How Leadership and new Technology Influence the Work Environment
- Experiences taken from Swedish organizations

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- Experiences taken from Swedish organizations

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Åsa Wreder
ABSTRACT

The satisfaction and health of employees have become important means for competitiveness and organizational success. Therefore, it is vital for organizations to create good work environment. Nevertheless, many are still struggling with high numbers of sickness absence caused by bad work environment.

The purpose of this thesis is to contribute with understanding about how organizations can create good work environment. The focus is on how organizations may work to adapt to the requirements of modern working life and at the same time ensure a good work environment in the endeavor to achieve employee well-being and organizational development. To accomplish this, the purpose was specified within two themes focusing on two important aspects of contemporary organizations and working life, leadership and technology, and how these aspects can influence the working conditions.

Theme 1 focused on what could be learned from organizations awarded prizes for successful leadership, work environment and improved profitability and health. A case study was performed in a large Swedish organization and the work and experiences of managers and employees on different organizational levels were studied through interviews and workshops. The case study showed that it is possible for managers of today’s organizations to practice good leadership and be successful by focusing on the needs of their subordinates. Furthermore, the managers’ strategies and work, that consciously focus on employee well-being and are supported by communication and trust, are a vital means to this. All managers and employees in the study, regardless of organizational level, also considered their manager to be a major reason for the good work environment and their organization’s success. Based on these findings, and comparisons with studies of smaller successful organizations and theory, a management model was created to describe how managers, in particular in larger but also smaller, organizations can work to create a good work environment promoting sustainable health. The model suggests a wider management strategy following a system view similar to that of Total Quality Management. The strategy is based on human core values that are supported by methodologies and tools such as delegation, coaching and employee development.

Theme 2 had a different focus on work environment through a case study performed in eldercare in Sweden. Firstly, the care pathway and work situation of registered nurses were described. Thereafter, influences of information and communication technology (ICT) on the work environment were identified from an outsider view, through observations, and an insider view, based on interviews, reflective dialogues and focus groups with registered nurses. The findings show
that there is still much that can be done to improve the work environment in eldercare. However, ICT has potential to solve some of the problems identified, for instance increase the security, independence and authority of registered nurses and increase the information sharing and their possibilities to follow up work. In that way it has also potential to improve the quality of care. Nevertheless, the changes ICT causes to the work environment, for instance through additional tasks and responsibilities, also lead to increased work load and stress. Therefore, to take advantage of the potentials of ICT not only should the new technology be adapted to the needs of the employees but also the structures, resources and routines of the organization have to be adapted to allow for good working conditions when ICT is used.

Brought together, the two themes confirm that leadership and technology have extensive influence on the working conditions. It is shown that managers’ leadership could not be neglected in the creation of a good work environment. An important conclusion is that it is possible and crucial for managers to intentionally shape leadership and technology to generate working conditions that meet the needs of the employees. It is important for managers to create possibilities for: control and handling of demands in work; involvement; clear goals and follow up; information sharing; competence development. The working conditions will be assessed by the employees and thereby influence their experienced work satisfaction, health as well as performance, which are crucial for achieving good quality and organizational results.
SAMMANFATTNING

Medarbetarnas arbetstillfredsställelse och hälsa är idag viktiga konkurrensmedel och förutsättningar för framgång. Därmed har det blivit allt viktigare för organisationer att kunna erbjuda en god arbetsmiljö. Trots detta kämpar många företag fortfarande med höga sjukkrivningstal till följd av dålig arbetsmiljö.

Syftet med denna avhandling är därför att bidra till ökad förståelse för hur organisationer kan skapa god arbetsmiljö som främjar både medarbetarnas hälsa och organisationens utveckling. För att uppnå detta definierades syftet inom två teman som fokuserade på två viktiga organisationsaspekter, ledarskap och teknik, och hur dessa kan påverka arbetsförhållandena för medarbetarna i dagens organisationer.


Tema 2 hade ett annat fokus på arbetsmiljö genom en fallstudie i äldrevården i Sverige. I denna studie undersöcktes till att börja med vårdenhet och sjuksköterskor, med sjuksköterskor som arbetar i äldrevården. Därefter studerades påverkan på dessa då informations- och kommunikationsteknologi (IKT) infördes i verksamheten. Effekter av IKT på arbetsmiljön identifierades utifrån två perspektiv, forskarnas, med observationer, och medarbetarnas, utifrån intervjuer, reflektiva dialoger och fokusgrupper med sjuksköterskor. Fallstudien visade att arbetsmiljön inom äldrevården behöver förbättras och att IKT har potential att lösa flera av de problem som identifierades. Sjuksköterskor kände sig trygghet och arbetet då de använde IKT. De fick dessutom ökad egenmakt, bättre kontroll över arbete, tillgång till mer information om patienterna och möjlighet att följa upp sitt arbete. IKT kan därmed också bidra till bättre vård. Studien visar dock att IKT samtidigt
kan ha negativa effekter på arbetsmiljön. Genom att IKT till exempel tillför ett ökat antal arbetsuppgifter för sjuksköterskorna och kräver ett större ansvar av dem i arbetet ökar arbetsbelastningen och arbetssituationen blir stressigare. För att dra nytta av de fördelar som finns med att använda IKT i verksamheten är det därför viktigt att inte bara anpassa tekniken utan även organisationsstrukturer, resurser och rutiner så att arbetsförhållandena tillfredsställer medarbetarnas behov.

Tillsammans bekräftar resultaten från Tema 1 och Tema 2 att ledarskap och teknik har betydande påverkan på medarbetarnas arbetsförhållanden. Det framgår att chefernas ledarskap är centrale för att skapa god arbetsmiljö. En viktig slutsats är att chefer medvetet kan, och måste, forma ledarskapet och tekniken så att de bidrar till att skapa arbetsförhållanden som tillfredsställer medarbetarnas behov. Tema 1 och Tema 2 visar samstämmigt vikten av att skapa möjligheter för medarbetarna att: ha kontroll och hantera kraven i arbetet; vara delaktiga; få information; se tydliga mål och följa upp dessa; utvecklas i arbetet. Medarbetarnas uppfattning av arbetsförhållandena påverkar deras upplevda arbetstillfredsställelse, hälsa och prestationssätt industrins möjlighet till framgång.
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1 INTRODUCTION

In this first chapter, the research area is briefly described. The purpose of the research, the stated research questions and the delimitations chosen are also presented. Finally, the structure of the thesis is explained.

1.1 Background

Customers today tend to demand more and more at a lower cost. In an internationalized and competitive environment this puts considerable pressure on organizations and calls for cooperation between managers and employees to reach goals, become flexible and constantly improve products and processes that fulfill these higher demands; see Docherty et al. (2002); Arnetz (2002); Molander (1996). Thus, organizations are dependent on employees’ competences, health and work performances.

The pressure has resulted in organizations adopting new organizational and management forms and strategies as well as introducing innovative technology, to increase flexibility, employee performance and competitiveness; see Arnetz (2005); Augustsson & Strandberg (2003); Docherty et al. (2002). Such approaches may provide conditions of more freedom and influence in work for the employees, which in turn can impact positively on work satisfaction and performance; see Johansson (2005); Docherty et al. (2002); Kondo & Park Dahlgaard (1994); Hackman & Oldham (1976). However, often the new management approaches and the practice of innovative technology instead seem to have increased the pressure on employees; see Johansson (2005); Docherty et al. (2002); Houtman et al. (2002). For instance, new technology in the organization may put new and higher demands on employees in terms of competence, autonomy and flexibility; see Johansson (2005); Docherty & Nyhan (1997). It is also shown that enlarged possibilities to involvement and growing requirements can increase workload, work intensity, responsibility and options and thereby cause stress and a bad work environment; see Gatu (2006); Arnetz (2002); McKenna & Beech (2002); McCabe et al. (1998).

The connection between a bad, psychologically unsatisfactory, work environment and a high frequency of sickness absence has been documented by, for instance, Dolbier et al. (2001) and The Swedish Labour Inspectorate (2000). In recent decades, sickness absence, caused by psychosocial diseases such as depression, has risen to alarming levels in Sweden and other parts of Europe; see Aronsson & Hallsten (2006); The Swedish Social Insurance Office (2005); Fredriksson (2004);

\[^{1}\text{For instance, Norway and the Netherlands; see Lindberg (2006).}\]
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The National Social Insurance Board (2003). An important part of this sickness absence is work-related and stressful modern workplaces are argued to be a major cause; see Aronsson & Hallsten (2006); Gatu (2006); Docherty et al. (2002); Levi (2000).

Sickness absence has many negative consequences for society, organizations and individuals; see Bonato & Lusinyan (2004); Daubas-Letourneux & Thebaud-Mony (2003). Not least, bad health means suffering for the individual employees concerned and has implications on their performance and capacity to work and be productive; see Arnetz (2005). From a business perspective, this reduces organizations’ ability to compete on the market and their future profits.

Accordingly, an organization’s chances of achieving quality and business competitiveness are linked to the work environment; see Edlund & Stattin (2005); Marklund et al. (2005); Hackman & Oldham (1976). One major reason to this is that the work environment can positively impact on work satisfaction and thereby increase the chances of fruitful employee performance and improved competitiveness. On the other hand, a bad work environment may cause dissatisfied employees and higher stress levels, which have been related to inferior performance and lower quality; see Redfern et al. (2002); Chu et al. (2000). This, in turn, may lead to dissatisfied customers, increased costs of ill-health and in the end decreased chances for organizational success; see Arnetz (2005); Bergman & Klefsjö (2003). Altogether, this implies that a better understanding of how to create a good work environment that promotes employee satisfaction and health is crucial in modern working life.

1.2 Purpose and research questions

The overarching purpose of the research described in this thesis is to contribute to the creation of good work environment. The focus is on how organizations may work to adapt to the requirements of modern working life and at the same time ensure a good work environment in an endeavor to enhance employee well-being and organizational development.

Development of a good work environment can be related to work satisfaction and increased health and performance in the organization; see SKI (2006); Vinberg (2006). Earlier research about work environment has suggested a number of organizational aspects, which may affect the working conditions, for instance organizational context, industrial relations, organization of work, management and leadership as well as technology; see Härenstam et al. (2006); Szulkin (1996). The working conditions will affect the employees’ satisfaction, which in turn influences their health and performance and the likelihood of organizational success; see, for instance, Docherty et al. (2002).
Based on this, aspects of organizations, competing in the context of modern working life, should be of specific interest to increase the understanding of how a good work environment may be promoted. The basic assumptions for this interest are shown in Figure 1.1, which illustrates an assumed influence of three such organizational aspects; management and leadership, organization and technology. These aspects are examples of work environmental factors that have been identified in theory to influence other aspects making up the conditions of the work environment; see Härenstam et al. (2006); Zanderin (2005); Axelsson (1995). As such, the organizational aspects may be seen as parts of the work environment as well as aspects influencing the conditions of the work environment.

Figure 1.1 The figure illustrates that organizational aspects, together with aspects related to working conditions, may be viewed as work environmental factors shaping the work environment. The figure also shows the assumed influence of organizational aspects, such as leadership, technology and organization, on aspects making up the working conditions, for instance, ergonomics, social relations and reward systems. These aspects are assumed to affect work satisfaction and health of the employees, which in turn will influence such as their performance, costs related to sickness absence and, in the end, the competitiveness and results of the organization. The dashed line in the figure illustrates that the focus of this thesis is on the work environment and its relation to employees’ work satisfaction and health rather than the end purpose of customer satisfaction and business results. The figure further shows that this focus is considered within two themes, Theme 1, related to management and leadership, the working conditions and health (the blue lines), and Theme 2, which mainly deals with technology, working conditions and work satisfaction (the red lines).

Figure 1.1 further exemplifies work environmental factors related to the aspects that establish the working conditions and thus may be influenced by the organizational aspects. Such factors in the work environment, for instance ergonomics, demand, social relations, influence, efficiency and reward systems are shown to affect the work satisfaction and health of the employees; see Johansson (2005); Arnetz (2002); Docherty et al. (2002); Kondo & Park Dahlgaard (1994).
Thereby, these aspects are important to the organization’s chances to perform well, create good quality products and, in the end, be competitive and successful. The areas and relations of the figure are described in more detail in Chapter 2.

In order to contribute to the overarching purpose, this thesis deals with some of the exemplified aspects related to two themes. Theme 1 is about ‘Leadership for sustainable health’ and Theme 2 considers ‘Influence of new information and communication technology on the work environment’.

1.2.1 Theme 1: Leadership for sustainable health

Management and leadership have been shown to have vital impact on the work environment; see Arnetz (2005); Nyberg et al. (2005); Maslach & Leiter (1997). The formal position of a manager implies responsibility and authority to control factors in the work environment presumed to have an impact on working conditions and employee health; see Lagrosen et al. (2007); Sundin (2005); Aronsson & Lindh (2004); DuBrin (2004). In addition, leadership, or the ways in which, for instance, managers at different organizational levels act, is assumed to impact on work satisfaction and promotion of health at the workplace; see Aronsson & Lindh (2004); Arnetz (2002); SOU (2002); Siegrist (1996).

To allow for work satisfaction and promote health among employees, managers should create a work environment in which the individual employee can handle the demands in work and have control and opportunity to develop; see Theorell (2005); Karasek & Theorell (1990); Antonowsky (1987). Thus, several authors have argued that managers have to adjust to the requirements of modern working life to allow for employee involvement and flexibility. For instance, it is believed that managers should practice a more supportive leadership and delegate more power to the lower levels of the organizational structures; see Docherty et al. (2002); Kinlaw (2000); Stowell (1988); Deming (1986).

Nevertheless, leadership as such may be difficult to practice, particularly in large organizations that tend to be hierarchical and have complex communication channels; see Daley et al. (2003); Nilsson (1999); Deming (1986). The distance between managers and employees in large organizations may be large, both physically and in terms of the hierarchy, and thereby obstruct interaction and interpersonal relationships between managers and employees; see Sundin (2005). As a result, employees may not be given responsibilities and hence have neither the authority nor the opportunity to control their work, act autonomously or develop. Sundin (2005), among others, argues that such conditions make people sick. According to statistics, sickness absence also tends to increase with the size of the organizations; see Statistics Sweden (2004). For instance, organizations of more than 100 employees relatively report more than double the sickness absence of a very small organization with less than five employees; see Rahm (2004).
Aim and research questions of Theme 1

Even if many organizations experience problems and face increasing numbers of sickness absence, there are successful organizations that have shown excellence in leadership and created good work environment. At the same time, these organizations have also shown decreased sickness absence as well as increased profitability. There would, indeed, be considerable gains for individuals, organizations and society if more organizations could reduce the number of employees suffering from physical and mental disorders and focus on promotion of sustainable health; see Lindberg (2006); Chu et al. (2000).

Based on this, the aim of Theme 1 is to describe how managers can act in modern working life to create a good work environment. The focus is on large organizations and what could be learnt from successful organizations to inspire managers in other organizations. This aim is specified in two research questions:

Q1: How have successful organizations worked to achieve sustainable health?

Q2: How can a model for sustainable health be formulated to support the work of managers in large organizations?

The core concepts of the theme are, ‘manager’ and ‘leadership’, ‘work environment’ and ‘sustainable health’. In this thesis ‘work environment’ refers to how the employees cope at work and includes all the work environmental factors influencing and making up the working conditions, such as, leadership, technology, lighting, noise, social relations, demands, as well as reward programs. The concept of ‘sustainable health’ should be understood in a work context and refers to the achievement of long-term maintained or increased health and social well-being. In this thesis, ‘manager’ further denotes a person engaged in a professional managerial position of an organization whereas ‘leadership’ may be described as a manner of influencing people in a direction. The core concepts are discussed further in Chapter 2.

1.2.2 Theme 2: Influence of new information and communication technology on the work environment

In recent decades, the rapid development and application of information and communication technology (ICT) has had major impact on the development of business and working life; see Johansson (2005); Docherty et al. (2002). ICT has revolutionized the storage and transmission of information in media and on the Internet. This has enabled people to see and communicate with each other, gather information and interact with distance service more quickly, more easily and without the limitations of time and space; see Johansson (2005); Johnston (2000); Campbell et al. (1999). Thus, ICT has also been an approach to handling increasing
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demands on communication, flexibility and speed in modern working life; see, for instance, Docherty et al. (2002).

Nevertheless, introduction of such new technology also compels significant, widespread, and sometimes even unanticipated, organizational change; see Barrett et al. (2006). According to Sävenstedt (2004), Certo (2000) and Pidd (1999), introduction of a new idea, such as new technology, is an organizational change that in turn forces changes in processes, work organization, responsibilities and methodologies. Thus, introduction of ICT also influences the work environment; see Sävenstedt et al. (2002); Iwarsson (1999). For instance, ICT can offer innovative learning opportunities, social relations and workplace flexibility; see Johansson (2005); Forslin (2003); Docherty et al. (2002).

However, the new flexible and ICT-intensive workplace is also argued to be profoundly ambiguous for the employees; see, for instance, Docherty et al. (2002). New technology may impose new ways of performing the work and may put new demands on the employees in terms of competence, autonomy, ethical considerations and flexibility; see, for instance, Johansson (2005). This in turn, may create stress and affect work satisfaction negatively and thereby increase sickness absence; see Redfern et al. (2002); Chu et al. (2000); McAiney (1998); Cohen-Mansfield & Rosenthal (1989).

Aim and research questions of Theme 2

There are growing opportunities of applying ICT in organizations to handle increasing demands on social relations, flexibility, and speed in modern working life. However, introduction of ICT will also change the work environment and work of employees, who will be forced to face the new technology in their work and must adjust to the changes it may bring to the organization.

Effects of ICT are commonly described in literature. However, most of the literature either deals with effects on the production and business or the attitudes towards technology; see Lee Kyle (2001); Wright et al. (2001). How ICT may affect the work environment and thereby the opportunities of the employees to feel and perform well is more scarcely described.

Therefore, the aim of Theme 2 is to describe how applications of new ICT may influence the working conditions of employees. This aim is specified in the following two research questions:

Q3: How do employees experience using new applications of ICT in work?

Q4: How can introduction of new ICT in work influence the work environment?
In this sense, ICT may be described as by the World Bank (2002): “Information and Communication Technology consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, images)”. The other core concept of Theme 2, ‘work environment’ was defined in Section 1.2.1 and is described in more detail in Chapter 2.

### 1.2.3 Summary of purpose, aims and research questions

The overarching purpose of this thesis and the aims and research questions that are stated within the two themes are summarized in Figure 1.2. The figure also illustrates the relationships between the purpose, aims and research questions.

![Figure 1.2](image-url)  
*The figure illustrates the hierarchy of the research purpose, the aims and the research questions posed within each theme of this thesis.*

### 1.3 Delimitations

The research described in this thesis is limited to Swedish organizations in order to minimize potential cultural and structural differences and other diversities between organizations\(^2\). In addition, the work primarily deals with psychological and social aspects of, and effects on, the work environment and not physical issues. Furthermore, the purpose is not to explain effects by casual relationships. Instead, the causality is already embedded in the theoretical assumptions as described in Figure 1.1. and Chapter 2. Moreover, as regards Theme 1, the thesis mainly focuses

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\(^2\) There are not only cultural differences between European countries, but also other differences in such areas as leadership, working conditions and sick leave. For instance, Denmark, Germany, Finland and Great Britain have a low number of people on long-term sick leave compared to Sweden; see Lindberg (2006).
on managers’ intentions and ways of working since strategies and methodologies should be easier to learn from and imitate in other organizations than the characteristics of people.

1.4 Structure of the thesis

The main body of the thesis is made up of seven chapters. Moreover, six papers and complementary appendices are appended to this foundation; see Figure 1.3.

Figure 1.3 The structure of the thesis, which consists of seven main chapters, six appended papers and complementary appendices. The first three appended papers are related to Theme 1 whereas the latter three are linked to Theme 2.

In this Chapter 1, a short description of the research area was outlined. Moreover, the purpose of the research was presented before the two themes of the thesis, the aims, stated research questions and the chosen limitations were described. Lastly, the structure of the thesis is now illustrated. Next, in Chapter 2 the theoretical frame of reference is presented. Chapter 3 presents the general research approach, strategies and methods selected. In Chapter 4, the performance of the research within two research projects is described. After that, in Chapter 5, the six appended papers are summarized. Chapter 6 presents the analysis of the main results within
each of the two themes towards theory. Finally, in Chapter 7, the conclusions of each theme are presented and discussed. Thereafter the results of the two themes are brought together and further conclusions are drawn. In addition, the research conducted as well as the results are discussed and suggestions for practical implications and further research are given.
2 THEORETICAL FRAME OF REFERENCE

In this chapter, the theoretical frame of reference is outlined. First, literature related to work environment is presented. Thereafter, the area of work environment management with the aim of health promotion is outlined. Last, the area of Quality Management is discussed.

2.1 Work environment

The area of ergonomics, which embraces work environmental aspects, has been an area of attention for a long time. Initiatives for organizational improvements, such as organization and production, have been of interest, at least, since the beginning of industrial organization. For instance, Taylor, as early as 1911, described the intention to develop and find better ways of working. Within this context, at the time of industrialization, the question of work environment and different ways of looking at labor were also brought up on the agendas of society and organizations; see Davis (1971). Since then, the interest and view of the work environment have changed and over the years shifted between different schools and views, for instance, the school of Scientific Management and the school of Human Relations.

The work by Taylor (1911) is probably one of the most famous examples from the so called school of Scientific Management. Taylor launched the principles of Scientific Management to improve control of the human factor in production and ensure the maximum prosperity for the employer together with the maximum prosperity of each employee; see Taylor (1911). In summary, the principles included:

- Methods based on scientific studies.
- Scientific selection, training and development of each employee.
- Cooperation with each employee to ensure the methods were followed.
- Equal distribution of work between managers (who should apply scientific principles to plan the work) and workers (who should carry out the work).

Shortly after that, between 1924 and 1932, the Hawthorne experiments were performed. In these studies, the researchers were interested in the impact of physical conditions on production but arrived at results known as the ‘Hawthorne effect’, which are argued to indicate the importance of managers’ social interaction and communication with workers to improve productivity; see Sandkull (2000); Mayo (1933).

1 ‘Taylorism’ has often been criticized and understood as something negative. However, even if Taylor’s principles may have been practiced in less favourable ways, Taylor appears to have had the best interest of the employees at heart.
Reactions of labor to Scientific Management and the findings from the Hawthorne experiments further encouraged a growing interest in the human dimensions of organization and thus the research area of Human Relations see; Jaffe (2001); Trist (1973). While Scientific Management assumed that a desire for bonus motivated people, Human Relations emphasized social needs and needs for self-actualization; see Jaffe (2001). Except for the Hawthorne experiments, Maslow (1943), Herzberg (1959) and McGregor (1960) are considered as important contributors to the shift that Human Relations represent in assumptions about sources of human behavior and motivation in work; see Jaffe (2001); Kondo (1991).

2.1.1 Definition of work environment

Today, ‘work environment’ is an extensive concept relating to the work situation of people. According to Eklund et al. (2007), work environment may be defined in a wider context of ergonomics and thus integrates work organization, leadership, psychosocial aspects, cognitive ergonomics and physical ergonomics. Other researchers have described the work environment as including all the factors, such as biological, medical, technical, physical and psychosocial factors, that affect or shape the working conditions and the people in work; see Zanderin (2005); Susser & Susser (1996); Axelsson (1995).

Nevertheless, the factors of the work environment are, in turn, argued to be affected by, for instance, the conditions and the surroundings of the organization; see Härenstam et al. (2006); Axelsson (1995). For instance, Zanderin (2005) argues that the foundation of the working conditions is the business a company runs. Depending on what is produced, production processes, technologies and work organization have to be adapted to the specific business; see Zanderin (2005). At the same time, an organization operates in a wider context of a society and all its changes, demands and regulations, which will affect the work environment and the employees; see Härenstam et al. (2006).

Hagberg (1996) has further described a model of a production system, consisting of employees, work tasks, technology, organization and work environment as different parts, to illustrate that a change in factors within one of the different parts will affect the other parts. For instance, a change in the technology will affect the tasks, the organization of work and in turn the work environment and the working conditions of employees; see Hagberg (1996). However, it is hard to find theories exploring the associations between phenomena at the organizational level and working conditions and health at the individual level; see Härenstam et al. (2006).

A holistic view of the work environment, with work environmental factors made up of the organization, is described by Axelsson (1995); see Figure 2.1. In a similar way, Härenstam et al. (2006) and Szulkin (1996) have argued that factors within the organization, which influence the work environment and employees, may be related
to factors such as, organizational context, industrial relations, organization of work, power and control, leadership and technology. These, in turn, may influence work environmental factors creating the working conditions, such as, the work group and colleagues, possibilities to influence and develop, social support, and reward systems; see Axelsson (1995); Wilson (1992); Lindell (1989).

Nevertheless, the view of the work environment as made up of work environmental factors shaping the working conditions is often seen among researchers and practitioners. In addition, they further tend to divide the work environment into the physical and the psychosocial work environment and thus the factors into two broader groups of psychosocial factors and physical ones; see Agervold (2001). From this view, the physical environment is defined as the surroundings, such as, local green areas, building, climate, production site or the office, including factors of machines, chemicals, light, vibrations, ventilation, noise and physical burden; see Zanderin et al. (2005); Agervold (2001). The term 'psychosocial work environment' was initially used in the 1950s by Eriksson (1959) as a contrast to the strictly biological view of people. Nevertheless, the term may give the impression of a specific psychosocial environment. However, the definitions of the psychosocial work environment are often related to peoples’ perception of their work environment or used to highlight a need of a wider view of the physical work environment that considers these individual perceptions; see Håkansson (2005); Agervold (2001); Allwood & Thylefors (1993). Katz & Kahn (1978) have also illustrated a psychosocial view of the work environment describing that the ‘external’ work environment may be perceived differently by different people. These individual perceptions may be seen as results of interplay between the individual and the work environment; see Katz & Kahn (1978). In the end, the
individual perceptions of the work environment and working conditions will decide the individual’s level of work satisfaction; see Jakobsson (2001).

This thesis focuses on the psychosocial aspects of the work environment. Thereby work environmental factors, such as organization and leadership, affecting the perceived psychosocial conditions will be of specific interest. According to Agervold (2001) and Karasek & Theorell (1990), psychosocial aspects consider for instance demands and control, social support and possibilities to develop. However, it is obvious that the individual’s perceptions or experiences of these conditions, for instance, displeasure or contentment, are also dependent on physical aspects of the work environment, i.e. depend on the work environment as a whole. The view of the work environment used in this thesis is illustrated in Figure 2.2, which shows that work environmental factors include different organizational aspects as well as both physical and psychosocial working condition aspects that are parts of the work environment. As such, the work environmental factors may both influence and shape the working conditions of employees.

![Figure 2.2](image-url)
2.1.2 Organizational aspects of the work environment

In this thesis I have chosen to focus on two work environmental factors related to organizational aspects, leadership and technology, which are identified to affect the working conditions and employees. Therefore, these two aspects are described below.

Leadership

Leadership has been of interest to society for thousands of years. However, it was not until the early 20th century that the scientific study of leadership began; see Kanji & Moura (2001). Today, there is a lot of literature within the field of leadership. There seem to be almost as many definitions of leadership as there are researchers. As stated by Yukl (1998), a risk with going into the subject of leadership might be that "how one defines leadership affects the research and theory on it". However, since leadership is of interest for this thesis I want, in spite of that, to give a brief overview.

During recent years, a discussion has evolved regarding the concepts of ‘management’ and ‘leadership’ as well as those of ‘manager’ and ‘leader’. Yukl (1998) emphasizes that the word manager is an occupational title. Moreover, Torrington et al. (2002) argue that a leader in some way motivates others to act in such a way as to achieve group goals. They mean that such a definition makes no assumption about who is the leader, i.e. it may be, or may not be, the professional head of a unit. Yukl (1998), similarly, claims that it is obvious that a person can be a leader without being a manager and be a manager without leading. He further states that successful management also needs to incorporate leadership. Certo (2000) discusses similar thoughts and argues that management, as a focused organizational process, and leadership, as focused on concern for the employees as people, need to be combined. Stoner & Freeman (1989) further argue that managers work both with and through people.

In Sweden, and several other countries, there seems to be a similar discussion going on. Here people have started to separate the concepts of ‘manager’ (in Swedish: ‘chef’) and that of ‘leader’ (in Swedish: ‘ledare’), as two types of roles. The manager gets the position from above, through an appointment, but the leader gets the status and legitimacy from the group he/she is the leader of. We also have two different ways to act within these roles, namely ‘management’ (in Swedish: ‘chefskap’) and ‘leadership’ (in Swedish: ‘ledarskap’); see Müllern & Elofsson (2006).

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4 To further complicate the situation, there are different interpretations of the concepts in different countries. In the paper by Huhn (2005) the concept of management is discussed. He states, for instance, that “the English-speaking world calls almost any activity below economics ‘management’, while the German-speaking world often talks of management when it wants to be modern."
Kotter (1990) is one of the researchers, who have addressed the difference between leadership and management. Much of the leadership literature treats the two concepts as synonymous and there is a lack of agreement and a strong debate in literature on this issue; see Huhn (2005); Hunt et al. (1982). The outcome of the study presented in Kotter (1990) is that leadership is conceptually broader than management and that leaders provide much more to their organizations than managers. This view is consistent with the writings of a number of other researchers; see Bennis (1989); Zaleznik (1977).

Certo (2000), Kotter (1999, 1988) and Wiberg (1992) also discuss the difference between those concepts and emphasize two distinct, but complementary, systems of action. Kotter (1988) describes leadership as “a process for influence, without forcing, one or several groups of people in one direction”. Northouse (1997) presents a similar definition and suggests four characteristics of leadership: it is a process; it involves influence; it occurs within a group context; it involves goal accomplishment.

According to Wiberg (1992), leadership means personal and deliberate influence on employees to perform a result. He describes management as orientation of an operation in the surrounding world, whereas Kotter (1999) argues that the main function of management is to provide directions and consistency to an organization and that the fundamental function of leadership is to cope with change.

In this thesis, management is associated with the professional way an organization is controlled through issues of strategies, responsibilities, planning and results. A manager is further defined as a person engaged in a managerial position of an organization. However, I assume that leadership, as defined by Kotter (1988), is also an important part of good management. Bearing this in mind, it can be assumed that managers have the authority to control most of the work and organizational factors that affect the work environment. In addition, the way they practice leadership will influence the working conditions and, consequently, employee satisfaction and well-being; see Sundin (2005); Aronsson & Lindh (2004). From this perspective, it is interesting to find out how managers should work, to increase work satisfaction and develop the workplace towards a health-promoting environment.

Technology

The development of technology and its influences on production, working life and peoples' conditions have always been of interest, for instance in the early peasant communities, in industrialization and during the introduction of computers; see, for instance, McClellan (2006).

The technology is constantly developing and organizations are forced to keep up with the development and introduce new technologies. The literature provides different reasons for introducing new technology, e.g. productivity, efficiency,
quality, safety, flexibility, and cost reasons; see Hess (2002). However, in recent decades most automation, as an example, is not done for safety reasons. Instead, cost is the primary motivation; see Carrière et al. (1998).

Today, in the 21st century, most organizations and employees face many changes connected to the rapid development of Information and Communication Technology (ICT), which has had a major impact on business and working life; see Johansson (2005); Docherty et al. (2002). In this sense, ICT may be described as by the World Bank (2002): “Information and Communication Technology consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, images).”

ICT is argued to have revolutionized the storage and transmission of information in media and on the Internet. This has enabled people to see and communicate with each other, gather information and interact with distance service more quickly and easily; see Johansson (2005); Johnston (2000); Campbell et al. (1999).

As such, the introduction of ICT compels significant, widespread, and sometimes even unanticipated, organizational change and impacts people who use the new technology; see Barrett et al. (2006); Bradley (2003); Lennerlöf (1984). According to Bradley (2003), ICT influences people within different areas. Five of these may be related to the workplace and work environment:

- Work organization and work content
- Human relations and communication
- Stress
- Distribution issues (balance, for instance, between work and leisure time)
- Transfer of knowledge and power.

For instance, Bradley (2003), similar to Lennerlöf (1984), argues that computerization can transfer tasks from the people to the machines and thereby change the work of the employees as regards both work content and release from repetitive and heavy tasks. Moreover, ICT is argued to offer innovative learning opportunities, social relations and workplace flexibility; see Johansson (2005); Forsling (2003); Docherty et al. (2002). As an example, computers may provide communication between people at distance and information sharing. According to Johansson (2005), ICT has further opened the possibility to perform work tasks and interact independently of time and place. All this may provide for more delegation and thus more power, flexibility and freedom in work for the employees; see Johansson (2005); Campbell et al. (1999); Lennerlöf (1984).

However, the new flexible and ICT-intensive workplace is also argued to be profoundly ambiguous for the employees; see, for instance, Docherty et al. (2002). New technology may impose new ways of performing the work and may put new demands on the employees in terms of competence, autonomy, ethical
considerations and flexibility; see Houtman et al. (2002); Docherty & Nyhan (1997); Forslin & Thulesstedt (1993). This in turn, may create stress and affect work satisfaction negatively; see Redfern et al. (2002); McAiney (1998); Cohen-Mansfield & Rosenthal (1989).

Johansson (2005) and Bradley (2003) also discuss risks related to increased demands on employees due to a multiple of tasks that with the support of ICT may be performed in parallel and not one at a time in a specific order as they used to be. Moreover, interruption in these activities is more likely because of always being reachable through the ICT. This can lead to high mental activity and load as well as annoyance. On the contrary, Lennerlöf (1984) argues that computerization may also imply physical isolation of colleagues in a situation where contacts between people are replaced by distance communication through computers and other media. Nevertheless, a risk of always being reachable through the ICT and able to work in different places and times, is that limits between work time and leisure time may be blurred and pauses from work become both shorter and fewer. This implies a higher intensity and thus higher mental load for the employees; see Johansson (2005); Bradley (2003).

To sum up, new technology might change the working conditions and thus influence the employees and their work satisfaction. According to Sävenstedt (2004), Bradley (2003), Certo (2000) and Pidd (1999), introduction of new technology, is an organizational change compelling changes in processes, work organization, responsibilities and practices. Therefore, introduction of ICT should also consider changes in the work environment; see Sävenstedt (2004); Bradley (2003). Nevertheless, organizations implementing new technology usually tend to disregard organizational and human issues and only focus on the development and purpose of the technology; see Bradley (2003); Axtell et al. (2001). Kira (2003), among others, further believes that many contemporary problems within working life relate to fundamental changes at work that have not been followed up by supporting organizational arrangements, structures or practices. Bradley (2003) even argues that the use of technology is a main reason to growing ill-health at workplaces since we have not learnt to handle the opportunities it provides us. She believes that to be successful, the use of the technology must consider the needs and wants of people.

### 2.1.3 Working conditions

To consider work environmental factors that are important for how the individual employees perceive their work environment, i.e. aspects of the working conditions, Dahlgren & Dahlgren (1988) suggest investigation of (1) human needs and what motivates the individual and (2) what affects the experience of work satisfaction. In the literature, theories of motivation and work satisfaction further appear to be closely interlinked. For instance, Kondo (1991) argues that an individual will feel
satisfied at work if motivated. Therefore, working conditions are described with regard to motivation and work satisfaction in the following sections.

**Motivation**

Theories of motivation for work are often based on the assumption that needs may be the force which triggers motivated behavior, and that these needs, can be identified and fulfilled within the work environment. More narrowly, the motivation to work can be defined as the willingness to spend effort on a particular task to obtain an incentive; see Wright (1996).

Different types of theories of motivation have been presented over the years; see, for instance Skinner (1953); Vroom (1964); Adams (1965). However, these different theories could be summed up in two groups. One group of theories focuses on intrinsic explanations for motivation, such as need theories, and another group describes external explanations, for instance equity theory; see Abrahamsson & Andersen (1996).

A well-known theory on motivation is presented by Herzberg (1959), who analyzed motivation through two sets of variables. One set are motivators that give work satisfaction and the other set are hygiene factors, which reflect things such as company policy and administration, supervision structures, salary and relations, all of which can not improve work satisfaction but decrease dissatisfaction. Instead, he emphasizes that making work more interesting and improving opportunities for achievement, recognition, responsibility and advancement is the way to gain work satisfaction.

The theory of human motivation by Maslow (1943) considering human needs is probably the most often referred to. His theory is based on a hierarchy of human needs from physiological needs, security needs, social needs and ego or esteem needs and self-fulfillment needs. The physiological needs are defined as basic or untaught needs and are life supporting, for instance needs for sleep, food, air and warmth. When the physiological needs are fulfilled, the safety needs, such as trust, freedom from assault and ability to foresee consequences, can be fulfilled. The social needs include those such as giving and receiving love, whereas status, acknowledgement and acceptance are examples of ego or esteem needs. The need for fulfillment is not always possible for all since it means to be able to fully utilize one’s personal abilities. Possible causes for this may be lack of self-awareness or lack of the right conditions. Sometimes other needs, such as security needs or social needs, are obstacles. It might, for instance, be hazardous to give up a steady job and identity in order to develop one’s talent as an artist with much uncertainty about success and income; see Maslow (1943). When needs on lower levels in Maslow’s model are satisfied, needs on higher levels become prominent. Kondo (1991) has generalized Maslow’s model in the sense that for each single individual, needs on different levels may coexist, but with different prominence.
According to Hackman & Oldham (1976), the motivation for work is dependent on how the work is designed. To achieve high motivation, they emphasize the importance of five dimensions that influence the experienced meaningfulness of the work, experiences of responsibilities for outcomes of the work and knowledge of the actual results of the work tasks. The dimensions of skill variety, task identity, task significance, autonomy and feedback, are argued to give psychological rewards to individuals and thereby higher motivation; see Hackman & Oldham (1976).

Work satisfaction
According to Tsigilis et al. (2004), there is a large interest in the area of work satisfaction because increasing concern that the level of work satisfaction is related to what people can perform in work.

Work satisfaction may be defined as one’s sense of satisfaction with work and with the relationship between work and non-work processes of socialization at work; see Büssing et al. (1999). According to Locke (1969), work satisfaction or dissatisfaction depends on the perceived relationship between what one wants from work and what one experiences that the work offers or entails. Rice et al. (1989) further include a discrepancy dimension and argue that work satisfaction in part is determined by the discrepancies resulting from a psychological comparison process involving the assessment of current job experiences against some personal standards. For a further discussion about work satisfaction; see, for instance, Schön (2007); Tsigilis et al. (2004).

In other words, achieving satisfied employees is about providing good, motivating working conditions that meet the needs and wants of the employees. In literature, there are several strategies and models illustrating strategies and dimensions, which are suggested to be important to achieve good work and create motivating working conditions that can provide for employee satisfaction; see Docherty et al. (2002); Pfeffer (1998); Karasek & Theorell (1990). For instance, Thorsrud & Emery (1969) have formulated psychological demands to be put on a good work:

- A reasonably challenging content of work.
- Learning and continuous development of individual competence.
- An own individual area of decision making.
- Social support and acknowledgement.
- Possibility to relate the own work to the world outside.
- Possibility to see that the work leads to a desired future.

Karasek & Theorell (1990) have further presented the demand-control-support model, which has been a common tool to understand and analyze the fit between

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5 Locke (1969) and many other authors use the term ‘job satisfaction’. However, in this thesis the concept of ‘work satisfaction’ is used and understood to entail the meaning of job satisfaction.

6 In Swedish often referred to as ‘det goda arbetet’.

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these three dimensions in discussions about employee satisfaction and well-being. The three dimensions are thought of as situational factors that may be changed, through, for instance work organization, to create the ideal work situation where the individual has good social support, reasonable demands compared to capacity and resources together with high decision latitude to influence the work and work situation; see also Theorell (2005). Such situation may then lead to work satisfaction. On the other hand, “high-strain” work, which entails a combination of unreasonable demands and low decision latitude, has been related to high rates of depression and heart diseases; see Karasek & Theorell (1990). According to Theorell (2003), the risk of ill-health increases further if also the third dimension, social support, is low.

Accordingly, there seems to be support for the belief that work satisfaction and dissatisfaction, will affect the health of the employees. Several other studies have also shown the connection between work satisfaction and stress; see Tsigilis et al. (2004); Wilson (2004); Dolan (1987). For instance, the connections between psychologically unsatisfactory work environment and negative effects on employees’ health and levels of sickness absence are well documented; see Aronsson & Hallsten (2006); Dolbier et al. (2001); Dahlgren & Daalgren (1981). On the other hand, the benefits of a work environment that promotes work satisfaction are shown to be participating, committed and well-being employees; see Harnesk et al. (2004). Healthy, satisfied and motivated employees, in turn, cause less sickness absence and, not least, achieve better performance, quality and productivity; see Malmquist et al. (2007); Hackman & Oldham (1976). An illustration of possible relations between effects of a good, motivating work environment and work satisfaction is presented in Figure 2.3.

![Figure 2.3](image)

**Figure 2.3** The level of work satisfaction is influenced by a psychological comparison process involving the assessment of current experiences of working conditions against some personal standards. When work satisfaction is experienced health may be positively influenced. This, in turn, affects the individual’s performance in work. Work dissatisfaction may, on the other hand, lead to stress, decreased health and sickness absence. The figure is inspired by the definitions by Büssing et al. (1999), Rice (1989) and Locke (1969) as well as findings presented by Malmquist et al. (2007) and Theorell (2003). The work satisfaction may be affected by work environmental factors shaping the working conditions, such as possibilities to learning, participation and social support; see Thorsrud & Emery (1969).
With a growing awareness about the influence of the psychological work environment on work satisfaction and health, and thus on business results, several researchers have started to look for factors creating a satisfactory and healthy work environment; see Wilson et al. (2004); Söderlund (2003); Dolbier et al. (2001); Murphy & Cooper (2000). Such factors are described further in the next section about health promotion work.

### 2.2 Health promotion work

During recent decades, sickness absence and related costs have grown to a major problem in parts of the Western world. In Sweden, for instance, the sickness absence listed more than 365 days increased by almost 30% per year between 1997 and 2001; see SOU (2002:5). According to national statistics, this increase in Sweden has declined somewhat after 2003; see The Swedish Social Insurance Office (2005). However, Lindberg (2006) argues that the number of people with newly approved early retirement pension simultaneously increased by 15% between 2002 and 2004. Moreover, many of those people being granted early pension had a history of long-term sickness absence. Nevertheless, the number of sickness absence and related costs continue to be high in Sweden; see The Swedish Social Insurance Office (2005).

An important part of the sickness is work related and the modern intense work places are argued to be a major cause; see Gatu (2006); Arnetz (2002); Docherty et al. (2002); Levi (2000). Accordingly, there is a need to find ways for how organizations could prevent this ill-health and promote work satisfaction and employee health; see Källestål et al. (2004).

#### 2.2.1 Health

Several definitions of the concept of ‘health’ seem to have been proposed and discussed during the second half of the 20th century. Medin & Alexandersson (2000) have identified the following three main views of health when summarizing studies on health from the 1970s to 1990s:

- Health as the absence of illness.
- Health as a resource, a strength including the ability to withstand disease.
- Health as a state of being in balance.

Arnesson (2006) in addition to those three includes a perspective about health as a capacity. Medin & Alexanderson (2000) further argue that there are two approaches to the view of health; the biomedical view and the humanistic view. In the biomedical view, diseases are in focus and health is defined as absence of illness. In the humanistic view, health is considered more than lack of illness and diseases, or,
in a sense, something else such as capability to achieve intentional goals; see Medin & Alexandersson (2000); Nordenfelt (1986). One example of a humanistic definition of health is the one that was provided by the World Health Organization, WHO, in 1948: “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. From a humanistic perspective, health is also viewed as a combination of self-assessed health, absence of chronic disease and absence of subjective health complaints; see Medin & Alexandersson (2000); Mackenbach et al. (1994). From a humanistic perspective, people may experience good health, even though they suffer from illness and diseases. The reason to this is that they may have had the possibility to satisfactorily find a balance between their specific needs and their resources and surroundings; see Bildt & Karlquist (2005).

According to Lindberg (2006), Pörn (1984) argues that health is a state of a person, which is obtained when the person’s repertoire is adequate in relation to their goals. A person, who is healthy in this sense, has intrapersonal resources that are sufficient for what their goals require. As such, health may also be described as a resource. For instance, WHO (1986) refers to health as a resource in daily life. Malmquist et al. (2007) further state that improved health in the workplace enhances human resources, which in turn support better performance and productivity.

‘Sustainable health’ is a related concept as regards the striving for positive development of health. In this thesis, the view of sustainable health is influenced by Harnesk et al. (2004) who define it as individually perceived and durable well-being. However, it is also assumed that to be sustainable, this perceived well-being should comprise resources that allow for the individual to meet current demands, such as demands from work, without compromising their future perceived well-being. As such, sustainable health is also seen as a resource in a long-term organizational perspective.

### 2.2.2 Health promoting workplaces

Care for health at Swedish workplaces has been taken since the beginning of the 20th century when the first employee protection act was introduced; see Bjurvald (2004). Thereafter, there has been concern for specific achievements for prevention of work accidents during the 1950s, chemical risks in the 1970s, physical ergonomics, muscular-skeletal diseases as well some psychosocial demands in the 1980s and, in the 1990s, for systematic work environment management. The aim with such work should, according to The Swedish Work Environment Authority (2001), be to prevent ill-health and accidents at work and achieve a satisfactory work environment.

Since the end of the 1990s and during the 21st century, the concept of ‘health promotion’ has also attracted great attention within society, organizations and work
environment management; see Eklund et al. (2007); Bjurevald (2004). Within these discussions Bjurevald (2004) describes that many have tried to raise different concepts, such as ‘health factors’ and ‘long-term healthiness’, to show the importance of focusing the work environment management on promotion of health instead of prevention of ill-health.

According to WHO (1986), health promotion deals with “…enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realise aspirations, to satisfy needs, and to change or cope with the environment”. A promoting perspective on health implies a focus on what contributes to creation and sustaining of health. Such a perspective is a salutogenic perspective in contrast to a pathogenic perspective that instead focuses on preventing diseases by elimination of factors with a negative effect on health; see Eklund et al. (2007). However, Eklund et al. (2007) argue that the two perspectives should complement each other in the work for increased health presence at workplaces.

Health promotion at workplaces could be seen as a strategy to create good working conditions for everyone and includes all efforts to increase well-being by providing opportunities for everyone to develop good health and health-related behavior; see Menckel & Thomsson (1997). According to Eklund et al. (2007), an important aspect of health promotion work is its sustainability in the long term.

According to WHO (1986), a person’s health is affected by a range of factors commonly referred to as the ‘determinants of health’ or ‘health factors’. These include: income and social status; social support networks; education; employment and working conditions; social environments. As such, health factors are often used to describe what characterizes health-promoting workplaces or to identify what organizations could strive for in endeavor to create a health-promoting workplace. Forslin (2003) further argues that health factors build on the assumptions that (1) psychobiological processes of a human can improve health and increase energy if promoted and (2) work can be created to promote these processes.

Wilson et al. (2004) have empirically tested and validated a model showing that work characteristics influence such areas as work satisfaction, commitment, perceived empowerment and stress, which in turn affect employee health. Moreover, management support and strategies for open communication and meaningful participation were shown to be important factors. Other research on health factors or, ‘what makes people function in the best way and feel well’, show similar results but additionally emphasizes factors such as trust, relations, short decision-making procedures and promotion of the balance between work and private life; see Alexanderson & Hensing (2004); Zwetslot & Pot (2004); Eriksson (2003); Johnson et al. (2003); Söderlund et al. (2003); Dolbier et al. (2001). According to Malmquist et al. (2007), many research results seem to concur
2.2.3 Health factors

Many of the most common health factors mentioned in literature, such as leadership, appear to be similar to factors related to working conditions and thus have already been described in Section 2.1. Therefore this section focuses on identified factors that might be related more specifically to managers’ work, which is in focus in Theme 1 of this thesis.

**Organizational culture**

According to Malmquist et al. (2007), a factor that seems to characterize health-promoting workplaces regards core values. Docherty & Huzzard (2005) have similar arguments about the importance of developing a common base of core values for the organization. Such a base of core values may be compared to a corporate culture of a shared understanding among the organizational members and development of a collective practice; see Schein (2004); Stoner & Freeman (1989); Sathe (1983). It is argued that such an organizational culture supports the person's sense of meaning, coherence and importance at work and thereby promotes well-being.

A large amount of literature published in the 1980s and 1990s deals with corporate cultures; see, for instance, Schein (1992); Stoner & Freeman (1989); Macoby (1983). Stoner & Freeman (1989) argue that corporate culture is an integral part of organizational life and has important implications for managerial actions. Some people even talk about 'leadership based on values' and state that organizations with strong cultures are more successful than other organizations; see Collins & Porras (1994); Kotter & Heskett (1992); Peters & Waterman (1982). IKEA might be one illustration of this, with a culture based on statements by the founder Ingvar Kamprad, see Kamprad (1976).

Schein (1992) classifies organizational core values in three groups. One consists of ‘artefacts’, which are values visible within the organization, such as furniture, architecture and clothes, for instance. The next group consists of ‘espoused values’, which are values related to how the professional role is performed – how we act in our professional role and how we make decisions. The third group consists of ‘basic values’; such as how we treat people with different culture, religion or skin color. These are entrenched in the organization and often employees are not even aware of them.

According to Kaufmann & Kaufmann (2005), a culture is based on a number of shared core values and the climate is the effect of these shared values measured in...
terms of the atmosphere, norms and practices. Schein (2004) further discusses culture as a result of a group’s accumulated learning and defines it as “a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has 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 those problems”. According to Schein (2004), the culture adds values of structural stability, depth, breadth and integration of the core values into a whole.

Robbins (1999) emphasizes that a strong culture is characterized by the organization’s core values being intensely held, clearly ordered and widely shared. Some researchers also talk about a strong culture as a substitute for formalization since the culture can convey to employees what behaviors they are expected to engage in; see Kaufmann & Kaufmann (2005). Molander (1996) also argues that it is possible to define certain characteristics of an effective culture. Some examples are flexibility, integration, decentralization, performance orientation, quality consciousness and empowerment.

Employee involvement
The concept of employee involvement has been discussed and used for decades; see Tubbs (1994). However, with increasing competition, employee involvement has gained new prominence among organizations in order to lower absenteeism, achieve responsibility and social interactions and in the long run, improve productivity; see Velury (2005); Paul et al. (2000). However, involvement does not directly equate with good working conditions and health, but can also lead to employee stress and burn-out. For instance, the disappearance of formal boundaries without their replacement by suitable structures or resources is argued to leave people to their own judgment with stress as a consequence and thereby a cause for sickness absence; see Backström (2003), Docherty et al. (2002), Kira (2002); McKenna & Beech (2002).

At the outset, employee involvement was practiced in programs like quality circles and self-managing work teams; see Paul et al. (2000); Tubbs (1994). During recent decades, the concept’s prominence has expanded to include delegation of authorities, responsibilities and rewards to lower levels of the organization. Accordingly, the name of the phenomenon has changed to “employee commitment” or “employee empowerment”.

