least the next phases could be considered: setting of knowledge goals, dissemination of the strategies and goals utilising transformation of tacit knowledge to explicit, and finally measurement and feedback.

Because knowledge transfer and networking are important for CBM creation in a firm, managers should exploit principles of KM when planning how to implement vision, strategy and goals, common operating models and customer approaches. In order to have personal relevance for initiating KM approach managers need to feel that KM is important in the eyes of top management. Personal relevance may be achieved by incentives and rewards, but first of all managers should be able to link KM to the existing and potential strategy and performance. The link to strategy and performance may be achieved by integrating KM to the overall strategies of the firm. Thus, a firm should define knowledge goals in alignment with strategic goals. (Bailey and Clarke, 2001; Probst et al. 2002; Kaplan and Norton, 2004).

Top management's ideas and the desired future state should be formulated to knowledge goals at different levels (Probst et al. 2002). Knowledge goals should ideally contribute to the realisation of the firms' "hard" goals. When keeping in mind the crucial impact KM issues have on CBM knowledge goals on strategic level should include the message that networking and knowledge sharing are desirable. In addition, strategic knowledge goals should define how organisation structures support knowledge goals.

At operational level managers should define clear goals for processing knowledge; how to acquire new knowledge, how to share knowledge and how to utilise knowledge in action.

Nordea Finance expressed goals for CBM in the sales force training including goals for knowledge acquisition and sharing, reciprocity and net-

working. As the assessment of the firm's strategy was not in the scope of this study the strategic details have not been explored, therefore the questions of how these goals were included at the strategic or firm level remain open. If the goal setting has not been made at the firm level it may result to different views within different units regarding knowledge, which in turn could danger CBM. In such case it could be useful to extend the knowledge goals and goals for CBM to cover the whole organisation in order to align all team goals with the common firm goal. In terms of KM this process would mean integration of knowledge goals with a firm's strategic goals. This may indicate that the most important task of managers is to be prepared and proactive in order to enhance discussions concerning issues of CBM that is vision, strategy and goals, common operating models and customer approach.

KM approach could benefit managers in a great deal in the process of dissemination of the strategies and goals. Firms need to consider different kinds of skills that are required to initiate KM approaches. Managers need the ability to influence attitudes and to work in complex organisations with plenty of tacit knowledge. Thus they need skills in communication, leadership, team-building, coaching, training, mentoring and information handling; they also need the ability to transform tacit knowledge to explicit. (Abell, 2000; Bailey and Clarke, 2001; Minbaeva, 2007).

At the final phase in CBM creation model top management should determine the way of measuring the results and giving feedback. One purpose of this study was to develop a measure for assessing CBM. This measure is suggested as a first tool to be used for measuring CBM and deciding the focus of development actions. There may be a need for modifying the measure to better fit a firm's goals, but it may also be used as a starting point without modification for measuring CBM. It is also very important to decide the means of feedback and rewards, otherwise the middle managers may lose the relevance of the whole issue wondering what is there for them? Kaplan and Norton (2004) suggest that employee surveys should

be used to assess leadership skills of managers and to create a status report on the readiness of key leadership competences. CBM measure could be integrated in the employee survey to achieve a systematic way of measuring managers' skills in CBM creation.

In order to enhance CBM building, this study suggests firstly that managers should create environments, which encourage knowledge transfer and networking. Many scholars have stated that teams are effective forums of dialogue and sense-making (Nonaka, 1991; Kaplan and Norton, 2004; Mohamed et al. 2004). Therefore managers should focus on teambuilding and creating an attitude of trust and open communication where members feel safe to ask questions and express ideas for development. Kaplan and Norton (2004) wrote: "There is no greater waste than a good idea used only once". This attitude should be desired and targeted in effective work teams. Reciprocity could also be encouraged in the work places by use of space as an opportunity (Earl, 2001). This could for example mean starting a "knowledge café" where employees could transfer knowledge around a specific topic, or using an open-plan office as a natural meeting place (Earl, 2001).

Secondly, this study suggests that information management should be reconsidered, because open communication and free flow of information are crucial for CBM creation. On the other hand it is not however necessary for everybody to know everything (Probst et al. 2002). Therefore managers should focus on disseminating the relevant information, ensuring that all employees have a commonality of purpose, a shared vision and an understanding of how their personal roles support the overall strategy (Kaplan and Norton, 2004).

Thirdly, managers could encourage networking by developing structures that connect employees naturally to establish work in cross-functional teams. Cross-functional teams dismantle critical barriers that isolate various departments into disconnected islands that may be pulling to different

directions (Mohamed et al. 2004). Internal networking could also be enhanced with help of technology by creating knowledge charts or skills maps consisting of descriptions of the skills and competences of all employees within the company.

### **7.3 Limitations and suggestions for further research**

CBM is a very firm specific construct and depending on the organisation its indicators may vary. Thus the intention of this thesis was not to state that the four indicators chosen for CBMi could be generalised within other organisations. Even though it may be possible to adopt construct CBM also in other firms' context, it could provide an interesting research topic to add more elements into CBM and test them within different environments. Furthermore, it would be interesting to examine whole organisations, not limited to sales force as in this thesis. The interesting detail in the results of this work was the possible impact of gender on common understanding of vision, which would also be worth of investigating further.

Cross-cultural invariance was not tested in the course of this work, thus possible cultural differences in response styles may decrease the reliability of the results. In addition language may also be considered as a limitation, as the questionnaire was delivered only in English and this may at least to certain extent, limit the understanding and perception of the questions. There are eight different local languages in the case organisation, English being the official group language. Anyhow, the sample constituted of sales people who in general have good language skills, hence it is assumed that language is not a major obstacle in understanding the questionnaire and doing the response task properly.

In the course of this work theories of strategic management were reviewed only superficially but enough for realising that these theories could provide an additional contribution and viewpoint to CBM, thus it is suggested as good area to be investigated.

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