The concept of ‘employee involvement’ is defined and used ambiguously, as well as expressed in a variety of terms. ‘Empowerment’ is only one such term. Wellins et al. (1991) define empowerment as “giving authority and responsibility to individuals at lower levels of the organizational hierarchy”. Kinlaw (1995) also discusses influence based on competence. Tengblad & Hällsten (2002) further discuss the concept of ‘employeeship’ or ‘co-workership’, which, according to them, means that every employee should feel like, act like and have the power to be like a manager of their
specific work tasks and area of responsibility. This does not imply that the employees take the role of a manager, neither is it collective decision making. Tengblad & Hällsten (2002) mean that the Dane, Claus Möller, who was involved in the ‘commotion’ within Scandinavian Airlines, during Jan Carlzon’s period as CEO in the 1980s, was one of the pioneers in the discussion of employeeship; see Möller (1994).

Bergman & Klefsjö (2003) further state that co-workership is a way of “contributing to the personal development of the employees”, when involving the endeavor to stimulate and create opportunities for co-creativity. Csíkszentmihályi (2003), Eriksson (2003), Leiter & Maslach (1988), and others, draw similar conclusions while several researchers also emphasize the importance of the leader’s ability to stimulate employees through coaching; see, for instance, Kinlaw (2000); Stowell (1988).

Bergman & Klefsjö (2003) and Eklund & Lund (1999) state that to achieve real success, a deeper form of involvement, which they call co-creation, is needed. They state that “co-creation is a committed, actively contributory and supportive way to participate”. It means that employees take responsibility for initiatives and development efforts and seek activity with the aim of the common good. The will to be co-creative, though, depends on the belief that one is needed and is able to contribute, as well as on signals from the culture influenced by expectations that one should be co-creative and contribute to the development.

To get co-creative employees, managers’ leadership is important; see, for instance, Stowell (1988), Bergman & Klefsjö (2003) and Harnesk (2004). Managers should make sure that employees at all organizational levels have the right mix of information, knowledge and rewards to work autonomously or independently of management control; see Paul et al. (2000).

**Coaching**

Several authors highlight the importance of a leader’s ability to stimulate employees through coaching; see Kinlaw (2000); Stowell (1988). According to Kinlaw (2000), coaching is something that managers do, to support people to resolve performance problems and challenges to reach higher levels. Furthermore, he argues that it is a function, not a role, and that it “is a mutual conversation that follows a predictable process and leads to superior performance, commitment to sustained improvement and positive relationships”. Coaching clarifies goals and priorities, helps people understand what is and is not important, invites people to influence their performance and careers, improves the knowledge and skills people need to do their best and conveys to people how important and appreciated they are; see Kinlaw (2000). In this manner, coaching can lead to employee commitment.

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7‘Coaching’ was originally used within leadership in sport, but is today an established concept within management literature for all types of organizations; see Gjerde (2004).
Molander (1996) further talks about coaching as systematically increasing the ability and experience of managers through activities, of delegation, counseling and appraisal, between top managers and subordinate managers. He argues that it is through delegation, which involves the setting of objectives and boundaries of authority and responsibility, as well as performance assessments that executive managers can most clearly be coaches. The skill of coaching further depends on limited intervention, so that learners do not make too many mistakes and lose confidence, or alternatively become dependent on their tutors.

**Communication**

Keeping staff informed is seen as a desirable organizational objective and a useful management methodology; see Müllern & Elofsson (2006); Molander (1996). Several authors also emphasize communication through dialogue between people as a key factor for managers to respond to employees’ needs and developing individuals and organizations; see, for instance, Bergman & Klefsjö (2003). According to Molander (1996), communication is even a part of a cultural change and the core of managing change. If a group is to accomplish tasks that enable it to adapt to its external environment, it must be able to develop and maintain internal relationships among its members and establish a system of communication and a language that permits interpretation of what is going on; see Schein (2004).

The essence of communication may be argued to be listening. Therefore, listening skills are central to organizations, and should be reinforced and become embedded in the way managers at all levels do their business; see Molander (1996). Harnesk (2004) also believes that well-functioning communication depends on people's interest in communication and ability to discuss, as well as using suitable technical support systems. He also explains that the core of communication in dialogue is to be open-minded and to practice active listening, trying to understand the messages and together come to mutual understanding. He further argues that this is to avoid misunderstanding, which is a common source of conflicts.

### 2.2.4 Effects of health promotion work

According to Menckel (2004), research has made progress when it comes to surveying ill-health as well as identifying the factors that can promote health. Nevertheless, according to her, as well as Jeding et al. (1999), there is now a lack of knowledge about the organizational processes, implementation and effects of such factors.

However, according to Eklund et al. (2007), methodological problems make it difficult to actually assess the effects of health promotion work. McAuley et al. (2000) even argue that reported studies tend to be overrepresented by positive results and, as less successful projects tend to get less exposure, they may give an erroneous picture of possible effects of such areas as health promotion.
Nevertheless, Källestål et al. (2004) have performed an extensive literature review and conclude that older summaries tended to be pessimistic about the effects of health promoting work whereas more recent summaries have been more optimistic about the possible effects; see Eklund et al. (2007). Moreover, in their review about work environment management and its effects, Eklund et al. (2007) have found some indicators supporting the argument that to practice work environment management may be profitable to organizations. For instance, several studies indicate that deliberate efforts to improve the work environment can result in a positive work environment and health; see Tarter & Hoy (2004); Aronsson et al. (2000). Others have also tried to assess the effects of work environment management in terms of production, quality and economical outcomes and have pointed at positive outcomes from it; see Oxenburgh et al. (2004); Hendrick (2003); Anderzén & Arnetz (2005); Abrahamsson (2000); Johanson (1997).

From an organizational perspective, health-promoting work environment management is important since it impacts on work satisfaction and employee health, which in turn influence productivity, quality and costs and thereby customer satisfaction and business success; see Edlund & Statin (2005); Marklund et al. (2005); Arnetz et al. (2002); Chu et al. (2000). For instance, Schlesinger & Hesket (1991) argue that customer satisfaction is rooted in employee satisfaction. Bernhardt et al. (2000) and Wiley (1991), among others, have also found such a relation between work satisfaction and customer satisfaction. Moreover, several studies have indicated that shortcomings of the work environment cause between 30-50 % of organizations’ quality deficiencies; see, for instance, Axelsson (2000).

Accordingly, by intentionally improving the work environment, not only major benefits to employee health may be achieved but also productivity improvements and quality may occur. This in turn, can result in increased economical results; see Anderzén & Arnetz (2005); Abrahamsson (2000); Bernhardt et al. (2000); Johansson (1997). In the literature there even seems to be support for the belief that a holistic view of work environment, efficiency and quality is useful if organizations are to succeed; see Lagrosen & Bäckström (2005); Lagrosen (2004); Eriksson & Hansson (2003); Hendricks & Singhal (1997); Axelsson (1995). Murphy & Cooper (2000), for instance, seek to identify factors at the intersection of employee well-being and organizational effectiveness; i.e. factors that predict both health and performance outcomes, and discuss the topic of ‘healthy organizations’. Warrack & Sinha (1999) have also suggested that the same kind of overarching management system is needed both to achieve good quality, and to organize healthier workplaces.
2.3 Quality Management

Quality is a complex concept with many interpretations; for a conceptual discussion see Garvin (1988). Some of the definitions are “the degree to which a set of inherent characteristics fulfills the requirements, i.e. needs or expectations that are stated, generally implied or obligatory” (ISO, 2000); “conformance to requirements” (Crosby, 1979); and “fitness to use” (Juran, 1951). The definition by Bergman & Klefsjö (2003), which is used in this thesis, entails a wider view; “quality is to satisfy, and preferably exceed, the needs and expectations of the customers”. To sum up, quality today originates from the needs and wants of the customers; see Bergman & Klefsjö (2003).

Similar to the concept of quality, the concept of ‘customer’ varies extensively. ISO 9001:2000 promotes a narrow definition of the customer concept as an "organization or person that receives a product”. In the Baldrige Criteria ‘customer’ refers to “actual and potential users of your organization’s products and services” (NIST, 2005). A wider definition is that of Bergman & Klefsjö (2003), which states that customers are “those we want to create value for”. For a broader conceptual discussion, see Klefsjö et al. (2008).

Bergman & Klefsjö (2003) emphasize that all organizations have, besides the external customers, also internal customers in the form of employees, that they must create value to in order to succeed. The link between satisfied internal customers and the organization’s ability to satisfy external customers is documented by, for instance, Gronholdt & Martenssen (2001), but is also shown, for instance, in the Swedish Employee Satisfaction Measurement ‘Svenskt medarbetarindex’; see SKI (2006).

2.3.1 The evolution of Quality Management

The evolution of Quality Management can be described in different ways; see Bergman & Klefsjö (2003). Kroslid (1999) describes an evolution based on two different schools. One is the Deterministic School of Thought, which may be seen as related to Quality Inspection and Quality Assurance related to the ideas of Frederick W. Taylor and military standards, and later became the foundation for the ISO 9000 international system of quality management system. The second school is the Continuous Improvement School of Thought, which focuses on variation and improvements, and may be seen as related to Quality Control and Total Quality Management. The Deterministic School of Thought is to a large extent built upon ideas by Walter A. Shewhart; see Shewhart (1931, 1939).

Another, more common, description of the development consists of a single evolutionary path made up of the four consecutive phases Quality Inspection,
Quality Control, Quality Assurance, and Total Quality Management. In the first stage, starting about 1910, when the Ford Motor Company started to employ teams of inspectors to test the T-model cars, the focus was on the inspection of critical characteristics of finished products relative to requirements. In the second phase, Quality Control, characteristics of the production process were studied and compared to the inherent variation of the process to try to identify problems earlier. At this second phase the responsibility for quality was often located in the manufacturing and engineering departments.

Quality Assurance has a focus on activities in the whole production chain, from design to market. Moreover the contribution of all functional departments is believed to prevent failures. In the fourth phase, Total Quality Management, everyone in the organization is considered responsible for quality and fulfilling customer needs. It covers understanding and implementation of quality management principles and concepts in every aspect of business and has a clear systems approach. In addition, committed leadership by all managers, not least the top management is emphasized; see Bergman & Kleväng (2003); Dale (1999).

In the 21st century, some authors have further discussed a plausible next step of the evolution being an enlarged view of customers as stakeholders; see Bergqvist et al. (2006); Foley (2005); Foster & Jonker (2003). Edgeman & Hensler (2005) and Garvare & Isaksson (2005) believe that by enlarging the view of customers, extensive parts of quality management theory should be relevant for sustainability management. Foley (2005) even talks about this stakeholder orientation that enlarges the customer focus, as turning quality management into a theory of management.

2.3.2 Definition of Total Quality Management

Many different definitions and descriptions of Total Quality Management, TQM, have been presented over the years; for a discussion, see Bergquist et al. (2007). For instance, Dale (1999) defines TQM as “a management approach of an organisation, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organisation and to society”. Dahlgaard et al. (1998) describe TQM as “a corporate culture that is characterized by increasing customer satisfaction through continuous improvements involving all employees in the organisation”.

The concept of TQM is often described as being based on a number of core values, where the concept of value has several interpretations; see Schein (1985). In relation to TQM core values are often described as “guiding principles and/or behaviours that embody how your organisation and its people are expected to operate”; see NIST (2003).
Moreover, in recent decades, some definitions with a system emphasis have been suggested; see Shiba et al. (1993); Hellsten & Klefsjö (2000). Hellsten & Klefsjö (2000) view TQM as “a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”; see Figure 2.4. They further argue that to achieve and maintain the culture, the values must persistently be supported by suitable methodologies and tools. Methodologies are here interpreted as ‘ways to work’ consisting of a sequence of activities whereas tools are more concrete supports, for instance, computer software or diagrams.

Bergman & Klefsjö (2003) emphasize the importance of looking upon the management system as an open system, interacting with and being influenced by the surrounding world. Consequently, the meanings of the values will, for instance, change somewhat over time.

![Figure 2.4](image-url) Total Quality Management can be seen as a management system made up of values, methodologies and tools. The methodologies and tools in the figure are just examples and can differ depending on the value they are supposed to support. The objective of the system is to create increased external and internal customer satisfaction with less resource consumption. (Source: Hellsten & Klefsjö, 2000).

### 2.3.3 The core values of TQM

According to Hellsten & Klefsjö (2000), the core values constitute a foundation for the culture of the organization and also the basis of goals set by the organization. The naming, formulation, and number of values differ somewhat between different authors. However, many authors express values that may be summarized as the values presented in Figure 2.4. This is supported by Sila & Ebrahimpour (2002) who summarized, after analyzing 347 survey articles published between 1989 and
2000, the most frequently covered TQM factors in the literature. Top management commitment is an overarching condition for focus on processes, base decisions on facts, improve continuously, and let everybody be committed; see Figure 2.4. Focus on customers is yet another basic core value, which is based on, and should be supported by, the other four core values that work as a system; see Bergman & Klefsjö (2003).

**Focus on customers**
Deming (1986) states that the customer’s judgment of a product or service is the base for estimating the quality. Therefore, it is important to focus on the customers’ experiences of what the organization has delivered and investigate their present and future needs to fulfill, and favorably exceed their expectations; see also Bergman & Klefsjö (2003).

The concept of ‘customer’ includes traditional external customers like consumers, buyers, as well as other people, organizations, shareholders and parts of the surrounding society, who benefit from and have interests in the organization. Recent research within the Quality Management area has tended to prefer the term ‘stakeholder’ rather than customer to emphasize the importance of satisfying other groups than just the end consumers; see Starik & Sharma (2005). In this thesis, as well as generally, internal customers, i.e. those who work within the organization, are included in both these concepts.

**Focus on processes**
A process may be defined in different ways. For instance, a process may be described as a chain of activities that transforms inputs to outputs or as interrelated activities that create value and are repeated over time; see Isaksson (2004); Ljungberg & Larsson (2001); Egnell (1994); Bergman & Klefsjö (2003). For instance, Isaksson (2004) writes: “A process is a network of activities that by the use of resources, repeatedly converts an input to an output for stakeholders.” This definition underlines that the activities are not always linear. Moreover, customers are included in the term ‘stakeholders’. Similar to Ljungberg & Larsson (2001), Isaksson (2004) also emphasizes that a process needs to be repeatable in order to enable improvement. Some advantages with a focus on processes are considered to be increased work satisfaction, reduced costs, less divergence between functions within the organization as well as reduction of unnecessary activities; see Bergman & Klefsjö (2003).

Deming (1986) argues that the focus should be on processes, not single aspects of the outcome. He further promotes a process view, for example through mapping in a process chart, because “anyone on a job needs to understand in detail the work and needs of people that come after him in the flow diagram…”; see Deming (1994).

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8 With the terminology from Sila & Ebrahimpour (2002).
Chapter 2: Theoretical frame of reference

**Base decisions on fact**
In quality management it is considered important to base decisions on fact instead of letting random factors have influence; see Bergman & Klefsjö (2003). Deming (1994) emphasizes the use of simple statistical tools for gathering, structuring and analyzing numerical data in order to ensure stable processes. Both quantitative and qualitative data regarding factors such as operating measurements, employee satisfaction and product development should be gathered; see Bergman & Klefsjö (2003). To structure and analyze numerical and verbal data, use of tools like the Seven Quality Control Tools and the Seven Management Tools are advocated; see, for instance, Mizuno (1988); Ishikawa (1985).

**Improve continuously**
In 1986 Deming stated, in one of his 14 points of management, the importance of constant improvements to enhance quality and productivity and accordingly decrease costs. In addition, he emphasized the use of the Deming cycle to improve systematically through four stages; Plan, Do, Study, Act (PDSA).

Today, systematic improvement work is practiced in many organizations. There are several reasons for the importance of this. One is that the pace of change in society generally has increased. New technology as well as increased internationalization are also mentioned as reasons; see Sörqvist (2004). Moreover, continuous improvement is essential due to the increasing and changing customer demands; see Sörqvist (2004); Bergman & Klefsjö (2003).

**Let everybody be committed**
An important means of quality improvement is to enable employees to participate in the work; see Bergman & Klefsjö (2003). By inviting employees to actively participate in decisions and activities, motivation and work satisfaction can be created. The advantages of involvement is also understood to be higher quality, less absenteeism, lower turnover, better decision making and better problem solving, which in turn result in better organizational effectiveness and competitiveness; see Juhl et al. (1997). Moreover, if people are given responsibilities and authorities they are likely to have increased confidence in top management; see Kotter (1996).

**Top management commitment**
According to Kanji & Moura (2001), leadership plays the prime role for creation of excellence in an organization and it eminates from the core values of the organization. According to Foster (2001), leadership, not least top management commitment to quality is vital to create a quality mindset within an organization. Dale (1999) similarly argues that top management has the responsibility for creating the organizational environment, values and behaviors that provide for successful improvement.

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9 Although Deming used the name “Shewhart cycle” to honour Walter Shewhart from whom he got the inspiration.
quality work within TQM. He emphasizes that top management’s attitude is vital due to its importance as a role model. Moreover, the top management has the authority to give financial and moral support.

### 2.3.4 Methodologies and tools of TQM

Another element of the TQM system is the set of methodologies, which are needed to support the core values of the organization and integrate them into the organizational culture; see Bergman & Klefsjö (2003); Hellsten & Klefsjö (2000). ‘Methodology’ is the established English term, in TQM literature for an organization’s approach, way of working or work procedure. In this thesis methodologies are looked upon as ways of working, which consist of sequences of activities. Methodologies may further differ between organizations and from time to time. According to Bergman & Klefsjö (2003), these variations should even be utilized to adapt the use of methodologies to support specific values. Some examples of methodologies are Process management, Employee development and Benchmarking; see Figure 2.4.

The third element in the management system consists of tools such as tree diagrams, process maps and the House of Quality; see Bergman & Klefsjö (2003); Hellsten & Klefsjö (2000). The tools are needed to structure and facilitate the activities within the methodologies and make them effective – you cannot do good wood-work without a suitable hammer. Similar to methodologies, the tools used may differ between organizations and from time to time and should not necessarily be related only to the TQM system. A tool is further different from methodologies in the sense that it is a concrete aid, for instance, a diagram, computer software, routine or a matrix. However, the dividing line between what is to be considered a methodology rather than a tool is not always obvious.

According to Bergman & Klefsjö (2003), there are many different methodologies and tools, in addition to the ones exemplified in Figure 2.4 that may be used to support a specific value. They also emphasize use of several methodologies, and thereby tools, to support each core value.
3 METHOD

This chapter describes the research process within which the purpose, aims and research questions were created. The research approach and some options for methods of information gathering and analysis are also discussed.

3.1 Introduction

All research is consciously or unconsciously conducted on a basis of pre-understanding of paradigms and theoretical conceptions concerning what is important, interesting and relevant; see Bjereld et al. (1999). The different paradigms, the theoretical perspectives on research that the researcher believes in and their own personal experience influence how the researcher looks at the world and acts in it; see Creswell (2003); Denzin & Lincoln (2000). Therefore, I will begin here with a glimpse of my own background and my research journey, before I dedicate the rest of this chapter and Chapter 4 to describing the choices I have made and the steps I have taken when conducting the research within two different projects.

Certainly, my beliefs, pre-understanding and experiences have influenced this thesis and the research conducted. My background is in the natural sciences, where perspectives tend to be positivistic. However, my interest in technology, but not least in people, made me move to Luleå in 1997 for my M.Sc. studies in Industrial Production Environment at the Department of Human Work Sciences at Luleå University of Technology. My belief that people are good, creative and responsible and, with the right prerequisites, want to be active, learn, contribute and develop made me interested in learning more about how technology applied in organizations can be adapted to the needs of the employees, so that they get opportunities to perform and feel well.

During my first years I was primarily studying how to design industrial work environments, which are adapted to human conditions and needs. Nevertheless, during 1999 and 2000 I worked as a trainee in a large Swedish energy company and was mainly involved in the quality work. After that, my fascination about and interest in the role of work environments and work satisfaction in quality management tempted me to take my first, but not last, course on quality technology and management at the Department of Business Administration and Social Sciences at Luleå University of Technology.

During the final years of my M.Sc. studies I had a focus more related to social sciences; quality technology and management on the one hand and, on the other
hand, on psychosocial issues in the work environment, for instance, stress prevention, leadership and personal development. Thanks to courses at two different departments at that time, my growing interest was in the commonalities between quality management and ergonomics.

In 2004, after I had finished my Master’s thesis I got the opportunity to be involved in a research school about lifestyle, health and technology and as a PhD student in a research project about leadership for sustainable health at the Division of Quality and Environmental Management at Luleå University of Technology.

I was involved in the project until June 2006 when I got my licentiate degree; see Figure 3.1. The more I was involved in it, the more I learned about the increasing problems and debates about managers’ way of working and the influence on our work environments and related sick leave. All the time, the well-being of individuals, from an organizational perspective, was at the centre of my research. The workplace was seen as a platform within which individual health can be promoted.

![Figure 3.1](#) The research process, including a literature study and two case studies performed within two different projects to achieve the purpose as well as the aims and research questions of Theme 1 and Theme 2. The research process has resulted in six papers and this thesis.
When, at the end of 2005, I was asked to take part in another research project about new applications of information and communication technology (ICT) in health care, I was mostly eager to find out more about the work environment of health care employees. I was aware of alarming reports about the working conditions in health care and of decreasing satisfaction among employees. Thus, my interest was whether ICT could be a tool for health promotion benefiting both employees’ performance and well-being and patients. However, at the same time, my understanding from my M.Sc. studies made me fear that new technology, if not adapted to the needs of the employees, would increase the number of dissatisfied and sick employees. Thus, within the project I chose to focus on the influences of new ICT on the working conditions of employees.

Accordingly, to achieve the purpose and aims of this thesis, I conducted my research within two projects. The aim and research questions related to Theme 1 were investigated within the project about leadership for sustainable health (Project 1) whereas those related to Theme 2 were considered in the project about new applications of ICT in health care (Project 2). The research process, covering the two projects performed between 2004 and 2008, is illustrated in Figure 3.1.

### 3.2 Research purpose

Research may be classified based on its purpose. Three main purposes are to explore, describe or explain a phenomenon; see Zikmund (2000); Marshall & Rossman (1999); Wallén (1993). Exploratory studies may be performed to clarify the nature of vague problems while descriptive studies are based on some previous understanding about the research problem and aim at creating descriptions about certain characteristics of a phenomenon; see Zikmund (2000); Marshall & Rossman (1999). Furthermore, these authors state that explanatory studies aim to show relationships between events and the meanings of these events.

The purpose of the research presented in this thesis is to contribute to the creation of good work environment. The focus is on how organizations may work to adapt to the requirements of modern working life and at the same time ensure a good work environment in an endeavor to enhance employee well-being and organizational development. To achieve this I want to explore and describe one phenomenon of how sustainable health is actually created in today’s organizations and another phenomenon about the influence of new applications of ICT on the work environment. Leadership, health promotion work and organizational development as well as the effects of ICT are commonly described in literature. However, the focus on health promotion and the specific characteristics and challenges of leadership in large organizations is limited. Moreover, when it comes to the influences of ICT, the literature either tends to deal most with the effects on
the production and business or the attitudes towards the technology; see, Ministry of Health and Social Affairs (2002); Lee Kyle (2001); Wright et al. (2001). How ICT may actually influence the work environment and thereby the opportunities of employees to perform and feel well are more rarely described. Thus, the purpose of the research is partly explorative since the intention is to increase understanding by exploring the two phenomena that literature has rarely described. However, the purpose is mainly descriptive and intends to document and describe the phenomena while building on some previous understandings from literature. Nevertheless, the purpose is not mainly to show the relationship between events and the meaning of these events.

3.3 Research approach selections

Deciding upon the research approach is primarily about determining how to systematically approach a problem; see Merriam (1988). There are different approaches available and these are often closely related to each other. According to Yin (2003) and Merriam (1988), the choice of research approach is dependent on the particular problem, the research purpose and the questions the problem generates.

Even though I have my background in the natural sciences I chose to deal with research about social sciences when studying the work of successful organizations and trying to understand the influences of ICT on the work environment. Consequently, the research is to a degree influenced by my positivistic view, but is hopefully mainly founded on my gained understanding that work and working conditions are socially constructed and dependent on the perceptions, actions and experiences of people. For instance, working conditions can be assumed to affect people but their reactions will not be simply mechanical. The reactions are rather influenced by the individuals’ interactions with and perceptions of the conditions of the environment, which therefore cannot be separated from the people.

The choices related to the research approach of Project 1 respectively Project 2 were made at different points of time in the research process; see Figure 3.1. However, the purpose, aims and research questions, which the choices were based on, were of the same kind; explorative and descriptive seeking a deeper understanding of the phenomena. Therefore, a similar research approach was selected for both projects. The choices made are described further in the following sections.
3.3.1 Induction, Deduction or Abduction

I realized a need to understand the work of people in large, successful, contemporary organizations on the one hand and peoples’ experiences of using ICT in work to identify influences of ICT on the work environment on the other. Since these phenomena were rarely described in literature I chose to deal with exploratory and descriptive aspects based on empirical understanding to achieve the purpose. My intention in both projects was a matter of understanding and interpreting people’s behavior and perceptions of reality. Such an understanding should be concerned with an empathic attempt to understand humans and their actions; see Bryman (2001). This means taking people’s actions and descriptions as a starting point to try to describe and explain the phenomena in real-life interventions with the people’s own terms and concepts.

My intention to do so is also reflected in the choice of an inductive approach rather than a deductive. Induction could be described as a generation of general conclusions from a specific case; see Molander (1988). It means going from empirical findings to theoretical explanations. However, a weakness is that induction is limited to the fact that a general rule is developed from a limited number of observations; see Molander (1988). According to Wiedersheim-Paul & Eriksson (1992), deduction, by contrast, implies that “from theory we form hypotheses, which are testable statements about reality. Through logical conclusions we derive results. Accordingly, in deduction, theory has a more obvious role than in induction; see Figure 3.2.

![Figure 3.2](image)

Figure 3.2 Different research approaches according to Alvesson & Sköldberg (1994) and the selections made in Project 1 (P1) and Project 2 (P2) in this thesis.

I would say, indeed, that the approach of the two projects in this thesis is mainly inductive even if it is not fully ideally inductive but instead moves towards abduction; see Figure 3.2. Abduction is often seen as an approach, which starts off from empirical facts, just like induction, but does not dismiss a theory; see Alvesson & Sköldberg (1994). In this way, it may be understood as a combination of induction and deduction that goes from understanding of the empirical material,
to understanding based on theoretical data and back to understanding of the empirical base; see Alvesson & Sköldberg (1994).

In this thesis I was interested in specific cases based on understanding of empirical information and did not specifically aim to go back to theory to confirm the empirical findings underway (abductive approach). However, I could neither fully dismiss theory since my pre-understanding and literature studies most certain colored my inductive reasoning. Moreover, it was not my intention to fully dismiss theory through the whole research process, but instead to give a complementing view of the phenomena and develop further inquiries by, in the end, comparing the real-life practice, described from the view of the informants in the empirical material, to existing literature.

3.3.2 Quantitative or Qualitative approach

Another relevant question when choosing research approach was whether the approach should be qualitative or quantitative. The choice should be based on the information wanted as well as the problem formulation. The two approaches have different strengths and weaknesses and are also combined in many research studies; see Miles & Huberman (1994); Holme & Solvang (1991).

Denzin & Lincoln (2001) describe how qualitative researchers study things in their natural settings to make sense or interpret phenomena in terms of the meanings people bring to them. Bryman (2001) also includes their interest in understanding the contextual factors influencing social behaviors. According to Miles and Huberman (1994), qualitative research can provide information about naturally occurring events, rich descriptions and explanations of processes in an identifiable local context and can reveal the meaning people place on processes or events taking place in their real-life. They argue that a qualitative approach is a good choice when answering questions such as “how are….described?” and “what characterizes….?” In contrary, quantitative research deals more with measurement, analysis and identification of relationships between variables; see Denzin & Lincoln (2001). Quantitative studies in general also tend to be wider and include numerous units, which can make statistical generalization possible.

Based on the explorative and descriptive purpose concerned with understanding and interpretation of people’s perceptions and their actions, a qualitative approach was selected in both projects rather than a quantitative approach or a mixture of the two. I was more interested in a deeper understanding based on people’s perceptions, meanings and words than in measurements and numbers.
3.4 Research strategy

Based on my research purpose and approach selections, I continued to sort out different research strategies for how the research should be carried out in each project. In social sciences research strategies can be related to five different strategies; see Table 3.1.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Type of question</th>
<th>Requires control over behavioral events?</th>
<th>Focus of occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How / Why</td>
<td>Yes</td>
<td>Contemporary</td>
</tr>
<tr>
<td>Survey</td>
<td>Who / What / Where / How many / How much</td>
<td>No</td>
<td>Contemporary</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>Who / What / Where / How many / How much</td>
<td>No</td>
<td>Contemporary / Past</td>
</tr>
<tr>
<td>History</td>
<td>How / Why</td>
<td>No</td>
<td>Past</td>
</tr>
<tr>
<td>Case study</td>
<td>How / Why</td>
<td>No</td>
<td>Contemporary</td>
</tr>
</tbody>
</table>

The strategies have distinctive characteristics, but can indeed be used for descriptive, explanatory as well as explorative research purposes. When choosing among the different strategies there are three important conditions to consider: type of question, the extent of control an investigator has over actual behavioral event, and the degree of focus on contemporary opposed to historical events; see Yin (2003).

The four research questions of my research are all “how” – questions. Thus, in both projects all five strategies at first appear as possible according to Yin’s (2003) first condition. However, experiments and history should not be possible considering that the research questions are asked about contemporary phenomena in natural contexts that the researcher has no possibility to control. Case studies then are characterized by their focus on the recognizable facts, descriptions that enhance the understanding of the reader and inductive approaches; see Yin (2003); Merriam (1988). These characteristics relate well to the aim and questions of the theme that each project considers. Thus, considering that the four questions are aimed at exploring and describing phenomena of today’s organizations, case study strategy was chosen in both projects.

Nevertheless, to answer the four questions, a literature study strategy, which is a form of archival study, was a possible choice according to Yin (2003). However, the phenomenon related to large organizations was found to be rarely described in the literature as was the phenomenon of work environmental influences of ICT.
However, knowledge about prior studies within Project 1, made me chose a literature study as a complementary strategy for my research within this project.

### 3.5 Information gathering

The research strategies represent different logical ways of gathering and analyzing empirical evidence. In general, case studies, and other qualitative strategies, aim to acquire a lot of information from a small selection of cases or informants; see Johannesson & Tufte (2003). Moreover, a characteristic of case studies is that they can rely on many sources of information; see Yin (2003); Merriam (1988). For instance, Yin (2003), discusses six main sources of information to apply on a small selection of cases or informants; documentation, archival records, interviews, direct observations, participant-observations, and physical artifacts; see Table 3.2.

**Table 3.2**  
A comparison of strengths and weaknesses of six sources of evidence that may be useful when conducting case studies (Source: Yin, 2003)

<table>
<thead>
<tr>
<th>SOURCE OF INFORMATION</th>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
</table>
| Documentation         | - Stable = can be reviewed repeatedly  
                      - Unobtrusive = not created as a result of the case study  
                      - Exact = contains exact names, references, and details of an event  
                      - Broad coverage = long span of time, many events, and many settings | - Retrievability = can be low  
                      - Biased selectivity, if collection is incomplete  
                      - Reporting bias = reflects (unknown) bias of author  
                      - Access may be deliberately blocked |
| Archival records      | - (Same as above for documentation)  
                      - Precise and quantitative | - (Same as above for documentation)  
                      - Accessibility due to privacy reasons |
| Interviews            | - Targeted = focuses directly on case study topic  
                      - Insightful = provides perceived casual inferences | - Bias due to poorly constructed questions  
                      - Response bias  
                      - Inaccuracies due to poor recall  
                      - Reflexivity = interviewee gives what interviewer wants to hear |
| Direct observations   | - Reality = covers events in real time  
                      - Contextual = covers contexts of events | - Time consuming  
                      - Selectivity = event may proceed differently because it is being observed  
                      - Cost = hours needed by human observers |
| Participant observation | - (Same as above for direct observations)  
                      - Insightful into interpersonal behavior and audits | - (Same as above for direct observations)  
                      - Bias due to investigator’s manipulation of events |
| Physical artifacts     | - Insightful into cultural features  
                      - Insightful into technical operations | - Selectivity  
                      - Availability |
The sources that were considered valuable, for the two case studies within Project 1 and Project 2, are documentation, interviews and direct observations. The choice and utilization of these sources of information are described in more detail in Chapter 4.

3.6 Analysis

According to Miles & Huberman (1994), the analysis of qualitative information, such as case study and archival data, may be described as an interactive process consisting of three activities: reduction of information, display of information, and conclusion drawing and verification; see Figure 3.3. Similarly, Merriam (1988) argues that information gathering and analysis are performed simultaneously. She further describes analysis as a process aimed at creating value out of the information and claims that several levels of analysis are possible. What level to strive for depends on the expected results.

![Figure 3.3](image)

**Figure 3.3** The analysis process alters between reducing the empirical material, displaying information and conclusion drawing. Verification implies testing the conclusions to increase the trustworthiness. (Inspired by Miles & Huberman, 1994.)

To analyze case study information, Yin (2003) argues that there are two general strategies; to rely on theoretical propositions and to develop a descriptive framework for organizing the case study. Theoretical propositions direct attention to something that should be examined within the scope of the study. However, when theoretical propositions are absent a case description may be an option; see Yin (2003).

When conducting the analysis, analytic techniques may be used as parts of the general strategy. Initially, to arrange the findings of the case study and reduce the information, some of the Seven Management Tools may be appropriate, for instance, tree diagrams, affinity diagrams, matrix diagrams or process charts; see Mizuno (1988). In a similar way, Miles & Huberman (1994) and Merriam (1988) suggest techniques for structuring the information thematically, in chronological order or according to trends, at an early stage to display the result descriptively.

To get higher than a descriptive level, the researcher may categorize the information to serve interpretation. The creation of categories is based on finding
themes, regularities and relations in the obtained information; see Merriam (1988). Moreover, Goetz & LeCompte (1984) suggest that this process should be based on convergence and divergence thinking. Convergence thinking means deciding what is connected to what, whereas divergence is about first naming the categories and then filling them with more information; see Merriam (1988); Goetz & LeCompte (1984). Indeed, the categories should not be the information but indicate and represent the content; see Merriam (1988). According to Miles & Huberman (1994) and Merriam (1988), a third level of analysis is about drawing conclusions and possibly development of theory.

To analyze the empirical evidence from the two case studies I chose to rely on both theoretical propositions, reflected in Chapter 1 and 2, and case descriptions. The analyses were performed with diverse techniques at different levels as advocated by Merriam (1988). Moreover, analytical techniques were used to structure and condense the empirical materials and form categories and themes to reflect the core of the materials and create descriptions and interpretations. The analyses of the literature study and the two case studies are described in more detail in Chapter 4.
4 DESCRIPTION OF THE RESEARCH PROJECTS

This chapter outlines the research processes of the two research projects and describes the studies performed. Last, issues regarding the trustworthiness are discussed.

4.1 Project 1

Within Project 1, the aim and research questions of Theme 1 were investigated. Thus, an inductive and qualitative approach was chosen for this project. The strategy to be applied was a case study complemented with a literature study.

4.1.1 Case Study 1

The case study in the first project, Case Study 1, was designed as a single-case study with embedded units of analysis. This choice was based on the assumptions that large organizations tend to be complex and have many organizational levels as well as managers and employees. There are, indeed, different ways of selecting the case for a study. To fulfil the aim of Case Study 1 it was important to find a case that fulfilled the basic requirements of being a large organization and acknowledged for good leadership and work environment.

Based on these prerequisites, I chose to focus on one organization, the Swedish bank FöreningsSparbanken (FSB)\textsuperscript{10}, to provide for a deeper study and understanding of a particular case instead of comparing multiple cases. Within this case, the main unit of analysis was ‘ways of working in an endeavour to achieve sustainable health’ and I decided to consider individual managers and groups of employees on different organizational levels as different subunits of analysis. The case study organization was chosen based on its recognition as a large, successful organization and being receiver of the award, “Sweden’s best workplace”, in 2003. (More information about FSB can be found in Appendix I.) The award “Sweden’s best workplace”\textsuperscript{11} was used as a reference in Project 1 for identifying the large organization and judging that it had proven good leadership and work environment and had managed to break the trend towards rising sickness absence, nurtured employee involvement and simultaneously achieved financial results. Thereby, it also provided for comparisons with the receivers of the award in 2001 and 2002,

\textsuperscript{10}After that the bank has changed name to Swedbank.
\textsuperscript{11}The award is a national award that is instituted by the Swedish insurance company Alecta. The award considers leadership, work environment, participation and interaction, long term planning, preventive work and profitability. Each year one or several organizations may be awarded in an evaluation process similar to that of quality and business excellence awards, such as the European Quality Award; see EFQM (2005).
which are the smaller organizations that were studied earlier by Harnesk et al. (2004) and Bäckström et al. (2006) within a similar project performed at the Division of Quality and Environmental Management at Luleå University of Technology.

The case study was then performed in a structure similar to the Deming cycle: Plan-Do-Study-Act, between autumn 2004 and spring 2006; see Figure 4.1. The planning and information gathering phases as well as parts of the analysis phase were conducted in a team with Ingela Bäckström and Pernilla Ingelsson, doctoral students at Luleå University Technology respectively Mid-Sweden University.

Figure 4.1 The case study constituted four phases performed in a sequence similar to the Plan–Do-Study-Act cycle. Later, the conclusions of the study were also to be compared to the conclusions of the literature study.

Planning
FSB is a large, nationwide organization; see details in Appendix I. Thus, one important dilemma to solve initially was how to choose informants that accounted for the different levels of the organizational structure, the geographical dispersion of the organization and also the wide variation in distance between different units and the head office. Since the focus was on a defined case and statistical generalizing was of no interest, I selected managers and employees meeting these criteria in cooperation with managers of the bank.
In August 2004, the research team first got in contact with the project manager of the bank’s company-wide health project. With support from her, we decided to focus on the ‘Bank branches’, one of the bank’s five business areas. This choice was made because of the clear organizational structure of this unit. Furthermore, it was represented all over Sweden. Subunits and informants were then chosen from four organizational levels that would cover the hierarchy from executive managers, to managers on middle and lower (office) organizational levels and down to employees at the bank offices; see Figure 4.2. The selection of managers is described in more detail in the appended Paper A, whereas the selection of employees is outlined in Paper B.

The number of informants was limited to provide deeper studies of opinions and experiences of six managers, representing three different organizational levels, and two groups of four and five employees each. This choice is further supported by, for instance, Miles & Huberman (1994), who state that a key feature of qualitative sampling is the work with a deeper study of few people in their natural context. The choice of two informants, or groups of informants, per organizational level was made to provide comparison between different bank units.

The success of the organization could be presumed to be a result of teamwork between managers and employees. Furthermore, success factors of their work were possibly parts of the day-to-day work and complex to identify. Therefore, the

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12 In this case study ‘success factor’ was used as a concept for anything perceived as contributing to the success of the organization. Thereby, a person, a physical workplace, a strategy, a tool or a specific initiative could for instance be viewed as a success factor.
intention of the research team was to gather information in cooperation with the informants to find out about factors and methodologies experienced as successful. Moreover, this information should be complemented with document studies. The key question was then how we could gather the information in a proper way and also facilitate a future comparison to the studies of smaller organizations.

Interviewing informants is one common and efficient method of gathering information for the purpose of understanding human behavior. Yin (2003) also states that using interviews is one of the most important sources of case study evidence. According to Bell (2000) the interview serves as a natural conversation where the interviewer logically can ask further questions and the informant can explain motives and feelings in a way that is not possible in a survey. Considering the aim of Case Study 1 and the informants, interviews were therefore chosen as one source of evidence to try to get considerable information about and insight into the six managers’, earlier and present, intentions, opinions and work. Interviews had also been used to study managers of the two smaller organizations; see Bäckström et al. (2006); Harnesk et al. (2004).

The planning of the interviews included preparation of two slightly different questionnaires with regard to the different organizational levels; see Appendix II and Appendix III. The questionnaires were planned to generate open-ended interviews, with a certain set of questions but without stress on the set order of the questions. Such semi structured interviews are not aimed at forcing the informants in any direction, but to capture the person’s view; see Patton (1980). In the planning phase, the questions were also tested in a pilot study in the Swedish bank Nordea, and since the interview worked out as planned no adjustments were made to the questionnaires.

To explore the opinions of employees, workshops and tree diagrams were selected to aid the information gathering. The idea was to perform a focus group interview similar to a workshop session; see Wibeck (2000). Thus, the questions were planned to trigger discussions and answers in a process with consecutive questions similar to the “five-why”-methodology, introduced at Toyota to reach basic reasons; see Andersen (2007); Toyota Motor Corporation (2003). According to Mizuno (1988), the tree diagram is a useful tool for structuring large amounts of qualitative information. In this case it was also chosen on the assumption that an interactive process based on individual answers and followed by a consensus discussion would give answers that could not come out of several individual interviews. Furthermore, tree diagrams had been used in the studies of smaller organizations and proven to inspire creativity and be successful in helping structure qualitative information; see Harnesk et al. (2004). The approach with a workshop and use of tree diagram was first tested in a bank office not included in the study and turned out to work well.
**Information gathering**

As a result of the choices made in the planning phase, the information gathering was accomplished mainly through individual interviews with the managers, workshops with groups of employees and document studies.

In total, six interviews, of approximately one to one and a half hours each, were held with the managers at their respective places of work. In order to facilitate the conversation and eliminate effects of different emphasis in the questions due to different persons, the same interviewer asked the questions in all interviews. The questionnaires were used as guides for the interviews, but the orders of the questions were adjusted to create natural conversations around what the informants felt important to describe. At least one other member of the research team was present during all interviews\(^\text{13}\) to facilitate, intervene to ask complementary questions, and take notes. When we noticed that the informants might have not answered a question or left out important information, we asked them to explain a little bit more regarding the specific question. The interviews were performed from October to December 2004 and five of them were recorded\(^\text{14}\). After transcription the informants were asked to comment on their answers in order to eliminate misunderstandings. The results of the interviews are presented in more detail in Paper A.

The two focus group interviews were performed as workshop sessions in two different bank offices between October and December 2004 and lasted for approximately four hours each. In the first workshop five female employees took part. They represented a mixture of ages, defined professional roles and periods of employment in the bank. In the second, four persons of varying ages, gender and roles participated. Each session was opened by an informal information and presentation of all participants, to build a relation between the members of the research team and the employees. The employees were also asked about their opinions about the award and being named “Sweden’s best workplace”. Thereafter, the intention of the workshops was mainly to identify factors and ways of working (methodologies) experienced as successful by the employees. To fulfil the purpose, the discussions at both offices were initiated by the question ‘What makes FSB one of Sweden’s best workplaces?’ The groups were then guided to discuss and answer successive questions, on two more levels to identify methodologies. This was done in brainstorming and consensus processes using tree diagrams to organize and scrutinize the answers. Suggested procedures for using tree diagrams were followed; see Klefsjö et al. (1999); Mizuno (1988). One tree diagram was established during each workshop. Both workshops were guided by the same coordinator from the research team, who asked the questions, followed up the

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\(^{13}\) Except for the last one with one of the top managers, the HR manager.

\(^{14}\) The interview with one office manager, was not recorded due to problems with the technical equipment. Instead the research teams took notes during the interview and recapitulated the notes in a discussion immediately thereafter.
answers and acted as a facilitator during the discussions. In addition, at least one more member of the research team participated as an observer and assisted the facilitator and group. Afterwards the tree diagrams were documented by the research team and verified by the informants; see Figure 4.3. The creation of the tree diagrams is described in more detail in Paper B.

**Figure 4.3** The tree diagrams were created in discussions and consensus processes using three consecutive questions. The figure shows an example of how suggestions were given and explored in several steps through the questions. The example is a part of the tree diagram created at one of the bank offices. The complete diagrams are presented in Bäckström et al. (2005).

Information was also collected through documents. According to Yin (2003), information found in documents is likely to be relevant for nearly every case study topic, especially for confirming and supplementing evidence from other sources. However, care must be taken in the interpretation of documents, since they are often aimed at another audience than that of the case study. However, a strength with documentation as a source of information is that it is stable and therefore may be reviewed repeatedly; see Table 3.2. According to Yin (2003), documentation is also unobtrusive because it has not been created as a result of the case study. Until the interviews and tree diagrams were finished the research team avoided, to a large extent, reading facts about FSB. The reason for this was a wish to affect the information given by informants as little as possible with our own opinions about the bank. However, some information given on the bank’s homepage as well as articles and documents, regarding for instance organizational structure, were considered at an early stage in order to get an overview of the organization and to
plan the interviews and workshops. Nevertheless, after the interviews and workshops deeper document studies were conducted to enhance our understanding.

**Analysis and conclusions**

The analysis relies on both theoretical propositions reflected in Chapter 1 and 2 and a case description. The major proposition made is that the ways managers work may affect employee health. Moreover, organizational success and sustainable health among employees may be dependent on what is argued to be difficult to practise in larger organizations: cooperation between managers and employees grounded in trust, commitment and involvement. This phenomenon further appears to be rarely described in theory whereby it seems apposite to apply a case description. According to Yin (2003), a case description is intended to organise the findings of the study, which is in line with the descriptive aim of Theme 1.

The analysis was performed with different techniques at different levels as advocated by Merriam (1988). Initially, the transcripts were examined individually in the project team, before the three members together examined the empirical material in two workshops covering two days each. During these workshops, the central questions of interest were:

- How have managers at different organizational levels worked to achieve employee health?
- How have managers and employees within FSB worked, according to the employees, to create a good workplace?

The first workshop was held in December 2004 to analyze the tree diagrams and transcripts from the interviews with the office managers. The aim was to scrutinize their opinions and how they work, before analyzing the intentions of managers at higher levels. To start with, the empirical material of each interview and tree diagram was examined and discussed separately and success factors and methodologies were identified from the material. After agreement these success factors and methodologies were written down on post-it notes, which were placed on a white-board. The second day a session with a facilitator was held and an affinity diagram was used to organize the large amount of qualitative information into related categories. The external facilitator had no information about the bank, but helped the research team to control the steps and focus on the empirical material when discussing the questions. The tool was applied with the idea of achieving unanimous and deeper understandings of successful methodologies used by the leaders and help building explanations. This analysis and creation of affinity diagrams may be defined as development of categories as described by Merriam (1988) and Goetz & LeCompte (1984).

The empirical material from the four interviews performed with local bank and executive managers was analyzed in a second workshop in a similar way as the interviews and tree diagrams from the office level. The activities performed to
create each affinity diagram are described in more detail in Paper A and Paper B, whereas the complete diagrams are presented in Bäckström et al. (2005).

To describe the core of the managers’ work I also used the transcripts of each interview in combination with notes from observations made at the times for the interviews; see Paper A. Later, both the tree diagrams, the results of the team’s analysis and my descriptions served as a foundation to compare the work of managers and employee groups within each organizational level, to compare the different levels of managers and also to compare opinions and experiences of managers and employees. Finally, the results were also compared to findings of other similar case studies in the literature study and to theory before conclusions were made and a model was created based on the major findings; see Figure 4.1. This last step may be defined as analysis on a higher level as described by Miles & Huberman (1994) and Merriam (1988).

4.1.2 The Literature Study

To explore the work of successful smaller organizations a literature study strategy was chosen. The work was mainly performed in the summer of 2004 and spring of 2006; see Figure 3.1. In 2004 when we planned Case Study 1 in FSB, a research report and drafts to the works of Bäckström et al. (2004) and Harnesk et al. (2004) were reviewed. However, it was not until 2006, when the case study in FSB was finished, that I started to study the empirical material and findings presented in the research reports and papers more thoroughly. The focus was then on methodologies and other factors expressed by the managers and employees as important to their organization’s success and on the conclusions drawn by the authors. Within the empirical descriptions given by Bäckström et al. (2006), Bäckström et al. (2004) and Harnesk et al. (2004) key words were highlighted and then sorted into categories of key words, which I considered related. The reason for searching key words and creating categories out of their empirical descriptions was to get a deeper understanding of the findings and provide a more critical approach to the studies. The categories were identified from the described view of the managers and out of the descriptions of opinions expressed by the employees. Key words relating to categories of ‘Leadership’, ‘Communication’ and ‘Competence development’ were highlighted from both managers and employees. In addition, categories of ‘Employee participation’, ‘Focus on customers and society’ and ‘Health promotion’ were derived from the information about the view of the managers. Instead, key words related to categories of ‘Improvement’, ‘Work satisfaction’ and ‘The work’ were highlighted within the material about opinions of the employees. After these categories had been derived from the empirical material, the findings of Bäckström et al. (2006) and Harnesk et al. (2004) were considered at last.
4.1.3 Comparison of Case Study 1 and the Literature Study

The comparison of large and smaller organizations was mainly made between the findings and conclusions of the case study in the bank, Case Study 1, versus the findings and conclusion made by Bäckström et al. (2006) and Harnesk et al. (2004) that were studied in the Literature Study. Initially a model of identified methodologies presented by Harnesk et al. (2004) served as a foundation to identify similarities and differences regarding methodologies used in smaller organizations versus the large. Thereafter, the view of managers and employees, respectively, were compared between the bank and the smaller organizations. Moreover, the three organizations were put side by side and key words were highlighted to contrast the core of their work; see Figure 4.4.

Finally, the findings of the comparison were also related to theory and the experiences taken from the studied organizations were formulated in a tentative model aimed at managers of large organizations. The tentative model is illustrated in detail in Paper C and Figure 5.2.

![Figure 4.4](image-url)  
*The findings and conclusions from the case study and literature study, respectively, were compared to identify similarities and differences regarding the work of organizations of different size.*

4.2 Project 2

To investigate the research questions of Theme 2, a case study with an inductive and qualitative approach was chosen in Project 2.

4.2.1 Case Study 2

The setting of the case study in Project 2, Case Study 2, was already decided upon as health care where new applications of ICT were to be introduced. Nevertheless, this setting fulfilled the restriction of selecting a case in which new ICT was used in work. Similar to Case Study 1, the case study was designed as a single-case study.
with embedded units of analysis to provide for a deeper study and understanding of a particular case instead of comparing multiple cases. The case chosen was the eldercare in Luleå in the north of Sweden. Within the case, the main unit of analysis was ‘influence on the work environment’ and individual registered nurses in eldercare that would be users of the ICT applications were chosen as different subunits of analysis.

The eldercare in Luleå was chosen because the municipality and county council, the providers of eldercare in Luleå, had approved the testing of a new platform of ICT applications\(^\text{15}\). Moreover, most of the employees in these organizations in Luleå had agreed to use the technology in their daily work. The eldercare was also considered an interesting representative of health care because eldercare in many countries in Europe and North America faces fundamental pressure for rationalization and quality improvements, not least due to ever-increasing numbers of elderly patients; see Sinervo (2000); Thomsen (2000). Thus, there is a call for more distance and advanced home care, improved methodologies and cooperation between professionals and providers in order to meet increasing demands and expectations of quality eldercare; see Ministry of Health and Social Affairs (2002); Shortell & Kaluzny (2000). The case is described in more detail in Appendix IV.

After the case had been selected, Case Study 2 was performed in four main steps corresponding to the Deming cycle: planning, information gathering, analysis and verification, between August 2006 and August 2007; see Figure 4.5. However, in order to study influences of ICT the steps of information gathering and analysis were further divided into two main phases; one performed without ICT in the eldercare and another phase performed when the ICT applications had been introduced. The intention was to first get an understanding for eldercare and the work of the RNs before the ICT applications were introduced. Such an understanding was seen as a prerequisite for exploring and describing influences of ICT. All steps, except for the analysis, were performed fully in cooperation with Monica Pohjanen, doctoral student at the Department of Nursing at Luleå University of Technology. The steps are described in more detail in the following paragraphs.

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\(^15\) The platform of ICT applications, for instance, a laptop, technology for videoconferencing and medical technology had been developed in cooperation between IT consultants and health care representatives in Norrbotten. The platform was a base of the trade and industry project SARAH which was run in Northern Sweden in 2006 and 2007.
Figure 4.5  Case Study 2 was performed in four different steps during 2006 and 2007. Information was collected in two phases, first when no ICT was used in eldercare and later when ICT had been introduced.

Planning
The platform of ICT applications was to be used by registered nurses (RNs) within the municipal eldercare, specifically in their contacts with physicians and in examination of elderly patients. Thus, we chose to limit the informants to registered nurses in order to get a deeper understanding of the phenomenon from their point of view. The criteria for participation of RNs were that they worked fulltime or part time in one of 15 municipal nursing homes that had approved to test the ICT applications. Based on that, a letter was sent to 26 nurses fulfilling the criteria as well as the patients at the nursing homes in order to give information about the study and obtain informed consent. Approval was given by 20 RNs and out of them eleven informants working at nine different nursing homes were chosen based on practical consideration of working hours. However, these eleven RNs were contacted as the case study proceeded and the selection stopped at eleven informants when we considered that we had reached “saturation” in the empirical material, as advocated by, for instance, Strauss & Corbin (1990). The participants consisted of one man and ten women with ages ranging from around 40 to 65 years. They had held their RN qualification between 3 and 28 years and their work experiences from municipal eldercare varied from 4 to 26 years. Ten out of the eleven RNs worked daytime and some had scheduled on call hours in the municipality eldercare, whereas one was employed to work night shifts only.
To explore and describe the eldercare and the RNs’ working conditions, we needed to study both the process of eldercare and the work of RNs within this process. Interviews of different forms were considered valuable for information gathering in order to understand the view and knowledge of the RNs. To start with, individual semi structured interviews were planned and a questionnaire, about areas such as the RNs’ backgrounds, work, responsibilities, their profession, stakeholders, cooperation, organization as well as attitudes about and experiences of usage of ICT applications in eldercare, were developed; see Appendix V. Thereafter, the questionnaire was tested on two RNs. During these tests difficulties were observed in questions about identifying stakeholders, their demands and cooperation with them. Thus, a tool for facilitating this identification was developed and added to the questionnaire. The development work was performed in cooperation with Rickard Garvare and Peter Johansson at Luleå University of Technology and drafts of the tool were used under observation during the individual interviews. Later on, the development of the tool also turned into a tentative methodology for identification of individual stakeholders and stakeholder interests. The development work and use of the tool is described in more detail in Paper D.

In addition to the semi structured interviews, reflective dialogues were considered valuable for encouraging the registered nurses to tell more freely about situations from their work and reflect around them. Tveiten (2003) holds also that reflective dialogues may be helpful for elucidating employee relations and identifying possible obstacles the employee has in performing work.

However, we saw that there was a possibility that the activities of the care process and the RNs’ work and working conditions were so familiar to the informants that they may omit to mention certain important everyday issues in their descriptions. Therefore, we planned to complement the semi structured interviews and reflective dialogues with observations to enable process mapping and explore the nurses’ work from an ‘outsider’ view. Observations are common for information gathering but are also known to be time consuming; see Yin (2003). Nevertheless, observations were, for instance used by Mintzberg when studying the nature of managerial work in the early 1970s; see Mintzberg (1973). According to Yin (2003), observations may be valuable in case studies to explore events and behaviors in real time in a natural context.

During the planning step, strategies for analysis were also considered. Moreover, focus group interviews with the selected RNs were decided to be a last step to verify and complement the empirical material and analysis before drawing conclusions. According to several researchers, focus group interviews may be valuable for studying attitudes, values and social phenomena as well as people’s experiences, opinions and wishes; see Barbour & Kitzinger (2001) and Hylander (1998). According to Barbour & Kitzinger (2001), the researcher encourages the participants to discuss and comment on certain subjects and exchange experiences
and opinions around them during a focus group interview. As in Case Study 1, the intention in Case Study 2 was to trigger discussions in an interactive process based on individual opinions followed by consensus discussions. Thus tree diagrams were chosen as a tool to collect and structure the information during the focus groups interviews. The main reason for choosing this tool was that I was familiar to using it in practice and that it had been a successful tool in Case Study 1.

Last, before the case study could proceed from the planning step, approval to perform the study was given by the Regional Health Service Ethics committee.

**Information gathering**
Between September and December 2006, which was before the ICT platform had been introduced in the eldercare, seven observation studies were performed by following five of the RNs in their daily work. Each nurse was observed between four and eight hours during their working day and when on call out of office hours. The observations were direct and non-participant to allow for a wider understanding of the context, being open-minded to occurrences and for detection of routines or activities that the RNs might not always be aware of. Monica Pohjanen and I used a checklist to study the RNs work and interactions with other professions and patients; see Appendix VI. In that way the process could be explored during the period that the RNs were the subjects of our observations. As advocated by Merriam (1988), we took notes individually during the observations and then, afterwards, sat down together and discussed what we had observed.

At the time of the observation, each nurse also participated in an individual interview. In the interviews, we probed the view and descriptions of the RNs to complement the ‘outsider’ view that would result from our observations. The questionnaire, including the stakeholder tool, was used as a guide, but the order of the questions was adjusted to create natural conversations around what the RNs felt important to describe. When we noticed that the informants might have not answered a question or left out important information, we asked them to explain a little bit more regarding the specific question, event or experience. When there was time, we sat down at the RN’s office and recorded the interviews. Indeed, some interviews had to be complemented by asking one or several questions from the questionnaire when following the RNs in their work.

In January 2007 the ICT platform was introduced within eldercare and accordingly in the daily work of the RNs; see Figure 4.5. At that time, we started a new phase of information gathering. This second phase proceeded in the same way, with observations and interviews, as did the first phase. However, the interview questions about attitudes towards ICT applications were changed to questions about experiences of the specific ICT platform that the RNs used. In addition, ten of eleven reflective dialogues were performed in this phase. The reasons for waiting with the reflective dialogues to this phase were mainly to make sure that each RN
had met the research team before we asked her/him to reflect around the work and open up to describe feelings and experiences. Moreover, by waiting, the RNs had the opportunity to choose whether or not to tell about a situation in which the ICT platform had been used.

In the dialogue, the RN was asked to reflect on experiences from an optional care situation based on the questions in Gibbs’ reflective cycle; see Figure 4.6. Each dialogue was held in privacy in a place chosen by the RN and lasted between approximately 20 and 60 minutes. All dialogues were guided by Monica Pohjanen as she was more familiar with specific expressions used in health care and thereby more able to focus on the comments made and have a dialogue on a more specialist level than I felt I would be able to. I attended the reflective dialogues, took notes and asked complementary questions. In addition, the dialogues were recorded. In that way I could afterwards, if necessary, ask my colleague about expressions that were strange for me.

In totally, 15 observations, eight interviews and ten reflective dialogues were performed in the information gathering phase between January 2007 and May 2007. The reason that 15 observations had to be made was that the ICT platform was not used on all working shifts due to practical and functional problems. Thus, the phenomena of interest could not be observed at every occasion. Therefore, several of the eleven RNs were observed several times. The informants’ roles in the two phases of the information gathering are summarized in Table 4.1.

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**Figure 4.6** During the reflective dialogues, a translated version of Gibbs' (1988) model of reflection was used. The figure shows the principle of and questions in Gibbs' reflective cycle. (Inspired by Gibbs, 1988).

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16 Before becoming a doctoral student, Monica Pohjanen used to work as a registered nurse within the hospital care.

17 Except for one reflective dialogue in which the RN did not feel comfortable with the recorder.
Chapter 4: Description of the research projects

Table 4.1  The eleven RNs were observed and interviewed in two different phases: one when ICT was not yet used and a second when it was in use. Intentionally, most of the reflective dialogues were performed in the last phase. The one performed in the first phase was aimed as a test but worked out well and was therefore included in the study. The table also illustrates the informants participating in the focus groups, which are described in more detail under the paragraph ‘Verification’.

<table>
<thead>
<tr>
<th>RN</th>
<th>Phase without ICT</th>
<th>Phase with ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observation</td>
<td>Interview</td>
</tr>
<tr>
<td>1</td>
<td>XXX</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td>X</td>
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<td>3</td>
<td>X</td>
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<td>8</td>
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<tr>
<td>11</td>
<td>XX</td>
<td>X</td>
</tr>
<tr>
<td>(12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tot</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

Analysis
The analysis strategy for the case study relies on the theoretical proposition that introduction of new technology, such as ICT applications, in the organization will initiate changes that affect the work environment and thereby the working conditions of the employees. However, since introduction of new ICT in eldercare care is rather recent there is not much written about the influences of ICT on the working conditions of employees. Thus, as in Case Study 1, it seems apposite to also apply a case description which is in line with the descriptive aim of Theme 2.

Already in the step of information gathering, all empirical information was sorted into two groups based on the phase in which it had been collected. When performing the analysis, information gathered without ICT in the eldercare was analyzed first to get an overall view of the process and work situation of the RNs. Thereafter, the second group of information was analyzed before we compared the results of the groups to explore and describe effects of the ICT platform. Nevertheless, the analyses were performed in the same way for both groups of empirical information to provide for this comparison.

Initially, all information within each of the groups were transcribed and thereafter read through several times by the research team to get an overall understanding. Thereafter, information gathered in the observations, interviews and reflective dialogues were sorted and analyzed separately.
The information obtained in the observations was analyzed by myself and Pohjanen in two workshops while using process mapping to visualize and describe the care process with and without ICT. Process mapping as a methodology is described in more detail by, for instance, Egnell (1994). Initially, activities were appointed and mapped out of the notes from each observation study. Thereafter, categories of more general activities were identified from all observations performed within each phase. These categories were named as different 'main activities' which were mapped in a chart describing a general overall chart, without and with ICT in the eldercare. These general charts were also mapped out in more detailed charts based on sub-categories of activities. The different charts that were created are described in more detail in appended Paper E, Paper F and Wreder et al. (2007b).

After the observations of each phase had been analyzed, the interviews were analyzed individually by the members of the research team. However, during the whole process, occasionally we got together to compare our analyses and results. I chose to use qualitative content analysis using affinity diagrams as a tool to reduce disorganized qualitative information into a narrative form as described by Mizuno (1988). Information was structured around the areas of questions before text units, parts of sentences or sentences were identified and coded within each area. Based on affinity, the textual units were then sorted into categories within each area of questions. The creation of the categories is described in more detail in Wreder et al. (2007b).

The reflective dialogues were also analyzed individually even if both Pohjanen and I performed the analysis stepwise using qualitative content analysis in a similar way as advocated by Miles & Huberman (1994), Merriam (1988) and Goetz & LeCompte (1984). I started the analysis by sorting the information into two groups, one containing stories where the RNs had reflected around situations about good care and one about stories relating to bad or unsuccessful situations of care. Moreover, dialogues reflecting the use of ICT were separated from those not related to ICT; see Figure 4.7

Figure 4.7  The empirical material from the reflective dialogues was divided into four groups based on if it was related to a good or bad situation and whether it considered usage of ICT or not.

The reasons for these groupings were firstly to identify possible obstacles that distinguish between the good and bad situations and secondly to explore influences from ICT. Text units were identified within each of the groups and then condensed and coded. Based on affinity, the textual units of each of the four groups were
sorted into categories and sub-categories in several steps. This was done manually by using affinity diagrams as described by Mizuno (1988). In addition, I used the software NVIVO7\(^{18}\) as a tool to support tracking and elaborating of the analysis when forming the sub-categories and categories. However, the routine of coding, sorting and forming categories was the same when using the software program as when doing it manually with affinity diagrams. During the whole process, I occasionally went back to the original textual units as well as discussing the categories and compared the results with Pohjanen.

During the analysis, the similar sub-categories were derived independently of whether the dialogue had related to ICT or not. Thus, halfway through the analysis the four groups were subsumed into two main groups of information only based on relation to good or bad situations. Finally, four categories occurred from the information about good situations and also about the bad situations. Those categories within each group that related to each other were subsumed into a theme to formulate a description of what the nurses had chosen to tell about their work in good and bad care situations respectively. Last, the categories and descriptions derived from each group were compared. Again, similar categories had been derived independently of whether the information came from stories about good or bad situations. Thus, from all the eight categories of the two groups, the ones that were related to each other were subsumed in three new categories. Last, these categories together formulated a theme describing the thread of meaning that appeared in the categories and related sub-categories. The analysis of the reflective dialogues is described in more detail in Wreder et al. (2007b).

The categories from the interviews and reflective dialogues, together with the RNs’ descriptions in the full empirical material, were later used to complement the process charts with deeper descriptions of the process and RNs’ work within this process. This step, which relates to the descriptive aim of Theme 2, was performed to create descriptions of eldercare as it appeared first without and then with the platform of ICT in the eldercare.

**Verification**

Verification may be seen as a step performed on a higher level when analysing the information gathered; see Miles & Huberman (1994). In this case study a last step, before drawing conclusions, was to verify and develop the results during two focus group interviews. The goal was to verify and develop the process charts, make the RNs describe their work in the process to find out what they considered important to reveal and not least, explore the RNs’ experiences of how ICT could affect the eldercare and in particular their own work.

\(^{18}\) For more information about the text analysis software NVIVO 7; see QSR International (2007).
In each focus group, which lasted for about six hours, five RNs participated. However, one of the informants in the observations and interviews had retired and one was on vacation at the time for the focus groups and could not participate. The second focus group was therefore complemented with one RN that had used the ICT platform in her work, but had not participated in the earlier parts of the study; see Table 4.1. The groups were formed by the manager of the RNs based on the informants’ working hours.

![Figure 4.8](image)

*Figure 4.8*  The photos were taken during the second focus group interview while the informants were noting answers on post-it notes and discussing them.

After a short presentation and introduction in each focus group the general process chart, describing the eldercare when ICT is not used, was presented. The informants were then encouraged to have an open discussion around the chart as well as to come up with changes. However, the presented chart was approved by both groups without any changes. Therefore, further discussions in the groups departed from the main activities proposed in the chart; see Figure 5.4. For each main activity, one at a time, successive questions were posed to encourage the RNs to discuss and further describe their work within the process of eldercare. The
question ‘What do you do when you [the main activity]?’ was discussed first and individual answers were noted on post-it-notes and put on a white-board for all informants to see, discuss and come to a consensus about; see Figure 4.8. Thereafter, the informants were asked to answer and discuss the question ‘How do you do when you [answer about ‘what’]? for each sub-activity that they had noted on the post-it notes for the first question; see Figure 4.9 and Paper E. Again, their individual answers were noted and put on post-it-notes below the first notes before they were discussed and last agreed about in the group. In the end, this resulted in an agreed picture describing what and how the RNs of each group considered that they perform in their work in eldercare.

Figure 4.9 The figure exemplifies what the answers related to one of the main activities could look like when arranged on post-it-notes on a white-board during the focus group discussions. Each answer was a sentence, part of a sentence or a word answering the question on each of the ‘what’ and ‘how’ levels in the hierarchy.

Thereafter, with the consensus picture in mind, the members of each group were encouraged to have an open discussion and come up with answers to the question ‘How has ICT affected my work as a RN in the process of eldercare?’ and note the common answers on the white-board. After each focus group the process chart, tree diagram and answers were transcribed by the research team before the material from the groups were compared.

Last in the Verification step, to identify influences of ICT, the descriptions from the content analyses and the process charts were used to compare the process and work of RNs with and without ICT and noting similarities and discrepancies. Based on this comparison, influences of ICT could be identified in two main steps; 1) by contrasting the two charts, 2) by considering the experiences and opinions of RNs demonstrated in the descriptions and categories. In this second step categories, describing the overall opinions and experiences of RNs about ICT, were firstly created based on condensation and comparison of results from the interviews, reflective dialogues and focus groups. Thereafter, the categories were also used to relate identified influences to the activities of the care pathway. This comparison and identification was initially performed individually by the members of the research team and then further discussed and formulated in mutual discussions; see Wreder et al. (2007b) for more details.
4.3 Research quality

It is essential to evaluate the research that is conducted to assess the quality and credibility of both research methods and results; see Flick (2007). Two concepts, that are commonly used to discuss the quality, are ‘validity’ and ‘reliability’; see Martella et al. (1999); Wiedersheim-Paul & Eriksson (1992). According to Martella et al. (1999), validity deals with the question as whether the measurement device indicates what it aims to measure. Reliability, on the other hand, focuses on whether the measurement produces consistent results across observations to provide the researcher with a way of assessing the trustworthiness of the findings. However, as regards qualitative research, which this thesis is based on, many authors discuss whether these concepts and interpretations are actually applicable or not. For instance, Bryman (1992) and Lincoln & Guba (1985) believe that different dimensions of trustworthiness, such as, credibility (paralleling internal validity), transferability (paralleling external validity), dependability (paralleling reliability) and conformability (paralleling objectivity), should be used instead. Lincoln & Guba (1985) mean that these dimensions better describe the criteria of social or qualitative research.

However, Yin (2003) argues that the conventional terms validity and reliability can also be used to judge the quality of qualitative research and that there are four logical tests, relating to construct validity, internal validity, external validity, and reliability, that can be used in order to do this; see Table 4.2. Moreover he discusses that the research design of case studies can be positively affected by conscious use of different tactics. In this thesis I have chosen to apply these four tests and tactics to discuss the quality of my research.

Table 4.2 Tactics for design tests of case studies. (Source: Yin, 2003)

<table>
<thead>
<tr>
<th>TESTS</th>
<th>CASE STUDY TACTIC</th>
<th>PHASE OF RESEARCH IN WHICH TACTIC OCCURS</th>
</tr>
</thead>
</table>
| Construct validity | • Use multiple sources of evidence  
                          • Establish chain of evidence  
                          • Have key informants review draft case study report | Information gathering  
                                                                                  Information gathering  
                                                                                  Composition |
| Internal validity | • Do pattern-matching  
                          • Do explanation-building  
                          • Do time-series analysis | Analysis  
                                                                                   Analysis  
                                                                                   Analysis |
| External validity | • Use replication logic in multiple case studies | Research design |
| Reliability   | • Use case study protocol  
                          • Develop case study database | Information gathering  
                                                                                  Information gathering |
According to Yin (2003), construct validity can be achieved through the creation of a correct instrument that measures the studied phenomenon in an accurate way. However, in qualitative research the focus is on understanding a social phenomenon not on measuring it; see Stenbacka (2001). This means that the researcher has to choose proper sources of information and the right informants and show that these sources reflect the studied phenomenon. The test of internal validity instead deals with whether the results are significant and believable for the research and if the conclusions are meaningful in the studies or their context. The third test, external validity, concerns the significance of the conclusions and whether they can be transferred into other contexts, studies or groups of individuals. Last, reliability can be achieved if another researcher can reach the same findings and conclusions, following the same procedures as described by an earlier researcher and conducting the same case study all over again; see Yin (2003); Martella et al. (1999). In order to affect the reliability positively Yin (2003) suggests use of a case study database and a case study protocol. Not least, the researcher should describe their operations in the study clearly and write reports so that transparency and inter-subjectivity are achieved; see Yin (2003). According to Stenbacka (2001) this increases the quality of a qualitative method. She suggests that it is essential to make the researcher’s whole process visible, from planning and preparation to information gathering and analysis.

To increase the quality of my research, my intention has therefore been to write this thesis in an honest and clear manner to provide for transparency and the readers’ own interpretations. I have described my choices made and steps taken within the research projects. Moreover, I have appended a list of references to the thesis and tried to make references to other authors correctly. In the following sections I will further discuss how the four tests and tactics have been considered in the two projects.

4.3.1 Project 1

Case Study 1
In this case study, the question of construct validity is about whether or not the chosen sources of information and informants reflect the true description of the work within the bank. The aim of the research was never to give a complete picture of the entire bank but to give valuable examples of how to work to achieve sustainable health. The studied units were therefore chosen on practical and geographical reasons and were not necessary the most successful units of the bank. However, a risk in the study could be to have the participating employees of the offices selected entirely by the managers. On the other hand, there are no suspicions that the studied units or employees perform differently from what is typical in the bank; see Appendix I. Moreover, the fact that the informants are actually parts of the case and the phenomenon studied should strengthen the
construct validity. Nevertheless, there could be a further risk related to the managers, who one would expect to be well-read within the field of management theory. Thereby, they might tend to answer interview questions in a way that they think is appropriate based on their reading, rather than describing their real intentions and methodologies. However, to find out about managers’ intentions and describe their ways of working I found it necessary to involve the managers themselves. The results of the study should also be strengthened by the fact that the intentions and methodologies described by the managers have been compared to the employees’ view of managers’ methodologies.

When conducting the case study, different sources of evidence, i.e. document studies, interviews and workshops with tree diagrams, were consciously used to provide information triangulation and thereby improve the construct validity of the research. The concept of triangulation is based on the assumption that bias inherent in particular sources of information, investigators and methods would be neutralized when used in conjunction with other sources, investigators and methods; see Creswell (1994). Moreover, the information was looked upon through theories from both manager and employee perspectives, which may be compared to theory triangulation; see Yin (2003). In this case study, the construct validity should also be improved by the fact that the interviews were semi structured and open-ended and the workshops were based on discussions to allow the informants to freely describe their opinions and work. Moreover, the transcripts of interviews and tree diagrams as well as drafts of the case study report were studied by the informants.

After having conducted the study I further tried to give credible portrayals of the case and describe the empirical findings with expressions of the informants to strengthen the internal validity. The internal validity should also have been strengthened when these findings were compared to literature and findings of similar case studies.

Another test of the quality deals with external validity, which is about the problem of knowing whether the findings are possible to generalize beyond the performed case study. In case studies, the external validity concerns analytical generalization, which is generalization of the results of the case study to broader theory; see Yin (2003). Analytical generalization further implies that analytical understanding is made possible as a result of the study by lifting the empirical material to a level where analysis of people’s behavior is made possible with the purpose of understanding their motivations; see Stenbacka (2001). This also means that the strategic choice of informants relevant to the study, which was used in this case study, can increase the external validity more than a statistical sample of participants.
Yin (2003) further argues that an analytical generalization requires that the theory is tested through replications of the findings in other cases, where the theory has stated that the same thing will happen. However, this particular case study was designed as a single-case study due to the uniqueness of the bank. The findings were then compared to the literature study and some theoretical findings. Moreover, examples of how managers in large organizations can work to achieve sustainable health were described. Hopefully, the external validity of these descriptions may be corroborated by the application and if not completely, at least give valuable examples possible for other organizations to learn from.

My tactic to affect the reliability of this case study positively was to describe the research conducted thoroughly in this chapter. In addition, a checklist and protocol were used for logging the proceedings and a case study report was established; see Bäckström et al. (2005). However, I believe that my own and the research team’s conscious and unconscious perceptions and interpretations have, indeed, affected the research. According to Stenbacka (2001), it is even impossible to differentiate between the researcher and the method. The case study has been carried out by me and other researchers from the Division of Quality and Environmental Management and my choices of methodologies and literature are therefore most certainly influenced by a strong TQM focus and my pre-understanding. Thereby, other researchers may not definitely arrive at the same results or conclusions if studying the same case organization.

The Literature Study
The aim of the literature study was to explore the work of successful smaller organizations. The choice to study only the findings of two case studies described by Bäckström et al. (2006) and Harnesk et al. (2004) might be considered as a weakness of the literature study when evaluating the three tests for validity. This choice is certainly affected by my relation to these authors and my position at the Division of Quality and Environmental Management.

Use of another strategy or study of other authors, at another point of time, may most certainly have given diverging results. However, with regard to my purpose and focus on large organizations, I consider my limitation of the literature study feasible. In addition, the internal and external validity should be strengthened by the fact that the results of this literature study to a large extent are compared to and confirmed in the case study and by other theories reviewed. Moreover, to secure the construct and internal validity I tried to describe the view of Bäckström et al. (2006) and Harnesk et al. (2004) clearly and honestly based on their descriptions and findings. However, it was impossible to avoid being influenced by the findings of the case study of the bank when reading and analyzing their findings.
To improve the reliability of the literature study I have appended the references to the studied reports and paper. In addition I have tried to describe the literature study in an honest and clear manner.

Comparison of Case Study 1 and the Literature Study

The creation of the tentative management model for sustainable health was based on the findings of Case Study 1. Moreover, the results were complemented with the literature study, which may have improved the validity of the research. However, a risk to bear in mind is that the results of three studies were compared even though the case studies of smaller organizations initially were performed with a slightly different purpose and methodologies than was the study of FSB. Accordingly, the results of the literature study initially were derived through examinations of the empirical descriptions and results i.e. using secondary information within the case study reports and related articles by other researchers.

Even though many of the characteristics described in Case Study 1 and the Literature Study certainly must be seen as unique to the specific organizations, my belief is that some of the results can be generalized to other organizations. The tentative model is, for instance, also supported by other general management theories and should be adaptable to the work of managers in different organizations.

4.3.2 Project 2

Case Study 2

Similar to Case Study 1, the question of construct validity in this case study deals with the researchers’ choices of proper sources of information and informants and confirmation of that these sources reflect influences of ICT on the eldercare and work environment of the registered nurses (RNs). In Case Study 2 the aim of the research was never to identify cause and effect relationships or give a complete picture of influences of ICT, but to increase the understanding of the phenomenon by describing valuable examples and experiences of how ICT might influence the work environment. The studied case and participants could therefore be chosen on practical reasons and knowledge about the development in the health care sector. The health care sector may not be the most representative one to study. However, it is a sector experiencing increasing demands and use of ICT and should therefore be in need of the knowledge about possible effects of the changes incurred by ICT. Moreover, there should be no misapprehensions that it is a representative case.

There is a risk though with having the participating RNs selected entirely by the managers. For instance, the managers might have chosen employees they knew would be positive to new technology. On the other hand, both negative and positive attitudes appeared in the study. Even though the participants were mainly
female, they should also be fairly representative since this is what is typical for the population of RNs in the Swedish health care sector; see Statistics Sweden (2007). In addition, they were all parts of the problem. Thus, the construct validity should be strengthened. Nevertheless, it could be questioned if it was necessary to observe eleven RNs since the authors felt saturation in the observations and interviews after about eight or nine. However, each of the RNs added to the deeper descriptions in the reflective dialogues and contributed to the discussions in the focus groups.

When conducting the case study, different sources of evidence, i.e. observations, interviews, reflective dialogues and group interviews, were consciously used to provide information triangulation and thereby improve the construct validity of the research. In this case study, the construct and internal validity should further be improved by the fact that the interviews and reflective dialogues were semi structured and open-ended and the group interviews allowed the informants to freely describe their opinions, work and their experiences of ICT. To let the informants themselves describe their perceptions in their own words instead of forcing them to answer questions increases the chances of getting truthful results; see Stenbacka (2001). Stenbacka (2001) further claims that the interaction between the researcher and informants leads to circumstances that improve the possibility of getting good data providing the information needed according to the purpose. Case Study 2 was performed for a year, during which the informants were continuously studied and the researchers tried to achieve confidence among the informants. Thereby, the informants had the opportunity to correct or add to their answers and descriptions as well as clarify the meaning of statements. Moreover, the analyses based on the observations were verified by the RNs during the group interviews and they were encouraged to read drafts of the case study. Nevertheless, there could be a risk with allowing this during a study lasting for almost a year since it might lead to changes of opinions. However, when being conscious about the risk, it should instead be a strength in this study since it implied a possibility to also understand the development of the informants’ attitudes and experiences over time.

As in Case Study 1 I further tried to give credible portrayals of the case and describe the empirical findings with expressions of the RNs to improve the internal validity. Moreover, these findings were compared to literature about quality management, ergonomics and nursing perspectives. This should have strengthened the internal validity. Moreover, it could be looked upon as theory triangulation as discussed by, for instance Yin (2003). The comparison of the empirical findings to literature was also a choice to contribute to external validity, which here may concern the analytical generalization of the results to broader theory.

When considering construct and internal validity another strength of the study should be the triangulation through different perspectives relating to information triangulation and investigator triangulation discussed by, for instance, Flick (2007).
and Denzin (1970). The exploration and descriptions of influences of ICT were achieved through consensus between both the outsider (researchers') perspective, obtained by the observations and interpretations of the RNs expressed experiences, and the insider (RNs') perspective obtained in interviews, reflective dialogues and focus groups. Moreover, we were two researchers cooperating during planning, information gathering and some of the analysis. This nourished the discussions with the RNs because of the authors' different backgrounds. Moreover, the two researchers performed individual observations of the same situations and thereafter discussed their impressions and notes together.

To affect the reliability of Case Study 2 positively I have tried to describe the research conducted thoroughly in this chapter and in related papers. In addition, a checklist and protocol have been used for logging the proceedings in a case database. However, I believe that my own and the other researcher's backgrounds, pre-understandings and conscious, as well as unconscious, perceptions and interpretations have affected the research. For instance, I purposely chose to apply typical methodologies used within the Quality Management area when conducting the research. This was a choice influenced by my belonging to the Division of Quality and Environmental Management. Moreover, it was a choice to integrate knowledge about such methodologies into the Health Care Sector in an attempt to contribute to improvement work within the sector. Nevertheless, what was unique with the study was the cooperation between researchers from the Quality Management and the Nursing areas. Certainly, other researchers with other backgrounds would not arrive at the same results or conclusions, but not necessarily to more truthful understanding of the RN's work and the influences of ICT.

As regards this case study, my opinion is that the quality should not only be evaluated through the concepts, tests and tactics of validity and reliability. Since we dealt with people and intruded into patients' homes when observing the RNs I felt it would be unavoidable to also consider an ethical dimension. This dimension is also advocated by several authors, for instance, Lincoln & Guba (1985). To handle the ethical dimension in this case study, the performance was approved by the Regional Health Service Ethics committee. Moreover, informed consent was sent to both RNs and their patients to sign. The RNs also had the right to withdraw from the study at any time without explanation to why. We also promised to handle the empirical material with care and respect. Not least, we had to judge from the situation if our presence would effect the care or research results negatively. If so, as was the case several times, we chose to withdraw from, or not even enter into, the care situation.
5 SUMMARY OF APPENDED PAPERS

In this chapter short summaries of the six appended papers are provided. The summaries mainly present the background, purpose, methods, results and conclusions of each paper.

5.1 Overview of appended papers

During the time that the two research projects described in Chapter 4 were performed, the results were reported in six papers appended to this thesis; see Table 5.1 for an overview. The first three papers describe results from Project 1, which is related to Theme 1 and concerns leadership for sustainable health. The last three papers deal with Project 2 related to Theme 2 about the influence of new information and communication technology on the work environment.

5.2 Paper A


5.2.1 Background

Today, many organizations experience problems with high sick leaves among employees. This has negative implications on the organizations’ ability to compete on the market, but also means suffering for the individuals concerned. However, there are organizations that have successfully broken the tendency of rising sickness absence, accomplished employee health and simultaneously achieved financial growth. Recent studies of some small and medium sized organizations who have received the award “Sweden’s best workplace” show that, the leadership, infrastructures for communication, relation building activities, employee influence, established holistic view and balance between work and private life have been vital success factors for achieving health; see Harnesk et al. (2004). However, it is advocated that the larger an organization gets, the harder it is to apply good leadership; see Deming (1986).

19 In this thesis, the term ‘employee’ is sometimes used interchangeably with the term ‘co-worker’.
Table 5.1 Overview of the type of the six appended papers, their titles, purposes and research methodologies.

<table>
<thead>
<tr>
<th>Paper A</th>
<th>Theme 1</th>
<th>Successful Methodologies for Achieving Co-Worker Sustainability in a Large Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Purpose</td>
<td></td>
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<tr>
<td></td>
<td>Describe factors and elements that have worked towards sustainable large organisation management methodologies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research &amp; design methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Project 1: Literature study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Workshops with two groups of employees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Interviews with six managers on different management levels</td>
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<tr>
<td></td>
<td>- Content analysis performed in work-shops</td>
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</tr>
<tr>
<td></td>
<td>- Content analysis performed in work-shops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Process mapping and content analysis performed in work-shops</td>
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<th>Paper B</th>
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<td>Describe how successful workplace can be created from public-sector organisations</td>
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<th>Successful large organisation: How to provide a starting point for improvements in work situation and developing a methodology for achieving sustainable health</th>
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<tr>
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| Paper E | Theme 2 | Successful large organisation: How to create a management for eldercare and the working situation of registered nurses in Swedish welfare care |  |
|---------|---------|------------------------------------------------------------------------------------------------------------------------------------|
| Title   | Purpose                                                                 |
|         | Describe how information technology can be used to create a management for eldercare and the working situation of registered nurses in Swedish welfare care |  |
|         | Research & design methods                                               |
|         | - Project 1: Case study                                                 |
|         | - Case study and literature study                                       |
|         | - Workshops with two groups of employees                               |
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|         | Type of paper & publication status                                      |
|         | - Published in Total Quality and Reliability Management Practice        |
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| Paper F | Theme 2 | Successful large organisation: How to create a management for eldercare and the working situation of registered nurses in Swedish welfare care |  |
|---------|---------|------------------------------------------------------------------------------------------------------------------------------------|
| Title   | Purpose                                                                 |
|         | Describe how information technology can be used to create a management for eldercare and the working situation of registered nurses in Swedish welfare care |  |
|         | Research & design methods                                               |
|         | - Project 1: Case study                                                 |
|         | - Case study and literature study                                       |
|         | - Workshops with two groups of employees                               |
|         | - Interviews with six managers                                          |
|         | - Content analysis performed in work-shops                              |
|         | - Process mapping and content analysis performed in work-shops          |
|         | Type of paper & publication status                                      |
|         | - Published in Total Quality and Reliability Management Practice        |
|         | - Submitted for publication                                             |
5.2.2 Purpose

The purpose is to describe how managers on different levels of a large Swedish bank, which has received the award as “Sweden’s best workplace”, say they work to support the development toward employee health and profitability, and also to identify successful management methodologies (ways of working) that may be possible for managers in other organizations to adopt.

5.2.3 Method

The paper is based on a case study of the Swedish bank, FöreningsSparbanken (FSB)\(^\text{20}\). Within the study, managers on three different organizational levels were studied. These managers also represented different geographical areas, local banks and offices of the organization. To explore the work of the managers, information was collected through individual semi-structured interviews. The interviews were recorded and the transcriptions checked by the respondents in order to eliminate misunderstandings.

Two workshops, each lasting two days and supported by an external facilitator, were held to analyze the empirical data. Affinity diagrams were initially used to organize the large amount of qualitative information into related categories. The empirical findings and diagrams were then assessed separately for the local banks and offices, but also for different organizational levels. Finally, the findings were related and compared to theory.

5.2.4 Main results and conclusions

All interviewed managers mentioned clear, honest and consistent leadership; measurements and feedback; employee participation and communications in dialogues as central for achieving employee health. Executive managers also believed that a structural business approach on health issues and an effective model of control are important.

The commitment of the bank’s managers has been vital to achieve a healthy and efficient organization. Executive managers have had a strategic and business focus on health issues and set objectives thereafter. These objectives were, according to the executive managers, supported by their ways of working. Further on, the objectives were deliberately passed on throughout the organizational hierarchy down to the bank offices. The interviews show that dialogues, delegation and goal-setting have been important management methodologies. Middle managers in addition have been coaches to office managers, who in turn have had focus on building relations, coaching and encouraging employees.

\(^{20}\) Nowadays named Swedbank.
The paper shows that in addition to already well-known methodologies, the company-wide health approach with supportive methodologies and measurements, the business view on health issues and the managers' courage to learn and deal with psychosocial illness, have been important.

5.3 Paper B


5.3.1 Background

With ever-increasing competition, employee involvement has become an important issue to support individual development, decrease absenteeism and in the long run improve productivity and organizational development; see Velury (2005); Paul et al. (2000). The argument for this is the positive influence the possibilities to active involvement have on motivation and work satisfaction; see, for instance, Kondo & Park Dahlgaard (1994); McGregor (1960). Thereby, stress can be prevented and employee health promoted at the same time as the employees’ knowledge and desire for commitment contribute to improvement work within the organization; see Bergman & Klefsjö (2003); Salancik (1977).

However, involvement does not automatically ensure good working conditions. It can also lead to employee stress and sickness absence, which in turn lead to high costs to society and suffering for the individuals; see Arnetz (2002). Therefore, it is important to learn what employees think and how managers can work to achieve forms of employee participation that promote health and organizational development. This is particularly important in large organizations, where it is argued that empowerment is difficult to practice; see, for instance, Nilsson (1999).

5.3.2 Purpose

The purpose is to describe what factors and methodologies employees of a large Swedish bank, who have received the award "Sweden's best workplace", think has been vital to create what they consider a good workplace.

5.3.3 Method

The paper is based on a case study of the bank FöreningsSparbanken (FSB). The opinions of two groups of employees, representing two different bank offices, were considered. Information was collected by two group interviews with employees.
using tree diagrams; see Mizuno (1988). Initially, the employees were asked about their opinions about the award and being named ‘Sweden’s best workplace’. The groups were then guided to answer consecutive questions, on different levels, through discussions about success factors and methodologies in brainstorming and consensus processes.

A workshop, lasting two days and supported by an external facilitator, was then held to analyze the empirical data. Affinity diagrams were first used to organize the information within the tree diagrams into related categories based on the research team’s understanding of the data collected. The analysis was later continued by a comparison of the two offices. At that time, the findings of both the affinity diagrams and tree diagrams of the two offices were considered to find out about similarities and differences regarding the factors argued to make the bank a good workplace. Thereafter, the methodologies related to the success factors mentioned by both offices, were compared. Finally, the results of the analysis were also compared to theory.

5.3.4 Main results and conclusions

The study shows that the possibilities to actively participate as an employee were seen as important. The value of everybody’s involvement seem to have been achieved through coaching and co-workership with communication, delegation, goal-setting and training as commonly used methodologies. The results, for instance, also confirm the importance of caring and visible managers, clear goals and adapting the business to the needs of internal and external customers; see Figure 5.1.

The study shows that managers and employees of the bank have worked to nurture five success factors, which have much in common with the fundamental values expressed by the bank; see FöreningsSparbanken (2005). Furthermore, they seem to have worked systematically by choosing methodologies supporting these values. This strategy is in accordance with what some authors believe creates Total Quality Management.
The figure highlights the success factors that, according to employees’ opinions, have contributed to the success of the bank. The figure also summarizes how managers and employees within the bank have worked, in order to support each of these factors. (Source: Wreder & Klefsjö, 2007).
5.4 Paper C


5.4.1 Background

To reverse the trend of rising costly sickness absence caused by stressful modern workplaces, organizations should continuously promote health so as to allow for human resources to be regenerated at work, and not become deteriorated. Management is assumed to have the foremost impact on health promotion at the workplace. Several authors have even argued that managers should be more supportive and must delegate responsibility and authority to lower levels of organizations in order to manage demands of flexibility and employee involvement; see Docherty et al. (2002); Kinlaw (2000); Stowell (1988); Deming (1986). However, this may be difficult to practice in large organizations that tend to be hierarchical and have complex communication channels; see Daley et al. (2003); Nilsson (1999); Deming (1986).

Nevertheless, at the same time as many organizations have problems with sickness absence, there are organizations that have successfully broken the tendency and shown excellence in management and health promotion. Such organizations may be model patterns for other organizations to learn from.

5.4.2 Purpose

The purpose is threefold: 1) to describe how a large organization has successfully worked to achieve sustainable health; 2) compare the work of the large organization with methodologies used by smaller successful organization; and then 3) to create a model for how managers can work to create sustainable health.

5.4.3 Method

The paper is based on a case study in the large bank FöreningsSparbanken (FSB), which has received the award “Sweden’s best workplace”. The empirical data was gathered through interviews with six managers at different organizational levels and workshops with two groups of employees. During the workshops, the employees were encouraged to identify methodologies in brainstorming and consensus processes.
Chapter 5: Summary of appended papers

In the analysis, success factors and methodologies were identified from the material and then organized into related categories using affinity diagrams, as described by Bergman & Klefsjö (2003) and Mizuno (1988). The idea was to achieve unanimous and deeper understanding of success factors and methodologies and help find explanations to how managers and employees had worked to create sustainable health. Later, comparisons were made between the methodologies used by managers at different organizational levels and between opinions of managers and employees. The empirical information was also compared to results from earlier case studies of three smaller organizations that had received the same award. The findings of this evaluation were also compared to theory before conclusions were drawn and documented in a tentative management model for sustainable health.

5.4.4 Main results and conclusions

The case study shows that there was a convergence between the intentions of the managers and the view of the employees. It appears that the large bank has managed to establish good forms of management, employee involvement and communication. However, independently of organizational size, the study shows coinciding results as to the importance of management commitment and methodologies, such as delegation, goal deployment and coaching, to create a health-promoting work environment. This may indicate that larger organizations do not need any specific methodologies.

Nevertheless, how managers can work to create sustainable health is not only described by methodologies but also has to be considered within a wider management strategy. Based on the experiences taken from the bank and the smaller organizations, a model was created to exemplify such a management strategy; see Figure 5.2. The model suggests that a culture, based on core values that are supported by methodologies and tools, and complemented with mandate and communication in all directions, may be of benefit to support creation of sustainable health. It could be argued that such a strategy for health promotion follows a system view of how to work with Total Quality Management. The core values should be common to managers and employees on all levels of an organization, whereas, methodologies and tools may vary between levels.

The model is further built around several management levels that may be found in larger organizations. Nevertheless, the strategy with exemplified methodologies and tools may be used as a guide by managers in both large and smaller organizations, for how to work to create sustainable health.
The model consists of a management strategy of core values, methodologies and tools with examples based on experiences taken from mainly the large bank but also from the smaller organizations that have managed to create a good work environment where health and performance have improved. (Source: Wreder et al., 2008).

5.5 Paper D


5.5.1 Background

Most organizations need not only to satisfy their customers but also a number of other stakeholders and interested parties whose wants and expectations are often disparate, in conflict and subject to change. Public eldercare in Sweden is no different. Over time it has developed towards business organizations with a more apparent customer focus and increased demands on performance. Reasons include the rapidly increasing number of patients and significantly stepped-up demands and expectations from patients, relatives and the community; see The National Board of Health and Welfare (2005), Hallin & Siverbo (2003) and Sinervo (2000).
In public eldercare, registered nurses are the most highly qualified medical professionals and thus have the greatest responsibility. They work according to the national legislation regarding health care operations. Thereby, the registered nurses have to fulfill both their obligations and answer to the demands of the patients and the patients’ relatives; see Johnsson (2000). This situation leads to conflicts where the satisfaction of one need or demand may be fulfilled at the expense of others; see Brunsson (2003). Adding to the problem is the fact that registered nurses often work alone in stressful situations when decisions and prioritizations have to be made; see Westlund & Larsson (2002).

5.5.2 Purpose
What originally started with a desire to identify the stakeholders of Swedish public eldercare later turned into the development of a tentative methodology for identification of stakeholders and stakeholder interests. The purpose of the paper is to describe this development and the results and experiences gained during the process.

5.5.3 Method
Information was collected within the field of public eldercare by means of participant observations to assess the methodology under development and to explore the stakeholder view within this field. A first draft was tested by six registered nurses working in public eldercare in the north of Sweden. When testing it, each registered nurse was encouraged to use an illustration, similar to a “sun”, and to think of herself/himself as in the middle of a network. Thereafter he/she was asked about who had demands, wants and expectations on him/her and the answers were noted on the sunbeams. The results generated from this test were analyzed and, together with theoretical considerations and the authors’ experiences of observing the registered nurses using the illustration, served as a base for further development of the methodology into a second draft. This draft was then tested on three registered nurses working in the same organization as the former six. After the results of this test had been analyzed they were verified through an observation study. Ten registered nurses were observed when working day, evening or night shifts, and notes were taken about the relationships observed in their work in order to identify potential stakeholders. Lastly, the experiences and results together with further theoretical considerations were used to develop the tentative stakeholder methodology.

5.5.4 Main results and conclusions
The results, derived during development, tests and verification of two different drafts of a methodology for identification of stakeholders and stakeholder needs,
indicate that in public eldercare, the customer focus is often emphasized, but not always apparent. The nursing employees have the responsibility to give patients the right care. However, these customers often have to be satisfied subject to meeting demands from relatives, management and society, just to mention a few of the other potential stakeholders. Besides this, registered nurses have diverging views of who the stakeholders are and also find it problematic to prioritize between stakeholders’ interests.

Thus, the developed stakeholder methodology suggests steps for identification of stakeholders and stakeholders’ demands, wants and expectations on an individual employee level as well as steps for group discussions concerning how to achieve a common view and balance different interests on an organizational level; see Figure 5.3.

<table>
<thead>
<tr>
<th>1. Identification of stakeholders</th>
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<tr>
<td>- Who has demands, wants and expectations that I must fulfill?</td>
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<th>2. Prioritization of stakeholders</th>
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<tr>
<td>- Who of them are the most important to satisfy in my work?</td>
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<tr>
<td>- Who should to be satisfied first, second… (1, 2 3..)?</td>
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<tr>
<th>3. Identification and prioritization of demands, wants and expectations</th>
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<tr>
<td>- Which are their most important demands, wants and expectations that I should fulfill?</td>
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<th>4. Compare</th>
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<tr>
<td>- employees’ pictures</td>
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<td>- the employees’ views to the management picture</td>
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<tr>
<th>5. Communicate</th>
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<tr>
<td>- Create a common picture and “Routines” for the work</td>
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A common view and understanding of stakeholders and why everyone should act in a certain way might also help registered nurses’ decision making and their prioritizing among stakeholders’ interests. In addition, since application of the methodology in the organization provides for involvement and discussions around problems as well as clarification of expectations and what should be valued in the organization, it may also improve registered nurses’ work situation.
5.6 Paper E


5.6.1 Background

It could be argued that to meet the constantly increasing demands on eldercare caused by ever larger numbers of elderly and not to mention the higher expectations of good quality eldercare there is need for improved collaboration and communication among the different providers of eldercare, which in Sweden are the county councils and the municipalities. Moreover, a better understanding for the work of registered nurses (RNs), who are the most highly qualified medical professionals in this field and hold the primary responsibility for the care within the municipalities, appears to be fundamental to provide opportunities for them to perform a good job that they feel happy about. This is important since the RNs’ work satisfaction is related to their capacity to provide good quality eldercare; see Gurner & Torslund (2003); Newman & Maylor (2002).

5.6.2 Purpose

The purpose is to provide a starting point for improvements of eldercare by (1) creating a chart of the care pathway, describing the flow of activities performed during the patient’s way through the care when treated in different organizations and by different professions, and (2) describing the work and work situation of registered nurses (RNs) involved in this pathway.

5.6.3 Method

The paper is based on a case study in eldercare in Northern Sweden. Approval for performing the study was given by the Regional Health Service Ethics committee. Thereafter, empirical data was gathered through observations of and interviews and reflective dialogues with RNs working in public eldercare. During the observations eleven RNs were followed in their daily work, during day, emergency and night shifts, to enable process mapping and explore the registered nurses’ work from an ‘outsider’ view. At the time for the observations, each RN was also interviewed about such areas as responsibilities, tasks, the profession, cooperation and organization, among others. The reflective dialogues were individual and based on

21 ‘Good quality eldercare’ is here viewed as eldercare that satisfies, or preferably exceeds, the needs and expectations on eldercare and thereby creates high value for, foremost the patients with the greatest need of care, but also for the other stakeholders such as relatives and the society.
Gibbs’ (1988) reflective cycle to find out about how the RNs viewed their work along the care pathway, felt about it and what they considered as important in care situations.

Process charts were then created based on the observations and taken to focus groups to be validated and developed with descriptions of the RNs’ work with the help of the RNs. Moreover, qualitative content analysis of interviews and dialogues were used to create further descriptions of the work and work situation of the RNs. During these analyses affinity diagrams and software for content analysis were used as support for creating categories and themes based on affinity of text units.

5.6.4 Main results and conclusions

The overlapping descriptions made from the view of the authors, based on observations of the eldercare, and the descriptions made by the RNs show that a generic chart of five main activities; decision making, planning, execution, evaluation and documentation and report, may be used to describe an overview of the care pathway of eldercare; see Figure 5.4. In addition, a chart on a more detailed level could be used to also exemplify the flow of activities between different professionals in different organizations and to emphasize the contribution from each individual that is working along the process. The detailed chart also indicated that physicians, RNs and assistant nurses depended on each others’ consultations, cooperation and information sharing to provide eldercare. Moreover, the chart confirmed the central role of RNs in eldercare.

![Figure 5.4](image.png)

Figure 5.4  The generic chart of the care pathway illustrates that a flow of activities is initiated when a patient has a demand for care. Based on the demand, five main activities of decisions about activities care and planning, execution, evaluation and documentation and report of these activities (the squares), are performed along the pathway. (Source: Wreder & Pohjanen, 2007a)

The work of RNs along the care pathway, illustrated in Figure 5.4, could be described within the similar five main activities and was described by the RNs as focused on problem solving, planning, delegation and instructions to assistant nurses and documentation. Nevertheless, the results of the content analysis show that this work was experienced as solitary work in terms of contact with other professionals. Making difficult and often ethical decisions about treatment in
isolation seemed to be the reality of the RNs’ work situation. To handle this, the RNs were dependent on access to good, accurate information about the patients and cooperation with other professions. However, the reflective dialogues showed several obstacles to achieving this and the RNs explicitly called for more support from physicians as well as a better collaboration with the emergency department to facilitate communication and the possibilities to follow up. Moreover, they indicated lack of time and opportunity to meet other professionals to discuss and reflect upon work and general issues of eldercare. Thus, arranging opportunities for RNs and other health care employees to meet in discussions should mean a great potential for, and help to the RNs in, both performing, learning about and improving their work. In such discussions a process chart of the care pathway might be used to feed discussions between the providers.

5.7 Paper F


5.7.1 Background

To meet increasing demands and expectations of good quality eldercare there is a need for more advanced, distance home care and cooperation between professionals and providers of eldercare; see Ministry of Health and Social Affairs (2002); Shortell & Kaluzny (2000). One solution for handling this is the introduction of Information and Communication Technology (ICT). ICT enables people to communicate, gather information and interact with distance service more quickly, more easily and without the limitations of time and space; see Campbell et al. (1999). However as such, ICT might not only change the ways eldercare is provided and organized in the future but also will most probably change the work environment of registered nurses (RNs), who have the greatest professional responsibility for public eldercare in, for instance, Sweden. The RNs would be forced to use the new technology in their work and adjust to the changes it might bring to the organization. Since this in turn will affect their work satisfaction and the quality of care that can be provided there is a need to learn more about the effects of ICT on eldercare and the employees providing the care.

5.7.2 Purpose

The purpose is to describe how eldercare and the working situation of employees (RNs) providing this care may be affected by new ICT in eldercare.
5.7.3 Method

The study was part of a case study performed in the eldercare in Northern Sweden where new ICT applications, developed to provide examinations and distance communication between physicians and RNs, were used. To identify influences of the ICT, both the process of eldercare and the work of RNs within this process were studied. Eleven RNs were observed during day and emergency shifts and a checklist was used to study, such as, tasks and interactions while they used the ICT applications. Each RN also participated in an interview, regarding their experiences of ICT, at the time for the observation. At a later occasion, reflective dialogues were also performed individually with the RNs based on questions in Gibbs’ (1988) reflective cycle. Last, two focus group interviews were also held. Based on an illustration of the care pathway, the five RNs were encouraged to discuss the question ‘How has ICT affected my work as a RN in the process of eldercare?’

The observations were then analyzed through mapping of activities to create a generic chart of the care pathway describing the activities performed when ICT was used in eldercare. Moreover, the interviews and reflective dialogues were analyzed with qualitative content analysis using affinity diagrams. Finally, identification of the influences of ICT on the care pathway and work situation of RNs were performed in three steps; (1) Comparison of the created generic chart to a generic chart describing the eldercare without ICT, (2) Summing up and comparing results of interviews, reflective dialogues and focus groups and (3) Identifying influences in relation to a chart of the care pathway.

5.7.4 Main results and conclusions

Based on a test period of approximately eleven weeks, the study shows that, on a generic level, the chart of the care pathway could look much the same whether or not the ICT application is used in the eldercare. The summing up and comparison of categories derived from interviews, reflective dialogues and focus groups resulted in four new categories describing the RNs’ experiences of using the new ICT applications: More information to act upon; Possibility to follow up; Additional and time consuming activities; Trouble with function and access of the ICT platform.

The study further shows that, within these categories, RNs have both negative and positive experiences of ICT. When the ICT applications were used in the eldercare, the RNs had availability to extended information which appeared to influence the flow of information in communication and collaboration along the care pathway. The RNs reported a decreased need to consult the physicians. However, on those occasions when contact had to be made, the RNs appeared to be more prepared.

22 The illustration had been created based on observations of and focus group interviews with the RNs in the first part of the case study reported in Paper E.
Chapter 5: Summary of appended papers

and could more easily deliver the information requested by the physicians. Moreover, the extended flow of information appeared to be a precondition for a reallocation of tasks to the RNs who got the opportunity to perform a number of new tasks such as examinations, test analysis and follow up at the patient’s home, while at the same time physicians and care centers appeared to be less burdened with questions from the RNs; see Figure 5.5.

Figure 5.5 Influences from the ICT platform could be identified within four of the five main activities of the generic care pathway. Moreover, the RNs argued that the care provided to the patient was influenced. (Source: Wreder & Pohjanen, 2007b)

Nevertheless, the transfer of tasks to the RNs seems to increase their work load within all main activities except for ‘documentation and report’. On the other hand, the extended availability to information and medical equipment was described by the RNs as giving them more security and safety and opportunity to perform better, learn from work and be less dependent on the physicians; see Figure 5.6.

Figure 5.6 The RNs described both negative and positive experiences of ICT. (Source: Wreder & Pohjanen, 2007b)
6 ANALYSIS AND RESULTS

The purpose of this chapter is to reflect upon the results in relation to the theoretical frame of reference presented in Chapter 2.

6.1 Theme 1

Theme 1 is focused on the work of changing the work environment positively to a health promoting work environment. Thus, the analysis of Theme 1 against theory could relate to several areas ranging from management strategies to the practice of leadership, and their influences on work environmental factors and employee health; see Figure 2.2 and Figure 2.3.

6.1.1 Total Quality Management: Values, methodologies and tools

Case Study 1 shows that strategic and systematic work to create a culture, based on core human values by choosing methodologies and tools supporting the values, may be one way of working with health. Within the bank, managers’ and employees’ performance even seem to rely on the core values and the effect of these values, i.e. the framework, norms and methodologies. The values seem to convey to the employees what behaviors they should engage in and thereby create security, being a substitute for formalization and a prerequisite for steering the large organization in one direction. This is in line with what some researchers emphasize about a strong culture; see, for instance, Kaufmann & Kaufmann (2005).

Support for a comparable structure, of values, methodologies and tools, within the work of the smaller organizations was identified in Paper C. Such a strategy is also similar to what some authors state creates Total Quality Management; see, for instance, Hellsten & Klefsjö (2000). However, neither the managers of the large bank nor those of the three smaller organizations mentioned any aim or relation to TQM-practices. Nevertheless, the four core values that were common to all organizations: ‘management commitment’; ‘co-worker involvement’; ‘focus on customers’; ‘continuous development’, are similar to four of the six TQM values stated by Hellsten & Klefsjö (2000). The meanings entailed in those values further seem to be focused on softer human values and relate to what Hackman & Oldham (1976), Herzberg (1959) and Maslow (1943) emphasize for human motivation and work satisfaction. They are also similar to the psychological demands on good work stated by Emery & Thorsrud (1969).

Within the bank, three of the core values identified as common to the four organizations were also espoused values within the organization; see Appendix I.
Nevertheless, ‘management commitment’, which was not an espoused value, seems to have been a condition for ‘co-worker involvement’, ‘focus on customers’ and continuous development’ within the bank. Regarding the methodologies and tools that were identified within the four organizations, they are very similar among the organizations and further appear to support so called health factors identified by, for instance,Csíkszentmihályi (2003), Eriksson (2003) and WHO (1986).

Based on these findings, a tentative explanation is that a culture, based on values with concern for humans and accompanied with methodologies and tools, supports health factors and thereby supports creation of sustainable health; see Figure 6.1. This explanation would imply that the case study and studies of the smaller organizations have identified both methodologies, tools and health factors from the organizations’ work in an attempt to describe their ways of working. Malmquist et al. (2007) state that common health factors in literature are core values of the organization, leadership, as well as possibilities to growth and joy in work. The explanation in Figure 6.1 confirms this but also indicates that the core values as a part of a management system might be seen as overarching health factors that can influence other health factors.

Figure 6.1. The figure describes how a management system of values, methodologies and tools may support other health factors advocated in support of the creation of health. The health factors in the figure are examples taken from theory about health promotion and are believed to interact. Moreover, these health factors concur with so called ‘work environmental factors’ identified to affect and shape the work environment and working conditions, which in turn can influence work satisfaction and employee health. Contrasting with most of the literature, his figure separates the culture of core values as an overarching health factor.
When it comes to the relation between managers’ ways of working and the influences on the work environment to create health, Figure 6.1 is in line with Figure 2.1. By contrast, it demonstrates that the findings, derived in Paper A-C, indicate that managers’ strategies and leadership could be viewed as overarching factors with power to influence the other work environmental factors so as they give possibilities to growth and joy in work. Moreover, Figure 6.1 illustrates that it might be possible and beneficial to have a system view and integrate knowledge, methodologies and tools from the work environment and quality management areas to create continuous improvements in organizations. This is similar to what has been argued by, for instance, Lagrosen et al. (2007) and Murphy & Cooper (2000).

6.1.2 Leadership

Within Theme 1, this thesis focuses on managers on different levels, who, in accordance with the description by Kotter (1999) and Yukl (1998), are persons holding formal positions as managers within companies. Those managers have the authority to steer the organization. Thus, they also have the authority to affect, directly, or indirectly, through their leadership, actions and decisions, the working conditions of the employees. In addition, they may do so both purposely and not on purpose. From this perspective, it is interesting to find out how managers could work to increase health and develop the workplace towards a health-promoting environment.

Case Study 1 in the bank and the literature study of the smaller successful organizations confirm the importance of commitment and the purposeful work of managers to achieve health and success, which is argued by Lagrosen et al. (2007), DuBrin (2004) and Docherty et al. (2002). For instance, executive managers within the bank intentionally focused on health issues and set objectives thereafter. Nevertheless, the health project appeared as the starting initiative to plan, perform and implement health improvement activities into the daily work of the bank in successive stages of cost assessments, development of metrics and integration of those into the bank’s balanced scorecard. In this way, health seems to have been made a focal area, in which the managers were asked to present results.

The studies also show that the managers of all four organizations, independently of level, appeared to consciously focus on providing the employees with possibilities to perform and to feel well. Within the bank, the managers described that this focus was vital to satisfy the external customers of the bank and become competitive. To achieve this, the managers were not afraid of taking care of the employees or aiding individuals who were not feeling well.

“Satisfied employees give satisfied customers”.

(Middle manager of FSB)
This connection between management commitment, leadership with employee focus and customer satisfaction has earlier been pointed out in other research; see, for instance Hackman & Wageman (1995). Perhaps, this connection would also have been an anticipated result when studying managers’ work in successful Swedish organizations. For instance, Inglehart et al. (1998) and Inglehart (1997) have described Sweden as a country with a declining belief in authority, and a strong emphasis on individual self-expression, quality of life and subjective well-being. In comparison to other countries, for instance USA, Sweden has also been associated with decentralized organizations with control built on shared values, dialogues and trust as well as management practices with a strong employee and customer focus; see Tengblad (2006; 2003).

An interesting conclusion from Paper A and Paper B is that all middle and lower level managers and employees within the bank stated that their immediate superior had been important to the success of the organization. Arnetz (2002) has earlier stated that the immediate manager is important to the employees’ awareness of efficiency and thereby their work satisfaction, which in the long run has a direct impact on the quality and customer satisfaction. What is also interesting in the bank is that the immediate manager appears to be important not only to employees at the lower levels and their performances, but to managers and employees at all levels. Thereby, the top down hierarchy, i.e. the chain of managers, within the bank, should have been important to achieve employee satisfaction and produce quality products at the lower levels.

Within the bank, all managers, regardless of management level, also seemed to agree upon the fact that the top down leadership had been effective for achieving health. The executive managers seem to have been important in order to decide upon strategies, point the way to middle level managers and to get the organization as a whole to work in the same direction. The objectives of the bank have further been successfully passed on throughout the organizational hierarchy by middle managers and finally, well executed in the bank offices. Delegation, clear goal setting and relation building based on open communication and mutual trust further appeared as important to achieve that. These methodologies have much in common with the results of Bäckström et al. (2006) and Harnesk et al. (2004) and are, indeed, already advocated as winning concepts by, for instance, Bergman & Klefsjö (2003), Csíkszentmihályi (2003) and Hackman & Oldham (1976).

Despite this top down hierarchy, there was no evidence of lack of empowerment, as Nilsson (1999) fears in large organizations. The managers at all the three levels worked through delegation, ‘management by walking around’ and as coaches. Moreover employee participation was integrated by daily dialogues, goal setting in cooperation with employees and a co-determination agreement. A comparison of Paper A and Paper B also reveals that managers and employees shared core values and mentioned almost the same methodologies as important to success.
Accordingly, the bank seems to have overcome difficulties of today’s working life and succeeded with good leadership, communication and empowerment in large organizations. Not least, it appears as if the bank has avoided the difficulties of practicing good leadership in large organizations mentioned by Sundin (2005), Daly et al. (2003) and Deming (1986) among others. In addition the work of managers within the bank, as well as the managers of the smaller organizations that were studied, supports the argument that good leadership is a vital part of successful management as have been argued by Yukl (1998). For instance, all interviewed managers within the bank mentioned clear, honest and consistent leadership as one central factor of their work for achieving employee health. Moreover they argued that measurements and feedback, employee participation and communication in dialogues were important.

“Leadership is about aligning people in the organization to the same objectives, bearing in mind that all of us have different preconditions.” (Middle manager of FSB)

Executive managers also believed that a structural business approach on health issues and an effective model of control are significant factors of management.

6.1.3 Work environmental factors

When comparing the literature about ‘work environmental factors’ and ‘health factors’, very similar factors appear, which might be expected since health factors should be related to how workplaces should be created to promote health; see Forslin (2003). In theory, health factors are mentioned as different social, work, organizational and individual factors, such as management commitment, participation and social support; see Wilson et al. (2004); Johnson et al. (2003); Söderlund et al. (2003). Those factors align with the work environmental factors mentioned by Härenstam et al. (2006), Zanderin (2005) and Axelsson (1995). When it comes to the factors and methodologies identified within the studies, those also seem to align with such factors. In addition, they appear to be more related to what could be seen as psychosocial factors of the work environment than physical.

Nevertheless, work satisfaction, which is often mentioned as any other health factor in theory, might, from a work environmental perspective, be seen as a result of a good work environment rather than a work environmental factor. This is also the perspective used in this thesis. On the other hand, satisfied employees could also contribute to shaping the working conditions positively. From this perspective, both work satisfaction and health may be seen as work environmental factors affecting the working conditions as well as being results of them.

Based on the similarities identified between health factors and work environmental factors, it appears as if many health factors could also have the potential of
influencing health negatively depending on how they are created and how they appear. Nevertheless, in literature, the restriction of work environmental factors seems to be that they affect the employees in some way, positively or negatively, whereas the health factors are only discussed within a context of promotion of positive effects. Moreover, some discussions even tend to separate the health promoting factors as separate and specific from those common in the pathogenic perspective; see, for instance, Forslin (2003); Söderlund (2003).

As regards the creation of a health-promoting workplace, the way work environmental factors may influence the employees positively is of interest. In Case Study 1 and the literature study, the work of managers was seen as one such factor affecting the working conditions and thereby the employees and their well-being. This finding further supports the findings by Johnson et al. (2003) among others. Moreover, if looking at leadership as a work environmental factor that might function as a health factor, managers’ leadership could also be seen as an overarching factor having authority to influence the other factors of the work environment and thus be more important than other health factors; see also Figure 6.1.

Except for the importance of good leadership, both the Case Study 1 and the Literature study reveal the importance of factors such as employee involvement, communication, trust, support and clear goal setting. In all four organizations possibilities for active participation by employees seemed to be naturally created through goal deployment, delegation and coaching. Individual goals were set and evaluated based on the bank’s goals in cooperation between the manager and subordinate. Thereby, all managers and employees were aware of the goals and had responsibility to fulfill the goals with strong support from their manager. In daily dialogues and regular meetings, planned competence development and supportive routines, the employee and managers in cooperation made sure the individual employee had the right opportunities to participate and perform well.

Even if Daly et al. (2003), among others, argue that communication gets more difficult when an organization gets larger the large bank seems to have solved this difficulty through personal dialogues and feedback between managers and subordinates at all levels. The executive managers also explained that to communicate with colleagues and assure a spread of a lot of structured information to the whole organization, official meeting structures and tools such as internal television, email and intranet had been used within an open climate. Moreover, the executive managers described how they intentionally adapted the information and ways they distributed it depending on the receivers. To allow for participation and honest communication in dialogues the managers also appear to have built relationships with subordinates on mutual trust (mandate).
In addition, the employees in the bank claimed that the managers delegated responsibilities along with authorities and availability of resources and training and gave them freedom to act within unambiguous frames. Thus, it appears as if the managers by working with supportive tools and in cooperation with the employees have avoided the risk of involvement leading to stress and burn-out. This risk has been discussed by several authors; see, for instance, Docherty et al. (2002), Kira (2002) and McKenna & Beech (2002). It is not that the bank or the smaller organizations have not undergone changes in professions, authorities or responsibilities, but the managers appear to have made sure that the disappearance of formal boundaries has not been occurred without their replacement by suitable structures, routines, tools and supporting leadership.

Based on this, it seems as if factors such as employee participation, communication, support and clear goal setting are influenced by managers and their leadership, and in turn, shape the working conditions positively. It also appears as if those factors influence the employees’ experiences of work satisfaction.

6.1.4 Health promotion work and sustainable health

Measuring health over time and relating these measures to economic results seems to have been a key area of focus in the creation of sustainable health within the bank. Nevertheless, both economical and health incentives seem to have been behind the managers’ strategic approach to improving health. The economical results apparently were calculated and evaluated in relation to health progress to show the impact, of for instance sickness absence, on the organization. The initiation of the health project and calculation of the costs related to sickness absence also appeared as a means to raise the awareness of the executive managers and employees, but with the goal of improving employee health. Furthermore, this business perspective on health seems to have been a prerequisite for allocating resources to health related initiatives. This finding confirms what has earlier been argued by Porter et al. (2003). From another perspective, Warrack & Sinha (1999), among others, have claimed that a holistic view of work environment, efficiency and quality increases the likelihood for success. It appears as if the strategic approach of the bank further supports this belief.

In this thesis, the concept of ‘sustainable health’ is related to the striving for positive development of health. According to Malmquist et al. (2007), many research results seem to concur regarding the factors that characterize health-promoting workplaces. In summary they describe that such factors are related to leadership, core values of the organization as well as the possibilities to growth and joy in work. The findings of Case Study 1 further seem to confirm the factors
appointed by Malmquist et al. (2007). Moreover, the study supports the findings of Csikszentmihályi (2003), Juhl et al. (1997), Griesinger (1990) and Leiter & Maslach (1988). In addition, there are similarities to the findings of Wilson et al. (2004), indicating that work characteristics influence factors, such as work satisfaction, commitment, perceived empowerment and stress, which in turn can influence employee health. For instance, the employees in the bank said that they have a good workplace that they are proud of and they identify their good work environment as a source of the bank’s success. This may be put in relation to the improved health and success reported by the bank, even though it is difficult to assess whether the bank and the smaller organizations will achieve employee health that is sustainable in a durable long-term perspective.

6.1.5 A relation between employee satisfaction, health and customer satisfaction

An interesting result of the case study and literature study was that both managers and employees mentioned the importance of customer focus to create a health-promoting work environment. This is similar to what several researchers have already argued; see, for instance, Chu et al. (2000). Managers of all four organizations had a clear customer focus and described the correlation between employee satisfaction and customer satisfaction. In addition, the employees in all organizations were aware of their customers, which, for instance, Bäckström et al. (2006) described as “they know who they are there for and are creating value for”. To achieve this, the organizations worked to build relations with customers and learn more about their needs. The bank, for instance, used a questionnaire tool to achieve this. Moreover, all organizations gave the employees opportunities to meet the customers in person to increase their understanding of their own contribution to the customers.

Not least, the results presented by the bank indicate that the improvements of internal satisfaction and health and external customer satisfaction are related to each other. Within the bank, managers’ commitment and actively involved employees also seem to have been a base of the bank’s work for creating a flexible company adapted to the needs of its employees and external customers. This initiative has much in common with the thoughts of Total Quality Management as described by, for instance, Bergman & Klefsjö (2003).

6.2 Theme 2

Seen from a quality management and work environmental perspective, Theme 2 has another focus than Theme 1. This theme is focused on the influences of technological changes on the work environment. Therefore, the analysis is here
related to theories regarding the development and introduction of technology into an organization and the changes it might cause. Moreover, the influences of these changes on factors of the work environment are of interest since these will affect the opportunities of employees and thus of the organization to succeed; see Bergman & Klefsjö (2003); Axelsson (1995).

6.2.1 Introduction of new technology at work

Case Study 2 exemplifies the rapid development and application of information and communication technology (ICT) that are forced into today’s organizations. Moreover, the empirical material supports the argument that ICT might revolutionize the storage and transmission of information in media and on Internet as well as enable people to see and communicate with each other, gather information and interact with distance service more quickly, more easily and with decreased limitations. This has earlier been claimed by, for instance, Johnston (2000) and Campbell et al. (1999). Nevertheless, the study also shows that ICT may imply negative consequences, for instance, ethical problems and increased demands from additional and time consuming tasks.

Accordingly, new technology brings changes into the organization as described by Sävenstedt et al. (2002), Iwarsson (1999) and Lennerlöf (1984). The study also indicates that all changes related to the new technology were not brought in by the technology itself. Nevertheless, many of those changes, such as changed methodologies and routines, appeared to influence the working conditions of the employees negatively. Kira (2003), among others, has also argued that many contemporary problems within working life relate to fundamental changes at work, such as introduction of new technology, which have not been followed by organizational arrangements, structures or practices. Based on this, it should be important not only to provide for organization, structures and methodologies that fit the requirements of the new ICT applications but, not least, to ensure that they are adapted to the needs of the people in the organization who must use the technology and adapt to the changes.

Within eldercare, the purpose of an introduction of ICT appears as a natural solution to growing demands within the field and increasing needs of distance communication in home care. ICT should have the potential to facilitate remote communication and the support of competent health care professionals to home-based care and improve the utilization of resources, such as health care employees; see also Hallin & Siverbo (2003); Ministry of Health and Social Affairs (2002). However, in the eldercare studied in Case Study 2, the purpose of the introduction seemed to be unclear to the registered nurses. For instance, many of them answered the following when they were asked about why they should use the new technology in their work:
Initially, this confusion seemed to negatively influence the attitude and motivation of the registered nurses to use the technology. For instance, the ICT platform was rarely used, with excuses, such as, “it is no use to go and get it” or “it takes longer time to use it than doing it the normal way”. Moreover, the registered nurses tended to use only a few applications that they felt improved their own work and the care offered to the patients. These findings indicate that to achieve the intended effects of the technology on the business, it is important to motivate the changes it brings with it and involve the employees, who it affects, when introducing it. This importance, of motivating and involving the employees and making them accept the changes, has also been discussed by, for instance, Balogun & Hailey (1999), Burns (1994) and Burke (1994) in literature about Change Management.

**Attitude and motivation**

According to Sävenstedt (2004), health care employees, in particular, appear to have a value-laden relationship to technology, which may affect their attitude towards it and motivation to use new technology. In the case study, the love and hate-relationship between man and machine, which is described by Ihde (1990), seemed to be present. The registered nurses described the applications of the ICT platform as helpful and supportive but also, very often expressed a frustration and irritation about the complicated, time-consuming equipment that was “never” functioning. The motivation to use the technology appeared to be influenced by the availability of the ICT platform and if it had functioned the last time the registered nurse tried to use it. As such, it seems as if the technology results in changes that in turn affect the attitude and motivation of employees to the technology.

As regards the attitude to the ICT, the case study coincides with theory about the importance of not violating ethical principles of the business or organization. If the changes implied by using the technology violate the essential nature and history of the organization or are inconsistent with the models of the organization and its business that the employees have in their head, i.e. the organization’s unspoken or spoken core values, they will not be accepted; see Weir (1996). In the case study, this was described in thoughts about whether the technology fitted into the care and medical practices of nursing and about possible negative experiences of the patients.

Not least, the motivation and attitude to use the ICT applications seemed to depend on the self experienced positive effects of and meaning in using it. This dependency has also been observed in several other situations; see, for instance, Hackman & Oldham (1976).
6.2.2 Work environmental factors

According to literature, the introduction of technology in work might influence the work environment in different ways, both positive and negative; see Johansson (2005); Bradley (2003); Docherty et al. (2002). Case Study 2 further confirms that changes that follow from the introduction of technology will influence the work situation and employees. Some of the work environmental factors that appear to be common in literature and also were experienced in Case Study 2 are discussed below.

**Work content and intensity**

Literature has to some extent discussed the change in work content that may follow from the introduction of new technology. For instance, Lennerlöf (1984) argues that computerization can transfer tasks from the people to the machines and thereby change the work. However, Case Study 2 shows that employees may be influenced by both additional or a reduced amount of tasks when using ICT. In this case, it is a result of a transfer of tasks from one group of employees, physicians, to another, registered nurses, instead of transfer to a machine. According to the registered nurses, the new tasks are also time consuming and thus imply increased work load, stress and demands on performing additional examinations.

Johansson (2005) further discusses risks related to increased demand on employees due to a multiple of tasks performed simultaneously and not one at a time in a straight order. Such risks might be connected to the additional tasks of the registered nurses, who on a daily basis perform several of the, often time consuming, tasks at the same time and with several interruptions in one task to keep on with another more acute one. This in turn, implies high intensity with few pauses in work, which is another risk described by Johansson (2005) as well as Bradley (2003). According to Johansson (2005), studies also show that such continuous changes of focus may lead to decreased performance as well as decreased level of activation and mental state. This study also indicates that it may lead to increased feelings of stress:

> “During on-call hours, the technology is sometimes a stress factor. 
> … If someone calls in emergency in the middle of such an examination, I do not have time to finish or otherwise it becomes a stress factor.” (Registered nurse in Luleå municipality)

Nevertheless, the case study also indicates that additional tasks could be experienced as possibilities giving positive extension of work content and increased possibilities in performing and following up the work. Such experiences are important to influence work satisfaction positively; see Hackman & Oldham (1976).
Demand and control

In the case study, ICT implied a more decentralized organization and increasing delegation of tasks and responsibilities. As such, ICT may provide for increased involvement of registered nurses. According to Kondo & Park Dahlgaard (1994), among others, employee involvement can increase motivation and work satisfaction. However, according to Karasek & Theorell (1990) problems will emerge if employees do not have control that corresponds to the demands that increased involvement may imply. The registered nurses in the study experienced increasing demands and some even feared new responsibilities, which they as registered nurses would not be trained for or hired to take on. Moreover, the ICT could create ethical problems requiring uncomfortable decisions to be made. These problems were experienced as both demanding, stressful and overwhelming by the registered nurses. Furthermore, there is a risk that such feelings may lead to stress, dissatisfaction and increased sickness absence; see Karasek & Theorell (1990).

Based on this, it seems as if a challenging imbalance between demands and control, as regards the registered nurses’ use of ICT, lies in the additional work load that was brought with the technology, but did not appear to be followed with additional time or staff resources.

Nevertheless, at the same time, the registered nurses described how they by means of the ICT platform got the authority to, for instance, make more decisions independently and experienced this as a positive change in work. Some even felt they were given more opportunities, freedom and power at work. This should be positive considering that other studies have shown that many registered nurses experience powerlessness in work when not using ICT, see Westlund & Larsson (2002); Oberski et al. (1999).

Case Study 2 further shows that the ICT platform could support the registered nurses’ feelings of security and safety in work. However, the nurses also explained that legislation and rules put clear limits for their actions and responsibilities and that they knew what the physicians expected and allowed them to perform independently. Thereby, the risk, that a new flexible and ICT intensive workplace would be profoundly ambiguous for the employees, seemed to be reduced. Paper F also shows that the registered nurses were happy about the opportunity the ICT platform allowed them as regards controlling their follow up and thereby development and learning in work. Follow up and development in work are important to work satisfaction and well-being; see Hackman & Oldham (1976).

Another possible imbalance of demands and control described in both literature, by for instance Sävenstedt (2004), and by the registered nurses in Case Study 2 regards feelings of security, competence, trust and fear in using the new technology. New technology may oblige new ways of performing the work and may put new demands on the employees in terms of competence, autonomy, ethical considerations and flexibility; see Houtman et al. (2002); Docherty & Nyhan...
(1997); Forslin & Thulestedt (1993). In relation to this, the registered nurses described negative feelings because of lost control of equipment not functioning very well and fear of not handling the equipment in the right way. However, they described that they trusted the technology and had good support of manuals and technicians.

Isolation and social support
Bradley (2003), among others, argues that computerization may imply distance work and physical isolation of colleagues when contacts between people are replaced by distance communication through computers and other media. Paper D and Paper E indicate that the registered nurses experienced isolation in their work even before the ICT platform was introduced. Similar findings regarding registered nurses’ feelings of loneliness have earlier been derived by, for instance, Westlund & Larsson (2002) and Oberski et al. (1999). Thus, increased isolation through the use of ICT would be devastating to the registered nurses who also ask for more support from physicians; see Paper E. However, Paper F indicates that the ICT could provide a new dimension of cooperation through distance communication and information sharing and thereby made the already isolated registered nurses more secure and safe on their own, and thus less dependent on social support from physicians.

6.2.3 A relation between leadership, technology, effects on the work environment and results
This case study confirms the necessity for managers to motivate the changes introduced in the organization with the new technology. It also appears important for managers to make sure that the technology is adapted to the needs of the employees and not least that the changes in organization, methodologies etc. that the technology brings with it, are created to fit the employees’ needs of, for instance, time, resources, well-functioning equipment, support and control. This has been advocated for many years, most recently by, for instance Bradley (2003) and Kira (2003). However, research, as well as initiatives in organizations, still seems to be more focused on the development of new technology than on how to best use and adapt the technology from a human perspective; see also Lennerlöf (1984). Nevertheless, how well the technology and the organization around it are adapted to the needs of the employees were in this study shown to influence the employees’ attitude and motivation to use as well as their satisfaction with the technology. Thus, to achieve the potentials of, often expensive, technology in eldercare it appears to be vital to first consider the needs of the users. Not least, because the performance and satisfaction of registered nurses, are vital to the quality of care that can be provided to the elderly patients. This relation has been shown in several studies; compare to Mc Cuscer et al., (2004); Newman & Maylor (2002). Even if the connection between employees’ experiences of the work
environment and quality of care was not the focus of Case Study 2, the registered nurses argued that as their working conditions improved, they could perform better and thus provide faster and more secure care to the patients.
7 CONCLUSIONS AND DISCUSSION

In this chapter, I reconnect to the research questions and present my conclusions. In addition, the findings related to each theme are discussed. Last, the two themes are integrated and discussed in relation to the overall purpose of this thesis.

7.1 Theme 1

The aim of Theme 1 was to describe how managers can act in modern working life to create good work environment. The focus was on large organizations and what could be learnt from successful organizations to inspire managers in other organizations. This aim was formulated in the following two research questions:

Q1: How have successful organizations worked to achieve sustainable health?

Q2: How can a model for sustainable health be formulated to support the work of managers in large organizations?

7.1.1 Research Question 1

The first question is mainly answered through Case Study 1 in the large Swedish bank, but also by the literature study concerning methodologies identified in smaller successful organizations. These studies resulted in several thriving methodologies derived from the opinions of both employees and managers on different organizational levels. Moreover, the studies identified the credence of working with a corporate culture, communication and trust to achieve employee health.

The methodologies recognized within the large bank, as well as in the smaller organizations, were to a large extent similar to methodologies already advocated in theory. This indicates that there actually are organizations that work in accordance with theory and also, that what is advocated in theory might result in success if put into practice well within an organization. The most salient methodologies, dialogues, employee development, delegation and coaching, should thereby be possible for managers in other organizations to consider adopting.

In contrast to the smaller organizations, the executive managers of the large bank also worked with a strategic health project to improve health within the organization. Within that project measures of ill-health were related to economical consequences to further strengthen the commitment for health promotion work.
The health project is also an example of how responsibilities and methodologies varied between managers at different levels in the hierarchy of the large bank. A similar tendency of variation in responsibilities and methodologies of managers at executive and lower levels could be recognized within the smaller organizations, but not as clearly as in the large bank. For example, executive managers within the bank appeared to have had a strategic focus in the health project and set the objectives in accordance with the core values of the bank. These managers also explained that they intentionally tried to support the values and objectives in their ways of working by, for instance, employee development and by offering possibilities for a self-evaluation of health status to all employees. Moreover, the objectives were successively passed on throughout the organizational hierarchy down to the bank offices in controlled communication, information dispersal and goal deployment. Within the offices, goal setting and follow-up were practiced regularly in cooperation between the manager and employees. Moreover, middle managers were coaches to the lower office managers, who in turn expressed a focus on building relations to encourage and provide for good conditions and well-being of the employees.

Based on this explanation of the managers’ and employees’ work, it appears as if it is not enough to simply exemplify the methodologies to describe how the successful organizations have worked to create a health-promoting work environment. The overall results of Case Study 1 and the literature study confirm that in order to promote health, a management strategy based on a culture of human core values that are supported by methodologies and tools, may be helpful. In a large organization, where the role models and close interaction with employees may only be found lower in the management hierarchy, such a strategy seemed to aid focusing on health, mediate what was accepted behavior and spread consistent messages to steer the large organization in one direction.

### 7.1.2 Research Question 2

The second research question is answered by the model for management practices which is presented in Figure 5.2 and Paper C. The model is mainly based on the experiences taken from Case Study 1 to describe how managers could actually work in practice in a large organization to create a health-promoting work environment and thereby support development of sustainable health. However, when the model was created, these experiences were also related to theory and compared to findings in other studies of smaller organizations; see Section 5.4 and Paper C.

The model presents a structure of values, methodologies and tools and describes how managers on different organizational levels through communication and mandate may work together to establish a culture in order to promote sustainable health. It could be argued that such a strategy for health promotion may be seen as following a system view of how to work with Total Quality Management as
described by Hellsten & Klefsjö (2000). Such a strategy, based on a culture of core values with concern for the individual, further seems to support ‘health factors’ in the work environment and thereby support creation of sustainable health. Among the health factors, managers’ leadership could also be seen as an overarching factor having authority to influence other factors of the work environment and thus employees’ work satisfaction and health.

The model is further built around several management levels to support managers of large organizations. The core values should be common to managers and employees on all levels of an organization, whereas, methodologies and tools may vary between levels. Therefore, the model exemplifies specific methodologies and tools for different management levels. For instance, dialogues, relation building, employee development and suggestion schemes, which the managers of the bank used to support their intentions, are exemplified. Common values may be ‘management commitment’, ‘employee involvement’, ‘continuous development’, ‘focus on customers’, as were identified within all studied organizations.

By presenting a strategy including examples of methodologies and tools that actually have been practiced to achieve health within the large bank and confirm what other authors have already emphasized for promotion of health the model may further support and inspire the work for sustainable health of other managers. Nevertheless, the general strategy and exemplified methodologies and tools should not only appeal to larger organizations, but also to smaller, since the work of such organizations appeared as very similar to the strategy, methodologies and tools of the bank.

7.1.3 Reflections about Theme 1

The findings of this theme have been achieved from experiences taken from organizations whose work had resulted in improved health and success; see Appendix I; Bäckström et al. (2006); Harnesk et al. (2004). These organizations had also been recognized for their leadership, work environment, long term planning, preventive work and profitability through the assessment process of the national Alecta award. Nevertheless, it is difficult to assess whether these organizations will achieve employee health that is sustainable in a durable long-term perspective. A strength with the research is though, in my opinion, that similar findings about successful work have come out of several case studies. However, I, as well as the research team that studied smaller organizations, work at a university department teaching quality management. Thereby, it could be argued that different conclusions would have been drawn if a person who was not as involved in TQM had performed the studies. At least, I have tried my best to describe the research conducted to provide for your own interpretation of the findings.
Nevertheless, the research conducted within this theme and reported in Papers A-C can contribute with increased understanding about how managers on different organizational levels in both larger and smaller organizations can work to create a good work environment that promotes health and business success. Paper A respectively Paper B describe examples of how managers could work on different organizational levels based on managers’ respectively employees’ experiences. Paper C further integrates those experiences and relates them to other studies in smaller organizations. Thereby, Paper C can also contribute with a comparison of one large organization to a number of smaller organizations and thus give understanding of specific difficulties of leadership that may appear in large organizations and, not least, how managers may act to overcome them. The management model for sustainable health presented in Paper C is further based on the aggregated knowledge of Case Study 1, the literature study and comparisons to theory. The model confirms earlier theories about leadership for health promotion and exemplifies that well-known management theories may be valuable to practice in contemporary organizations. As such, the model should be a contribution to both theory and practitioners regarding the work of managers in large organizations.

However, the model is based on experiences taken from Swedish organizations and concurs well with the value-based, decentralized and employee-focused organization and leadership that have been seen as the norm in Sweden. It might also be that the leadership, strategy and methodologies for health promotion described in Paper A-C fall on more fertile ground in Swedish organizations. Nevertheless, the findings of Case Study 1 and the literature study show several similarities to findings of other international studies and might therefore appeal to other non-Swedish organizations.

After having studied the successful organizations I would emphasize management commitment and a wider management strategy focusing on human values to describe how managers can act in modern working life to create a good work environment. Within the organizations, the managers’ conscious focus on the needs and well-being of employees also appeared as the prerequisite for satisfying external customers. Accordingly, a focus on human values, supported by methodologies and tools, might be successful to support health factors within the work environment and thereby create a health-promoting work place. In that way, managers seem to increase the likelihood of satisfied employees, who perform well and are absent less often, and thereby achieve more satisfied customers and improved competitiveness and business results.

It is also my belief that if more managers worked in the same way, as the managers of the successful organizations have done, the prerequisites for employees would improve and thereby their health and performance. However, despite similar problems with demands of modern working life and increasing numbers of sickness absence in many organizations, I believe that when it comes to handling of
these problems, every organization, independent of size and nationality, is unique and should adapt the strategy, methodologies and tools as well as other solutions to its own beliefs, prerequisites and needs.

**An exemplary organization**

Based on the results presented in Paper A-C one might argue that the bank is a good example of how theory could be applied to achieve employee health and success in a large organization. However, one might wonder if it is true that the bank is really as good as it seems to be.

After having studied a sample of managers and employees from two units of the bank my intent is not to show that it does everything right. However, even though the results from the study can not be assumed to give a complete picture of the entire bank, I believe that the bank certainly has achieved a lot and seems to be an exemplary organization for others to be inspired by and learn from.

The most surprising aspect of the case study may be that when discussing the success of the bank, many of the employees and managers also talked about difficulties they had had some years earlier. For instance, strain related to when the bank was created out of a merger of two different banks, when staff reductions were made and when employees did not agree with the new professional roles that were to be introduced; see Appendix I. Seen in the light of the human motivation theory by Maslow (1943) and Kondo (1991), the bank even appears to have been opposed to basic human needs for security by carrying out such changes.

Out of that, another problem with high and rising numbers of sickness absence appeared and was also the initiating factor for the health project, which was started in the bank in 2002. Within the project the project manager seemed to have worked intentionally to increase interest in health issues among executive management and employees. This was done through a business perspective, forcing information on the executives and lower managers and by offering information, preventive health care activities and health- evaluation to the employees. Therefore, one might argue that middle managers have been more or less forced to give priority to health issues because of the pressure from both their managers and subordinates. Also, by putting a business perspective on health, executive management presumably paid attention to and increased each manager’s responsibility for health related results.

The empirical material also shows that the managers of the bank were not afraid of identifying and solving problems. The lower managers within the bank described how they frequently asked each employee how he/she felt and tried to build relations to increase the opportunities of getting an honest answer and detecting if someone did not feel well. At one office they had recently reorganized, and the office manager explained that she had introduced a health evaluation when it was at its worst, to see how the employees felt and to identify problems.
In addition, the employees and managers described mistakes and failures. However, they also explained that they felt trusted by their managers and got encouragement rather than punishment when making mistakes. For instance, one of the middle managers explained that it was vital for him as a manager to work without prestige. He explained that he felt that he was trusted by his manager and in the same way trusted his subordinates.

In summary, it appears as if the successful bank also had difficulties that the employees and managers had to handle in their work. Somehow, it seems as though having to depart from a problematic situation creates special conditions for success. A similar view was also stated by Harnesk et al. (2004). In addition to already well-known methodologies, the company-wide health approach with supportive management methodologies, tools and measurements, seem to have been an important part of the bank’s work for improved employee health. Based on the empirical material, there is also a reason to believe that the health project supported the bank’s core values.

**Practical implications**

The overall results of the research confirm that in order to improve health, a management strategy based on a culture of core values that are supported by the ways of working, may be valuable to aid focusing on health, mediate what is accepted behavior and spread consistent messages to steer a large organization in one direction. Therefore, my first suggestion to managers of large organizations is to consider the core values of the organization and soft values related to human needs and consistently practice methodologies that support these values. In addition, managers should practice leadership and base their management and leadership on the values. The values should be visible in the managers’ work and guide their behavior since they are role models to the employees and thereby may affect their actions.

Last, based on the experiences taken from the successful organizations, I would like to give some suggestions, which support human values, to managers within large organizations;

**Executive managers:**

- Create and mediate clear health strategies and objectives with a business perspective on health and also allocate resources to provide for performance. Be consistent when mediating the objectives and decisions to show that “they won’t be neglected”.

- Set goals, measure and evaluate performance. For instance, a balanced scorecard may be useful for deploying objectives, and continually highlighting and asking for results in areas associated with the objectives.
• Delegate responsibilities and authorities to lower managers and trust them to facilitate active involvement from all managers and employees.

• Provide for education. Learning is argued to be an intrinsic motivator and should be encouraged and supported by resources.

• Facilitate the work of employees and managers at lower levels by offering methodologies and tools that support the objectives of the organization. A concrete example may be a routine for handling of employees on long-term sick leave.

**Middle level managers:**

• Have dialogues with managers at lower levels and walk as you talk. Be clear and consistent when mediating what executive managers have stated is important to the organization.

• Delegate responsibilities and authorities. Trust lower managers and allow freedom. Do not intrude into their work if not necessary, but be a coach who clarifies goals and priorities.

• Provide for networks within and between different subunits of the organization to facilitate knowledge sharing and a shared culture.

**Lower level managers (closest to the employees):**

• Create relations with the individuals by dialogues, trust and “management by walking around”.

• Be a coach to the employees and make sure they have the right opportunities and competence to perform their work. Talk to them and ask what they need. Clarify goals and priorities, invite people to influence their performance and careers, and convey to people how important and appreciated they are. In this manner, coaching may lead to employee commitment.

• Set goals, measure and follow up results in confidence with the employees to understand individual needs and support the employees’ understanding of what is and is not important. Also, have regular performance reviews and meet each employee regularly for face-to-face conversations to learn about their current opinions, intentions and feelings and also identify problems within the workplace.

### 7.1.4 Suggestions for further research

From theory it is known what organizations should do to promote work satisfaction and employee health. The studies within Theme 1 have further shown that it is actually possible to achieve success by practicing what is suggested in this
theory. Nevertheless, since many organizations still suffer from high levels of sickness absence it could be asked: Why do managers not use methodologies and tools that are proven to be successful in their work? An interesting question is also how the practice of management theories could be promoted and comforted in other organizations.

Based on the research conducted within this theme, it would be worthwhile to further compare the successful organizations studied with less successful organizations to distinguish the factors with largest impact on work environment and employee health. Another suggestion for future research is a broader follow-up study to further develop the tentative management model for sustainable health. It would also be interesting to compare the model to the work of successful, international organizations to assess the fertility of this model in non-Swedish organizations. Using similar reasoning, as when comparing organizations of different sizes, it would also be worthwhile to investigate commonalities and differences in the work between different branches of industries as well as in the private versus public sector further, since national statistics also show variation in sickness absence within these groupings; see Statistics Sweden (2004).

7.2 Theme 2

The aim of Theme 2 was to describe how applications of new ICT may influence the working conditions of employees. This aim was specified in the following two research question:

Q3: How do employees experience using new applications of ICT in work?

Q4: How can introduction of new ICT in work influence the work environment?

7.2.1 Research Question 3

Research Question 3 is mainly answered through the second phase of Case Study 2. This phase, which is also reported in Paper F, describes registered nurses’ experiences of using new applications of ICT in eldercare. Moreover, it describes their experiences in relation to the changes that the ICT brought in to their work.

The registered nurses described that the ICT changed their work so as they could perform more tasks, such as examinations and follow up, and retrieve more information. Nevertheless, more information to consider as well as new and time consuming tasks made them feel more stressed, sometimes inadequate and more vulnerable to disturbances.
On the other hand, the changes caused by the ICT platform implied that the registered nurses could make more decisions individually without support from others and thereby experienced more authority in work. Moreover, many of them felt their work was enriched and offered more possibilities to perform well and thereby also to satisfy the needs of the patients faster and more secure. Nevertheless, some of the registered nurses also feared additional responsibilities, ethical problems and a lack of medical focus because of the ICT, even if they did not experience such during the test period.

Accordingly, within eldercare, introduction of an ICT platform appears to be a possibility to fulfill the needs of registered nurses as regards extended information about patients and colleagues’ work and possibilities to follow up. In addition, the need for more support partly seemed to be reduced when ICT increased information sharing and thus made the registered nurses feel more secure, safe and independent. The case study also confirms that when the registered nurses experienced positive self effects in using the technology, they got more motivated and positive to the technology. Nevertheless, their motivation to use it could also be destroyed by experiences of bad availability to heavy equipment not functioning well. Based on this, it seems as if how well the technology and, not least, the organizational changes it brings with it, are adapted to the needs of the users will influence the users’ experiences and attitude. Thereby, it will also decide the chances of achieving the intended positive effects of the technology.

7.2.2 Research Question 4

Research Question 4 was mainly answered through the second phase of Case Study 2 and the analysis, comparing the findings of the study to theory, made in Chapter 6. Nevertheless, a base for this was the first phase of Case Study 2, which provided for the identification and understanding of changes appearing in the work environment when ICT was introduced.

The results show that ICT might influence the flow of information and imply a transfer of activities between different professions. As such, ICT altered the work content, loads and intensity as well as social relations of the professionals. Not least it appeared to influence the experienced meaning and control in work and thus the motivation of the registered nurses to accept the changes it brought with it to factors of their work environment.

When additional tasks were transferred, from physicians and care centers, to the registered nurses, who on a daily basis already performed several time consuming tasks at the same time, the work content was changed positively whereas the intensity seemed to rise and the work appeared to be more demanding as the likelihood of stressful abruptions in work increased.
However, the changed flow of information and transfer of activities also provided for a more decentralized organization and increased delegation of tasks and responsibilities to the registered nurses. At the same time, it influenced the isolated registered nurses’ feelings of security and safety in work and thus reduced their need of support. Thereby, the work environment could also encourage the registered nurses to be more participative, powerful and independent at work. However, legislation and rules that put clear limits for their actions appeared as a prerequisite for their willingness to accept these opportunities. Nevertheless, the case study confirms that increased possibilities to participate are not only good but may also lead to increasing demands, stress and fear of new overwhelming responsibilities at work. Moreover the imbalance, between the demands on the users and their control, caused by increased work loads not accompanied by additional time or staff resources, appeared as a main threat to the positive influences that the ICT could bring to the work environment.

7.2.3 Reflections about Theme 2

The eldercare in Case Study 2 is only one of several possible examples that could have been chosen from different business areas to describe how applications of new ICT may influence the working conditions of employees. Moreover, the study includes only a sample of manifold available applications of ICT and medical equipment. However, the study confirms the rapid development and wide application of new technology within modern working life. Not least, it shows that ICT certainly will bring in changes to the organization that, in turn, will influence the work environment of the employees. Based on this, the case should be representative for the aim. However, the test period that was planned to last for more than six months only turned out to be eleven weeks due to license and technological issues. It could be questioned if such a short period is representative for studying the actual use of new technology. It is more likely that it is the introduction of ICT that has been studied in Case Study 2. This implies that the influences identified and experiences described in Paper F would be more related to the introduction of the specific ICT-platform rather than the use of it in everyday work.

Since I have a background as an engineer, and lack experience from the health care sector, the choice to focus on the eldercare could be seen as a weakness of the case study. The health care sector appears to be similar to most business organizations in many matters, such as, the apparent customer focus and increased demands on performance. Nevertheless, it is also specific in many ways and difficult to understand because of specific health care terms as well as the funding system, strong hierarchy and power balance concerning different professions and organizations. However, I performed Case Study 2 in cooperation with a doctoral student, from the Department of Nursing at Luleå University of Technology, who also has experience as a registered nurse. Therefore, I actually experienced my
background as a strength since we could perform the study from different perspectives complementing and learning from each others’ areas. For instance, I could question issues that appeared as natural to her from her nursing perspective whereas she added knowledge about the health care sector that could deepen our studies and discussions to levels that would not have been possible from only an engineer’s pre-knowledge and perspective.

It is also my belief that the structured method of different phases and several sources of data collections used in Case Study 2 have strengthened the results further. The first phase increased the understanding for eldercare and the work of municipal registered nurses, from both the registered nurses’ perspective and an outside perspective based on our observations as well as knowledge from the nursing and quality management areas. This phase was also the foundation for a broad identification and understanding of the influences ICT could have on the work environment.

In view of that, the case study of eldercare, presented in Paper D-F, should provide explicit understanding about eldercare and also about influences of the particular ICT-platform on registered nurses’ working conditions that can appear during a test period. In the Introduction chapter I identified a need for more understanding for how ICT may affect the work environment and thereby the opportunities of employees to feel and perform well. Paper F could contribute to a better understanding of this by giving valuable examples, not only to eldercare, but also to other sectors about how ICT positively and negatively might influence working conditions and what consequences this might give concerning employee motivation, satisfaction and performance. Paper F further adds understanding about what factors in the work environment might be of specific importance to consider to successfully introduce technology. As regards health care, these factors are also related to where in the care pathway they could be considered. It is my belief that managers of any other organization considering introduction of new technology could benefit from bearing in mind the importance of adapting the technology, but not least, the organization and resources linked to it, to the needs of the users instead of only focusing on the development of the technology itself. As have been argued by, for instance Balogun & Hailey (1999), Paper F indicates that managers’ focus on the involvement and needs of the employees is vital if a strategic organizational change, such as introduction of new ICT, is to be accepted and successful.

Practical implications
After having performed Case Study 2 and reflected on the findings I would like to give some recommendations to managers or other persons considering adoption of new ICT in their organizations. These recommendations are strongly related to change management even though the study has not actually focused on that area. The reason to this is that the findings indicate that the influences from introduction
Chapter 7: Conclusions and discussion

of ICT on the work environment as well as the experiences of employees depend on how the technology and the changes that come with it are adapted to the needs of the employees:

- Clarify the purpose of the ICT and particularly describe the positive effects that it may bring to the users of the technology and to the customers that these employees are responsible to satisfy.

- Adapt the ICT to the needs, capacity and competence of the users. The intended users should be involved as early as possible in the work with developing the applications and the work place it is to be used within.

- Make sure the ICT functions as intended before it is introduced to the users. In case of problems there should be fast support easily available to the users to solve the problems.

- Before putting demands on the employees to use the ICT and perform, ensure they have received necessary skills and education to feel secure in using the technology.

- Make sure that the changes in organization, structures, routines and needs of resources that the new ICT brings with it to the organization are adapted to the needs of the users.

In addition to these recommendations, some practical suggestions for factors of the work environment might also be given based on the findings of Case Study 2:

- Provide for employee participation. The possibilities to participate should also be followed by authority, clear goals and frames as well as information and resources required for participation.

- Make sure the employees have possibilities, competences and support from managers and colleagues to feel safe and secure at work.

- Provide for meaningful tasks.

- Make sure that sufficient resources and authority are provided to balance the individual’s control over work and the demands put on the person.

- Give possibilities for learning through individual follow up and group discussions with colleagues and managers.

Implications for eldercare

The findings of Case Study 2 should provide understanding that are of particular interest and value to the eldercare sector, which operates under great demands for quality and rationalizations and is under pressure to introduce constantly developing technologies. In addition, the case study gives specific knowledge about the work environment of registered nurses in public eldercare and provides potential areas of improvement within Paper D-F. The working conditions of the
registered nurses should be given particular attention, since the employees to a
great extent appeared to feel dissatisfied and isolated and yet at the same time
bearing a heavy burden of responsibility even before the ICT was introduced.
Thus, to fulfill the increasing demands of good quality eldercare it should be
important to improve the conditions of these employees and be aware of additional
possibilities and risks that the ICT could bring with it.

It is my belief that the stakeholder methodology and process chart that Paper D
and E present, could also contribute to such improvement work of care and
working conditions, both as inspiration and support for eldercare practitioners and
for further research.

As well as the general practical implications given above, some practical suggestions
for eldercare in Sweden could also be given based on the findings presented in
Paper D-F. The suggestions given below are based on the identified potential areas
of improvement which, if considered, may lead to better working conditions and
increased quality of eldercare.

- Arrange for different professions from different organizations to meet and
discuss. In such discussions the stakeholder methodology or a chart of the
care pathway may be used (or created in cooperation) to support a wider
understanding of eldercare and the needs and contribution of different
organizations, professions and other stakeholders.

- Provide easy access for registered nurses to the right information about
patients, including possibilities to check up decisions, results and referrals.

- Arrange opportunities for registered nurses to meet in discussions and
reflections. By this means, they could support and learn from each other.

7.2.4 Suggestions for further research

Considering the role of ICT in modern working life and that little seems to be done
to understand the effects of the use on employees, other studies should further
investigate use of new technology from an employee perspective. For instance,
because of the limited test period of the ICT applications studied in this thesis,
more research is needed to find out about how ICT can influence the work
situation of the employees when used in the daily work. Another interesting
question to investigate would be: How can ICT be used to positively influence
working conditions and how can negative consequences that it causes be handled?
Further studies are also needed to investigate the influences on working conditions
from different ICT applications and in different contexts.

When it comes to eldercare, since the case study was focused on eldercare from
only an RN perspective it would be valuable to further consider experiences of and
influences on other actors, for instance physicians and assistant nurses. In addition, because the research indicates effects on the working conditions of RNs that in turn can influence the quality of care provided to the elderly patients, it would be interesting to also find out more about experiences of ICT and quality of care from the perspective of the elderly.

Within this theme, methodologies and tools related to the area of quality management were developed and used within the health care sector. At the same time, the research also identified several areas for improvement within eldercare. Thus, it would be interesting to further study the role and suitability of ‘quality’ methodologies and tools, for improvement intentions, within the health care sector in general and in eldercare in particular. If considering the proposed stakeholder methodology developed in this thesis, the methodology needs to be further assessed and developed because of the short development period and limited tests in practice. An evaluation of it should also take into account the employees’ and their managers’ experiences of using such a methodology.

### 7.3 Conclusions and contributions of the thesis

The overarching purpose of the research described in this thesis is to contribute to the creation of good work environment. The focus is on how organizations may work to adapt to the requirements of modern working life and at the same time ensure a good work environment in an endeavor to enhance employee well-being and organizational development.

Throughout the thesis, this purpose has been dealt with in two themes with diverse focuses on the work environment. For each theme an aim and research questions were specified based on the overall purpose. Whereas the aim and questions of Theme 1 relate to the managers’ work of changing the work environment positively to a health-promoting work environment, Theme 2 is focused on the consequences of changes, with other purposes, on the work environment, namely the influences of technological changes. Now, to conclude, the findings derived from the studies carried out within these themes, could be integrated to discuss the conclusions and contributions in relation to the overall purpose; see Figure 7.1.

#### 7.3.1 Conclusions

In the beginning of the thesis a figure was presented to describe the underlying assumptions for my interest in studying organizational aspects and their influence on the work environment; see Figure 1.1. Brought together, the two themes confirm that leadership and technology are two important organizational aspects that can have extensive influence on working conditions. A change in one
organizational aspect changes other work environmental factors and thus the working conditions in negative and positive ways. The two themes also show that the working conditions will be assessed by the employees and thereby influence their experienced work satisfaction, health as well as performance, which, in turn, are important for satisfaction of external customers and improved business results; see Figure 7.1.

Despite the different aims, both themes confirm what has already been shown about the importance of leadership focusing on the needs of employees. Managers’ strategies and leadership, based on such a focus, further turned out to be a key for success of both health promotion and introduction of new technology in organizations. The managers’ focus on needs and well-being of employees is the base of purposeful health promotion work but is shown to be as important when changes are made with another purpose in the technology aspect. Thus, an important conclusion is that it is possible and crucial for managers to intentionally shape the organizational aspects so as they generate working conditions that meet the needs of the employees’ work. This is important independently of their purpose with the improvement work; see Figure 7.1. To do so, a strategy based on a culture of human core values, that are supported by methodologies and tools, could be helpful. Such a strategy is similar to the system view of Total Quality Management. In large organizations, with managers on several organizational levels, it is specifically important to further support the strategy with extensive communication and trust.

From a work environmental perspective, a conclusion of the two themes is that the strategies and leadership that managers chose to use to meet increasing demands of society and working life can be viewed as an overarching work environmental factor with authority to affect other work environmental factors. Based on Theme 2, a conclusion is that a change in the technology factor is dependent on the overarching leadership factor in the initiation of the new technology and when shaping the working conditions.

Another conclusion is that, the two themes, despite different aims, show the importance of similar work environmental factors for creation of a good work environment. It is important for managers to positively shape the psychosocial working condition aspects of: involvement; clear goals and follow up; information sharing; possibilities for employees to handle the demands in work and have control; competence development. These work environmental factors go hand in hand with health factors and also confirm basic issues of such as good leadership, security and meaningfulness, defined in management and motivation theory. Based on Theme 1, the conclusion is that if put into practice properly, such already well-known theories may result in a good work environment promoting work satisfaction and health and thereby organizational success.
Chapter 7: Conclusions and discussion

**PURPOSE OF THE RESEARCH**
Contribute to the creation of good work environment. The focus is on how organizations may work to adapt to requirements of modern working life and at the same time ensure a good work environment in an endeavor to enhance employee well-being and organizational development.

**THEME 1**
Describe how managers can act in modern working life to create good work environment

Q1: How have successful organizations worked to achieve sustainable health?
Q2: How can a model for sustainable health be formulated to support the work of managers in large organizations?

**THEME 2**
Describe how applications of new ICT may influence the working conditions of employees

Q3: How do employees experience using new applications of ICT in work?
Q4: How can introduction of new ICT in work influence the work environment?

**CONCLUSIONS**
Managers’ commitment to changes, such as health-promotion work or new technology that are to be introduced to an organization and their focus on the needs of the employees are vital to create employee satisfaction, health, successful changes and in the end organizational success.

To create a satisfactory and health-promoting work environment managers’ leadership is an overarching factor influencing other work environmental factors.

Health-promoting initiatives and introduction of new technology change the working conditions of employees. To make the changes successful and achieve a satisfactory health-promoting work environment such work environmental factors as employee involvement, balance between demands and control, social support and learning opportunities, are vital to consider.

**Figure 7.1** The figure shows how the two themes of this thesis have contributed to the conclusions drawn in relation to the overall purpose. The conclusions illustrated in the figure make up a summary of the conclusions that could be drawn when bringing the two themes together.
7.3.2 Contributions

The contributions of each of the two themes of this thesis and the related papers were reflected upon in Section 7.1 and Section 7.2. However, when brought together the themes can also add additional understanding and link the areas of quality management, health promotion work and work environment.

The theoretical frame of reference brings together knowledge, from different studies and authors from different areas, and thereby motivates the importance of managers to intentionally consider the work environment in their work for improved quality products, customer satisfaction and business success.

In the Introduction chapter, a need for better understanding of how to create a good work environment that promotes employee satisfaction and health in modern working life was identified. To contribute to such understanding this thesis reports results from two projects concerning several studies completed in contemporary Swedish organizations that have faced increasing demands and pressure. By studying successful organizations in Theme 1 the thesis contributes with understanding and examples of intentional influences of the leadership aspect on working conditions to achieve employee health. The strategy, methodologies and tools that have been shown to work well in practice could thereby contribute to theory and practice through the management model for sustainable health. Theme 2 adds further knowledge about effects that can appear on the work environment when an organization tries to adapt to the requirements of improvements, rationalizations and increased quality by introducing new ICT in the business. Differently from many earlier studies, Case Study 2 does not primarily focus on the technology itself or gains for business, but on the employees who have to face the technology in their work.

Together the two themes also contribute with understanding about psychosocial working conditions by, similar to several earlier studies, identifying what factors of the work environment are important for managers to consider. In contrast this thesis also adds knowledge about how managers intentionally can work to shape them positively in the endeavor to achieve employee satisfaction, health and performance. Both themes also contribute with development of concrete methodologies and tools: the management model; the stakeholder methodology; the care pathway of eldercare, to support further research and improvement work.

7.4 Reflections about general findings of the thesis

The two themes of this thesis were intentionally chosen to explore and describe influences of two specific organizational aspects assumed to impact on the work environment. Nevertheless, the choice to focus on leadership and technology was
only one possibility since there are many potential organizational aspects that could change the work environment, positively and negatively, for each individual employee.

To explore and describe the influences of leadership and technology I further chose to perform qualitative research in studies of specific cases and relate these to theory. I could certainly have complemented the studies of both Theme 1 and Theme 2 with questionnaires sent to larger groups of managers and employees to, for instance, identify more health factors and influences of ICT on the working conditions. Nevertheless, in striving for a deeper understanding of the specific cases and the employees’ and managers perceptions and experiences, I chose to focus my research on more extensive studies with qualitative methods. This, implies, indeed, that all the findings are not necessarily possible to generalize to other organizations. It is my belief, though, that Project 1, bringing together the perspectives from managers and employees on different levels with findings from other similar studies by using different methods of data collections, as well as the careful planning and execution of different methods for data collection to achieve both an ‘insider’ and ‘outsider’ perspective in Project 2, can contribute with deep knowledge and inspiring examples that may be complemented with broader quantitative studies in the future.

The findings presented in this thesis, similar to a manifold other studies, show that factors such as leadership and technology in one way or another cause changes to and form the work environment and thus influence the opportunities and experiences of the employees. The first theme on purpose also considered managers’ leadership because of an interest in finding out how managers might work intentionally and practice leadership to change the work environment positively. Nevertheless, in the second theme the power that the work of managers might have on the technology aspect and its effects on the working conditions was difficult to neglect. It appears as if both themes, despite the different focuses on the work environment, relate to change management as described by, for instance, Balogun & Hailey (1999) and Pidd (1999). According to the arguments of Pidd (1999) both introducing new technology and changing the work environment to create health, despite the different intentions of the changes, might be described as changes appearing within an organization. To succeed with such changes the commitment and strategies of managers and the acceptance of employees are vital; see Balogun & Hailey (1999); Kotter (1988). This is also confirmed by the studies presented in this thesis. For instance, within Case Study 1 the managers intentionally and structurally appeared to have worked to change the work environment by motivating the importance to all managers and employees in different ways adapted to the interests of the individuals on each organizational level. On the contrary, Case Study 2 pointed at the importance of motivating the change and adapting it to the needs of the employees to increase motivation and likelihood of success. Moreover, both studies thereby indicate that management
skills in communication, relation building, delegation and coaching are vital. These findings have much in common with the arguments of Balogun & Hailey (1999).

The conclusion about the importance of managers’ strategies and ways of working also raises further questions about how managers could act to handle changes of different organizational aspects in successful ways and whether a strategy, such as the one suggested in the tentative management model might be valid and useful to managers who plan other changes than changes for a health purpose. The findings within both themes further showed the importance of considering core values in improvement work. To this could be added that the findings within both themes indicated that the focus on softer values, concerning employees, is vital to achieve external customer satisfaction. Not least the managers’ and employees’ ways of working in accordance to these values appeared as vital independently of the focus of the themes. Based on this, I would like to argue that the findings of both themes seem to have much in common with what, for instance, Hellsten & Klefsjö (2000) discuss about TQM. It is also tempting to believe that an overarching management system similar to TQM might be used to achieve both good quality and to organize healthier workplaces as is argued by Lagrosen et al. (2007).

Finally, the different studies of this thesis in many ways confirm other studies and show that managers’ strategies and leadership and other work environmental factors, such as employee involvement, social support and learning opportunities, are important to consider, regardless of the organization’s purpose with the improvement work. Therefore, it is my belief that an understanding about the influences that leadership and new technology can have on the work environment together with the suggested strategy, methodologies and tools could give valuable support to managers of other organizations about how to create better work environment.

### 7.5 Further research

Work environment will probably be at least as important to consider in the future as it has been for a long time. A changing working life puts demands on organizations and the satisfaction and health of employees have become an important means for competitiveness.

This thesis identified influences from the leadership aspect and technology aspect but also a possible interaction between the two when shaping the working conditions. Thus, a suggestion for further research is to identify and study the influences of other organizational aspects as well as possible relations between them that may be of importance. How might the different organizational aspects interrelate and how should they be shaped in relation to each other to create health-promoting working conditions?
Based on the findings of the two themes, it would also be interesting to further study the role of a holistic management strategy and core values in organizations as well as how such factors may be intentionally and successfully shaped. In this manner, there also appears to be an interesting connection to the system view and some values of TQM. It would therefore be valuable to further study the relations between TQM, the shaping of organizational aspects and their influences on working conditions and employee health.
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Successful Management Methodologies for Achieving Co-worker Health in a Large Organization

Successful Management Methodologies for Achieving Co-Worker Health in a Large Organization

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ABSTRACT Today, many organizations experience problems with high levels of sick leave. This has negative implications on the organizations’ ability to compete on the market, but also means suffering for the individual employees. The leadership of the organization is considered by several researchers to impact on employee health and competitive advantage. However, it is argued that the larger an organization gets, the harder it is to apply good leadership. Therefore, the purpose of this paper is to describe how management in a large Swedish bank, awarded as ‘Sweden’s best workplace’, has successfully worked to transform increasing levels of sick leave into co-worker health and profitability. The paper also includes suggestions that managers in other organizations might consider adopting. Through interviews, with managers at different organizational levels of the bank, management methodologies and success factors have been identified. The commitment of the bank’s managers seems to have been central to achieve a healthy and efficient organization. Executive managers have had a conspicuous strategic focus on health issues and set objectives thereafter. These objectives have been deliberately supported by the managers’ methodologies and successfully passed on throughout the organizational hierarchy to the bank offices. Dialogues, delegation and clear goal setting seem to have been important methodologies. Middle managers in addition have been lucid coaches to office managers, who in turn have put focus on building relationships and encouraging employees.

KEY WORDS: Management, leadership, health, Total Quality Management, methodologies, large organizations

INTRODUCTION

Since about 1980, sickness absence has risen to alarming levels in parts of Europe. In Sweden, for instance, long-term sick leave listed (of more than 365 days) increased by almost 30% between 1997 and 2001 (SOU 2002: 5).
Bad health has implications for society as a whole. For instance, the costs for sickness benefits and disablement pensions combined were 10% of the Swedish Government’s total spending in 2001 (The National Social Insurance Board, 2000, 2003). Not least, bad health means suffering for the individual employees concerned and has implications on their performance and ability to work and be productive. Consequently, from a business perspective, sickness reduces an organization’s ability to compete on the market and its future prospects. Therefore, methods to reduce the costs of sickness absence and working disability are needed (Cordes & Dougherty, 1993; Arnetz, 2002; Porter et al., 2003).

Leadership is mentioned by several researchers as an issue with considerable impact on employee health; see, for instance, Benders & van de Looij (1994), Eriksson (2003) and Zwetsloot & Pot (2004). Several researchers also explain how leadership must be conducted in such a way as to increase the motivation and well-being of co-workers. However, there is often a conflict between the human aspects and the demands of efficiency and profitability; see, for instance, Deming (1986), Docherty et al. (2002) and Porter et al. (2003). Docherty et al. (2002), among others, claim that management has to be more supportive and that authority has to be delegated to the lower levels of the organizational structures to meet successfully the requirements and complexity of today’s business market.

However, there are organizations that have successfully broken the trend towards rising sickness absence, nurtured co-worker health and simultaneously achieved financial growth. Recent studies of some small and medium sized organizations, who have received the award ‘Sweden’s best workplace’, show that the leadership, infrastructures for communication, relationship building activities, co-workers’ influence, established holistic views and balance between work and private life have been vital success factors for achieving health (Harnesk et al., 2004).

However, as organizations grow larger, internal communication gets more difficult (Daly et al., 2003). According to Nilsson (1999), most large organizations have hierarchical structures, complex communication channels and are less empowering. Deming (1986) even claims that it is very difficult to apply good leadership in large organizations. Therefore, it is of great importance to study and learn how management in large organizations can act to achieve co-worker health in combination with economic growth. This study has, for that reason, been conducted at the bank Föreningssparbanken, receiver of the award ‘Sweden’s best workplace’ for large organizations in 2003. The aim of the study was to answer the question: how have managers on different levels worked to achieve co-worker health? In addition, the purpose of this paper is to describe how managers at different levels in the bank have deliberately worked to support the development of co-worker health together with profitability, and also to identify successful management methodologies (ways of working) that managers in other organizations can adopt.

Case Description

Föreningssparbanken is one of the largest banking groups in the Nordic area and was founded in 1997 through the fusion of Sparbanken Sverige and Föreningsbanken, which have their roots in the early 19th and 20th centuries respectively.

According to FöreningsSparbanken AB (2005a) the bank’s fundamental values are long-term sustainable development and a strong relationship with local communities. It prioritises customer satisfaction and aims to be ‘a bank for everyone’ and an attractive employer. Moreover, the bank stands for security, humility, respect, openness and
involvement. A characteristic is a co-determination agreement aiming at inviting employees to take part in the bank’s operations through insight, involvement, and responsibility, see Table 1.

Föreningsparbanken has around 15,000 employees, of which approximately 9,000 are working in Sweden (in 2004). The group is organized into five business areas including Swedbank Markets (investment bank), Robur (fund management) and Swedish retail operations. The latter consists of subsidiaries, for instance the telephone and internet banks and the bank branches. The bank branches make up an important unit, which is divided into geographic regions and encompasses a network of local bank offices; see Figure 1. In 2004, around 490 offices were divided into 75 local banks in six regions (FöreningsSparbanken AB, 2005a).

In the Annual Report 2004, improvements in measurement of health issues, as well as customer satisfaction and profitability, of the Swedish operations were presented; see Table 2 and Figure 2.

Theory

Management and Leadership

The expressions ‘management’ and ‘leadership’ are generally used, but have a variety of definitions and meanings (Yukl, 2002). According to several authors, e.g. Kotter (1988),

Table 1. A selection of important events in Föreningsparbanken, mainly between 2000 and 2004

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity in Föreningsparbanken</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997–1999</td>
<td>Staff reductions as consequence of the merger.</td>
</tr>
<tr>
<td>2000</td>
<td>The co-determination agreement (IDA) was established.</td>
</tr>
<tr>
<td>2001–2004</td>
<td>Roles of employees and managers were defined in order to better meet the needs of customers.</td>
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<tr>
<td>2001–2004</td>
<td>Programs for managers were carried out to ensure new leadership and help managers.</td>
</tr>
<tr>
<td>2002</td>
<td>A staff reduction program, including more than 500 employees, was run in the banking group.</td>
</tr>
<tr>
<td>2002–2004</td>
<td>A health project was carried out in order to cope with increasing levels of sick leave.</td>
</tr>
<tr>
<td>2003</td>
<td>Received the national Alecta award ‘Sweden’s best workplace’.</td>
</tr>
<tr>
<td>2003</td>
<td>A new CEO was appointed.</td>
</tr>
<tr>
<td>2003 &amp; 2004</td>
<td>Was the most profitable major bank in the Nordic region.</td>
</tr>
<tr>
<td>2004</td>
<td>Received an award as ‘The Competence Company of the year’.</td>
</tr>
</tbody>
</table>

Table 2. The development of human capital, in terms of the indices measured since 2003. ‘Satisfied Employee Index’ measures employees’ opinions of their personal situation in the company, ‘Well-being’ measures employees’ opinions of health-related issues and ‘Value-adding ability’ measures employees’ opinions of their ability to create value for customers

<table>
<thead>
<tr>
<th>Development of Human Capital</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Local banks in Sweden)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied Employee index</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>Well-being</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Value-adding ability</td>
<td>75</td>
<td>77.5</td>
</tr>
<tr>
<td>(private and business customers)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 1. Overview of the ‘Bank branches’ unit. The relation between offices, local banks and regions is illustrated. The figure also shows the connection between these regions, the unit and the executive management.

Figure 2. The numbers of long-term healthy employees, i.e. employees who take a maximum of five sick days during a 12-month period, have increased and sick leaves have decreased within Föreningssparbanken between 2003 and 2004. At the same time both profit and customer satisfaction have improved.
there is a difference between management and leadership. Kotter (1988) describes leadership as ‘a process for influence, without forcing, one or several groups of people in one direction’. Yukl (2002) claims that the word ‘manager’ is an occupational title for many people. He further argues that it is obvious that a person can be a leader without being a manager and be a manager without leading. Yukl (2002) believes that successful management also needs to incorporate leadership.

In this paper, leadership will be used as defined by Kotter (1988), while management will be associated with a profession and the way an organization is controlled through issues of strategies, responsibilities, planning and results. Leadership is also assumed to be an important part of management.

Health and Health Promotion

The concept of ‘health’ is difficult to define in an unambiguous way. However, many researchers seem to have a humanistic view of health and agree that health is more than just lack of illness and diseases (Medin & Alexandersson, 2000). The definition of health in this paper will follow the well-known and accepted definition, stated by the WHO’s Constitution (1948): ‘Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’.

The concept of ‘health promotion’ is often used for work aimed at increasing good health. According to WHO (1986), health promotion is: ‘the process of enabling people to increase control over, and to improve, their health’. To achieve health, an individual or group must be able to identify and realise goals, satisfy needs and change or cope with the environment (WHO, 1986).

Several researchers also discuss what factors can affect employee health and make people feel well at work. For example, Zwetsloot & Pot (2004) highlight some issues, normally not regarded as health related, which have considerable impact on health: leadership and its style, industrial relations, trust, communication, corporate culture, business partners and organizational development, among others. A study presented by Eriksson (2003), of three different organizations, also shows that the management, structures and routines of work, clarity and balance between requirements, objectives and resources, are vital to how employees perceive their health. Similar thoughts are expressed by Csíkszentmihályi (2003), who claims that conditions such as, for instance, clear goals, feedback and balance between challenges and skills are key issues. Griesinger (1990) also believes that a reduction in uncertainty and an increase in honesty and openness can contribute to both social and ethical betterment and economic efficiency.

Arnetz (2002) presents research on stress, efficiency and renewal seen from the perspective of organizations. He argues that the initiate leaders (at the lowest level) of an organization can affect the co-workers’ awareness of effectiveness and thereby their work satisfaction, which in the long run has a direct impact on the quality that is vital to achieve customer satisfaction. This statement is also backed up by Porter et al. (2003) and the ideas in Total Quality Management that Bergman & Klefsjö (2003) describe.

Eriksson (2003) also argues that organizations must have a holistic view, but also that organizations need to think of health instead of sickness to promote health. Furthermore, Lindkvist (1996) claims that top management initiatives and long-term perspectives as well as a focus on ‘soft’ aspects are associated with competitive success. He believes
that the figures in the budget are insufficient as statistics unless complemented by considerable dialogue with co-workers.

Management Concepts

During the last few decades, management concepts such as Lean Production, Total Quality Management, Business Process Reengineering and Integral Health Management have been used to facilitate changes and development toward business excellence (Docherty et al., 2002; Zwetsloot & Pot, 2004).

Zwetsloot & Pot (2004) discuss the business value of health management. They present Integral Health Management (IHM), a strategic approach for reducing the costs of sickness absence and working disability, while at the same time increasing the productivity and resilience of the company and its employees. To implement IHM, they suggest that five changes of a general health and safety nature are needed:

- From focus on problem solving to positive challenges.
- From a medical perspective to a business perspective on health.
- From fragmented activities to a holistic approach.
- From attention on people with health problems to care for all personnel.
- From cost to a sound investment.

The connection between Total Quality Management (TQM) and profitability has been explored in several investigations. For example, Eriksson & Hansson (2003) showed in a Swedish study, that organisations that received quality awards performed better than comparable competitors and branch indices. Recent studies have also reported on correlations between TQM-values and the perceptions employees have of their own health; see Lagrosen (2004) and Lagrosen & Backstrom (2005).

According to Hellsten & Klefjo (2000), Total Quality Management can be described as a management system consisting of values, methodologies and tools; see Figure 3. To achieve results, the values must persistently be supported by suitable methodologies and tools. In addition, management must preserve the core values in TQM by quality activities and with the use of economic, ethical and other resources; see Hellsten & Klefjo (2000).

The relation between participation and work satisfaction has been a subject of research literature for many years (see for instance Mayo, 1949; McGregor, 1960; Kondo, 1993). Nevertheless, it is not evident what methodologies to use in today’s working life to support the values of TQM and create co-worker health. In recent literature, there is a lot about so-called ‘health factors’, but little concerning particular management methodologies for achieving co-worker health.

Research Method

Research Strategy and Approach

A qualitative case study was performed to explore management methodologies within Föreningssparbanken. Merriam (1988), Miles & Huberman (1994), Yin (1994) and Zikmund (2000) among others, discuss different research strategies for qualitative research. In this case an explorative study was conducted through a single-case approach.
with embedded units of analysis. In that way different units of the organizational hierarchy could be studied by use of numerous tools.

The full research process, which originated from the aim of the study, is described in Figure 4. The case study organization was chosen on its recognition as a successful organization and receiver of the Alecta award, ‘Sweden’s best workplace’, in 2003.

Selection of Interviewees

Miles & Huberman (1994) state that a key feature of qualitative sampling is the work with a deeper study of a small sample of people in their natural context. Since statistical generalizing was of no interest, non-probability sampling was used to select appropriate managers within Förreningsparbanken.

In August 2004, the research team first got in contact with the project manager of the bank’s now-concluded company-wide health project. In cooperation with her and other managers, the team decided to focus on one unit; the Bank branches within the business area of ‘Swedish retail operations’: see Figure 1. This choice was made because of the clear organizational structure of this unit. Furthermore, it is represented all over Sweden.

Subunits and respondents were then chosen to cover several levels of the organizational hierarchy and the geographical dispersion of the organization. The study was based on three management levels that would cover the hierarchy from top managers to the bank offices. The HR Manager (who was also the Executive Vice President), was chosen to represent the board of directors. To cover the rest of the management structure within the Bank branches two ‘local units’ were chosen with support from the project manager. These units, here called local bank A and local bank B, are located in different parts of
Sweden and were chosen because they represent the geographical dispersion of the organization. Meetings were held with the managers of the two units since they were naturally the representatives of the second management level. The aim of the meetings was to decide which bank offices to study. In the end, two local offices were randomly selected from each of the local units A and B. These offices are here called office α and office β. The choice of representatives of the third management level, namely the two managers of the offices, was then obvious. Finally, the sampling process resulted in the selection described in Figure 5.

Data Collection

To explore the work of the managers, data were collected through individual semi-structured interviews during October to December 2004. Each interview lasted about an hour and a half and was performed at the managers’ places of work. Question forms were used as guides for the interviews, but the order of the questions was adjusted to create natural conversations. The interviews were recorded and the transcriptions checked by the respondents in order to eliminate misunderstandings.

Data Reduction and Analysis

The empirical data were analysed with diverse methodologies in several steps. The central question of interest was: how have managers at different levels worked to achieve co-worker health?
The transcriptions were examined individually by the three members of the research team, before they examined the empirical data together in two workshops covering two days each; see Figure 4. In the first workshop, the information given by the managers at the office level was considered. The aim was to scrutinize the opinions and methodologies of lower level managers, before analyzing the intentions of managers at higher levels. During the first day, the research team examined and discussed the interviews. Methodologies and success factors were identified from the transcriptions and, after agreement, written down on Post-It Notes, which were placed on a white-board. The answers of the office managers were considered separately and the Post-It Notes were kept apart to separate the two of them.

The second day, a session with a facilitator was held and an affinity diagram tool was used to organize the large amount of qualitative information into related categories. The external facilitator had no information about the bank, but helped the research team to control the steps of the tool and to keep discussions as objective as possible. Affinity diagrams can be used to collect and reduce disorganized facts, ideas and information, about unknown and unexplored areas, to a narrative form (Mizuno, 1988). In this study, the tool was applied with the goal of achieving unanimous and deeper understandings of successful methodologies used by management and help building explanations.

By use of the tool, the Post-It Notes from each interview were organized into categories in consensus processes built on several steps. Initially, groups of related factors and methodologies were arranged according to subjects that were common to several notes. For example, groups of communication issues, goal setting and evaluation and health prevention were formed. Thereafter, the notes of each group were summarized into a single sentence reflecting the core meaning of the notes. The sentences were written down on new Post-It Notes before the team again searched for relations and this time formed groups of sentences that had connections. Once more, the vital content of each group was

Figure 5. The selection of representatives resulted in a sample of six managers (see the square) from three different management levels and two different local banks. Within each of the two local banks one office manager was chosen from all the offices. The diagram also shows that the office managers represent the lowest management level of the business area and thereby work closest to the employees.
summarized into a single sentence. These new sentences were also, when feasible, arranged in cause-and-effect order. Finally, these sentences, for each respondent, were used to form a statement answering the question: ‘how has the “respondent” worked to make Föreningssparbanken one of Sweden’s best workplaces?’

The two remaining management levels were analysed in the same way as the office level in a second workshop. Finally, the results of each of the six diagrams were put together in a table to make it easier to evaluate different organizational levels as well as the local banks. When drawing conclusions the empirical findings and diagrams were assessed separately for the local banks, but also for different organizational levels. Last, the findings were related and compared to theory. The complete affinity diagrams are presented in Bäckström et al. (2005).

Results

The empirical findings from each interview are here presented in reviews sorted by management levels and local banks, see also Figure 5. Thereafter, a figure will help summarize the identified methodologies and success factors. To begin with, Table 3 gives some information about the working situation of the respondents. Further information can be found in Bäckström et al. (2005).

HR Manager

The HR Manager, who had principal responsibility for human resources and competence development, strongly supported delegation of responsibility and authority. He stated that his foremost task as a leader was to point the way and make sure that management within the bank had a common understanding of the bank’s status and in what directions to work.

In 1999, when the HR Manager was recruited, the bank was at the end of the fusion process between Sparbanken and Föreningsbanken, two former competitors. This process resulted in extensive changes in the organization, new IT systems and staff reduction programmes. At the same time, management noticed that the sick leave was constantly increasing. In 2001, the health status of the organization was studied in systematic ways and the results were alarming. Therefore, the HR Manager initiated a health project in 2002 and appointed a project manager, who was assigned to evaluate what should be done to reduce the high level of sick leave.

The project was finished in 2004 and had then resulted in changed infrastructures and routines and also new ways of measuring health. To ensure an enduring and systematic

| Table 3. Basic facts about the studied local banks and offices. |
|-------------------|-------------------|-------------------|-------------------|
|                   | Local bank A     | Local bank B     |
|                   | and office α     | and office β     |
| No of local banks in the region | 1                | 3                |
| No of employees in local bank   | 130              | 250              |
| No of offices in local bank    | 10               | 15               |
| No of employees in office      | 9 (all women)    | 7 (mix of men and women) |
approach to health concerns and to get the routines to work, the project manager was positioned in a company-wide organization that would integrate health and wellness issues with work-related health issues. However, managers at lower levels were still responsible for the work environment and health issues of their units while the executive management focused on providing appropriate methodologies and tools to help them succeed.

The HR Manager said that the management approach to psychological health issues and rehabilitation of those staff with long-term sickness absence had been important parts of the health project. He thought that the project had been successful, but that it was too early to evaluate the numbers since reducing sickness absence is a long-term process. He explained that it is vital that people have the right prerequisites to perform their work, have clear goals, get feedback and have time to recover. According to him, the key factor that reversed the trend within the bank was that they became aware of the problems and the costs: ‘... to get attention and priority of other organizational issues you have to create a feeling for the economic effects. That is what counts.’ He also believed that the bank’s president had been important, by pointing out the direction, involving people and making difficult decisions when needed. Moreover, he explained that consistency, communication in honest dialogues as well as measurements and feed-back on organizational and individual levels had had a great impact on the success of the bank.

Coordinator of the Health and Work Environment Organization of the Bank (Former Project Manager)

In September 2002, a long-term focus on health was initiated with the health project. The person who was appointed as project manager had been in the bank since 1988. According to her, there were willpower and belief that the project would reduce the costs of sickness, but they did not state any cost reduction objectives in either the bank or the project. She said that the goal was to reduce sickness absence and increase long-term healthiness and thereby save money. Luckily, she thought, they got the executive management and president to understand this, and allocate resources for the project. However, the project manager was the only human resource completely involved in the project, and she brought managers and other co-workers into the project in order to integrate it into the day-to-day work.

The manager described the project as a development process to which resistance had been naturally met. As a project manager, she had worked to involve both executive management and also lower level managers and co-workers. ‘It did not work to just point with my finger. In my role it was important to involve people, both upwards, downwards and sideways, so to speak. So you had to find languages that they understood.’ She further explained that it had been important to find different languages that talked to the different categories of staff in order to make everybody understand the goals and what was important. Within the project, they had formed the language to fit the interests and values of managers by also having a result orientation and a business perspective. In addition, the project had had a site on the bank’s intranet in order to spread information and achieve a wide understanding. Moreover, within the project they had created activities and tools such as a self-evaluation test for personal health, which was available for all co-workers on the intranet. The purpose of the tool was to achieve improvements, educate and raise interest among the co-workers.
According to the manager, there is always some difficulty for executive management to reach out to the employees and she explained that the middle managers had been important to the implementation of the project. To make it function in the day-to-day work the executive managers had worked through the middle managers and trusted their local initiatives. Indeed, in the beginning it had been vital to the project manager to involve and raise interest among the executive management. ‘I do not think that it is possible to succeed in such a task [to achieve co-worker health] unless you have a strong connection with executive management. I believe that you can perform well somewhere in the middle of an organization, but it will always run out of momentum without upper management’s commitment.’

She made it clear that through consistent and open management and by inviting the co-workers and not giving up, the intentions of the project had been realized. Furthermore, she summarized her thoughts about success factors of the project in the following terms; committed, open and clear leadership; information sharing, business focus on health; a customer model including both stakeholders, customers, co-workers and society as a whole; a management model based on three components; human resources, customer satisfaction index and business results; structured and consistent work (evaluation, planning, performing, assessment) within the project and the organization of the project.

In the end, she explained that the project finally had resulted in a clear organization and infrastructures for the work environment and health issues within the bank. Today, there are measurements of risks and the health status of specific organizational units, which she feels are important in order to prevent and act upon potential risks. The present focus is on making the routines, measurements and activities work in practice and being consistent in order to make the changes long lasting.

Local Bank Manager A

The manager of local bank A had worked in the banking business almost all his life. He felt that his responsibility, as a manager, was to work with both people and regulations and to balance the administration work with leadership tasks. He worked through other managers and was convinced that he had to create his leadership in cooperation with them to be able to communicate the same commonly-agreed goals and messages throughout the whole local bank. He said that ‘leadership is about aligning people in the organization to the same objectives, bearing in mind that all of us have different preconditions’. Moreover, he believed that it is about creating an open climate and giving a lot of structured information. His intention was to give the office managers absolute responsibility, freedom, safety and support. In addition, the manager expressed the opinion that it was vital to his leadership to work without prestige. He had the mandate, from his manager; ‘When you have a mandate it is okay to be creative, fail and regret mistakes.’

According to the manager, there was a clear structure for sharing information in the bank and a smoothly working bureaucracy with simple and clear structures as well as regulations given by the executive board. He said that what had been vital to the success of the bank were honest objectives of change and that the changes had been planned, money had been allocated to execute the plans and the plans had been rooted in the organization before changes were executed.
Moreover, the manager believed that the bank had practised a caring leadership and said that an employee satisfaction index had been used to improve even more. ‘As a leader you need to care about the co-workers and show that you really do so. You can do that by inexpensive means such as offering bowls of fruit’. He also claimed that the values you pay attention to as a manager will be perceived as important among co-workers. According to him, a good working climate and job satisfaction are essential to achieve good results.

Local Bank Manager B

The manager of local bank B had worked in the bank and finance businesses for more than 20 years. His responsibility was to supervise the office managers and give them authority, responsibilities and tools to perform their jobs. However, he felt that through his leadership and general manner and demeanour he was a leader for all co-workers within the local bank and offices belonging to it. He also tried to visit all co-workers in their offices as often as possible and to know them all by names and be aware of their professional roles.

The manager explained that it is important that managers remember that improvement work is a process, not a competition, in which all units have to take part. He believed that to succeed in the local bank, continuous dialogue, evaluation and feedback, competent people and also a clear organizational structure were important.

Moreover, he used the office managers to communicate with the co-workers. He made good use of the intranet when sharing information from executive management. In addition, he wrote a newsletter and distributed it, in different forms, to the employees of the local bank every week. Since most decisions were taken by executive management and communicated in a hierarchical order, the local bank manager himself got information and briefings regularly from his manager and in the weekly meetings with the regional management. However, he explained that they did not only discuss results and economy during their meetings. The ‘soft values’, which produce the really good results, were also important issues.

He believed that there is a relationship between job satisfaction and sickness absence. His methodology to keep people healthy was constantly to be observant as a manager. In addition, health progress was a fixed point on the agenda of the local bank’s work environment committee. He said that his responsibility was to show the importance of health issues and prioritise these issues in order to affect the co-workers. Moreover, he claimed that it had been vital to communicate the message about the health issues repeatedly through different channels, to make sure everyone understood that ‘it won’t disappear’.

Within the local bank they had also focused consistently on rehabilitation, information distribution and the indexes of human capital development. In addition, they had arranged sessions with all managers and work environment representatives together with lecturers to discuss stress and other work environmental issues. He meant that these initiatives had resulted in people being more observant and focused on health in the offices. Moreover, he thought that well-adjusted health activities and also measurements of health and follow ups, consistency, patience and dialogues had contributed significantly to the success of the bank.

Office Manager α

The manager at office α became an office manager in 1975. He said that information is central in an organization and that he, within his group of nine people, could manage to
spread information efficiently. The manager himself, got information through the local bank manager in the group of managers of the local bank A. Information was also given regularly from executive management to offices through intranet and the internal TV. The office manager worked to create an open atmosphere and had told the employees to tell him both good and bad news.

Manager α believed that his most important task was to make sure that everyone in the office felt well. He knew his staff well and if someone did not seem to feel well he talked to that person to get to the bottom of problems. Moreover, he said that the key to satisfied customers is healthy co-workers; ‘If you are happy and satisfied at work you will also perform well and satisfy the customers’. He gave the co-workers opportunities to take care of their health by offering a variety of initiatives such as health activities, fruits, vitamins and light therapy at the office. Moreover, he worked in cooperation with the co-workers in order to understand their needs.

All co-workers had individual goals and the manager explained that an important task of him was to set the goals in cooperation with each individual and to follow up the results every month. Moreover, the office was competing against itself and was rewarded by the office manager if performing better than it had done in previous years.

When talking about work changes and the improvement work of the bank, the manager mentioned the fusion and the changes in work processes and systems that followed as a result. He said that the office had made the fusion rapidly in comparison to other offices and that he had had daily information sessions with the co-workers and had focused on everything that really was successful in the new organization. Moreover, the manager himself had learned and evaluated new routines and systems before asking the staff to use them.

The office manager believed that a safe and secure workplace, where managers had cared about each other, learned from each other and taken care of the staff had been vital to success of the bank. He believed that clear professional roles and lucid managers are important to both managers and employees. He explained that he could acquire the authority he felt necessary in order to fulfil his responsibilities. Finally, he highlighted that everyone in the office, regardless of professional role, has the same value.

Office Manager β

The manager at office β became the office manager in 2003. She believed that her foremost responsibility was to be committed and coach the co-workers. She said that the change of the bank toward a more sales-orientated organization, had meant major changes in tasks and the focus of employees’ work. Therefore, an important task as a manager had been to manage the changes in the office and involve the co-workers. She had used her close relationship with the co-workers, study groups in the office, discussions and dialogue to accomplish this. In addition, before accepting the responsibility to implement anything new in the office, she herself always had evaluated it against her own values. She was of the opinion that executive and middle managers need to be clear and consistent to successfully implement changes in the organization and make it easier for the office managers to involve the co-workers.

The most important thing to the office manager was the wellness of co-workers. Therefore, she actively involved the co-workers in decisions, gave regular feedback, talked with them about health, had evaluated the health status in the office through questionnaires and tried to act immediately on problems such as physical and psychological stress symptoms.
Her goal was to prevent burnout in the office. Therefore, she tried to know the individuals well and talk a lot to the co-workers. She often asked how they felt, and she had the will-power to solve the problems.

The office manager practised ‘management by walking around’. Likewise, she meant that because of the small group of co-workers she, as a manager, had plenty of time to give each individual. Once a week there was a meeting in the office but there were also informal meetings during coffee breaks. Information was also communicated through email. All co-workers had individual goals that were set in cooperation between the manager and employee in accordance with the constraints given by executive management. The short-term goals were followed up once a week in a meeting with the individual employee.

Manager β, in turn, had meetings with the other office managers of the local bank and the local bank manager every second week. Between meetings, she had regular phone calls with her manager i.e. the local bank manager. She also, said that ‘the office is like a small company within the larger company’ and that she could feel her authority and her manager’s trust to run the office.

According to the office manager, the customer orientation and the ‘selling organization’, which made it possible to recognize each individual’s performance and have clear and fair demands on the co-workers, had contributed most to the success of the bank. Furthermore, she felt that the new organization had encouraged involvement, more authority for the offices and pride in work.

Recognized Management Methodologies

The methodologies that could be identified within each management level, by use of affinity diagrams, are summarized in Figure 6. The full affinity diagrams can be seen in Bäckström et al. (2005).

The analysis of the interviews, in addition, resulted in patterns of success factors expressed by the managers. Most of them expressed the importance of customer focus and highlighted the vitality of employee satisfaction and health to fulfil customer needs. For example, one of the managers explained the relationship as: ‘Satisfied co-workers give satisfied customers’. Moreover, all six managers mentioned the following factors as central for achieving co-worker health: clear, honest and consistent leadership; measurements and feedback; co-worker participation and communications in dialogues.

Executive managers also meant that a structural business approach on health issues and an effective model of control are important.

Discussion and Conclusions

In this study, a sample of six managers from the large bank, Föreningssparbanken, has been studied through interviews. Therefore, the results cannot be assumed to give a complete picture of the entire bank but should give valuable examples of management methodologies. The studied units were chosen on practical and geographical reasons and were not necessarily the most successful units. On the other hand, there were no indications that these units perform differently from what was typical in the bank. Within the two local banks and offices there were some differences, but in general the same methodologies were identified. Some of these might, however, be influenced by the perceptions and analysis of the research team.
The results support the findings of Griesinger (1990), Eriksson (2003) and Zwetsloot & Pot (2004) by demonstrating that leadership, structures, objectives, clarity and resources as well as trust and communication are important to achieve employee health and business results. Moreover, there seem to be similarities between the managers’ intentions and work and what employees in the Eriksson’s (2003) study have reported as promoters of health. The commitment and work of managers appear to have been central to the bank’s achievements. This connection has also been pointed out in other research; e.g. Hackeman & Wageman (1995). All interviewed managers, regardless of level have stated that their immediate superior has been important to the success of the organization. Moreover, most of the local bank managers and office managers mentioned that they felt they had authority and their managers’ trust.

### The Bank’s Management Approach towards Health

Executive management initiated a health project and assigned a project manager to plan, perform and implement health improvement activities into the daily work of the bank. The
The project was performed in stages and started with a cost assessment of sickness absence and related costs as well as development of measures. Key measures of health were also integrated into the bank’s balanced scorecard and are related to co-worker indices, economical results and customer satisfaction indices. Thus, health was made a focal area, in which the managers were asked to present results. In addition, it illustrates that the executive managers paid attention to and measured, and thereby acted upon, what they said was important to the bank.

The rehabilitation programme and the education of managers in stress management also appear to demonstrate an honest effort by executive management to act upon psychosocial health issues, not only physical health activities. It feels acceptable to assume that many times it is easier to work preventively by arranging a physical health activity than working with psychosocial health. It seemed like if managers within the bank were not afraid of taking care of the co-workers or aiding individuals who were not feeling well.

However, both economical and health incentives seem to have been behind the management’s strategic approach. The economical results apparently have been calculated and evaluated in relation to health progress to show the impact – of for instance sickness absence – on the organization. The initiation of the health project and calculation of the costs related to sick leave were means to raise the awareness of the executive managers and employees, but with the goal of improving employee health. Furthermore, a business perspective on health, which is also prescribed by Porter et al. (2003), seems to have been a prerequisite for reserving resources to health-related initiatives within the bank.

The Management Approach versus IHM and TQM

The study shows that aspects of both IHM and TQM values are parts of the bank’s management approach towards health. Specifically three of the needs mentioned by Zwetsloot & Pot (2004) were characteristics of the bank. The bank talked in terms of long-term healthiness and health issues instead of focusing on sickness. Middle and lower level managers expressed the importance of health and care for all personnel. However, there was also specific attention on and care for people with problems within the rehabilitation programme, which was activated throughout the organization by executive management. Moreover, a clear business perspective on health could be seen within the bank. Investments and resource allocations to health activities seem to have been a result of cost awareness.

In addition, the results of this study show the importance of management methodologies and measurements that support the approach and objectives. Executive managers demonstrated commitment through the strategic and holistic project-approach, which was companywide, and got resources reserved by them. Objectives seem to have been intentionally supported by the methodologies and tools used within the organization. Links between the intentions expressed by the managers and their methodologies were visible. For example, the TQM values of customer focus, total co-worker commitment and fact-based decisions find clear support in the statements summarized through the affinity diagrams; see Figure 7.

The managers did also create methodologies and tools to help co-workers contribute to the objectives and fulfil customer needs. In addition, managers ‘practised what they preached’. The analysis of the interviews and observations showed that the managers of the bank acted as role models and tried to behave according to common guidelines and
as they expected the co-workers to behave. They consistently concentrated on, and paid attention to, what they communicated as important issues to the bank.

### Methodologies of Different Management Levels

All managers, regardless of management level, seem to agree upon the fact that top-down management has been effective for achieving health. There was indeed no evidence of lack of empowerment, as Nilsson (1999) fears in large organizations. Instead, co-worker participation obviously was integrated by daily dialogues and goal setting in cooperation with employees.

The managers at all three levels worked through delegation and as coaches. However, the executive managers worked with a conspicuous strategic focus on health issues and set objectives thereafter, whereas middle managers deployed the objectives and worked as coaches to the office managers. The office managers in turn, practised goal setting and follow-up in cooperation with the co-workers, based on the bank’s goals. Moreover, they focused on building relations to encourage and provide for good conditions for the co-workers.

The executive managers were important in order to decide upon strategies, point the way to middle level managers and get the organization as a whole to work in the same direction. The objectives of the bank have then successfully been passed on throughout the organizational hierarchy by middle managers and, finally, been well executed in the bank offices. Open communication, clear goals and mutual trust seem to have been important to achieve that. These methodologies have much in common with the results of Harnesk et al. (2004).

However, the executive managers’ work through middle level managers may possibly have been facilitated by the use of common values and the creation of aiding tools. Moreover, within the project they seem to have worked hard to raise interest in health issues

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#### Figure 7.
The arrows show a few examples of how management methodologies, identified within Förerningssparbanken, supported the values of managers. Values represent examples of intentions that were expressed by the managers during the interviews and the methodologies are a sample of the methodologies summarized in Figure 6.

<table>
<thead>
<tr>
<th>VALUES</th>
<th>METHODOLOGIES</th>
</tr>
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<tbody>
<tr>
<td>Focus on employee health</td>
<td>A health project</td>
</tr>
<tr>
<td>Top management commitment</td>
<td>Managers act as they talk</td>
</tr>
<tr>
<td></td>
<td>Executive management:</td>
</tr>
<tr>
<td></td>
<td>– give methodologies and tools to aid</td>
</tr>
<tr>
<td></td>
<td>the work of local bank managers</td>
</tr>
<tr>
<td></td>
<td>– reserve resources for improvements of health issues</td>
</tr>
<tr>
<td>Base decisions on fact</td>
<td>Measurements, evaluations and feedback</td>
</tr>
<tr>
<td>Focus on customers</td>
<td>Employee development</td>
</tr>
<tr>
<td>Let everybody be committed</td>
<td>Delegation</td>
</tr>
<tr>
<td></td>
<td>Dialogues</td>
</tr>
</tbody>
</table>

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among executive management and co-workers. Therefore, one might argue that middle managers more or less have been forced to prioritise health issues. In addition, by putting a business perspective on health, executive management presumably has put attention on and increased each manager’s responsibility for health-related results.

Management Methodologies

The identified methodologies, presented in Figure 6, are obviously not revolutionary, but are already well known as winning concepts in management theories. The same conclusions could be arrived at by Harnesk et al. (2004), when they studied smaller organizations. They questioned why only a few organizations though seem to practise the methodologies. Unfortunately, there are no answers given to that question in this study of Förerningssparbanken either. One guess is that lack of knowledge as well as pressure on managers to make money can hinder long-term efforts for health improvements and staff activities, when problems are faced. Short-term and local initiatives might be easier to apply, when there is no holistic business view of health or acceptable ways of measuring the consequences of health improvements.

In conclusion, the business perspective towards health and the focus on health in the companywide strategies seem to have had a great impact on the success of the bank. In addition, the support of these strategies through management methodologies and, not least, the good relationships and dialogues between managers and co-workers, appear to have contributed to the employee health. These results show the importance of an overall approach to health and of managers supporting the objectives and the employees by their methodologies and through communication.

Practical Implications

It is difficult to answer the question ‘How have managers on different management levels worked to achieve co-worker health?’ by simply identifying management methodologies. After having studied three management levels of a successful bank no complete solution can be given, but the identified successful approach and advice of methodologies presented in Figure 6 may give valuable inputs and ideas to other managers who aim to improve both health status and profitability. In summary, the author would give the following suggestions to managers at different levels of large organizations.

Executive Management

- Create and mediate clear health strategies, objectives and intentions with a business perspective on health.
- Set goals, measure and evaluate performance – continually ask for results in areas associated with the objectives.
- Facilitate the work of managers at middle levels and co-workers by offering methodologies and tools that support the objectives of the organization.

Middle Level Management

- Have dialogues with managers at lower levels – be clear in communicating what executive managers have expressed as being important to the organization.
• Be a coach to managers at lower levels and trust them.
• Prioritise and ask for results in focal areas.

Lower Level Management (Initiate/Closest to the Co-workers)
• Create a relationship with the individual through dialogue, trust and ‘management by walking around’.
• Be a coach to the co-workers and make sure they have the right opportunities and competence to perform their work.
• Set goals, measure and follow up results in confidence with the co-workers.

Further Research
There is a reason to believe that, in addition to already well-known methodologies, the company-wide health approach with supportive methodologies and measurements, the business view on health issues and the management’s courage to learn and deal with psychosocial illness as well as personalities, have had a large impact on the success of the bank. Further research on not only methodologies but also on holistic approaches regarding management for sustainable health would therefore be of interest. There also seems to be an interesting connection to TQM that should be studied further. In addition, since a business perspective and cost incentives on health seem to have an impact on management motivation to reserve resources and activities to health improvements, it is necessary to learn more about business models, measurements and calculations on health and sickness absence issues.

The result also shows a common understanding, among the managers, about what are important factors to achieve health and profitability. These factors also have similarities with health factors identified in other studies. This leads the author also to wonder about the opinions of the bank’s co-workers and how the co-workers opinions are related to the managers’ statements. However, this subject has to be the issue of a future, additional analysis to be performed from the view of the co-workers.

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Notes
1. The words ‘employee’ and ‘co-worker’ are here used alternately for a person who works for and/or with another in return for financial or other compensation.
2. The information about Föreningssparbanken is based on personal observations, documentations of the organization (Annual reports for 2002-2004, and http://www.fsba.se) and facts given by its management and co-workers. More information about Föreningssparbanken can be found in Föreningssparbanken AB (2005) and on http://www.swedbank.com.
3. The Swedish insurance company Alecta has instituted a national award, ‘Sweden’s best workplace’, that considers leadership, work environment, participation and interaction, long term planning, preventive work and profitability. Each year one or several organizations are awarded in an evaluation process similar to that of quality and business excellence awards, such as the Malcolm Baldrige National Quality Award (NIST, 2004).

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PAPER B

How to create a successful workplace: the co-workers' opinion of 'Sweden's best workplace'

How to create a successful workplace: the co-workers’ opinion of ‘Sweden’s best workplace’

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Abstract: Employee involvement is important to support individual and organisational development, but can also lead to stress and sickness absence. To learn more about how managers should work to achieve forms of involvement that both promote employee health and organisational development, a case study was performed in a large bank that has reduced sickness absence while developing employee dignity and organisational performance. The paper describes the employees’ view of what has been vital to create such a successful workplace and methodologies that have been used to achieve this. The results indicate that managers and employees have worked systematically to create a culture based on common values by choosing supporting methodologies.

Keywords: employee involvement; commitment; management; leadership; TQM; health; methodologies; workplace.


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1 Introduction

The concept of employee involvement is not new, but has been discussed and used for decades (Tubbs, 1994). However, with ever-increasing competition, employee involvement has gained new prominence among organisations in order to lower absenteeism, achieve responsibility and social interactions and in the long run, improve productivity, quality of working life and organisational development (Paul et al., 2000; Velury, 2005). In this context, co-workers who actively participate are seen as a factor for stress prevention, health promotion and for achieving local, as well as global, betterment (Bergman and Klefsjö, 2003). The argument for this is the positive influence that the possibilities of active involvement have on motivation and work satisfaction (Mayo, 1949; McGregor, 1960; Kondo, 1993; Kondo and Park Dahlgaard, 1994). Thereby, stress can be prevented and employee health promoted; at the same time the employees’ knowledge and desire for commitment will contribute to improvement in work within the organisation (Salancik, 1977; Bergman and Klefsjö, 2003).

However, involvement does not directly equate with good work conditions and health, but can also lead to co-worker stress and burn-out. For instance, the disappearance of formal boundaries without their replacement by suitable structures or resources is argued as leaving people to their own judgements, with stress as a consequence, and thereby a cause for absence due to sickness (Docherty et al., 2002; Kira, 2002; McKenna and Beech, 2002; Backström, 2003). Bad health, in turn, implies higher costs for society. For example, the costs for sickness benefits and disablement pensions, together, were 10% of the Swedish Government’s total expenses in 2001 (The National Social Insurance Board, 2000, 2003). Not least, bad health means suffering for the individuals concerned and has implications on their performance, which in turn reduces the companies’ future prospects (Cordes and Dougherty, 1993; Arnetz, 2002; Porter et al., 2003).

On the other hand, there are organisations that have successfully broken the tendency towards rising sickness absence that is documented in several countries in Europe and have established good forms of co-worker involvement. This, in turn, has resulted in good employee health and also in financial growth. Studies by Harnesk et al. (2004), as well as earlier research, show that the management and communication in the organisation is vital in creating employee commitment. For example, Stowell (1988) disputes the concept that managers have to learn how to be more like coaches and less like bosses. It is interesting to note that in many discussions related to co-worker commitment, no co-workers are included (Tengblad and Hällsten, 2002).

In addition, as organisations grow larger, internal communication gets more difficult (Daly et al., 2003). According to Nilsson (1999), most large organisations have hierarchical structures and complex communication channels and are less empowering. Deming (1986) even claims that it is very difficult to apply good leadership in large organisations.

Therefore, it is of great importance to study and learn what employees of large organisations think is vital, and how managers, according to the co-workers, should work to achieve forms of co-worker involvement that promote health and organisational development. In this context, employees in a large Swedish organisation, awarded the title of ‘Sweden’s best workplace’ in 2003, have been studied. The purpose of this paper is, based on that study, to identify and describe factors and methodologies that, according to these co-workers, have been important in creating a good workplace.
2 Theory

2.1 Employee involvement

At the outset, co-worker involvement was practised in programmes like quality circles and self-managing work teams (Tubbs, 1994; Paul et al., 2000). However, during recent decades, the concept has expanded to cover delegation of authorities, responsibilities and rewards to lower levels of the organisation. Factors such as information sharing, ownership and partnership are also often discussed as means to fulfil the common needs of the co-workers and the organisation (Stowell, 1988; Lawler et al., 1989; Velury, 2005). Accordingly, the name of the phenomenon has sometimes changed to ‘employee commitment’ or ‘employee empowerment’.

According to Wellins et al. (1991), empowerment is the process of giving authority and responsibility to individuals at lower levels of the organisational hierarchy. Kinlaw (1995) also talks about influence based on competence. Juhl et al. (1997) simply explain empowerment as delegation of authority, whereas Tengblad and Hällsten (2002) talk about empowerment as a process in which management make the decisions about what authority to distribute and in what way.

Spreitzer (1996) claims that there are good reasons to propose that a feeling of empowerment, and being able to make a difference in the workplace as a co-worker facilitates the commitment to the organisation. Janssen (2004) further argues that commitment, by several authors, have been defined as an individual’s identification with and involvement in the organisation, characterised by a strong belief in, and acceptance of, the organisation’s goals and values, and a willingness to exert considerable effort on behalf of the organisation. Employee commitment is here seen as an effect of new requirements in today’s working life (Stowell, 1988; Axelsson and Bergman, 1999).

On the subject of involvement, Tengblad and Hällsten (2002) also discuss employeeship, which means that every employee should feel like, act like and have the power to be like a manager of their specific work tasks and area of responsibility. This does not mean that the co-workers take the role of executive management, neither is it collective decision making. They believe that the Dane Claus Möller (Möller, 1994), who was involved in the revolution within Scandinavian Airlines, under Jan Carlzon in the 1980s, was one of the pioneers.

To achieve real success, Bergman and Klefsjö (2003) argue that a deeper form of involvement, which they call co-creation, is needed. They state that “co-creation is a committed, actively contributory and supportive way to participate”. It means that co-workers take responsibility for initiatives and development efforts and seek activity with the aim of the common good. The will to be involved as co-creative, though, depends on the belief that one is needed and is able to contribute, as well as on signals from the societal culture influenced by expectations that one should be co-creative and contribute to the development.

Harnesk (2004), similarly to Stowell (1988), further uses the term “partnership with internal customers” to stress the necessary mutual agreement between employers and co-workers. He argues that internal partnership could be a way to achieve increased co-worker commitment and has, from a management perspective, identified decisive factors for achieving partnership. These factors, which are presented in a partnership model, are core values, personal motives, personal maturity, trust and equity.
The model also demonstrates that these, in turn, depend on a fifth factor; communication in dialogues (Harnesk, 2004).

### 2.2 Means to involve employees

To get co-creatively involved employees the management is important (Stowell, 1988; Bergman and Klefsjö, 2003; Harnesk, 2004). Managers must make sure that employees at all organisational levels have the right mix of information, knowledge and rewards to work autonomously or independently of management control (Paul et al., 2000).

Bergman and Klefsjö (2003) state that co-workship is a way of “contributing to the personal development of the employees”, when embarking on the endeavour to stimulate and create opportunities for co-creativity. Also Leiter and Maslach (1988), Csikszentmihályi (2003), Eriksson (2003), and others, draw similar conclusions. Moreover, Bergman and Klefsjö (2003) argue that, to get people co-creative, there is a need for trust and confidence in people, and also self-confidence, communication, purposefulness and the ability to learn from experience. Similar arguments are presented by Griesinger (1990), who claims that a reduction in uncertainty and an increase in honesty and openness can contribute to both economic efficiency and social and ethical betterment.

Furthermore, relations between co-workers and managers, common values and also balance between requirements, objectives and resources are argued to be important factors in the work environment to achieve employee involvement. It is also shown that clear goals, feedback, structures and routines of work, competence development and good performance reviews are important to support personal development and wellness (Leiter and Maslach, 1988; Csikszentmihályi, 2003; Eriksson, 2003).

Similar conclusions, on how to work to achieve a successful work environment, were drawn from case studies carried out among employees of successful minor organisations. In these studies, Harnesk et al. (2004) found a number of methodologies considered, by the co-worker, to be fundamental to their commitment and health. Some of these are: participation by everybody; evaluations made with inquiries and in group discussions; listening, visible and encouraging managers; competence development programmes; the corporate culture and encouraging atmosphere; responsibilities and authorities distributed in accordance with personal interests and competence.

Further on, several researchers stress the importance of the manager’s ability to stimulate employees through coaching (Stowell, 1988; Kinlaw, 2000). According to Kinlaw, coaching is something that managers do, to support people to resolve performance problems and challenges to reach higher levels. Further, he means that it is a function, not a role, and that it “is a mutual conversation that follows a predictable process and leads to superior performance, commitment to sustained improvement and positive relationships.” (Kinlaw, 2000)

Coaching clarifies goals and priorities, helps people understand what is and is not important, invites people to influence their performance and careers, improves the knowledge and skills people need to do their best and conveys to people how important and appreciated they are. In this manner, coaching leads to employee commitment (Kinlaw, 2000).
2.3 Total Quality Management (TQM) and employee involvement

Employee involvement is one of the core values within TQM. Hellsten and Klefsjö (2000) express the value as “Let everybody be committed”, Foster (2001) talks about ‘Employee improvement’ and Dale (1999) emphasises team work and recognition of people as an asset.

Many different definitions and descriptions of TQM have been presented over the years; for a discussion see Bergquist et al. (2006). For instance, Dale defines TQM as

“a management approach of an organisation, centred on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organisation and to society.” (Dale, 1999)

Dahlgaard et al. describe TQM as

“a corporate culture that is characterized by increasing customer satisfaction through continuous improvements involving all employees in the organisation.” (Dahlgaard et al., 1998)

In the last decade some definitions with a system emphasis have been suggested (Shiba et al., 1993; Hellsten and Klefsjö, 2000). Hellsten and Klefsjö view TQM as

“a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources.” (Hellsten and Klefsjö, 2000; Figure 1)

They further argue that to achieve and keep the culture, the values must persistently be supported by suitable methodologies and tools. The values are fixed but the methodologies and tools can differ depending on the value they are supposed to support (Hellsten and Klefsjö, 2000).

Figure 1 Total Quality Management can be seen as a management system made up of values, methodologies and tools

The value of everybody’s commitment is achieved through methodologies based on communication, delegation and training. By inviting employees to actively participate in decisions and activities, motivation and work satisfaction can be created (Hellsten and
3 Methodology

To explore factors and methodologies that are important to achieve a good workplace and sustainable health, a case study was performed at FöreningsSparbanken (FSB), a large Swedish bank, chosen because of its having received the award ‘Sweden’s best workplace’ in 2003 (More information about FöreningsSparbanken is given in the Appendix). The study included managers at many levels as well as employees at separate bank offices. This paper focuses on the views of the employees.

3.1 The research process and approach

The case study was accomplished in a process similar to the Deming cycle: plan-do-study-act. Figure 2 illustrates the steps taken in each phase of the process in order to explore the views of the co-workers at two different bank offices; Office α and Office β. The outcome of the data collection, i.e., empirical findings, served as input to the analysis. In the same way the results of the analysis, together with literature, was a base for comparisons with the theory, the conclusions and the discussion.

3.2 Planning

In August 2004, the research team first got in contact with managers of FöreningsSparbanken and decided to focus the study on ‘Bank branches’, one of the bank’s five business areas; see Appendix. Two offices were randomly selected from two
different local groups. These local groups were chosen, to make sure that several related
levels of the organisational hierarchy and the geographical dispersion of the bank would
be accounted for. The selection of representatives of the co-workers was entrusted to the
office managers in order to assure a variation in professional roles, genders, ages and
experiences among the participants and to minimise the disturbance to the everyday
business of the offices.

3.3 Data collection

The intention of the study was to explore the employees’ views of how managers and
employees within the bank have worked to create a good workplace. Since we believed
that the reasons might be embedded in complex activities and difficult to express,
workshops using tree diagrams (Mizuno, 1988) were selected to aid the data collection.

In the workshop at Office α five female co-workers took part. They represented a
mixture of ages, defined working roles and time in the bank. At Office β, four persons of
varying ages, gender and roles participated in the workshop.

Initially, the co-workers were asked about their opinions on the award and being
named ‘Sweden’s best workplace’. The groups were then guided to answer three
successive questions, at different levels, through discussions about success factors and
methodologies in brainstorming and consensus processes. In these discussions the tree
diagram tool was used to organise and scrutinise the answers; see Figure 3. The idea was
similar to the ‘five-why’-methodology, introduced at Toyota to reach basic reasons
(Toyota Motor Corporation, 2003).

Figure 3  The tree diagrams were created in discussions and consensus processes using three
consecutive questions. The figure shows an example of how suggestions were given
and explored in several steps through the questions. The example is a part of the tree
diagram created at Office α.
The first question, Level 1, was of a general nature: “What makes FöreningsSparbanken (FSB) one of Sweden’s best workplaces?” Suggestions from the co-workers were then written on post-it notes and placed on a white-board; see Figure 3. The next step was to further explore these suggestions by asking ‘Why?’ or ‘What is causing this?’ to each of the post-it notes (Level 2). Once again, answers were written down and placed on the white-board. Last, on Level 3, to identify more detailed methodologies, these suggestions were examined by asking the co-workers “How have you worked within FöreningsSparbanken (FSB) to achieve this?”

Suggested procedures for using tree diagrams were followed (Mizuno, 1988; Klefsjö et al., 1999) and one tree diagram was established during each workshop. Both workshops were guided by the same member of the research team. This coordinator asked the questions, followed up the answers and, when needed, acted as a facilitator during the discussions. In addition, at least one more member of the research team participated as an observer and assisted the group by writing the submissions on post-it notes. Each workshop lasted for approximately four hours, and afterwards the tree diagrams were documented by the research team and verified by the participants.

3.4 Analysis

The data in the tree diagrams were later analysed by the research team in a workshop led by an external facilitator. This person had no information about the bank, but helped the research team to control the steps of the analysis and to stay as objective as possible. One tree diagram, at a time, was considered and the information on each separate post-it note was discussed to get a common understanding of its message within the research team. Affinity diagrams, recommended to reduce disorganised facts, ideas and information, about unknown and unexplored areas, to a narrative form, were then used to organise the large amount of qualitative information. The procedures suggested by Mizuno (1988) were used to achieve unanimous and deeper understandings of influential factors and methodologies and help building explanations to the question “What, according to the co-workers, makes FöreningsSparbanken (FSB) to one of Sweden’s best workplaces?”

Throughout the analysis, all the notes originating from the tree diagrams were taken out of the diagrams and instead, organised into categories based on affinity. Basically, this was done in a consensus process built on different steps. Initially, all the notes were arranged in groups of related factors and methodologies that the co-workers had recognised as important to the bank’s success. Thereafter, the notes of each group were summarised and expressed as a new success factor reflecting the core of the notes within the group. Within these newly formulated success factors, the research team, once more, searched for relations and then again formed groups of factors that had connections. Thereby a few prevailing factors could be formed to explain the question about the bank’s success. These success factors were also, when possible, arranged in cause-and-effect order; see Figure 4(a) and (b).

The analysis was later continued by a comparison of the two offices. In this comparison the findings of both tree diagrams and affinity diagrams served as inputs; see also Figure 2. First, the findings of the affinity diagrams and tree diagrams of the two offices were compared to find out about similarities and differences regarding the factors that make the bank a good workplace. Thereafter the methodologies related to those success factors that looked similar to both offices, were compared. In that way the
How to create a successful workplace: the co-workers’ opinion

question “How have FöreningsSparbanken (FSB) worked to become one of Sweden’s best workplaces” could be explained. Finally, the results of the analysis were also compared to theory.

4 Empirical findings

Initially, the co-workers at both Office α and Office β, with one accord said that they were lucky to work at FöreningsSparbanken and that they had a great workplace. They were proud of and enjoyed being employees of the bank. By using the tree diagrams, the employees were then encouraged to answer questions on three different levels: ‘What?’ , ‘Why?’ and ‘How?’ and thereby explain what makes FöreningsSparbanken a good workplace and what methodologies had been used to achieve that.

4.1 Success factors that make FöreningsSparbanken a good workplace

On the lowest level, Level 1, of the tree diagrams, both groups agreed upon four success factors that answered the question “What makes FöreningsSparbanken (FSB) to one of Sweden’s best workplace?”; see Table 1.

The groups were then asked to agree upon why each of these success factors was important or, alternatively, explain what was creating the factor. The reason for this was to further investigate why the mentioned success factors were considered important and to get a more detailed explanation. The discussions within the groups resulted in several answers on the second level of the tree diagrams; see Table 1.

Table 1 The matrix shows the employees’ answers on the first and second level of the tree diagrams. These answers were derived through discussions about what makes FöreningsSparbanken a good workplace and why

<table>
<thead>
<tr>
<th>Office α</th>
<th>Level 1: Success factor</th>
<th>Level 2 Why is this factor important? and/or What is causing this factor?</th>
<th>Continuous learning</th>
<th>A good work environment</th>
<th>Continuous development</th>
<th>We work close to the customers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous learning</td>
<td>Training</td>
<td>We enjoy being at work</td>
<td>We enjoy being at work</td>
<td>Personal development</td>
<td>We ask about our customers’ opinions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We learn from each other</td>
<td>Good facilities</td>
<td>Good facilities</td>
<td>Development</td>
<td>We are available to the customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enjoyable work</td>
<td>We work office hours</td>
<td>We work office hours</td>
<td>Dialogues</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variation</td>
<td>Preventive healthcare</td>
<td>Preventive healthcare</td>
<td>Business development</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changing customer demands</td>
<td>Ergonomic workplaces</td>
<td>Ergonomic workplaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Varying working tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 1  The matrix shows the employees’ answers on the first and second level of the tree diagrams. These answers were derived through discussions about what makes FöreningsSparbanken a good workplace and why (continued)

<table>
<thead>
<tr>
<th>Office β</th>
<th>Clear professional roles</th>
<th>Secure workplace</th>
<th>Flat organisational structure</th>
<th>Possibility to participate and influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Success factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Why is this factor important? and/or What is causing this factor?</td>
<td>Customers’ requirements on competence have increased</td>
<td>Preventive healthcare</td>
<td>Managers see the co-workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organised methodologies</td>
<td>The type of business makes outsourcing impossible</td>
<td>Good office managers with authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We learn from each other</td>
<td>Good terms of employment</td>
<td>A ‘we-feeling’ in all units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continuous training</td>
<td>Clear regulations</td>
<td>Responsibilities and authority delegated to co-workers having customer relations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The company is successful</td>
<td>Resources to improve safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Knowledge available within the company</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clear bodies of regulations – freedom within</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Market and Human capital research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Management encourages dialogues</td>
</tr>
</tbody>
</table>

4.2 Methodologies

When creating the top level, Level 3, of the diagrams the co-workers described methodologies, i.e., how they thought managers and co-workers had worked to achieve the essence of the factors presented in Table 1, and consequently become a good workplace. The methodologies mentioned by the co-workers are given in Table 2. This table also describes from which factor the methodologies were derived in the co-workers’ discussions.

The empirical findings show that the co-workers of the two offices came up with different success factors that they believed were the foundation for the achievements of the bank. However, the answers regarding why the factors are important and what is creating them, as well as the methodologies mentioned, show similarities. Together, the success factors and methodologies consequently seem to give two fairly consistent pictures of what, co-workers of Office α and Office β think, makes FöreningsSparbanken a good workplace and how they have worked even though the success factors were expressed differently.
How to create a successful workplace: the co-workers’ opinion

Table 2  The methodologies were derived through co-workers’ discussions about how they had worked within the bank to achieve each of the factors given in Table 1

<table>
<thead>
<tr>
<th>Success factor</th>
<th>Methodologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office α</strong></td>
<td></td>
</tr>
<tr>
<td>A good work environment</td>
<td>Co-worker participation in design of workplaces</td>
</tr>
<tr>
<td></td>
<td>We work office hours</td>
</tr>
<tr>
<td></td>
<td>Preventive healthcare: common activities, health representatives, counselling, competitions</td>
</tr>
<tr>
<td></td>
<td>Ergonomic and tailor-made workplaces to individuals</td>
</tr>
<tr>
<td></td>
<td>The office manager and co-workers create a atmosphere based on the needs within the office – we respect each other and work as a team</td>
</tr>
<tr>
<td></td>
<td>Both male and female co-workers</td>
</tr>
<tr>
<td></td>
<td>Measure the human capital</td>
</tr>
<tr>
<td></td>
<td>A co-determination agreement – possibility for the co-workers to actively participate</td>
</tr>
<tr>
<td></td>
<td>Yearly gathering of all within of the whole local unit</td>
</tr>
<tr>
<td></td>
<td>Resources to work environmental and health activities are reserved by managers</td>
</tr>
<tr>
<td></td>
<td>The office managers listens, cares, remembers everyone’s birthday and asks the co-workers and tries to arrange what the co-workers need</td>
</tr>
<tr>
<td></td>
<td>Regular office meetings and information sessions</td>
</tr>
<tr>
<td>Continuous learning</td>
<td>Access to external and on-the-job training</td>
</tr>
<tr>
<td></td>
<td>Permission to study during office hours</td>
</tr>
<tr>
<td></td>
<td>Get leave of absence, salary and literature</td>
</tr>
<tr>
<td></td>
<td>We learn from each other</td>
</tr>
<tr>
<td></td>
<td>We consult and advise each other by e-mail</td>
</tr>
<tr>
<td></td>
<td>Formal networks between local units and offices – meetings, mailing registers etc.</td>
</tr>
<tr>
<td></td>
<td>The organisational culture: we share our knowledge</td>
</tr>
<tr>
<td></td>
<td>Technical innovation is prioritised by managers and new technical equipment is tested before it is put in use</td>
</tr>
<tr>
<td></td>
<td>Suggestion schemes</td>
</tr>
<tr>
<td></td>
<td>We adapt to changing customer demands by counselling, go-to-see meetings, registers and offering tools to customers</td>
</tr>
<tr>
<td>Continuous development</td>
<td>Dialogues</td>
</tr>
<tr>
<td></td>
<td>Individual goal-setting, based on restrictions from upper management, and follow up monthly in confidence with manager</td>
</tr>
<tr>
<td></td>
<td>Choose to compete against other offices</td>
</tr>
<tr>
<td></td>
<td>Performance reviews twice a year</td>
</tr>
<tr>
<td></td>
<td>System for competence administration including diagnostic tests, self-evaluation tools, knowledge certifications and competence profiles</td>
</tr>
<tr>
<td></td>
<td>Try and adopt new work conditions</td>
</tr>
<tr>
<td></td>
<td>Everybody is engaged in a professional role</td>
</tr>
<tr>
<td></td>
<td>Permission to implement changes – open discussions and decisions within the office</td>
</tr>
<tr>
<td>We work close to the customers</td>
<td>Ask about customers’ opinions: questionnaires and personally – results evaluated and acted upon</td>
</tr>
<tr>
<td></td>
<td>Available to the customers: the only office with its own telephone exchange, opening hours 9 am–4 pm</td>
</tr>
</tbody>
</table>
Table 2  The methodologies were derived through co-workers’ discussions about how they had worked within the bank to achieve each of the factors given in Table 1 (continued)

<table>
<thead>
<tr>
<th>Success factor</th>
<th>Methodologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office β</td>
<td>We learn from each other</td>
</tr>
<tr>
<td>Clear professional roles</td>
<td>We work close to each other in an open-plan office</td>
</tr>
<tr>
<td></td>
<td>It is okay to ask questions</td>
</tr>
<tr>
<td></td>
<td>Work in cross-functional projects</td>
</tr>
<tr>
<td></td>
<td>New co-workers are actively recruited to fit in the group and culture of the workplace</td>
</tr>
<tr>
<td></td>
<td>Regular performance reviews</td>
</tr>
<tr>
<td></td>
<td>Personal strategies for education – considered in the performance reviews</td>
</tr>
<tr>
<td></td>
<td>Continuous education</td>
</tr>
<tr>
<td></td>
<td>System for administration of competences including competence profiles and tests</td>
</tr>
<tr>
<td>Secure workplace</td>
<td>Good terms of employment; flexible working hours, bonuses</td>
</tr>
<tr>
<td></td>
<td>Preventive healthcare</td>
</tr>
<tr>
<td></td>
<td>Clear and standardised methodologies, tools and vocabulary</td>
</tr>
<tr>
<td></td>
<td>A clear body of regulations</td>
</tr>
<tr>
<td></td>
<td>Continuous development and clarification of the business</td>
</tr>
<tr>
<td></td>
<td>The bank works according to a long-term strategy</td>
</tr>
<tr>
<td></td>
<td>Safety is prioritised – no cash handling, new technical equipment, training</td>
</tr>
<tr>
<td></td>
<td>Competence available within the bank; specialists tied to each office, helpdesk, internal education, user-friendly computer systems</td>
</tr>
<tr>
<td></td>
<td>The co-workers can influence the design of computer systems</td>
</tr>
<tr>
<td>Flat organisational structure</td>
<td>Re-organisation to reduce the number of levels of middle managers</td>
</tr>
<tr>
<td>Possibility to participate and influence</td>
<td>The co-workers are trusted; authority and responsibility are given to office managers and co-workers who work closest to the customers</td>
</tr>
<tr>
<td></td>
<td>Clear recruitment of managers</td>
</tr>
<tr>
<td></td>
<td>Managers pay attention to the co-workers; know everybody’s name, fast feedback on suggestions and questions submitted by telephone and e-mail</td>
</tr>
<tr>
<td></td>
<td>Managers encourage dialogues; meetings and an open culture</td>
</tr>
<tr>
<td></td>
<td>The co-workers can actively influence the business plan</td>
</tr>
<tr>
<td></td>
<td>Management has created a ‘framework’ – co-workers and office managers have freedom to act within the frames</td>
</tr>
<tr>
<td></td>
<td>Market research and continuous measures of the human capital – results are presented</td>
</tr>
<tr>
<td></td>
<td>Ask customers about their needs and expectations</td>
</tr>
<tr>
<td></td>
<td>Use of a business plan including goals, measures, analysis of gaps, actions</td>
</tr>
</tbody>
</table>

5 Results

The information given in the tree diagrams was then analysed by the research team. First, success factors were derived by use of affinity diagrams; see Figure 4(a) and (b).
Based on these and comparisons of the two offices’ complete tree as well as affinity diagrams, a model could be created to describe both success factors and how the bank has worked to become one of Sweden’s best workplaces; see Figure 5. The results of different steps of the analysis are described in more detail below.

5.1 Findings of the affinity diagrams: What makes FöreningsSparbanken one of Sweden’s best workplaces?

The complete tree diagrams were analysed by the research team in order to structure and condense the information and to describe and explain the opinions expressed by the co-workers. This analysis resulted in two affinity diagrams, which present success factors that together summarise the thoughts of the employees; see Figure 4(a) and (b). Moreover, cause and effect orders of the success factors were identified. These are illustrated with arrows in Figure 4(a) and (b). For example, in Figure 4(a), these are understood such that management is a foundation for the clear expectations and requirements on employees which, in turn, make it possible for the employees to be actively involved.

Figure 4(a) The figure shows five success factors that together are explanations for What, according to the co-workers of Office α, makes FöreningsSparbanken one of “Sweden’s best workplaces?”

Figure 4(b) The figure shows the success factors formulated in the analysis of the tree diagram of Office β. Between the three success factors to the left there was a cause and effect order identified

5.2 Comparison of Office α and Office β. How has FöreningsSparbanken worked?

A comparison between the affinity diagrams at the two offices shows similarities. In both diagrams the cause-and-effect relations seem to emphasise a clear, caring and committed leadership as a base; see Figure 4(a) and (b).

The results presented in Figure 4(a), regarding Office α, highlight the importance of continuous learning, cooperation and the possibility for employees to influence work
and participate in the design of their work environment. Similar thoughts are also found in the tree diagram created at Office β. For example, the co-workers emphasised their opportunities to influence the business plan and design of computer systems as well as their freedom to make decisions and work independently within the framework set by management; see Table 2.

Ultimately, both affinity diagrams show that the bank strives to adapt its business, methodologies and work environment to the needs of the customers (and society). Moreover, the employees described a culture of openness and knowledge sharing that encourages active participation and learning. Within both offices, employee involvement was vaunted and methodologies such as a co-determination agreement and delegation were observable. The diagrams also show that management and employees practise clear goal setting and follow up to create a safe and good work environment and make participation and learning possible. At the same time competence systems, active recruiting, training and networks were mentioned as means to further support this culture.

5.3 Success factors and methodologies

Lastly, the findings of the analysis could be summed up in a model describing those factors that appear to have made FöreningsSparbanken a good work place and how the bank has worked to achieve this; see Figure 5.

Figure 5 The figure highlights the success factors and supporting methodologies that, according to the analysis of the employees’ opinions, have contributed to the success of FöreningsSparbanken
In summary, the figure highlights the success factors that, from the view of the employees, seem to have been vital to the success of the bank: customer focus, continuous development, employee involvement, a good work environment, committed leadership and clarity. These were identified based on the central role they had in both tree diagrams and affinity diagrams. Moreover, they seemed to be common to both the offices and the core of their work. The methodologies described, in addition, seemed to emphasise a work aimed at these success factors. Several methodologies even appeared to support more than one success factor and in the end contribute to “A flexible organisation adapting to internal and external customers’ needs”. Moreover, committed, caring, active and visible managers seemed to be the base for all this.

6 Discussion

In summary, the study shows that well practised management methodologies and actively involved co-workers have been the base for creating a flexible company adapted to the needs of its employees and external customers. These results confirm what has been stated by, for instance, Leiter and Maslach (1988), Griesinger (1990), Juhl et al. (1997), Csikszentmihályi (2003) and Harnesk (2004).

According to the employees, managers of the bank appear to have practised a caring, clear, visible and coaching leadership, which reduces uncertainty and increases openness in order to create employee commitment and frameworks that support development and avoid stress as an outcome of participation. This work is in agreement with Kinlaw (2000).

The findings contrast with the fears of Deming (1986), Nilsson (1999) and Daly et al. (2003) demonstrating that a large and geographically dispersed organisation can successfully practise a coaching leadership and establish good communication. The employees at the lowest organisational levels seem to have got a favourable mix of information, knowledge and rewards to work autonomously or independently of management control. In that way the bank has achieved co-creation, low percentages of sickness absence, and organisational competitiveness.

6.1 Methodologies for achieving employee involvement and a successful workplace

The bank seems to have managed to involve the co-workers and build personal relations between managers and employees through a caring leadership, daily dialogues, individual goal setting and follow up, frequent performance reviews and weekly meetings.

Moreover, the co-workers in the study claimed that managers delegate responsibilities along with authorities and availability of resources and training and give them freedom to act within unambiguous frames; see Figure 5. Thereby, the employees have had the opportunity to make their own decisions which, according to Dygert (2000), is a good way to get employees to care about the success of the organisation.

Furthermore, the employees felt that the culture of FöreningsSparbanken encourages participation and personal development. The concrete co-determination agreement further shows the opportunities that employees have to be co-creative and also that the bank has well developed forms of involvement. The agreement is an actual mutual contract between the employer and co-workers, reflecting the responsibility of managers
to simplify employee participation and the responsibility of co-workers to take initiatives and seek involvement, activity and development; see Appendix. In this manner, it could be argued that co-workership, as defined by Bergman and Klefsjö (2003), and employeeship, as discussed by Tengblad and Hällsten (2002), exist within the bank. The co-determination agreement also shows similarities to an internal partnership, that Harnesk (2004) talks about.

6.2 Total Quality Management (TQM) and fundamental values

Interestingly, the factors highlighted in Figure 5 have similarities to the bank’s values; sustainable development, humility, customer satisfaction and to be ‘a bank for everyone’ and an attractive employer providing opportunities for involvement, personal development and security; see Appendix. These values are also visible in the tree diagrams.

Consequently, the findings show that managers and co-workers within the bank have worked systematically to support the common values. These common values consistently seem to have been supported by strategic methodologies and tools practised within Föreningssparbanken and by resources reserved by the management. Thereby, the work of the bank could be argued to follow the view by Hellsten and Klefsjö (2000) on how to work with TQM.

Both affinity diagrams also show that the bank, according to its employees, strives to adapt the business, methodologies and work environment to the needs of the customers (and society). Moreover, the study demonstrates the importance of management and co-worker involvement, which has been stressed by, for instance, Stowell (1988), Kinlaw (2000) and Bergman and Klefsjö (2003).

6.3 Methodological issues

In general, the same factors and methodologies were identified at both the offices. The results might, though, be influenced by the analysis of the research team, since affinity diagrams were created out of the co-workers’ suggestions and then compared. However, the validity of the study should be strengthened by the fact that the tree diagrams were created in discussions between the employees without management participation. In addition, these tree diagrams demonstrated large similarities even before the analysis. Tree diagrams have also been used in similar studies and proven to inspire creativity and be useful in structuring qualitative information from a complex situation (Harnesk et al., 2004).

The minor differences found between the offices could be a result of two different units working as two smaller organisations within the bank and with their own ‘unit’ managers. This feeling was even described by the co-workers as the ‘we feeling’ of each unit.

Finally, the results are not assumed to give a complete picture of the entire bank but should give valuable examples of how to work. The selection of co-workers was entrusted to the office managers in order to assure a variation among the participants and to minimise the disturbance of the everyday business of the offices. Moreover, the studied offices were chosen for practical and geographical reasons and were not
necessarily the most successful units of FöreningsSparbanken. On the other hand, there are no suspicions that these offices or employees perform differently from what is typical in the bank.

7 Conclusions

The purpose of the paper was to identify and describe factors and methodologies that, according to the co-workers, are important to create a good workplace.

Five success factors that seem to have been vital to the success of the bank could be recognised: customer focus, continuous development, employee involvement, a good work environment, committed leadership and clarity.

The findings demonstrate the importance of strong co-worker involvement, which has been stressed by Stowell (1988), Kinlaw (2000) and Bergman and Klefsjö (2003), to mention a few. The possibility to actively participate as a co-worker was seen as a vital factor by the employees.

Further, the importance of a caring, clear, visible and coaching management as a base was emphasised. Practices of, for instance, dialogues, preventive health care, delegation, a system for administration of competences, and also strategic recruitment of managers have been common methodologies within the bank. Most of these should be valuable to apply in other companies.

Managers and co-workers within FöreningsSparbanken seem to have worked systematically in accordance with common values to create a culture that has been the base for the methodologies and tools used in the every-day work. This is in line with Hellsten and Klefsjö (2000) when discussing TQM. The employees mentioned several thriving methodologies used by managers to create a culture that encourages learning and development and to involve the co-workers in the design of work tasks, the work environment and the business plan.

The conclusion from this is that management has been vital in creating employee allegiance. Also, managers and co-workers of the bank have worked in accordance with what is already advocated in theory and have managed to create successful practices of leadership and communication in their large and wide spread organisation. Through coaching and co-workership and co-creation, a good work place and business results have been created. In summary, the study in several ways confirms what already has been argued in theory but too seldom is shown in practice.

The conclusions in this study derive from the opinions of co-workers. More about possible links between the objectives and means of managers at higher organisational levels and the actual activities and performances as experienced by the employees are discussed in Wreder (2006).

Acknowledgements

The authors gratefully acknowledge the financial support from the Swedish insurance company, Alecta. Many thanks also to the representatives of FöreningsSparbanken, who made the study possible and interesting. Furthermore, the authors would like to thank the members of the research team, Ingela Bäckström and Pernilla Ingelsson at Mid-Sweden University.
References


How to create a successful workplace: the co-workers' opinion


Notes

1 In this paper the words ‘employee’ and ‘co-worker’ are used alternately for ‘a person who works for and/or with another in return for financial or other compensation’.

2 In this paper the meaning of what is a ‘good workplace’ is based on the opinions of the co-workers. The organisation studied has been awarded the title ‘Sweden’s best workplace 2003’ for its excellent leadership, employee involvement, work environment and financial results.

3 The Swedish insurance company Alecta has instituted a national award, ‘Sweden’s best workplace’, that considers leadership, work environment, participation and interaction, long term planning, preventive work and profitability. Each year one or several organisations are awarded in an evaluation process similar to that of quality and business excellence awards, such as the Malcolm Baldrige National Quality Award (NIST, 2005) and the European Quality Award (EFQM, 2005).

4 The information about FöreningsSparbanken is based on personal observations, documentations of the organisation (FöreningsSparbanken AB, 2005a) and facts given by its management and co-workers. More information about FöreningsSparbanken AB can be found on http://www.fsb.se.
Appendix: Case description

FöreningsSparbanken is one of the largest banking groups in the Nordic area and was founded in 1997 through the fusion of Sparbanken Sverige and Föreningsbanken, which have their roots in the early 19th and 20th centuries respectively; see Table A1.

According to FöreningsSparbanken AB (2005) the bank’s fundamental values are long-term sustainable development, humility and a strong relationship with local communities. It prioritises customer satisfaction and aims to be ‘a bank for everyone’ and an attractive employer giving opportunity to involvement, personal development and security. A characteristic is a co-determination agreement that invites employees to take part in the bank’s operations through insight, involvement, and responsibility.

In 2004, the bank had around 15,000 employees, of which approximately 9,000 worked in Sweden. The group is organised into five business areas, including Swedbank Markets (investment bank), Robur (fund management) and Swedish retail operations. The latter consists of subsidiaries, for instance the telephone and internet banks and the bank branches. The bank branches make up an important unit, which is divided into geographic regions and encompasses a network of local bank offices; see Figure A1. In 2004 the business area comprised around 490 offices, which were divided into 75 local banks and spread in six regions.

Table A1  A selection of important events in FöreningsSparbanken, mainly between 2000 and 2004

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity in FöreningsSparbanken</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>FöreningsSparbanken was founded</td>
</tr>
<tr>
<td>1997–1999</td>
<td>Staff reductions as consequence of the merger</td>
</tr>
<tr>
<td>2000</td>
<td>The co-determination agreement (IDA) was established</td>
</tr>
<tr>
<td>2001–2004</td>
<td>Roles of employees and managers were defined in order to better meet the needs of customers</td>
</tr>
<tr>
<td>2001–2004</td>
<td>Programs for managers were carried out to ensure new leadership and help managers</td>
</tr>
<tr>
<td>2002</td>
<td>A staff reduction program, including more than 500 employees, was run in the banking group</td>
</tr>
<tr>
<td>2002–2004</td>
<td>A health project was carried out in order to cope with increasing levels of sick leave</td>
</tr>
<tr>
<td>2003</td>
<td>Received the National Alecta award ‘Sweden’s best workplace’</td>
</tr>
<tr>
<td>2003</td>
<td>A new CEO was appointed</td>
</tr>
<tr>
<td>2003 and 2004</td>
<td>Was the most profitable major bank in the Nordic region</td>
</tr>
<tr>
<td>2004</td>
<td>Received an award as “The Competence Company of the year”</td>
</tr>
</tbody>
</table>
Figure A1 Overview of the Bank branches unit, which consists of six regions. Each region is divided into a number of local banks. Moreover, several offices are organised under these local banks.

Some basic information about the two specific local banks that have been studied is presented in Table A2.

Table A2  Basic facts about the studied offices and the local banks that they are parts of

<table>
<thead>
<tr>
<th>Local bank A and Office α</th>
<th>Local bank B and Office β</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of local banks in the region</td>
<td>10</td>
</tr>
<tr>
<td>No of employees in local bank</td>
<td>130</td>
</tr>
<tr>
<td>No of offices in local bank</td>
<td>10</td>
</tr>
<tr>
<td>No of employees in office</td>
<td>9</td>
</tr>
<tr>
<td>Other remarks</td>
<td>All employees at Office α are women (except for the manager)</td>
</tr>
</tbody>
</table>

Since 2002, the business unit has measured and followed up on health issues, for instance, ‘Well-being’, which measures employees’ opinions on health-related issues. Other indices that have been used are ‘Satisfied Employee Index’, which measures
employees’ opinions of their personal situation in the company and ‘Value-adding ability’, i.e. employees’ opinions of their ability to create value for customers: see Table A3.

Table A3  The development of human capital, in terms of the indices measured since 2003 and presented in the Annual report, 2004

<table>
<thead>
<tr>
<th>Development of human capital (Local banks in Sweden)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied employee index</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>Well-being</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Value-adding ability (private and business customers)</td>
<td>75</td>
<td>77.5</td>
</tr>
</tbody>
</table>

Source: FöreningsSparbanken AB (2005a, 2005b)
PAPER C

Management for sustainable health: A TQM-inspired model based on experiences taken from successful Swedish organizations

Management for sustainable health
- A TQM-inspired model based on experiences taken from successful Swedish organizations

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ABSTRACT

Purpose: The purpose of this paper is threefold: to describe how a large organization has successfully worked to achieve sustainable health; compare the work of the large organization with methodologies used by smaller successful organizations; and then to create a model for how managers of larger organizations can work to create sustainable health.

Methodology: The empirical data was gathered through interviews with managers at different organizational levels and workshops with employees, within a case study in a large bank which received the award ‘Sweden’s best workplace’. The data was also compared to results from earlier case studies of three smaller organizations that have received the same award.

Findings: The results of the studies show coinciding results as to the importance of management commitment and methodologies, such as employee involvement, delegation, goal deployment and coaching, to create a health-promoting work environment. This indicates that larger organizations do not need any specific methodologies. Indeed, how managers can work to create sustainable health is not only described by methodologies but also has to be considered within a wider management strategy. Based on the empirical findings it could be argued that such a strategy for health promotion may be designed with a similar system perspective as that of Total Quality Management.

Practical implications: Based on the experiences from four successful organizations, managers should mainly consider to (1) start measuring and evaluating the consequences of sickness absence in their organization and (2) adopt a management strategy based on humanistic core values that are supported by methodologies and tools.

Originality/value: The paper adds understanding about how managers of large organizations could work practically to overcome management problems in today’s working life and support the work and organizational factors earlier described in literature to create a health-promoting work environment that stimulates the development of sustainable health.

Key words: Management, sustainable health, TQM, corporate culture

1. INTRODUCTION

1.1 Background
In recent decades, sickness absence and related costs have become a major problem in parts of the Western world. In Sweden, for instance, the number of sick leaves extending over more than 365 days increased by almost 30% per year between 1997 and 2001 (Swedish Official Government Report, 2005). The number is still high and in 2006 the costs for sickness and incapacity benefits in Sweden was EUR 12.5 billion (Gatu, 2006).

An important part of the sickness is work-related and stressful modern workplaces are argued to be a major cause of this (Gatu, 2006; Docherty et al., 2002). International competition and the ever-changing demands of modern working life put considerable pressure on
organizations and call for cooperation between managers and employees to reach goals and to constantly improve products and processes. Thus, organizations are dependent on employees’ competences, motivations, health, and work performances. Indeed, this situation often results in work intensification, stress and high sickness absence, which might have an adverse effect on business competitiveness (Arnetz, 2005; Backström, 2003; Kira, 2002).

To reverse the trends of increasing sickness absence and promote health at the workplace, management is assumed to have the foremost impact. Managers should create a work environment in which the individual employee can handle the demands in work and have control and opportunity to develop (Karasek, 1990). In addition, support from managers in work is shown to be vital for employees’ well-being (Aronsson & Lindh, 2004). Several authors have even argued that management has to be adjusted to the requirements of modern working life. To manage the increasing demands of, for instance, flexibility and employee involvement, managers should delegate responsibility and be more supportive to the lower levels of organizations (Kinlaw, 2000; Deming, 1986). However, such management may be difficult to practice in large organizations that tend to be hierarchical and have complex communication channels (Daley et al., 2003; Nilsson, 1999).

Nevertheless, at the same time as many organizations have problems with sickness absence, there are organizations that have successfully broken the tendency and shown excellence in management and health promotion. Some examples are the organizations that have received the national award “Sweden’s best workplace”, which considers management and leadership, work environment, participation and interaction, preventive work and profitability. Each year, one or several organizations may be given the award in an evaluation process similar to that of quality awards and business excellence awards, such as the EFQM Excellence Award1 (EFQM, 2006). The discussion in this paper draws on experiences from a Swedish research project called “Leadership for sustainable health”2, which examined how managers and employees of award-winning organizations successfully create sustainable health and competitiveness.

1.2 Purpose
An empowering and supporting management attitude is argued to be vital to promote employee health and business competitiveness. However, even management as such is argued to be difficult to practise in large organizations. This implies that managers of large organizations may need to work in ways that differ from those used by managers of smaller organizations, to overcome such as hierarchical structures and hinders for communication. Thus, the purpose of this paper is threefold. First, we shall describe how a large organization has successfully worked to achieve health and from that, identify methodologies3 that have been used by managers and employees and can be adopted by other organizations. Second, the purpose is to compare the work done by that large organization with methodologies used by smaller successful organizations. Third, we shall create a model as a support for how managers, of larger organizations, can work to create sustainable health.

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1 Earlier named ‘the European Quality Award’.
2 In the research project “Leadership for sustainable health”, several researchers from Luleå University of Technology and Mid-Sweden University in cooperation have studied Swedish organizations that have received the award “Sweden’s best workplace”. The overall aim of the project is to integrate experiences from such organizations to help other organizations create sustainable health and competitiveness.
3 Methodologies are here seen as ways of working, which consist of sequences of activities that may differ between organizations and from time to time. (Hellsten & Klefsjö, 2000).
2. THEORY

2.1 Sustainable health

Health is described from many different perspectives in the literature. The concept of “health” can, on the one hand, refer to an individual’s feeling of complete physical, mental and social well-being (WHO, 1948). In this perspective, health is also viewed as a combination of self-assessed health, absence of chronic disease and absence of subjective health complaints (Medin & Alexandersson, 2000; Mackenbach et al., 1994). On the other hand, health may be described as a process or a resource (Malmquist et al., 2007). For instance, WHO (1986) refers to health as a resource in daily life. Health may further be seen as a resource in a workplace perspective. Malmquist et al. (2007) state that improved health in the workplace enhances human resources, which in turn support better performance and productivity.

“Sustainable health” is a related concept as regards the striving for positive development of health. In this paper, the view of sustainable health is influenced by a definition by Harnesk et al. (2004): “durable individual perceived well-being.” Indeed, it is also assumed that to be sustainable, this perceived well-being comprises resources that allow for the person to meet current demands, such as demands from work, without compromising their future perceived well-being. As such, sustainable health is also seen as a resource in a long-term organizational perspective.

To achieve sustainable health, the work and workplace must continuously promote health to allow human resources to be regenerated, and not become deteriorated. From this perspective, work and organizational factors are presumed to have an impact on physical, psychosocial working conditions and employee health (Härnstam et al., 2006). In regard to this, the main interest is on organizational activities, as well as employees’ and managers’ collective efforts, to increase the health and develop the workplace towards a health-promoting environment. A health-promoting workplace can then ensure flexibility between customer needs and organizational objectives, on the one hand, and employee competence and health on the other. Such competence and health are desirable for organizations if they are to compete successfully and develop sustainability in work (Chu et al., 2000).

For organizations to succeed there seems to be support for the belief that a holistic view of work environment, efficiency and quality is useful. Murphy & Cooper (2000) seek to identify factors at the intersection of employee well-being and organizational effectiveness; i.e. factors that predict both health and performance outcomes, and discuss the topic of “healthy organizations”. In the literature, Warrack & Sinha (1999) have even suggested that the same kind of overarching management system is needed both to achieve good quality and to organize healthier workplaces. In a similar way, Lagrosen et al. (2007) point to the twofold worth of quality management to support efficiency as well as resulting in more rewarding working conditions. They also argue that commitment from managers is the central and common factor for achieving this. As a basis for organizational activities they suggest that organizations should let core values, regarding management commitment, continuous improvements, everybody’s involvement, and customer orientation, to permeate the corporate culture. Docherty & Huzzard (2005) have similar arguments about the importance of developing a common base of espoused values for the organization. The base of core values may be compared to a corporate culture of a shared understanding among the organizational members and development of a collective practice (Schein, 2004; Stoner & Freeman, 1989). It is argued that such an organizational culture supports a person’s sense of coherence and importance at the workplace and thereby promotes employee health.
Murphy & Cooper (2000) have found that factors such as meaningful work, influence and control, security, a good work environment and common core values in the organization, appear in discussions about healthy organizations. Recent research on what makes people feel well and function in the best way shows similar results but additionally emphasises factors such as trust, relations and communication, short decision-making procedures and promotion of the balance between work and private life (Eriksson, 2003; Söderlund et al., 2003; Dolbier et al., 2001). Indeed, many research results seem to concur regarding the factors that characterize health-promoting workplaces. In summary, such factors are related to management and leadership, core values as well as the possibilities to growth and joy in work (Malmquist et al., 2007).

2.2 Management and sustainable health
Management and leadership are understood to have the foremost impact on achieving health at the workplace (Lagrosen et al., 2007; Aronsson & Lindh, 2004). However, management and leadership should not be seen as the same thing. For instance, management may be seen as an occupational title and leadership as a process for influencing people in one direction (Yukl, 1998; Kotter, 1999). The main function of management is then to provide directions and consistency to an organization, whereas the primary function of leadership is to cope with change, inspiration, motivation and influence (DuBrin, 2004). Furthermore, Yukl (1998) argues that a person can be a manager without leading and vice versa. Indeed, several authors believe that the concepts of “management” and “leadership” are distinct but complementary systems of action. According to Certo (2000) and Yukl (1998), successful management also needs to incorporate leadership.

In view of that, it can be assumed that managers have the authority to control most of the work and organizational factors that affect employee health. From this perspective, it is interesting to find out how managers should work to increase health and develop the workplace towards a health-promoting environment.

Several authors have argued that management has to be adjusted to the requirements of modern working life and be more supportive. For instance, it is believed that managers should delegate power to the lower levels of the organizational structures and be more supporting in order to manage demands of flexibility and employee involvement (Docherty et al., 2002; Kinlaw, 2000). However, some authors state that management is difficult to practice in large organizations (Nilsson, 1999; Deming, 1986). There are several examples of top management decisions being neutralized by other managers and of decisions that have not penetrated the consciousness of the majority of the members of large firms (Daly et al., 2003). Moreover, the distance between managers and employees in large organizations may be large, both physically and symbolically, and thereby obstruct interaction and interpersonal relationships between managers and employees (Sundin, 2005). As a result, employees are not given responsibilities and hence have neither the authority nor the opportunity to work autonomously and develop. Sundin (2005) argues that these conditions create frustration, which makes people sick. Nevertheless, few studies have described how managers can actually work to overcome management problems in today’s working life and what specific methodologies that may be needed to achieve sustainable health in large organizations.
3. METHODOLOGY

This paper mainly deals with one of several case studies within a research project about “Leadership for sustainable health”. Here the focus is on the work performed in a large bank. However, experiences from previous studies within the same project, that have been compiled from smaller successful organizations with a similar purpose of identifying methodologies, are also considered; see Figure 1.

A qualitative single-case study approach with embedded units of analysis was chosen to explore and describe methodologies used by managers and employees within the bank,
Swedbank⁴, which received the award “Sweden’s best workplace” in 2003. The case study was accomplished between 2004 and 2006⁵ in a process similar to the Deming cycle ‘Plan-Do-Study-Act’. Thereafter, the results of the case study were compared to results of the studies of smaller successful organizations to identify similarities and differences between the methodologies of the larger and the smaller organizations. Based on the findings, a tentative management model was created as a last step of the research process. The steps of the research process are illustrated in Figure 1 and described in more detail in the following section.

3.1 Case study in the bank

Planning

During meetings with the executive managers of the bank in August 2004 it was decided to focus the study on one of the bank’s five business areas. Managers (n=6) were then sampled from three organizational levels, the executive level and two levels from different sub-units of the business area. Thus this way, the management hierarchy of the bank, from executive managers to middle managers and lower managers at bank offices, was covered. Moreover, employees (n=9) from two different offices were sampled: see Figure 2.

Data collection

Data was collected through individual interviews with the six managers, workshops with the two groups of employees and complementary document studies. One reason for this choice was the explorative and descriptive purpose of the study. Another reason was to enable comparison to the studies of the smaller organizations in which these data collection methods had been used successfully. Question forms were used as guides for the interviews, but the order of the questions was adjusted to create natural conversations. During the workshops, the employees were initially asked about their opinions about the award and being named “Sweden’s best workplace”. Thereafter, group discussions at both offices were structured around the question “What makes the bank one of Sweden’s best workplaces?”, which was followed by successive questions that were asked in a sequence similar to the “five-why”-methodology, introduced at Toyota to reach root causes; see Toyota Motor Corporation

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4 In 2006, the bank changed name to ‘Swedbank’ from the former name ‘Föreningssparbanken’. More information about this case organization is given in the Appendix.
5 The planning and data collection phases, as well as parts of the analysis phase of the case study were conducted in a team of three postgraduate students. One of the members was also member of the two research teams that studied the smaller organizations.
(2003) for further descriptions of the “five-why”. Thereby, the groups were encouraged to identify methodologies in brainstorming and consensus processes.

**Analysis**
The initial analysis performed from the information given in the interviews and workshops may be defined as development of categories based on relationship, as described by Merriam (1988) and Goetz & LeCompte (1984). Similar strategies had also been used in the studies of smaller organizations. The empirical material of each interview and workshop was examined and discussed separately. Sentences, parts of sentences or single words describing success factors and methodologies, were identified from the material and then organized into related categories using affinity diagrams, as described by Bergman & Klefsjö (2003) and Mizuno (1988). The affinity diagram was applied with the idea of achieving unanimous and deeper understandings of success factors and methodologies and help find explanations to how managers and employees had worked to create sustainable health. Later, comparisons were made between the work of managers, both within and between the organizational levels. Moreover, the views of managers and employees were compared.

**Results**
In the Results phase illustrated in Figure 1, the findings from the analysis were related to theory before conclusions were drawn about how the bank had worked to create sustainable health.

3.2 Comparison of the bank to smaller organizations
When the case study in the bank had been completed, the results were compared to the results presented by Harnesk et al. (2004) and Bäckström et al. (2006) from smaller organizations. The idea was to look for conformities and differences between the large and the smaller organizations. The findings of this evaluation comprising four different organizations were also compared to theory before conclusions were drawn and documented in a tentative management model for sustainable health; see Figure 1.

4. RESULTS OF THE CASE STUDY IN THE BANK
In this section the empirical data collected through interviews with managers and in workshops with groups of employees is briefly described. More about the work of managers and employees in the bank is described by Wreder (2007) and Wreder & Klefsjö (2007).

4.1 Interviews with bank managers
The interviews show that the managers referred to the following:
- clear, honest and consistent management in accordance with core values
- measurements and feedback
- dialogues
- employee participation
as central for achieving employee health. In addition, most of them mentioned the importance of customer focus and highlighted the significance of employee satisfaction and health to fulfill customer needs. The executive managers also believed that a business approach to health issues and a comprehensible model for management are important.
Management methodologies

Within the bank, managers at executive, middle as well as lower levels worked towards common goals through various common methodologies but with some different focuses. The executive managers worked with a conspicuous strategic focus on health and other key issues and set clear objectives thereafter. For instance, in 2002, executive managers initiated a long-term focus on health through a health project in order to increase long-term healthiness. The project was initiated due to increasing sickness absence. To start with, an evaluation of sickness absence and related costs was performed and metrics were then developed to measure health instead of sickness. According to one of the executive managers, this was one of the key factors that made health issues a priority and reversed the trend of sickness absence within the bank. He explained that “...to get attention and gain priority over other organizational issues, you have to create a link to financial benefit. That is what counts.”

The project was run in a structured and consistent way (evaluation, planning, performance, assessment) by a project manager and was integrated into the daily work of managers and employees. Managers at middle and lower levels were still responsible for the work environment and health issues of their units while the executive management focused on providing appropriate methodologies and tools to help them succeed in doing so. For instance, training managers to handle stress and a rehabilitation programme were efforts used to address psychosocial health issues. Moreover, health measures were integrated into the bank’s balanced scorecard to make sure health was considered when setting goals and monitoring progress at all levels of the organization.

Executive managers described that their overall strategic work was based on the core values of the bank; see Appendix. Objectives were then set to create consistent “messages” to the managers and employees about what was prioritized within the organization. For the same reason, objectives were also expressly supported by the managers’ methodologies and their use of suitable tools. Some examples are the business plan, the management model based on three vital components (human resources, customer satisfaction index and business results), and the use of the balanced scorecard to evaluate the key issues of the organization. Another example is a co-determination agreement that was implemented to support employee involvement and delegation within the bank. The agreement was a concrete mutual contract between the employer and employees, reflecting the responsibility of managers to facilitate employee participation and the responsibility of employees to take initiatives and seek involvement, activity and development.

Indeed, the strategic organizational decisions were taken by executive management and communicated in a hierarchical manner throughout the organization by middle managers to the bank offices. Middle managers deployed the objectives and worked as coaches to the lower level managers at the offices. These managers in turn, worked in close cooperation with their employees and focused on building relations to encourage the employees and provide for good work conditions within the offices. For instance, the bank worked with goal deployment and all employees had individual goals that were set by means of discussion between the office manager and employee, according to the constraints provided by executive management and the deployment by the middle manager. In the offices, the short term goals were followed up on a weekly or monthly basis by the office manager and the individual employee. The managers on executive and middle levels even expressed the opinion that they managed by means of the work of lower level managers. To do this successfully, delegation, the goal deployment, communication and trust were used in practice. The middle managers said that they gave the lower managers absolute responsibility, freedom, trust and support.
One middle level manager described this as “to give mandate”. He argued that it was vital to his leadership to work without prestige, i.e. to have so called, mandate, from his manager and to give mandate to the lower managers; “When you have mandate it is okay to be creative, fail and regret mistakes”, he explained.

Moreover, a documented meeting structure for the business area as a whole was practiced to provide for regular information sharing and discussions within different forums and between different management levels of the bank. Information was also given regularly from executive management to offices through email, intranet and the internal TV channel. Once a week there was a meeting in each office, but there were also informal meetings during coffee breaks. The managers at the lowest level commented that being a manager of a small group of less than ten employees gave them plenty of time to communicate with each employee and to practice “management by walking around” to build relations with the employees.

4.2 Workshops with employees

The employees at both offices were unanimous in expressing the opinion that they were lucky to work at the bank and that they had a very good workplace. They were proud of and enjoyed being employees of this bank. Both groups of employees discussed success factors that they felt had been important to the success of their organization. These were related to:

- committed leadership and clarity
- employee involvement
- continuous development
- a good work environment
- customer focus.

Methodologies that according to the employees create a good workplace

According to the employees, the managers practised a caring, clear, visible and coaching leadership and thereby contributed to a good work environment. Moreover, they said that they wanted management to have clear expectations from them, but also to provide opportunities for participation. Both groups highlighted the importance of having possibilities for continuous learning, co-operation and influencing the work and the design of their work environment.

The employees described a culture of openness and knowledge sharing that encouraged active participation, learning and development of the business to fulfil customer needs. Within the offices, the individual goals together with competence systems, active recruiting, training and work in networks were mentioned as methodologies that supported this culture. For instance, the employees of one office explained how they were encouraged to take classes they considered useful for responding to the needs and demands of their customers. The co-determination agreement was also positively mentioned as a tool of the culture. The employees explained that the agreement was an opportunity for them as employees to be involved in the design of work tasks, the work environment and the business plan as well as to work independently within the framework set by management.

4.3 How the bank worked to create sustainable health

The case study shows that there was a convergence between the intentions of the managers and the view of the employees. Managers’ and employees’ work seem to have been based on four core values dedicated to creating a good workplace and sustainable health;
• management commitment
• employee involvement
• continuous development
• customer focus

These core values all relate to humanistic aspects and are similar to the core values stated by the bank; see Appendix. Furthermore, the work of executive management within the bank has similarities with the ideas of Docherty & Huzzard (2005) and could be argued to be characterized by espoused values and supporting strategies and control systems in combination with care for the employees. The function of executive managers of the bank seems to have similarities with the description given by Kotter (1999) mainly providing directions and consistency to the bank, whereas middle and lower managers to a larger extent seemed to work deliberately as leaders to influence employees’ performance, as described by Wiberg (1992). Indeed, managers on all levels seemed to complement their management function with what could be viewed as leadership from the definitions described in literature.

It appears that this large bank has managed to establish good forms of management, employee involvement and communication. The study emphasises the value of management and the use of methodologies such as employee involvement, goal deployment, coaching, and employee development, in doing this. In addition, tools like a balanced scorecard, routines and competence profiles were practiced to aid these methodologies. Not least, these methodologies and tools seem to have been deliberately chosen by managers to support the core values of the organizational culture. This strategy of core values, methodologies and tools in combination with communication in dialogues and mutual trust, are probably the important reasons for the success of this large and hierarchical organization, where the close interaction between managers and employees may only be found lower in the management hierarchy. The managers’ strategy has most likely contributed to a focus on health, mediating what is accepted behaviour and spreading consistent messages to steer the large organization in one direction.

Indeed, the case study also shows that a characteristic of the bank’s work was an organizational-wide health project initiated to improve employee health. Through the project, health was made a focal area, in which the managers were asked to present results and thereby acted upon, what they said was important to the bank. This emerged as the major first step to permeate the health focus in the managers’ work. Based on the interviews, there is also a reason to believe that the health project has supported the bank’s core values; see Appendix.

5. HOW SMALLER ORGANIZATIONS HAVE WORKED TO CREATE SUSTAINABLE HEALTH

Within the research project “Leadership for sustainable health”, Harnesk et al. (2004) previously studied two smaller organizations, Fresh and the Department of Emergency and Accidents at South Stockholm General Hospital, that both received the award “Sweden’s best workplace” in 2002. This was done in a multiple-case study to investigate the work of the organizations and describe important methodologies.

Based on the opinions of managers and employees, their main conclusions were that the following had been important for managers to create sustainable health in their organizations:
building close relations with employees; dialogues; mediation of how each individual function is important to the performance of the whole; observing and respecting the needs of each employed person; making an effort to establish trust in all directions. The study was further recapped in a model of four categories of methodologies for sustainable health that had been identified in the analysis; see Figure 3.

Figure 3: A simplified version of the model by Harnesk et al. (2004). “General attitudes” are general throughout the whole organizations and not specific to either employees or managers. “Leadership attitudes” are related to the ways managers behave and act, whereas “Organizational structures” is based on managements’ responsibility and organizational structure issues. Finally, “Methodologies” are connected to these responsibilities and the ways managers act.

In another study within the research project, the same two organizations were examined together with a third small organization, Roxtec International, that received the award “Sweden’s best workplace” in 2003; see Bäckström et al. (2006). The main results presented from this study were the key-methodologies, attitudes and organizational structures that the authors identified in all three examined organizations:

- customer orientation by giving the employees the opportunity to meet the customers in person and understand their own contribution to the customers
- creating infrastructure for communication and information
- giving everyone the opportunity for a holistic view by, for example, work rotation
- routines for learning from each other
- continuous education and development through projects and cross functional groups
- maintaining committed and charismatic leaders who give the employees responsibility and authority to influence their work.

6. COMPARISON OF THE BANK TO SMALLER ORGANIZATIONS

Compared to the other three organizations, the bank is a very large organization and could thus be assumed to have faced some specific difficulties related to management; see Table 1. For this reason, the comparison of the bank to the smaller organizations was made with regard to organizational structure and management issues, with a focus on the methodologies used within the organizations. The reason for this was to detect analogous methodologies used in both large and smaller organizations and also to bring to light the specific methodologies that
can be adopted in practice in other large organizations to overcome management problems of today’s working life to create sustainable health.

Table 1: The four organizations that are compared are of different sizes. However, they all show good health results compared to the average numbers in Sweden (the brackets); see SCB (2006) Different definitions of the measure are given due to the different ways and intervals in which the organizations have chosen to collect the data.

<table>
<thead>
<tr>
<th></th>
<th>Fresh</th>
<th>The Department of Emergency and Accidents at South Stockholm General Hospital</th>
<th>Roxtec International</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of business</strong></td>
<td>Production of ventilation products</td>
<td>Emergency medical care (hospital)</td>
<td>Manufacturer of cable- and pipepacking</td>
<td>Financial services (bank)</td>
</tr>
<tr>
<td><strong>No of employees</strong></td>
<td>54</td>
<td>397</td>
<td>75 (in Sweden)</td>
<td>9,000 (in Sweden)</td>
</tr>
<tr>
<td><strong>Average numbers of sickness absence</strong></td>
<td>1999: 11 days (11)</td>
<td>2001: 14 days (11)</td>
<td>2001: 14 days (19)</td>
<td>2000: 5 days (12)</td>
</tr>
<tr>
<td></td>
<td>2003: 10 days (21)</td>
<td>2003: 11 days (21)</td>
<td>2003: 11 days (21)</td>
<td>2002: 3 days (13)</td>
</tr>
<tr>
<td></td>
<td>1998: 2 days (9)</td>
<td>2000: 5 days (12)</td>
<td>2004: 4.3 % (5.3)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000: 8 days (9)</td>
<td>2001: 14 days (19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2002: 4.8 % (6.1)*</td>
<td>2003: 4.6 % (5.7)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comparison based on results in:</strong></td>
<td>Harnesk et al. (2004) &amp; Bäckström et al. (2006)</td>
<td>Harnesk et al. (2004) &amp; Bäckström et al. (2006)</td>
<td></td>
<td>This paper</td>
</tr>
</tbody>
</table>

6.1 Organizational structure and management issues

The four organizations differ in terms of size, organisational form and ownership. According to Harnesk et al. (2004), a flat, empowered organizational structure promoted health within two of the smaller organizations. However, even though the bank was hierarchical and managed in a top down manner, good forms of employee involvement were present and decision processes and distances between managers and employees appeared as short.

Such short physical and symbolic distances between executive managers and employees may have been more naturally created in the smaller and flatter organizations. In contrast, executive managers within the bank described that they worked through managers at middle and lower levels, who were more involved in building relations with the employees. These lower managers at these levels were also seen as an important channel for spreading executive management’s intentions as well as involving and supporting the employees. The executives, on the other hand, worked to align the organization around core values and to steer the way of the bank through strategy and goal deployment and by providing resources for middle and lower managers to coach the employees. By comparison, within the smaller organizations executive managers seem to have been responsible for strategic work, but at the same time worked closely with the employees. Thereby, the work of these managers was more similar to a combination of the responsibilities and methodologies of managers on all different levels within the large organization.
Infrastructures for communication were visible in both the smaller organizations and the large. However, objectives and information were transferred between and applied on more levels within the bank. Indeed, personal dialogues seemed to take place between employees and managers at the lowest organizational levels whereas different channels for information were important for executive managers to reach out to the employees. Moreover, trust appeared as a key issue for delegation, communication and creation of good workplaces. From the work of two of the smaller organizations, Harnesk et al. (2004) recognized trust in all directions, which seems to be similar to the mandate that was highlighted within the bank. However, Bäckström et al. (2006) only discussed the importance of trust in one direction, i.e. that managers must trust the employees.

6.2 Methodologies
The results of the case study at the bank show that general management methodologies have been practiced to achieve a good workplace and health. Moreover, the results imply that managers within the bank have worked systematically and intentionally chosen methodologies and tools to support the bank’s core values. A similar tendency can be seen in the results presented by Harnesk et al. (2004) and Bäckström et al. (2006), even though neither of the studied organizations appears to have used the term “core values”. However, Harnesk et al. (2004) argue that ethical issues were certainly present in the daily work at Fresh and The Department of Emergency and Accidents at South Stockholm General Hospital, Moreover, they claim that the foundation of the “General Attitudes” in Figure 3 is the common base of values for each of these smaller organizations. They also found that “Leadership Attitudes” affects the way the organization is structured as well as the methodologies used.

The methodologies practiced by the different organizations were very similar and appeared to support the four core values, management commitment, employee involvement, continuous development and customer focus, which were identified within the bank and also were fundamental in the work within the three smaller organizations. Moreover, all four organizations showed several examples of concrete tools that were used to further make the methodologies efficient. Some examples of the methodologies and tools that supported the core values in the four organizations are described below.

Management commitment
Managers of all four organizations were committed to the co-workers’ well-being. In Fresh, The Department of Emergency and Accidents at South Stockholm General Hospital as well as at Swedbank, they purposely worked with rehabilitation of employees on long-term sick leave and used specific tools to aid this work. For instance, the bank had a check list for how managers should deal with absent employees to help them going back to work.

In contrast to the smaller organizations, the executive managers of the bank had also focused on health promotion through implementation of an organization-wide health project. The project seems to have supported the core values and used several methodologies and tools to do this. Among these were the education of managers in stress handling and a self-evaluation tool to involve employees in health promotion, by letting them assess their own health.

Employee involvement
In all four organizations possibilities for active participation by employees seemed to be consciously supported through goal deployment, delegation and coaching. The managers worked as coaches by clarifying goals and priorities, encouraging staff to influence their work
and emphasising people’s importance. “Management by walking around”, personal dialogues and feedback, official meeting structures and routines are other examples of methodologies and tools that were used by managers of the four organizations to give employees opportunities to participate.

Customer focus
Managers of all the four organizations had a clear customer focus and emphasized the correlation between employee satisfaction and customer satisfaction. In addition, the employees in all organizations were aware of their customers, which, for instance, Bäckström et al. (2006) described with “they know who they are there for and are creating value for”. To achieve this, the organizations worked to build relations with customers and learn more about their needs. The bank, for instance, used a questionnaire tool to achieve this. Moreover, all organizations gave the employees opportunities to meet the customers in person to increase their understanding of their own contribution to the customers.

Continuous development
Within the bank, several methodologies were used to support development of the organisation and the employees, for example competence development, networks for knowledge sharing and on-the-job training. Such methodologies were also identified by Bäckström et al. (2006) and Harnesk et al. (2004). Learning from each other was another methodology that was recognized in all four organisations. In addition, employees within the smaller organizations were part of cross-functional groups focusing on improvements. Such organized teams were not visible in the large organizations but each office worked for their own good and shared their experiences and knowledge in networks with employees from different offices and through their manager’s contact with other bank managers.

7. DISCUSSION AND CONCLUSIONS

7.1 Results and theoretical considerations
Bringing together the results above, there is support for the beliefs of Sundin (2005) and Aronsson & Lindh (2004) among others, about the importance of management, and in particular the managers’ work on health promotion. For instance, within the bank, both managers and employees, regardless of organizational level, stated that their immediate manager had been important for their good, successful workplace. This, together with the results of the bank, may indicate that the managements’ leadership has been supportive and adapted to manage the demands of flexibility and employee involvement, which is a key issue emphasized by many authors, for instance, Dochetry et al. (2002) The results support that, management and leadership are essential and should complement each other to promote employee health. The managers seem to have been the cornerstone of the focus on development of sustainable health in the four organizations, whereas their leadership could be viewed more as one of the key work and organizational factors.

The comparison of the bank to smaller successful organizations shows that similar management methodologies have been used to create sustainable health, regardless of organizational size. Even though the methodologies used in the bank differed slightly between management levels because of their different focus and responsibilities, the managers of the large organization overall do not seem to have needed any specific methodologies to practice management that promote employee health. Instead, health was achieved through methodologies, such as employee involvement, delegation, goal deployment, coaching and
employee development, which are already well known methodologies in theory, described by for instance, Kotter (1999) and Kermally (1996).

Furthermore, the opinions of managers and employees, as well as the results of the four organizations, imply that the methodologies have resulted in good work environments and employee health. The base for this seems to be that managers' methodologies have positively supported work and organizational factors, such as core values, communication and possibilities to influence, which are also raised by, for instance, Eriksson (2003) and Murphy & Cooper (2000). This in turn may have helped to establish health-promoting work environments together with improved results.

Indeed, the methodologies used by the organizations appeared to be related to four common core values caring for people; management commitment, employee involvement, customer focus, continuous development. These core values were the foundation of the corporate cultures of the organizations and were supported by the methodologies, which in turn seem to have been purposely supported with concrete tools, such as balanced scorecards, routines, co-determination agreements between management and employees, and customer questionnaires. This strategy was explicitly expressed by executive managers of the large bank, whereas the tendency of such purposeful approach could be observed from the identified categories, methodologies and tools described in the studies of the smaller organizations.

Accordingly, the picture that emerges from the case studies at four of “Sweden’s best workplaces” – a culture of core values that are tenaciously supported by methodologies and tools - shows how managers can work, to achieve sustainable health by creating a health promoting organization. This is not only described by methodologies but should also include a wider management approach based on humanistic principles. Furthermore, the management approach that appeared in all four organizations is comparable to the thoughts about developing a common base of core values for the organization to support the well-being of employees (Docherty & Huzzard, 2005). These ideas are also very similar to the system view of Total Quality Management (TQM), which is presented by Hellsten & Klefsjö (2000) as “a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”; see Figure 4. The values are fixed but the methodologies and tools are just examples and can differ depending on the value they are supposed to support.

The results of the case study imply that managers within the bank have used a strategy similar to what Hellsten & Klefsjö (2000), among others, believe create TQM. The conclusions made by Harnesk et al. (2004) also have much in common with the identified strategy of the bank and the ideas of TQM. Moreover, Bäckström et al. (2006) found that core values were the foundation of Roxtec International and served as guidelines for all the employees in the organisation, as did the culture of core values for the managers and employees within the bank. In addition, the core values, which were identified as central in the organizations, coincide with four of the six core values of TQM, as presented by Hellsten & Klefsjö (2000). Indeed, it is interesting that no mention at all of TQM was made during interviews or workshops with managers and employees of the bank or the other organizations. Even though the management approach within the bank had a strategy similar to what some authors argue create TQM, it has not been analysed whether or not the bank had a TQM-philosophy. However, Bäckström et al. (2006) have argued that the three smaller awarded organizations have worked according to a TQM-philosophy after having analysed the methodologies of the organizations towards a TQM-perspective.
Figure 4: Total Quality Management seen as a management system made up of core values, methodologies and tools. To achieve and keep the culture, the core values must persistently be supported by suitable methodologies and tools. Adapted from Hellsten & Klefsjö (2000).

Nevertheless, the four values that appeared as central in the studied organizations are related to humanistic issues and are similar to the values that Lagrosen et al. (2007) suggest for a management system in order to support quality and more rewarding working conditions. Similar to the results by Lagrosen et al. (2007) and Warrack & Sinha (1999) the results of the studies could indicate that the same kind of overarching management system is needed both to achieve quality or efficiency and to organize healthier workplaces. A similar connection between organizational performance and human issues can also be found in Human Resource Management (HRM) literature and current literature on High Performance Work Systems (HPWS). One hypothesis in the HPWS literature is, for instance, that the work system creates sustained competitiveness of the organization through the involvement and motivation of people (Eklund et al., 2007; Boselie & van der Wiele, 2002).

7.2 A tentative management model for sustainable health

Based on the experiences taken from the successful large bank and the three successful smaller organizations we would now like to formulate a model to describe how managers could actually work in practice in order to create a health-promoting work environment and thereby support development of sustainable health; see Figure 5. The model suggests that a culture, based on core values that are supported by methodologies and tools, and complemented with mandate and communication in all directions, may be of benefit to support creation of sustainable health. The model is built around several management levels to support managers of large organizations. The core values should be common to managers and employees on all levels of an organization, whereas, methodologies and tools may vary between levels. Accordingly, based on experiences taken from the bank, the model exemplifies specific methodologies and tools for different management levels.

The model is mainly based on experiences taken from the bank, but may be used as an example of how to work to create sustainable health and should be possible for managers in
other large organizations to consider adopting. The general strategy and exemplified methodologies and tools should also appeal to smaller organizations since the work of smaller organizations to create sustainable health appeared as similar to the strategy, methodologies and tools of the bank. Indeed, one final thought for managers to consider is that the health project through which the sickness absence was firstly measured and evaluated in economical terms appears as the evolving factor that introduced measures and actions related to health and thereby made the bank turn the trend of increasing sickness absence in the beginning. Thereafter the focus of health seems to have been integrated into the bank’s culture and strategy. Therefore, the starting point for managers may be to measure the consequences of their organization’s sickness absence and then honestly adopt a strategy and find methodologies and tools to support development of a health-promoting organization.

<table>
<thead>
<tr>
<th>Core values</th>
<th>Methodologies</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive managers</td>
<td>• Consistent deployment of strategies and objectives in accordance to core values</td>
<td>• Business plan</td>
</tr>
<tr>
<td></td>
<td>• Delegation</td>
<td>• Balanced Score Card</td>
</tr>
<tr>
<td></td>
<td>• Health project</td>
<td>• Documents describing the requirements on and opportunities of every professional role</td>
</tr>
<tr>
<td></td>
<td>• Suggestion schemes</td>
<td>• Co-determination agreement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intranet</td>
</tr>
<tr>
<td>Middle managers</td>
<td>• Deployment of goals through consistent focus on important objectives of the organization</td>
<td>• Routine for rehabilitation of absent employees</td>
</tr>
<tr>
<td></td>
<td>• Delegation</td>
<td>• Meeting structure</td>
</tr>
<tr>
<td></td>
<td>• Coaching</td>
<td>• Routines for regular performance reviews</td>
</tr>
<tr>
<td></td>
<td>• Dialogues</td>
<td>• Intranet</td>
</tr>
<tr>
<td></td>
<td>• Employee development</td>
<td>• Newsletter</td>
</tr>
<tr>
<td></td>
<td>• Formal networks</td>
<td></td>
</tr>
<tr>
<td>Lower managers</td>
<td>• Goal setting and follow up in cooperation with the employees based on the organization’s goals</td>
<td>• Routines for regular performance reviews</td>
</tr>
<tr>
<td></td>
<td>• Delegation</td>
<td>• Questionnaires for measuring employee and customer satisfaction</td>
</tr>
<tr>
<td></td>
<td>• Coaching</td>
<td>• Routine for rehabilitation of absent employees</td>
</tr>
<tr>
<td></td>
<td>• Dialogues</td>
<td>• Lists of customers</td>
</tr>
<tr>
<td></td>
<td>• Relation building</td>
<td>• Competence profiles</td>
</tr>
<tr>
<td></td>
<td>• Employee development</td>
<td>• Diagnostic tests</td>
</tr>
<tr>
<td></td>
<td>• Problem solving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Formal networks</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5:** The model is based on a management strategy of core values, methodologies and tools with examples taken from a large bank that has managed to create a good work environment where health and performance have improved.
7.3 Methodological issues
The paper is focused on the single-case study in the bank that is a part of a larger research project. This study contributes with descriptions of the work of a specific, large organization and is therefore not generalizable. However, the studies of the three smaller organizations that were performed as parts of the same research project, with similar purposes and methods and one of the team members as participative in all studies, should give comparable results and thus provide a broader understanding of how sustainable health can be created and how the work within a large organization might be compared to the work of smaller. The comparison made in this paper is based on results from research carried out by different research teams, in different studies, using slightly different tools for the content analyses. A better approach had been a multiple case-study performed by a larger research team, to allow discussions and availability to all empirical material. However, since one person has been member of all the included teams, we believe that the validity still is fairly good. The results might, as well, have been influenced by the participants as well as the researchers. The fact that all members of the different research teams have backgrounds in quality management oriented university departments may have influenced the research and results to some degree. Another fact is that the managers interviewed might have had theoretical knowledge about management and thus might have answered to questions according to management theories. However, the consistency when comparing the answers from the managers with those from the rest of the staff contradicts that suspicion.

7.4 Conclusions
This paper synthesizes the empirical material from three case studies, performed by different research teams, in four organizations that have been awarded for excellence in management and health. Although, the organizations considered differ in several ways, the studies were performed with similar methods and show coinciding results about the methodologies and the importance of management commitment to create a health-promoting work environment. The results indicate that larger organizations do not require any specific methodologies to overcome management problems of today’s working life to promote health. However, the main conclusion is that to create sustainable health, managers may need to consider a wider long-term management approach. Therefore, not only the identified methodologies but primarily the suggested model, which is a broader management strategy for promoting sustainable health, should be worth considering for managers, in both larger and smaller organizations. Based on the empirical material it is argued that the strategy for health promotion actually may follow the view of Hellsten & Klefsjö (2000) on how to work with Total Quality Management. The explanation for this is that a culture of core values with concern for human aspects that are tenaciously supported by methodologies and tools, could be of benefit to support such work and organizational factors that help to form a health-promoting work environment, which in turn can contribute to the development of sustainable health and improved results.

ACKNOWLEDGEMENTS
The authors would like to thank the representatives of Swedbank, who made the case study successful and the Swedish insurance company, Alecta, for making the study possible by financial support. Many thanks also to Ingela Bäckström and Pernilla Ingelsson at Mid-Sweden University, who were members of the project team and to an anonymous referee for comments that improved the paper.
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Description of Swedbank

Swedbank, former Föreningssparbanken, is one of the largest banking groups in the Nordic area and was founded in 1997 through a fusion of two Swedish banks with their roots in the early 19th and 20th centuries; see Table 1. In 2004, the bank had around 15,000 employees, of which approximately 9,000 were working in Sweden. The group was organized into five business areas including Swedbank Markets (investment bank), Robur (fund management) and Swedish retail operations.

Table A1: A selection of important events in Swedbank, mainly between 2000 and 2004.

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity in Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-1999</td>
<td>Staff reductions as a consequence of the merger.</td>
</tr>
<tr>
<td>2000</td>
<td>The co-determination agreement (IDA) was established.</td>
</tr>
<tr>
<td>2001-2004</td>
<td>Roles of employees and managers were defined in order to better meet the needs of customers.</td>
</tr>
<tr>
<td>2001-2004</td>
<td>Programs for managers were carried out to ensure new leadership and help managers.</td>
</tr>
<tr>
<td>2002</td>
<td>A staff reduction program, including more than 500 employees, was run in the banking group.</td>
</tr>
<tr>
<td>2002-2004</td>
<td>A health project was carried out in order to cope with increasing levels of sick leave.</td>
</tr>
<tr>
<td>2003</td>
<td>Received the national Alecta award “Sweden’s best workplace”.</td>
</tr>
<tr>
<td>2003 &amp; 2004</td>
<td>Was the most profitable major bank in the Nordic region.</td>
</tr>
<tr>
<td>2004</td>
<td>Received an award as “The Competence Company of the year”.</td>
</tr>
</tbody>
</table>

According to the webpage, the bank’s core values are long-term sustainable development and a strong relationship with local communities. It prioritises customer satisfaction and aims to be “a bank for everyone” and an attractive employer. Moreover, the bank stands for security, humility, respect, openness and involvement; see Föreningssparbanken (2005).

The large bank can be regarded as a successful organization as a receiver of several awards and according to the attaining of sustainable health among employees and organizational performance; see Table A1, Table A2 and Figure A1.

Table A2: The development of human capital, in terms of the indices measured since 2003. “Satisfied Employee Index” measures employees’ opinions of their personal situation in the company, “Well-being” measures employees’ opinions of health-related issues and “Value-adding ability” measures employees’ opinions of their ability to create value for customers.

<table>
<thead>
<tr>
<th>Development of Human Capital (Local banks in Sweden)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied Employee index</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>Well-being</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Value-adding ability</td>
<td>75</td>
<td>77.5</td>
</tr>
</tbody>
</table>

6The information about Swedbank is based on personal observations, documentations of the organization and facts given by its management and co-workers. More information about Swedbank can be found on http://www.swedbank.com.
Figure A1: The numbers of long-term healthy employees, i.e. employees who take a maximum of five sick days during a 12-month period, have increased and sick leaves have decreased within Swedbank between 2002 and 2004. At the same time both profit and customer satisfaction have improved.
PAPER D

Towards a Stakeholder Methodology: Experiences from public eldercare

TOWARDS A STAKEHOLDER METHODOLOGY
– Experiences from public eldercare

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Keywords: Elderly, patients, customer focus, stakeholders, health care, methodology.

Category: Research paper.

ABSTRACT
Purpose – The aim of the study is to trace the development of a methodology for identification of stakeholders, their demands, wants and expectations.

Methodology/Approach – Within the public eldercare, data were collected by means of participant observations to assess the methodology under development and to explore the stakeholder view within public eldercare.

Findings – In public eldercare, the customer focus is often emphasised, but not always apparent. The nursing staff has the responsibility to give patients the right care. However, these customers often have to be satisfied subject to meeting demands from relatives, management and society, just to mention a few of the other potential stakeholders. Indeed, nurses have diverging views of who the stakeholders are and also find it problematic to prioritize between stakeholders’ interests. The findings include a stakeholder methodology, which suggests steps for identification of stakeholders and stakeholders’ demands, wants and expectations on an individual employee level as well as steps for group discussions concerning how to achieve a common view and balance different interests on an organizational level.

Research Limitation/Implication – The implications of the findings are mainly valid for the Swedish public eldercare. However, both experiences and the stakeholder methodology should be valuable both for other public and private organisations.

Originality/Value of paper – The study might stimulate the debate on the somewhat controversial customer focus in public eldercare. It explores the suitability of stakeholder theory on an individual level and presents a tentative stakeholder methodology.

1. INTRODUCTION
Most organisations need not only to satisfy its customers but also a number of other stakeholders and interested parties whose wants and expectations are often disparate, in conflict and subject to change. Donnelly (1999), among others discusses the complexity and further indicates a blurred view of customers and a variety of stakeholders to recognise in the public sector. The public eldercare in Sweden is no different. It is facing a rapidly increasing number of patients and also significantly stepped up demands and expectations from patients, relatives and the community; see Socialstyrelsen (2005), Hallin & Siverbo (2003) and Sinervo (2000).
The customer concept has been introduced in the health care sector as a replacement for ‘patients’, but it is still widely debated. Some critics argue that using the term customer decreases the importance of the individual person in care, whereas others think that customer implies that care is something that can be sold as any other product; see Keaney (1999). Indeed, Andersson (2004) claims that there are positive voices believing that the customer concept gives the patient more power and includes more actors than solely the patient, for instance, relatives and the society.

Over time the public eldercare has developed towards business organisations with a more apparent customer focus and increased demands on performance. Nurses in public eldercare have the highest medical profession and the uttermost responsibility, working under national legislation of health care operations. Thereby, the nurses have to fulfil both their obligations and answer to the demands of the patients as well as their relatives; see Johnsson (2000). This situation leads to conflicts where the satisfaction of one need or demand may be fulfilled on expenses of others (Brunsson, 2003). Adding to the problem is the fact that nurses often work alone in stressful situations where decisions and prioritizations have to be made under strong time pressure. Research also shows that many nurses in public health care often have a feeling of loneliness when making patient assessments and decisions about care and treatment; see Westlund & Larsson (2002). Unclear and contradictory pictures of the actual situation among different nurses and their managers are important problems in today’s public eldercare. There is a need for a methodology which could not only bring a uniform picture of the situation in terms of actual stakeholders, but also form a foundation for discussions regarding how to find a balance between conflicting stakeholder interests.

What originally started out as a desire to identify the stakeholders of Swedish public elder care later turned into the development of a tentative methodology for identification of individual stakeholders and stakeholder interests. The aim of this paper is to describe this development and the results and experiences gained during the process.

2. THE STAKEHOLDER CONCEPT
As in Garvare & Johansson (2007), stakeholders are posited in the present study as being actors that: (i) provide essential means of support required by an organisation; and (ii) could withdraw their support if their wants or expectations are not met, thus causing the organisation to fail, or inflicting unacceptable levels of damage. Although the definition adopted here does not require a stakeholder to be identified by the organisation to be categorised as such, organisations will behave in such a way as to satisfy the wants and expectations of those it does identify as being its stakeholders. The authors’ hypothesis is that these statements are valid also for the individual nurses as they have actors that affect their work and whose interests have to be fulfilled.

The list of stakeholders of a particular organisation or individual employee will vary over time and is dependent on factors that determine the power balance among various parties. In the authors’ view ‘stakeholders’ can be distinguished from other ‘interested parties’ in that the former have the ability to take action if their needs are not met. In contrast, ‘interested parties’ are those that have an interest in the organisational activities, output, or outcome, although these parties are not capable of significantly influencing the state of the organisation or its stakeholders. For their needs to be considered, these ‘interested parties’ need to amplify their influence on stakeholders.
Garvare & Johansson (2007) argue that organisations should satisfy, or preferably exceed, the wants and expectations of its stakeholders. The use of the term wants here is not obvious and other authors have used the term needs instead. However, most organisations may prosper by satisfying the wants and expectations of the customers, which may oppose their actual needs. In public healthcare it might be argued that it is the needs of the customer that should be fulfilled first, which sometimes may oppose what the customer actually would want. The term demand is used to describe the lowest acceptable level of performance accepted by the stakeholders.

3. METHODOLOGY
A first draft of the stakeholder methodology was developed with the intention to find ways for nurses to identify stakeholders of the public eldercare. The draft was tested by six nurses working in public eldercare in the north of Sweden; see Figure 1. Indeed, the nurses were asked to use the draft as a specific part of more general individual interviews performed in a study in the Swedish public eldercare. When testing the first draft each nurse was encouraged to use an illustration, similar to a “sun”, and to think of itself as in the middle of a network. Thereafter he/she was asked about who had demands, wants and expectations on him/her and the answers were noted on the sunbeams. The results generated from this test were analysed and served as a base for further development of the methodology into a second draft. In addition, theoretical considerations and the authors’ experiences of observing the nurses using Draft 1 served as input for reformulation of the question posed in the illustration.

Draft 2 was also tested, this time with three nurses working in the same organization as the former six. The three nurses were encouraged to use the draft to identify stakeholders, demands, wants and expectations as well as making a prioritization among these. As in the first test, this was performed as parts of more general interviews.

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Figure 1 An outline of the research process. A first draft of the methodology was formulated by the authors in a workshop. Thereafter, the development included tests, reformulations and verification of different drafts into a tentative stakeholder methodology.

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\[1\] The study is a part of a project in which IT companies, university researchers, care and nursing staff cooperate to develop technology and work methods that can create added value and benefit both patients and staff in the public eldercare.
After the results of this test had been analysed they were verified through an observation study. Ten nurses were observed when working day, evening or night turn, and notes were taken about the relationships observed in the nurses’ work in order to identify potential stakeholders. Moreover, demands, wants and expectations of the studied actors were noted. The results were then compared to the identification and prioritizations made by the nurses when testing Draft 2. Lastly, the experiences and results together with further theoretical considerations were used to develop the tentative stakeholder methodology.

4. DEVELOPING A METHODOLOGY FOR STAKEHOLDER IDENTIFICATION IN PUBLIC ELDERCARE

Test and development of Draft 1
In the test of the first draft, 20 different actors were identified as stakeholders by at least one of the six nurses. All nurses identified the patient’s relatives, doctors and colleagues as their stakeholders, whereas five of them identified the pharmacy, health care centres and the hospital; see Figure 2. Only two nurses mentioned the patient as a stakeholder.

However, even though some stakeholders were mentioned by all nurses in the test the individual results were slightly diverging, possibly indicating different views regarding which actors they should respond to in their work. Another interpretation could be that the question posed in the illustration was perceived differently by the six nurses. Indeed, the results show that the identification with the aid of the first draft of the methodology seems to result in almost all the nurses also identifying actors such as medical staff and pharmacies, which they cooperate with, as stakeholders.

Therefore, when formulating the second draft, Draft 2, of the stakeholder methodology, the question included in Draft 1 was reformulated to possibly make the nurses more clearly identify actors having decisive influence. In addition, steps of prioritization among stakeholders and their interests were included in the methodology to also have the nurses identifying the interests of the stakeholders and indicating how different interests might be balanced.

Test and development of Draft 2
The results from the test of Draft 2 show that the nurses together considered four actors to be the foremost stakeholders to satisfy; patients, relatives, colleagues and the manager of the residential; see Figure 3.
The variation in individual results was still high, but with the use of this second draft actors such as the pharmacy were not identified by the nurses. Accordingly, by answering the questions posed in Draft 2, the nurses seemed to be able to make a distinction between parties who have significant influence and those who do not. By using Draft 2, the patient was the highest prioritized stakeholder by all three nurses, whereas their prioritizations among the others were nearly exactly the same.

![Diagram](image_url)

**Figure 3** The figure sums up the individual identifications and prioritizations made by the three nurses. Each of the ten stakeholders was identified by at least one of the three nurses. The figure also presents perceived stakeholder demands, wants and expectations. The nurses’ prioritizations among the stakeholders are shown by the numbers and among the stakeholder interests by the lettering.

When identifying the most important demands, wants and expectations of these stakeholders, the views of the three nurses were diverging. They mentioned different demands, wants and expectations and also made diverging prioritizations. These results indicate that nurses in public eldercare do not always have a shared view of who the foremost stakeholders are and how their interests should be balanced. Furthermore, the results confirm that there are many wants and expectations to fulfil and prioritize among for nurses in public eldercare. Indeed, many demands, wants and expectations may be fulfilled simultaneously, for instance, treatment to the patient and information to the relatives. However, in some occasions, the different needs seem to conflict, for instance, a relatives’ wish to get in contact with the doctor may oppose to the wish and best solutions for creating wellbeing and safety of the patient.

**Verification of results**

In order to verify the results of Draft 2, the daily work of ten nurses’ were studied. In total, around 15 actors that could be classified as stakeholders were identified, for instance, patients, relatives, different health care professions, managers, the local...
government and other actors in the society which had also been identified by the nurses; see Table 1. All these actors had their specific demands, wants and expectations. Moreover, many of them had the possibility to withdraw their support if their wants or expectations were not met, thus causing the nurse or the eldercare unacceptable levels of damage. Accordingly, the observations confirmed the results from the identification made by the three nurses using Draft 2. No further stakeholders were found, but many different interests were identified because of the stakeholders’ diverging demands, wants and expectations in the different situations observed. Conflicts between interests were also observed. For instance, in a stressful situation one of the nurses spoke out; “Now, what I as a nurse think is best for the patient is against the wants of the relatives. Everyone can’t be satisfied every time and actually, the law and regulations control my work.”

Table 1  The stakeholders and interests that were most frequently observed in the daily work of the ten nurses. A cross in the table indicates that the stakeholder and its demand, want or expectation was observed in the daily work of several of the nurses.

<table>
<thead>
<tr>
<th>Stakeholders &amp; expectations</th>
<th>Patients</th>
<th>Colleagues (nurses)</th>
<th>Assistant nurses</th>
<th>Manager of residential</th>
<th>Relatives</th>
<th>Doctors</th>
<th>Manager (the nurses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-being</td>
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<tr>
<td>Safety</td>
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<td>x</td>
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<tr>
<td>Information</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Contact with doctor</td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>Answers</td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>Treatment</td>
<td>x</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>Medical advices</td>
<td>x</td>
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<td>x</td>
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<td>Good care</td>
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<td>x</td>
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<tr>
<td>Honesty</td>
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<td>x</td>
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<tr>
<td>Documentation</td>
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<td>x</td>
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<tr>
<td>Confidence</td>
<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>Supervision</td>
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<tr>
<td>Cooperation</td>
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<td>x</td>
<td>x</td>
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</tr>
</tbody>
</table>

Towards a tentative stakeholder methodology

After having tested the two drafts and observed the nurses, our view is that nurses often face problems in their daily work due to conflicting stakeholder demands, wants and expectations. Further, many nurses work alone and therefore have few opportunities to discuss their problems with colleagues. Not least, the nurses in this study seemed to have somewhat differing views of the stakeholders and how to balance stakeholder interests. It is likely that not only do nurses have differing views, but their views may also differ compared to their managers’. This emphasises the necessity to bring forward discussions towards a consensus between nurses and managers regarding who the foremost stakeholders are and how different interests should be balanced.

Accordingly, to stimulate the creation of a common view on how nurses should work in public eldercare, two steps were added to the methodology; see Figure 4. The steps ‘compare’ and ‘communicate’ were included as to make the nurses as a group come together and discuss their views and problems and to promote communication in which also managers share their views in comparison to the nurses’. However, these last two steps have not yet been tested in practice.
5. CONCLUSIONS AND DISCUSSION

This paper presents the development of a tentative stakeholder methodology in public eldercare. The methodology includes identification of stakeholders and their demands, wants and expectations on an individual employee level. It is suggested that results obtained from use of this methodology should be employed to fuel group discussions within the organization.

Results from the practical application of two drafts and verifications through observations in public eldercare show that nurses respond to a number of stakeholders’ interests simultaneously. Moreover, nurses face conflicts when the satisfaction of one interest has to be fulfilled on behalf of another. This confirms the thoughts of Socialstyrelsen (2005), Hallin & Siverbo (2003), Brunsson (2003) and Sinervo (2000). For nurses, it is not enough to only consider demands, wants and expectations of their patients. Accordingly, our contention is that the stakeholder concept may contribute to explain the nurses’ situation. The methodology developed might be used to identify stakeholders and their interests. As for the stakeholder definition, this study indicates that it might also be suitable to identify stakeholders on an individual employee level.

Indeed, to increase the understanding of stakeholder interests in public eldercare and how nurses might act to balance these interests and make prioritizations, forums should be created where the different views of employees and managers could meet. A common picture and understanding of why everyone has to act in a certain way might help nurses’ decisionmaking and their prioritizing among stakeholders’ interests. Indeed, since application of the methodology in the organization provides for involvement and discussions around problems as well as clarification of
expectations and what should be valued in the organization, it may also improve nurses work situation. Such conditions are argued to positively affect the work satisfaction (Hackman & Oldham, 1976). Indeed, the methodology could also facilitate management operations and strategies for how, on an organisational level, to find a balance between different stakeholder interests.

The last steps of the proposed stakeholder methodology should be tested in practice and further assessments and development of the methodology is necessary. Moreover, an evaluation should take in the nurses’ and their managers’ experiences of using the methodology. It would also be interesting to investigate if the identified wants and expectations of the stakeholders correspond to their actual wants and expectations.

When concluding the development process so far, our view is that the largest benefit of the proposed methodology is that it may be used for group discussions in public eldercare, or other organizations, as a means for managers and employees to discuss and learn from each other while creating a common view of their stakeholders. This in turn, may provide the basis for new strategies and activities in the organization as a whole.

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The care pathway of eldercare: Describing the process of Swedish eldercare and the work of registered nurses along it

The care pathway of eldercare

Describing the process of Swedish eldercare and the work of registered nurses along it

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Abstract

Purpose: The purpose of this paper is to provide a starting point for improvements of eldercare by creating a chart of the care pathway and describing the work and work situation of registered nurses (RNs) involved in this pathway.

Methodology: Empirical data was gathered through observations of and interviews and reflective dialogues with RNs working in the eldercare in Northern Sweden. Process charts were created and then taken to focus groups to be validated and developed with descriptions of the RNs’ work. Moreover, content analysis of interviews and dialogues were used to create further descriptions of the work and work situation of the RNs.

Results and conclusions: Two charts, one illustrating a generic flow of main activities and one more detailed demonstrating activities of different actors, were created to describe the pathway of eldercare. A generic flow of five main activities may also be used to describe the activities performed by a single RN along this pathway. The study shows that to perform these activities well and satisfactory, RNs require information and better opportunities to follow up their work. Moreover, cooperation with and support from other professions are necessary to improve their work situation so as they get opportunities to provide good quality eldercare.

Key words: Quality, process management, work description, work situation
1. Introduction

During the last decades, eldercare in Sweden and many other Western countries have experienced fundamental challenges (Axelsson, 2000; Sochalski et al., 1997). Not only have improved knowledge and consciousness of citizens amplified the demands and expectations on the health care organizations and quality of care (Hallin & Siverbo, 2003). The rapidly growing numbers of elderly have also resulted in ever increasing needs as well as costs of eldercare. Elderly often suffer from a manifold of deceases at once and thereby have high and complex needs of care (Agahi et al., 2005; Sandberg, 1994). To eldercare, this means an increasing number of ill and disabled people to cure and care for (Thorslund & Parker, 2005). This in turn, put higher pressure on health care organizations and professionals involved in eldercare.

In Sweden, responsibility for eldercare is shared between the county councils and the municipalities (The Swedish Association of Local Authorities and Regions, 2005). Eldercare in nursing homes is provided by, for instance, registered nurses (RNs), occupational therapists and assistant nurses, employed in the municipalities, whereas county councils provide the physician service. As a result, eldercare involves several activities performed by actors of different professions working in different organizations. These professionals are highly dependent on each other to provide and coordinate care of high value for the patients (Shortell & Kaluzny, 2000).

Nevertheless, shortcomings of the eldercare tend to appear in the borderline of interests between different professions and organizations since no one considers the overall picture and because of differing views of care among professionals (Iwarsson, 1999). According to Anell (2004), there is a tendency towards even more specialised and fragmented care, even though
the requirements on collaboration within eldercare have increased. This results in inaccurate communication between organizations and professions as well as low productivity and quality of care (Andersson, 2006).

A central profession of the eldercare is held by the registered nurses (RNs), who have the highest medical profession and the uttermost responsibility to ensure patients are given good quality care within the municipalities. Accordingly, increasing demands and numbers of patients put additional pressure on these RNs. Several studies have also shown that working as a nurse in eldercare may be stressful and lead to work dissatisfaction (van den Berg et al., 2006; Sinervo, 2000). At the same time, to provide good quality care, there is growing evidence for the necessity of a good work environment to create satisfaction and well-being of health care employees (compare to; Mc Cuscer et al., 2004; Newman & Maylor, 2002; Thomsen, 2000; Glloran et al., 1994). In a study of RNs in eldercare, Kihlgren et al. (2003), for instance, showed that managers’ lack of understanding for the RNs’ work, a long distance to the physicians and lack of co-operation within the organization were experienced as unsupportive environments that made the RNs feel insecure and harmed their decisions making about treatments for the patients.

Accordingly, it could be argued that to meet the increasing demands and expectations of good quality eldercare\(^\circ\) there is need for improved collaboration and communication among different providers of eldercare. Moreover, a better understanding for the work of RNs appears to be fundamental in order to provide opportunities for them to perform a good job that they feel happy about (Kihlgren, 2006; Gurner & Torslund, 2003). However, the care pathway of eldercare, which is the flow of activities performed during the patient’s way

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\(^\circ\) Good quality eldercare is here viewed as eldercare that satisfies, or preferably exceeds, the needs and expectations on eldercare and thereby creates high value for, foremost the patients with the greatest need of care, but also for the other stakeholders such as relatives and the society.
through the care when treated in different organization and by different professions, as well as the work of RNs within this pathway are scarcely explored and described. Therefore, to provide a starting point for better understanding and improvements of eldercare the purpose of this paper is twofold; (1) create a chart that describes the care pathway, and (2) describe the work and work situation of municipal RNs involved in this care pathway.

The paper builds on a case study performed in cooperation between researchers from two areas, quality management and nursing. In joint data collection, the researchers together illuminate the care pathway and the RN’s work through different perspectives; a quality management and a nursing perspective.

2. Eldercare in Sweden

In Sweden, county councils and municipalities serve as the dominating providers of health care within their respective areas. The health care is mainly tax-financed through county and municipal taxes (Molin & Johansson, 2005). In 1992, there was a change to these financial and provider responsibilities in The Eldercare Reform. Since then, several employee categories from both the municipality and county council are involved in eldercare. Municipalities usually employ RNs, occupational therapists, assistant nurses, needs’ assessments officers, and supervisory employees, whereas physicians are employed by county councils (The Swedish Association of Local Authorities and Regions, 2005).

The intentions of the new system of The Eldercare Reform were to provide and ensure health care and home care services to elderly. However, according to Gurner & Thorslund (2003) it is now overburdened due to increasing numbers of elderly and simultaneous cutbacks. For instance, the numbers of beds in nursing homes as well as in hospitals have been reduced (The
National Board of Health and Welfare, 2005). Therefore, most of the elderly that reside in nursing homes have an age above 80 years, some degree of dementia and therefore high and demanding needs of nursing care and hospitalisation (Akner, 2004). This, in turn, puts pressure on the employees, obliges the competence of different professions and requires extensive cooperation between the organizations involved in providing the care (Thorslund et al., 2001; Shortell & Kaluzny, 2000).

2.1 RNs in municipality eldercare
Within the municipalities, the RNs have the highest medical profession and the utmost responsibility to ensure the patients are given good quality care. According to Fagerberg & Tunedal (2001), The Elder Care Reform presented a challenge to those nurses. They did not only have to adapt to the home environment instead of hospitals, they also found themselves working in an organization with fewer levels of decision making and less contact with physicians and colleagues (Fagerberg, 1998). As a result, the RNs’ profession encompasses many sub-roles within the municipality, for instance, clinician, educator, researcher and consultant (Cattini & Knowles, 1999). At the same time their responsibility also involves making decisions about demands, treatments and attention of physicians.

In 2004, Weman et al. showed in a study that almost 50 percent of the RNs in eldercare were dissatisfied with their work situation. Other studies have also shown that many RNs experience loneliness and powerlessness as well as increased workload in their work (Wreder et al., 2007; Westlund & Larsson, 2002; Oberski et al., 1999). At the same time, less satisfaction and higher stress levels among employees have been related to lower quality (Chu et al., 2000; Redfern et al., 2002; Cohen-Mansfield & Rosenthal, 1989). For instance low
satisfaction among nurses is associated with the process and outcomes of care as well as the patient satisfaction (Mitchell & Shortell, 1997; Weisman & Nathansson, 1985).

Indeed, to meet the increasing demand of good quality eldercare the performance and satisfaction of RNs are important. To improve their opportunities to do a good job that they feel happy about, it should be fundamental to first understand the work and working conditions of RNs in the pathway of eldercare.

2.2 Process orientation in eldercare
The concept ‘process’ is understood and used in some different ways within different areas. Within the Quality Management area, many definitions of ‘process’ describe interrelated activities that create value and are repeated over time (Isaksson, 2004; Bergman & Klefsjö, 2003; Egnell, 1994). For instance, Isaksson (2004) writes: “A process is a network of activities that by the use of resources, repeatedly converts an input to an output for stakeholders.” This definition underlines that the activities are not always linear. Moreover, customers are included in the term ‘stakeholders’. Similar to Ljungberg & Larsson (2001), Isaksson (2004) also emphasises that a process has to be repeatable in order to enable improvement.

In health care, having a process view is often understood as following regular flows, the care pathways, of patients through health care from a horizontal perspective. The processes cross different functions within different organizations and have both patients and health care professions as customers (Trägårdh & Lindberg, 2002; Åhgren, 1997). This calls for collaboration within and between professions.
Deming (1994) promotes a process view, for example through mapping in a process chart, because “anyone on a job needs to understand in detail the work and needs of people that come after him in the flow diagram...”. Process mapping has also been identified by Olsson et al. (2003) as a valuable methodology for improvements in Swedish health care. According to Elg & Lindmark (2006), using a flow-chart that describes a flow of activities within the health care may have several benefits, for instance:

- to help professionals/administrators plan and manage patient flows,
- to serve as a tool in improvement work, and
- to enable systematic following-up of patients’ processes.

According to Egnell (1994), a problem in process mapping is though, to choose how detailed the chart should be, which is how far the activities should be broken down and to what level of detail the process should be described. Egnell (1994) refers to Harrington (1991) who argues that this problem has to be solved from situation to situation and depends on the purpose of the mapping. For instance, the purpose may be to describe an overview of an organization’s processes or to thoroughly describe a specific sub-process.

In Sweden there have been attempts to find a generic process chart that can fit all health care functions (Elg & Lindmark, 2006; SAMBA, 2004). However, these attempts consider health care and care more generally. Thus, to create an overview of eldercare specifically and increase the understanding for cooperation of different organizations in Swedish eldercare, it would be valuable to purposely consider and describe the overall process of eldercare in Sweden, the care pathway, which follows the patient through the care and considers the cooperation and organization of activities and different professions. Such a process view can aid in emphasizing and improving the care across organizational borderlines and may also
provide a better understanding of the contribution from each individual that is working along the process (Olsson, 2005; Trägårdh & Lindberg, 2002; Åhgren, 1997).

3. Method

The case study was performed between September 2006 and August 2007 in four main steps corresponding to the Deming cycle†; planning, data collection, analysis and verification and development; see Figure 1.

RNs working in the context of nursing homes in Luleå in Northern Sweden were observed and interviewed to explore and describe the care pathway of eldercare and the work and work situation of the RNs along this pathway.

† The Deming cycle is also known as the PDSA–cycle (short for Plan-Do-Study-Act) within the Quality Management area. The cycle is an improvement cycle for solving problems in the continuous improvement work; see Deming (1986).
3.1 Planning
Approval of performing the study was given by the Regional Health Service Ethics committee. The criterion for participation of the RNs was that they worked in one of 15 municipal nursing homes that had approved to take part in the study. Based on that, a letter was sent to 26 nurses and the patients at the nursing homes in order to give information about the study and obtain informed consent. Approval was given by 20 RNs and out of them eleven participants working at nine different nursing homes were selected based on practical consideration of working hours. Among these participants were one man and ten women with an age ranging from around 40 to 65 years. They had had their RN degree between three and 28 years and their work experiences from municipal eldercare varied from four to 26 years. Ten out of the eleven RNs worked daytime and some scheduled emergency hours in the municipality eldercare, whereas one was employed to work night hours only.

3.2 Data collection
The goal of the data collection was to explore and describe the care pathway as well as the work and work situation from the RNs’ view since they were considered to be the ones who best knew and understood these things. This goal influenced the choice of interviews as a method of data collection. However, the authors saw a possibility that the activities of the pathway and RNs’ work were so familiar to the participants that they may leave out taken for granted information in their descriptions. Therefore, observation studies were also accomplished to enable process mapping and explore the nurses’ work from an ‘outsider’ view.

The two authors observed each nurse between eight and twelve hours during day, emergency and night hours. The observations were direct and non-participant to allow for wider understanding of the context, being open-minded to occurrences and for detection of routines
or activities that the employees were not always aware of. The authors followed an observation guide and studied the work of the RNs and their interactions with other professions and the patients. In that way the care pathway could be explored while the RNs were the object of the observations and also participated in individual semi-structured interviews. During these interviews, question forms were used as guides, but the order of the questions was adapted to create natural conversations about such as responsibilities, tasks, their profession, cooperation and organization, among others. (The observation and interview guides are presented in Wreder et al. (2007a))

In addition, to collect information about how the RNs view their work along the care pathway, feel about it and what they consider as important in care situations, a reflective dialogue was held with each RN. In the dialogue, the RN was asked to tell about and reflect on experiences from an optional care situation based on the questions in Gibbs’ (1988) reflective cycle. According to Tveiten (2003), such reflection may also identify obstacles to care.

3.3 Analysis
All data were transcribed and thereafter read through several times by the authors to get an overall understanding. Thereafter, the observation data was analysed through mapping of activities in cooperation between the authors to create charts of the care pathway.

The interviews were then analysed with qualitative content analysis using affinity diagrams\(^1\). Data were structured around the areas of questions before text units, sentences or parts of sentences were identified and coded within each area. Based on affinity, the textual units were

\(^1\) The affinity diagram is a tool that can be used to reduce disorganized qualitative information into a narrative form see; Mizuno (1988).
then sorted into categories. In a similar way, the reflective dialogues were analysed stepwise using qualitative content analysis. Text units were identified within each dialogue and then condensed and coded. This was done using a software (NVIVO7)\(^8\) and manually by using affinity diagrams. In both cases, the textual units were sorted into categories and sub-categories in several steps based on affinity. During the whole process, the authors also occasionally went back to the original textual units and compared the results as well as discussed the categories together. From all the categories, the ones that were related to each other were subsumed into three main categories. Last, those categories were used to formulate a theme describing the thread of meaning that appeared in the categories and sub-categories.

### 3.4 Verification and development

The generic chart of the care pathway that was created during the process mapping, was thereafter taken to two focus groups to be validated and further developed together with the RNs. One of the goals with using the focus groups was also to make the RNs describe their work in relation to the pathway, in order to find out what they considered important to reveal. During each focus group, which lasted for around four hours, five RNs participated**. The authors presented an overview of the pathway chart and encouraged the participants to have an open discussion around it as well as come up with changes. The presented chart was approved by both groups. Therefore, further discussions in the groups departed from the main activities proposed in the chart of the care pathway; see Figure 2.

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\(^8\) For more information about the text analysis software NVIVO 7; see QSR International (2007).

** One of the RNs that had participated in the observations and interviews had retired and one was on vacation at the time for the focus groups and could not participate. The second focus group was therefore complemented with one RN that had not participated in the earlier parts of the study.
For each main activity, successive questions were posed to encourage the RNs to discuss and further describe their work within eldercare. The question ‘What do you do when you [the main activity]?’ was discussed first and individual answers were noted on post-it-notes and put on a white-board for all participants to see, discuss and come to a consensus about. Thereafter, the participants were asked to answer and discuss the question ‘How do you act when you [answer about what]?’ to each of the answers for the first question; see Figure 2. Again, their individual answers were noted and put on post-it-notes under the first notes before they were discussed and last agreed about in the group. In the end, this resulted in an agreed picture describing what and how the RNs of each group considered that they perform along the pathway of eldercare.

4. The care pathway of eldercare

Based on the observations, a generic chart was created to give an overview of the care pathway; see Figure 3. This chart of the eldercare was also confirmed by the RNs during the focus group interviews.
Figure 3: The generic chart of the care pathway illustrates that a flow of activities is initiated when a patient has a demand for care. Based on the demand, five main activities (the squares) are performed along the pathway. The main activities are decisions about activities of care and planning, execution, evaluation and documentation and report of these activities.

The chart illustrates the flow of five main activities undertaken within eldercare when the patient is cared for. Based on the demand for care of an elderly at the nursing home, a request comes from the elderly patient, a relative, another profession or another health care organization and it points to a specific profession and organization. The person or organization, for instance a physician, RN or the emergency department, which receives the request for treatment must consider the demand and decide whether a commitment can be done or it should be delegated to another profession or even another organization. The one that accepts the demand also judges the demand and treatment to be needed and makes prioritizations before planning the treatment. The planned treatments are executed and then evaluated to see what has been achieved and if the health status of the patient implies a further demand for care. If so, another process is started with decisions about the demand. Before the demand can be considered fulfilled, the decisions made and activities performed are documented and may also be reported within and between different professions when they have finalized their commitments respectively.

Indeed, the generic chart in Figure 3 does not illustrate that the main activities of the care pathway may involve cooperation and activities of different professions and organizations. Thus, a
chart on a more detailed level was created to also exemplify the flow of activities between different professionals in different organizations and to emphasize the contribution from each individual that is working along the process when care for an elderly patient is provided; see Appendix 1. Moreover, the chart illustrates that physicians, RNs and assistant nurses depend on each others consultations, cooperation and information sharing to provide eldercare. This chart puts focus on the patient but the flow of activities is intentionally centred on the perspective of RNs to also describe the work of the RNs along the pathway in more detail.

5. Description of the work and work situation of RNs

The ten RNs who worked daytime and some emergency hours, described that according to law and regulations, each of them is responsible for providing the right and good quality care, 24 hours a day, all the year round, to 18-27 patient living in a nursing home††. To fulfil this, each of the RNs works daytime with planned and preventive health care as well as more acute demands evolving in the nursing home where she/he holds responsibility. For instance, establishing plans for the care of each patient, rounding, medication, documentation, planning for treatment, meetings, guiding assistant nurses, communicating with the physician and making referrals to the emergency department, were mentioned when the nurses were asked to describe the tasks of their everyday job. The performance of such tasks along the pathway is outlined in Section 5.1 based on the results from the focus groups. Thereafter, more detailed descriptions of the RNs’ work and work situation, resulting from the analyses of the interviews and reflective dialogues, are presented in Section 5.2.

†† The RNs who work daytime in specific nursing homes also work emergency hours according to a planned schedule. At emergency hours, one registered nurse handles acute demands of around 300 patients within nursing homes in a geographically delimited area. During night hours ‘night RNs’ work with acute demands within the same area.
5.1 The work along the care pathway
In general, the discussions within the focus groups revealed that, what the nurses do within the main activities of the care pathway and how they do it, depend on if it is day-time or emergency hours and if the demand for care is acute or of a more planned manner. However, independently of this, the work of the RN in the care pathway may be described as a flow of five main activities described in the generic chart in Figure 3: decision making, planning, execution, evaluation and documentation and report. The work performed by the RNs within each of these main activities is described below.

**Decision making**
The results from both focus groups show consensus about what decision making is about; “problem solving”. In doing this, information gathering about the patient’s health status is a vital activity. The RNs explained how they do this by reading the case book, examining the patient physically and having dialogues with the patient and assisting nurses. If needed a physician or colleagues may also be consulted.

The information about the patient constitutes, together with the RN’s experiences, education and knowledge about strategies for good medicine, care practices and available resources, the foundation for the decisions the RN makes about what has happened and what treatment is needed. Based on that, the RN then makes a prioritization about what he/she can solve as a RN, what can wait and what needs to be referred to another professional. Indeed, what prioritizations about treatments that are made are also dependent on the desires of the patient and may also be affected by the requirements and expectations of relatives.
Planning

The RNs described that their former role as consultant in the nursing homes has changed the last years:

“Today it is much about planning and a complete responsibility for the care that the patients are provided.

What the RNs do when they plan is described in long term, underway and acute planning with the purpose of providing the patient with right and good quality care. Another kind of planning discussed was also the RNs’ opportunity to plan and schedule their own work.

Similar to the decision making, the accomplishment of planning is dependent on information about the patient’s health status, needs and wants. When the patient moves to the nursing home an individual long term planning for the care is made by a team (of the RN, a physiotherapist, an occupational therapist and the manager of the nursing home) that work together with the patient and its relatives. Then, in the underway planning the RNs plan day-to-day activities such as examinations, portions of medicine, rounding with the physician and orders of material and medical equipment. Asking how RNs perform the acute planning, generated the answer that they prepare information about the patient that should be sent with the patient to the emergency department in an emergency situation.

Execution

When discussing execution of care, both groups seemed to relate to what and how they do when they take action. The RNs explained that they perform what can not be delegated. They came up with activities of preparation, examination and treatment based on ordination from the physician, for instance, arranging medical equipment, bandaging, risk assessment and
examination of health status. Moreover, the discussion with the physician over phone and during rounding was mentioned by both groups as one kind of action that RNs take. In one of the groups, they also described that execution is about checking, for instance:

“We have to make sure that the physician has completed what he promised to do”

However, delegation to assistant nurses was described as major activity of execution, since much of the eldercare is performed by assistant nurses. To accomplish this, the RNs inform and supervise assistant nurses about given and planned care and treatments, how they should accomplish care and how to, for instance, give insulin. The RNs explained that nowadays, they should delegate as much as their and the assistant nurses’ professions permit.

Indeed, referral of a patient, to specialists, a physician or the emergency department, was another answer to the question about what the RNs do during treatment. Referrals were explained to be much about informing the professions and organizations concerned and also about informing and listening to needs and wants of the patient and its relatives. In the discussions about execution, one of the focus groups also had a discussion around improvement work. The RNs develop the care by working in teams to improve nutrition and work descriptions among others. Moreover, it was declared that, the RNs continuously try to update their own knowledge by, for instance, checking the law and regulations, reading research reports about new ways of treating diseases and learning about new technology.

**Evaluation**

Regarding what and how RNs work to evaluate there seemed to be a consensus between the two groups even though one of the groups went further into more details in the discussions.
According to both groups, evaluation is about making sure that a treatment or action has been completed and that the result is desirable both in a long term and a short term perspective.

The group with the more detailed discussions about evaluation, described that in a long term perspective the RNs make sure that plans for individual care as well as strategies and goals for the care are achieved. This is mainly done in a team of the health care employees that are involved in the care of the patient. On a day-to-day basis, the follow up is more about evaluating short term effects such as examinations, health status, medicines and care performed by other professions. In addition, the RNs explained that they try to follow up their own efforts in providing care to a patient.

On the question of how they follow up, both groups again mentioned different ways of collecting information about the patient, treatments and effects, for instance, reading the case book and visiting the patient to examine and, if possible, ask and listen to the patient’s opinions. Moreover, they have conversations with assistant nurses and relatives as well as discussions with the members of the team involved in the care of the patient. Indeed, one of the groups specifically emphasised that collecting information is a prerequisite to follow up results and treatments that have been delegated.

**Documentation and report**

Documentation was discussed by both groups as a vital activity during the whole process, from decision making to follow up, and not only in the termination of a fulfilled need of care. Documentation was explained as a way of accumulating information about a patient for future decisions about care and treatments. Moreover, documentation was seen as a personal security that may show decisions and actions if complaints would be raised against the RN from, for instance, relatives. Thus, the RNs document, among others, the individual plan for each
patient’s care as well as health status, problems and symptoms of the patients. Moreover, decisions, prioritizations, contacts and treatments made are documented. The information is documented at the offices in electronic case books as well as in a file of care directed to the assistant nurses. However, memorandums are first written manually in memo books at the patients’ and transcribed electronically afterwards. Other documents that the RNs establish at work include, for instance, manual weight and nutrition lists and handwritten messages to assistant nurses. In addition they draw up signing lists to control the care, medication and treatment accomplished by the assistant nurses.

The reports are mainly described as an issue between RNs to report specific demands of care when handing over to each other after a shift. This is most often accomplished by phone or in written reports sent electronically to RNs or the physicians or emergency department;

"We accomplish the reports over telephone since we seldom have time to meet."

5.2 The work situation
When the RNs told about their work during the interviews and were asked to reflect around experiences from an optional care situation of their everyday job, the analyses show that RNs’ chose to talk about aspects related to three categories under the theme ‘Aspects that affect the RN’s work and security, satisfaction of relatives and, in the end, the quality of the eldercare provided to the patients’. The three categories are:

1. The RN work for the best of every elderly patient
2. The RN has a lonesome role in between other professionals in eldercare
3. The RN is reliant on information and improved relations and collaboration with others
The RN work for the best of every elderly patient

The category ‘the registered nurse work for the best of every elderly patient’, describes the RNs’ envision of being there for the elderly and to do their best to provide for the elderly so that they can feel as good as possible and get a worthy death in their home at the nursing home. Thus, RNs try to find out about the needs, wants and expectations of the patient. However, this is not always easy since the elderly mostly have some degree of dementia or is very ill and therefore can not speak out the desires. The RNs often need to find out through the documented individual planning for each patient’s care, her/his own professional knowledge and experiences and dialogues with other persons involved in the care of the patient. At the same time, the needs and wants of relatives should be considered as long as their demands do not interfere with the health of the elderly. Therefore, the relation between the RNs and the relatives of the patient is vital. The RNs need the relatives’ understanding and collaboration and want to inform and talk to them to involve them in making the best decisions about care and treatment for the patient. Indeed, the relatives’ wants and expectations about the care are not necessarily the same as what the RNs, from their understanding, think is the best for the patient. This creates ethical problems in decision making, particularly in situations where the patient is dying:

“... what I as a nurse think is best for the patient is against the wants of the relatives. Everyone can’t be satisfied every time and actually, the law and regulations control my work.”

The RN has a lonesome role in between other professionals involved in eldercare

The RNs provide the medical competence but "someone else”, the assistant nurses, actually perform the care within the nursing homes. According to the RNs, they primarily decide upon and plan the care and then guide the assistant nurses so as to ensure the patients are given the
right and good quality care. Indeed, the RNs are regularly called for, in more or less acute situations, to identify problems and decide upon demands for care, treatments, referrals and weather or not to call for a physician. All the time each RN works alone and do not have direct contact with colleagues or physicians, and therefore can not easily consult other professionals in such acute situations. The RNs describe feelings of loneliness and powerlessness when making the difficult decisions and prioritizations regarding the care of elderly with multifaceted diseases;

"It is difficult to be a registered nurse in the municipal eldercare since you have to make many decisions on your own."

This requires the RNs to be competent and experienced as well as relentlessly available for the assistant nurses during working hours so that they can ask questions and send for medical competence.

The RNs also describe that they often feel lonely and uncomfortable because getting caught in between different actors due to ethical decisions about care. They describe situations in which they have to stand up for decisions that are made by the physician about care and treatment, for instance, when the assistant nurses do not understand or support this decision and therefore complain to the RNs about the care that is provided. Other situations related to this problem are those in which the RNs make decisions about care and treatment that they think are the best for the elderly but the relatives do not understand and therefore refuse to accept. However, when the RNs listen to the relatives and, for instance, refer the elderly to the emergency department on their wishes, they do often instead get complaints from the professionals at the emergency department about referring a dying patient that can not be treated. Thus, to be able to provide the best for the patients in such situations, the RNs ask for
more support from the physicians to inform relatives and assistant nurses and make them understand why the prioritizations and decisions are made:

"...you should get a diagnosis ‘dying’ earlier so that you know how to act, and inform relatives in a way that they can understand, but they [the physicians] do not dare to say that someone is dying. You should have physicians who dare to talk about death more than they do today and establish an individual plan for the dying of a patient to make it as good as possible [for the patient]"

The RN is reliant on information and improved relations and collaboration with others

The RNs are reliant on good relations and cooperation with other actors around common prioritizations for eldercare. For instance, RNs are dependent on the manager of the nursing home to assure resources for care. There is also a necessity of collaboration with physicians, assistant nurses and the emergency department for providing good care, not least in acute situation or when a patient is dying. The RNs need support from the physicians and want them to visit the patients and back up their decisions in acute and problematic situations, for instance, when relatives need to be informed about the health status of a dying patient. However, sometimes a physician makes different prioritizations about a situation than the RN and does not think it is necessary to come to the nursing home.

Not least, in their work, all RNs describe that they are highly dependent on access to the right and good information about the patients to feel secure and make the best decision about care and treatment for the patient. Moreover, when consulting a physician, the RNs feel that it is vital to give right and good information to the physician to aid his/her work and in turn get good support and decisions about care. The assistant nurses are a vital source of information
for the RNs’ decision making since they are the ones who accomplish most of the care and
detect changes in the health status of the patients. The information the RNs get from the
assistant nurses is based on these assistant nurses’ experiences and will shape the RN’s view
of the situation:

“The staff [assistant nurses] influence my in-view that I have when I
enter into a situation”

“I am dependent on the staff [assistant nurses] I work with, the
security to know who they are and what they know”.

The RNs spend much time on making secure and good decisions. Nevertheless, they rarely
get feedback on their decisions and only have limited possibilities to follow up a specimen or
referral by themselves. Normally, a physician or employees at the primary care centre need to
be contacted and requested to check up results. Moreover, they can not get any information
about a patient, or whether they have made a correct decision, after a referral to the
emergency department at emergency hours. At the same time, since the RNs work alone and
seldom meet with their colleagues they have no time or opportunity to reflect together or learn
from a colleague’s decision or problem.

6. Discussion and conclusions
This paper shows that a generic chart of five main activities; decision making, planning,
execution, evaluation and documentation and report, may be used to describe an overview of
the care pathway of eldercare. This generic chart is based on the overlapping descriptions
made from the view of the authors, based on observations of the eldercare, and the
descriptions made by the RNs. The chart also coincides with the flow-model, which is a
model that should describe the flow of Swedish health care in general (Elg & Lindmark, 2006). Indeed, the results of this paper in addition show that the generic chart of the care pathway, when seen from the perspective of the RNs, may describe an overview of the main activities that are undertaken by a single profession working along the pathway of eldercare.

However, the generic chart does not directly demonstrate that eldercare crosses different professions within different organizations and requires extensive cooperation and communication. Thus, a chart on a more detailed level was also created. This chart, in Appendix 1, may be seen as one suggestion of how a more detailed process chart can be created. The chart describes the activities and communications of RNs in more detail and thus may be used together with the generic chart to enhance the understanding of RNs’ work and work situation on an organizational level. At the same time, the more detailed chart might be used to increase the RNs’ understanding of their own roles and contribution to the wider context of eldercare as well as for their specific tasks and responsibilities.

Nevertheless, the chart in Appendix 1 does not illustrate, for instance, that the tasks within the five main activities and thus, of the professions involved, vary with the demands and time of the day. One, or several, more detailed process chart(s) may therefore be created to describe the pathway of eldercare and the work of different professions along this process. The mapping of these pathways may preferably be based on collaboration with several different professions to reflect the work and contribution of each profession along the pathway. Thereafter, the process charts might be used to feed discussions between the providers of eldercare and increase the understanding for how to improve the collaboration and how to provide for the RNs and other professions to perform a good job they can feel proud of. Such
are needed to meet the increasing demands on eldercare and create value to future patients and relatives.

Indeed, the chart in Appendix 1 shows that the RNs have a central role, as between the different actors of eldercare. The RNs’ descriptions of their work further show that being a RN involves being both a clinician, consultant as well as an instructor and educator. This multiple role has also been emphasized by, for instance, Cattini & Knowles (1999). However, these roles appear to be lonesome and demanding. Making difficult and often ethical decisions about treatment all alone, in more or less acute situations and under pressure from relatives seem to be the reality of the RNs’ work situation. To handle this and feel secure the RNs depend on access to good and right information about the patients and cooperation with other professions, not least assistant nurses and physicians. However, the reflective dialogues showed several hinders for achieving this. For instance, the RNs described feelings of loneliness and uncomfortably and they explicitly called for more support from physicians in informing relatives about ethical decisions regarding care as well as a better collaboration with the emergency department to facilitate the communication and possibilities to follow up after referrals. Moreover, they indicated lack of time and opportunity to meet other professionals to discuss and reflect upon specific situations and more general issues of elder care.

Feelings of loneliness together with a lack of support and feed-back may be negative for the work satisfaction of RNs (Karasek & Theorell, 1990; Hackman & Oldham, 1976). This, in turn, may impact the quality of care that can be offered (Chu et al., 2000; Redfern et al., 2002; Mitchell & Shortell, 1997). Considering this, providing for RNs to easily access the right information about patients, including possibilities to use documentation for checking up
decisions, results and referrals, and arranging opportunities for them to meet other health care employees in discussions, should mean a great potential for, and aiding the RNs in, both performing, learning about and improving their work of providing good quality eldercare.

**Methodological considerations**

The results presented in this paper are based on studies of twelve RNs working in the municipal eldercare in Northern Sweden. The participants were mainly female which is typical for the population of RNs in the Swedish health care sector (Statistics Sweden, 2007). It could be questioned if eleven nurses had to be observed since the authors felt saturation in the observations and interviews after about eight or nine. However, each of the RNs added to the deeper descriptions in the reflective dialogues and contributed to the discussions in the focus groups.

In the study, two researchers from different research areas have cooperated during planning, data collection and partly in the analysis. This nourished the discussions with the RNs because of the authors’ different backgrounds. Another strength with this study should be that several sources of data collection have been used to create the descriptions from some different views. The illustration of the care pathway was created from a consensus of both the outsider perspective obtained from the observations and the inside perspective, the perspective of the RNs. In addition, interviews, reflective dialogues and discussion in focus groups added to the RNs description of their work along the care pathway. However, the methods used may have affected both that the charts of the care pathway were centred on the profession of RNs as well as the descriptions given by the RNs. Indeed, the focus groups were mainly used to confirm the results and further develop the description of the work of RNs. Moreover, none of the focus groups generated new information but helped structure and
deepen the descriptions from the interviews in relation to the care pathway. The results showed an agreement between the two different groups but not least reflected a need of the RNs to meet and compare, discuss and exchange experiences about their work. Afterwards, the participants of one group realised that they do a lot that they had not really thought of until they met and discussed their work together.

**Practical implications**

The results of the case study in eldercare in Northern Sweden indicate potential areas of improvement which, if considered, may lead to better work conditions and increased quality of eldercare. Based on the results of the study, the authors would suggest providers of eldercare to consider the following:

- *Arrange for different professions from different organizations to meet and discuss. In such discussions a chart of the care pathway may be used (or created in cooperation) as a tool to support a wider understanding of eldercare and the needs and contribution of different professions.*

- *Provide for RNs to easily access the right information about patients, including possibilities to check up decisions, results and referrals.*

- *Arrange opportunities for RNs to meet in discussions and reflections. By this means, they could support and learn from each other.*

**Conclusions**

In conclusion, this study shows that the care pathway of eldercare may be described as a flow of five main activities involving different professions from both the county council and the
municipality. The work of RNs along this care pathway can be described in activities of decision making, planning, execution, evaluation and continuous documentation and report in both planned and acute care situations. To perform these activities well and satisfactorily, RNs have a need for information and also ask for better opportunities to follow up their work. In addition, better cooperation with and support from other professions in eldercare are requested by the RNs to improve their security and performance so as they can satisfy relatives and achieve what they see as the essence of their work; provide good quality care to the elderly.

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8. References
SBU-rapport.


PAPER F

Effects of information and communication technology on the care pathway: Experiences of registered nurses in Swedish eldercare

Effects of information and communication technology on the care pathway

Experiences of registered nurses in Swedish eldercare

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ABSTRACT

Purpose: The purpose of this paper is to describe how eldercare and the working situation of registered nurses providing this care may be affected by the introduction of information and communication technology (ICT).

Methodology: The study is a part of a case study performed in the municipal eldercare in the north of Sweden between 2006 and 2007. Data was collected through observations of and interviews, reflective dialogues and focus groups with eleven registered nurses (RNs) using applications of new ICT and medical equipment in their work. Data was then analysed through process mapping and content analysis. Based on this, influences of ICT, on the eldercare and RNs’ working situation, could be identified and related to the main activities of a chart illustrating the care pathway of eldercare.

Results and conclusions: The study showed that applications of ICT and medical equipment in eldercare might shorten the care pathway by creating an extended flow of information along the care pathway and reallocation of tasks. This in turn might provide for better care to be offered faster and more securely to the patients with improved but decreased contact between physicians, care centres and RNs. However, introduction of ICT applications in eldercare also causes dual effects on the working conditions. The RNs in this study experienced increased work load, demands and stress but also reported improved work content and feelings of more authority, independence and security in work due to the ICT. These experiences might influence the work satisfaction of the RNs, and in the long run, also the quality of care, both negatively and positively. Thus, the study shows the importance of adapting the ICT applications as well as the changes it brings with it into the organization, to the needs of the users.

Key-words: Quality of eldercare, care pathway, ICT, work situation, registered nurse

1. INTRODUCTION

The number of elderly people is increasing in many European countries and North America. Sweden is no different. Between 1980 and 2003, the group of people aged 80 and older increased by 81 per cent (Swedish statistics, 2005) and this trend is continuing. There even seems to be a medical paradox since more peoples’ lives can be saved due to medical developments in modern health care at the same time as better conditions make people live longer (Ekermo, 2000). Nevertheless, the elderly often suffer from a manifold of deceases and
impairments at once and thereby have high and complex needs of care (Agahi et al., 2005; Akner, 2004). At the same time the elderly patients and their relatives have increased their expectations on the quality of the care¹ and their opinions on how the treatment is carried out (Hallin & Siverbo, 2003). All these factors result in mounting needs of care and hospitalisation, for an increasing numbers of elderly patients with high expectations regarding good quality eldercare¹ (Thorslund & Parker, 2005; Hallin & Siverbo, 2003).

Despite this, decreased resources have reduced hospital care, which means shorter stays at the hospitals and patients being discharged from hospital earlier and in worse health than previously. This, in turn, implies an increased pressure on home-based care to be provided at the patients’ home and at a distance from hospitals with the support from competent and collaborating professionals from different care authorities (Ministry of Health and Social Affairs, 2002; Shortell & Kaluzny, 2000).

One solution suggested for meeting the increasing demands and expectations of good quality and distance eldercare to increasing numbers of patients is the use of information and communication technology (ICT)², which is expected to play an important role in how the eldercare is organized and provided in the future. ICT enables people to communicate, gather information and interact with distance service more quickly, more easily and without the limitations of time and space (Campbell et al., 1999). Thereby, ICT should have the potential to facilitate remote communication and the support of competent health care professionals to home-based care and improve the utilisation of resources, for instance, health care professionals (Hallin & Siverbo, 2003; Ministry of Health and Social Affairs, 2002).

However, new technology also compels changes of the processes, organisation and control systems of care and will imply changes in the work situation of health care employees (Bradley, 2003; Sävenstedt et al., 2002; Iwarsson, 1999). Positively, it can influence learning opportunities, social relations and workplace flexibility (Johansson, 2005; Docherty et al., 2002). It should also have the potential to satisfy the needs of increased support from physicians and transfer of information between care providers, which have been identified in eldercare (Wreder & Pohjanen, 2007, Kihlgren et al., 2003). However, there are several studies reporting a resistance of health care employees towards introduction of ICT in eldercare and a worry about dehumanised care (Sävenstedt, 2004; Lee Kyle, 2001). The new technology may also put new demands on the employees in terms of competence, autonomy, and flexibility (Houtman et al., 2002; Docherty & Nyhan, 1997; Forslin & Thulestedt, 1993).

Accordingly, it is likely that an introduction of ICT would change the working conditions of registered nurses, who in Sweden have the most significant professional role in municipal eldercare. The registered nurses would be forced to use the new technology in their work and adjust to the changes it might bring in to the organization. This in turn may create stress and affect work satisfaction. Since the satisfaction and well-being of the health care employees, not least registered nurses, are essential to provide good quality eldercare, the quality of care may be affected in the end (Redfern et al., 2002; Chu et al., 2000; McAiney, 1998).

¹ Good quality eldercare is here viewed as eldercare that satisfies, or preferably exceeds, the needs and expectations on eldercare and thereby creates high value for, foremost the patients with the greatest need of care, but also for the other stakeholders such as relatives and the society.

² In this sense, ICT may be described as by the World Bank (2002): “Information and Communication Technology consists of hardware, software, networks, and media for collection, storage, processing, transmission, and presentation of information (voice, data, text, images).”
1.1 Purpose

At a time when the need for ICT in eldercare increases at an enormous rate, there also appears to be a need to learn more about the effects that the ICT might cause to eldercare and the employees providing this care. Therefore, the purpose of this paper is to describe how eldercare and the working conditions of registered nurses (RNs), involved in providing this care, may be affected by introduction of ICT.

2. EXPERIENCES OF ICT IN ELDERCARE

In recent decades, the rapid development and application of information and communication technology (ICT) has had major impact on the development of business and working life (Johansson, 2005; Docherty et al. 2002). ICT have revolutionized the storage and transmission of information in media and on the Internet. This has enabled people to see and communicate with each other, gather information and interact with distance service more quickly, more easily and without the limitations of time and space (Johansson, 2005; Johnston, 2000; Campbell et al., 1999).

As such, health care is only one sector in which the interest for the benefits of ICT has amplified. In eldercare, the great demand for care, the costs involved in this and the needs to improve the utilisation of resources such as physicians’ time, are a few examples of what could motivate a drive for ICT applications (Sävenstedt, 2004; Hallin & Siverbo, 2003). The use of ICT for clinical practice is also argued to support the relational components of care through interaction, for instance at distance, and in the best case provide care to those who otherwise would not benefit from the same level of service (Wright et al., 2001).

ICT may be seen as an example of recent developments in health care technology, which is constantly being developed further by new applications and methods for use in the care (Sävenstedt, 2004). Limited projects have reported successful use of tele- and video-conferencing for consultations and support by health professionals of the elderly in their homes (Demiris et al., 2003; Arnaert & Delesie, 2001; Whitten et al., 1998). A barrier to ICT applications is however negative attitudes among health care employees as well as among the elderly patients (Sävenstedt, 2004). Another obstacle for ICT may be identified in the perceived loss of interaction qualities, which are considered important to the quality of care (Arnold & Boggs, 1995). Miller (2003) also argues that even though there are those who believe that distance care based on ICT can alter the relations between physicians and patients, there is no consensus as to whether it enhances or damages the relationships or the practice of medicine.

Indeed, the introduction of new technology compels significant, widespread, and sometimes even unanticipated organizational change; see Barrett et al. (2006). According to Sävenstedt (2004), Certo (2000) and Pidd (1999), introduction of a new idea, such as new technology, is an organizational change forcing changes in processes, work organization, responsibilities and practices. This may imply structural changes and lack of control, support and security in work, which can lead to job dissatisfaction, health problems and pessimism among employees according to Härenstam et al. (2000), Landsbergis et al. (1999) and Karasek & Theorell (1990). Thus, introduction of ICT should also involve consideration of changes in the work environment and the work of the health care employees (Sävenstedt et al., 2002).
3. ELDERCARE IN SWEDEN

The healthcare system is commonly composed of a complex net of actors, activities and processes (Stahr et al., 2000). The Swedish eldercare is not different. It involves a wide range of actors employed by two responsible providers, the municipality and county council. Municipalities, usually responsible for eldercare within nursing homes, employ registered nurses (RNs), occupational therapists, physiotherapists, assistant nurses, needs’ assessments officers, and supervisory employees, whereas physicians are employed by county councils (The Swedish Association of Local Authorities and Regions, 2005).

3.1 The care pathway of eldercare

Most of the elderly that reside in the municipal nursing homes are over 80 and have some degree of dementia and therefore have considerable and demanding needs of nursing care and hospitalisation (Akner, 2004). Thus, when an elderly patient is treated, they go through a chain of treatments and actions performed in different organizations by different actors (Wreder & Pohjanen, 2007). This chain of treatments and activities may be defined as the care pathway (Andersson, 2006). Along this care pathway extensive cooperation between the municipality and county council is required and the competence of different professions is obliged to provide care of high value for the patients (Thorslund et al., 2001; Shortell & Kaluzny, 2000).

Based on this, several attempts have been made in Sweden to find generic charts of the care pathway that can be used for description and improvement purposes, for instance, for understanding needs of ICT and improving cooperation (Wreder & Pohjanen, 2007; Elg & Lindmark, 2006; SAMBA, 2004). An example of a generic chart describing the care pathway of the eldercare is illustrated in Figure 1.

![Figure 1. A chart describing the generic care pathway of eldercare in Sweden (Source, Wreder & Pohjanen, 2007)](image)

3.2 RNs in municipal eldercare

Along the care pathway, RNs working in municipal nursing homes have a central role as “a spider in the web” working in between both different professions and organizational borders (Wreder & Pohjanen, 1997). The RNs are the most highly qualified medical professionals and have the ultimate responsibility to ensure the patients are given good quality care within the municipalities. They work in the home environment instead of hospitals, in an organization with few levels of decision making and little contact with physicians and colleagues (Fagerberg, 1998). As a result, the RNs’ profession encompasses many sub-roles within the municipality, for instance, clinician, educator, researcher and consultant (Cattini & Knowles,
At the same time, their responsibility also involves making decisions about demands, treatments and attention of physicians.

Weiman et al. (2004) showed in a study that almost 50 percent of the RNs in eldercare were dissatisfied with their work situation. Other studies have also shown that many RNs experience loneliness and powerlessness, lack of support and information as well as increased workload in their work (Wreder & Pohjlanen, 2007; Westlund & Larsson, 2002; Oberski et al., 1999). At the same time, a relationship has been revealed between poor work satisfaction and high stress levels among employees and lower quality (Redfern et al., 2002; Chu et al., 2000; Cohen-Mansfield & Rosenthal, 1989). For instance, low satisfaction among nurses is associated with the process and outcomes of care as well as the patient satisfaction (Mitchell & Shortell, 1997; Weisman & Nathansson, 1985). Thus, when introducing ICT as a solution for the increasing demands and expectations on eldercare, it should be important to also consider the effects on the work environment and make sure the RNs are provided satisfactory opportunities to do a good job that they feel happy about when they use ICT in their work.

4 METHOD

The paper builds on a case study performed in cooperation between researchers from two areas, quality management and nursing. In joint data collection, the researchers together have illuminated the effects of ICT on the care pathway and the RN’s working situation through different perspectives; a quality management and a nursing perspective.

The study reported in this paper was a part of the case study, which was performed in eldercare in the north of Sweden between September 2006 and August 2007. The first part of the case study was performed without ICT in the eldercare and this second part was performed, during eleven weeks in the spring 2007, when ICT applications had been introduced; see Figure 2.

![Figure 2. The care pathway without ICT](image)

The focus of this paper is the second part of the case study, which is focused on the influences of ICT on the care pathway and the working situation of RNs. Thus, this paper reports observations and experiences made at the time when ICT was used in the eldercare.

The intention of Part 1 of the case study was to get an understanding of eldercare and the working conditions of health care employees before the ICT applications were introduced. Such an understanding was seen as a prerequisite for exploring and describing influences of ICT in Part 2. The methods and results of the first part are described in more detail in Wreder & Pohjlanen (2007), whereas this paper is focused on the second part of the case study.
Approval for performing the case study was given by the Regional Health Service Ethics committee.

4.1 ICT applications

The ICT applications used in the eldercare\(^3\) were parts of an ICT platform developed to provide distance communication between physicians and RNs. Among the applications were a laptop with mobile connection to a ‘peep hole’ in the documentation and case book system, video conference technology and a digital camera. Moreover, medical equipment, for instance a bladder scan, a CRP-instrument for detection of infections, a haemoglobin measurement device, an instrument for measuring peak expiratory flow and an instrument for pulsoximetry, were included in the platform to support the communication\(^4\). The laptop, camera and medical equipment were packed in a trolley for RNs to bring to the patients’ at the nursing homes; see Figure 3.

![Figure 3. The laptop, camera and medical equipment were mobile and packed in a trolley (although another trolley than the one in the picture) for RNs to bring with them to the patients. The laptop or the stationary computer at the RNs’ offices could be used by the RNs to connect to the document and case book systems of both the municipality and the county council to read information about the patients. (Source: CDH, 2007)](image)

4.2 Participants

The platform of ICT applications was to be used by RNs within the municipality eldercare, specifically in their contacts with physicians and in examination of elderly patients. Considering this and the fact that RNs appear to have a central role within Swedish eldercare, we chose to limit the population of informants to RNs to get a deeper understanding of the phenomenon from their view. The criteria for participation were that the RNs worked fulltime in one of 15 municipal nursing homes that had agreed to test the ICT solutions. Based on that, a letter was sent to 26 nurses fulfilling the criteria as well as the patients at the nursing homes in order to give information about the study and obtain informed consent. Approval was given by 20 RNs and out of them eleven participants working at nine different nursing homes were selected based on practical consideration of working hours. Among the participants were one man and ten women with ages ranging from around 40 to 65 years. They had had their RN qualification between three and 28 years and their work experience in municipal eldercare varied from four to 26 years. Ten out of the eleven RNs worked daytime and some scheduled on-call hours in the municipality eldercare, whereas one was employed to work nights only.

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\(^3\) The platform was developed and tested within the SARAH-project conducted in eldercare in the north of Sweden during 2005 and 2007. For more information about the project and ICT platform; see CDH (2007)

\(^4\) The platform is described in more detail in Wreder et al. (2007)
4.3 Data collection

When the ICT applications had been initiated in the eldercare and thereby in the daily work of the RNs, the data collection in Part 2 proceeded in a similar way to that in Part 1 of the case study. To explore and describe the influences of the ICT platform on eldercare and the RNs’ working conditions, we needed to study both the care pathway of eldercare and the work of RNs within this pathway. Thus, each RN was observed between four and eight hours during day and on-call hours and a checklist was used to study, areas such as, tasks and interactions while the RN used the ICT applications. The observations were direct and non-participant to allow for a wider understanding of the context, being open-minded to occurrences and for detection of activities and influences that the RNs might not be aware of.

In addition, individual interviews and reflective dialogues were considered valuable for data collection to seize the view and knowledge of the RNs. Thus, each nurse also participated in an individual interview at the time of the observation. In the interviews, the authors were interested in the views and descriptions of the RNs to complement the ‘outsider’ view that would result from their observations. A questionnaire5, including questions about experiences of the ICT applications was used as a guide, but the order of the questions was adjusted to create natural conversations. At a later occasion, the reflective dialogues were performed individually with the RNs. In the dialogues, each RN was asked to reflect on experiences from an optional historical care situation based on the questions in Gibbs’ reflective cycle; see Gibbs (1988). Thereby, the RNs had the opportunity to choose whether or not to tell about a situation in which ICT had been used or not, resulting in only two nurses reflecting around their experiences of ICT.

Last, two focus group interviews, lasting about two hours each, were also held. Based on the illustration of the care pathway6 in Figure 1, the five RNs that participated in each group were encouraged to have an open discussion and come up with answers to the question ‘How has ICT affected my work as a RN in the process of eldercare?’ and note their common answers on a white-board. The main reason for discussing this question in focus groups was to trigger discussions on the assumption that they would give additional opinions and experiences of ICT that could not come out of several individual interviews.

4.4 Analysis

All data were transcribed and thereafter read through several times by the authors to get an overall understanding. The observations were then analysed through mapping of activities in cooperation between the authors to create a generic chart of the care pathway describing the activities and tasks performed with ICT in eldercare. After that, the interviews were analysed with qualitative content analysis using affinity diagrams7. Data were structured around the areas of questions before text units, sentences or parts of sentences were identified and coded within each area. Based on affinity, the textual units were then sorted into categories describing the RNs’ opinions and experiences. In a similar way, the reflective dialogues were analysed stepwise using qualitative content analysis; see Figure 4. Text units were identified within each dialogue and then condensed and coded before being sorted into categories and

5 The question form may be found in Wreder et al. (2007).
6 The illustration had been created based on observations of and focus group interviews with the RNs in the first part of the case study.
7 The affinity diagram is a tool that can be used to reduce disorganized qualitative information into a narrative form see; Andersen (2006) or Mizuno (1988).
sub-categories in several steps based on affinity. This was done using a software (NVIVO7)\(^8\) and manually by using affinity diagrams.

Figure 4. Based on the collected data several steps were conducted in the analysis to identify influences of ICT.

After that, identification of influences of ICT on the care pathway and work situation of RNs was performed in three steps; see Figure 4. Firstly, the generic chart describing the care pathway with ICT was contrasted to the generic chart created in Part 1 and illustrating the care pathway without ICT; see also Figure 1. As a second step, the categories and descriptions that resulted from content analyses and focus groups, were condensed and compared. Out of this, four new categories, describing the RNs’ overall experiences of using ICT in eldercare, were created based on affinity. Thirdly, the comparison of the charts of the care pathways and the categories based on the RNs’ experiences were used to identify influences of ICT and relate them to the activities of the care pathway. In this step, influences of ICT were identified by searching similarities and discrepancies\(^9\) of the two charts; see also Figure 2. Indeed, the main activities illustrated in both charts turned out to be the same. Therefore, the chart of the care pathway illustrated in Figure 1 could be used to relate identified influences on the care pathway and working situation of RNs (described in the categories) to specific activities of the care pathway; see Figure 5 and Figure 6.

5 RESULTS

The results are based on a test period of approximately eleven weeks during which the RNs were encouraged to use the applications of the ICT platform in their work. However, in general, the study shows that some applications were used to a larger extent than the others. For instance, all RNs used the connection to the ‘peep hole’ in the documentation and case book system of the county council in their daily work. Moreover, the CRP instrument and bladder scan were used frequently, whereas others such as the video conference technique and digital camera were applied at only a few occasions. Nevertheless, when asked about their overall impressions in the end of the test period, the RNs tended to be positive and argued that

\(^8\) For more information about the text analysis software NVIVO 7; see QSR International (2007).

\(^9\) This comparison was possible to perform since the authors had also performed the first part of the case study.
the ‘peep hole’ and medical equipment of the ICT platform should have been natural parts of their work for many years.

During the test period, the results were derived through (1) an ‘insider’ perspective based on the RNs’ experiences of using ICT, and (2) an ‘outsider’ perspective based on the authors’ identification of influences on the care pathway and work situation of RNs through observations and interpretation of the RNs’ experiences. The results presented below are described from these two perspectives.

5.1 The RNs’ experiences of using ICT in eldercare

The summing up and comparison of the categories from the analyses of interviews, reflective dialogues and focus groups resulted in four new categories describing the RNs’ experiences of using ICT in eldercare. The categories are:

- More information to act upon
- Possibility to follow up
- Additional and time consuming activities
- Trouble with function and access of the ICT platform

**More information to act upon**

The category ‘More information to act upon’ was made up of sub-categories describing positive and negative aspects of having availability to more information than before. Through the peep hole in the document and case book system of physicians and other health care employees within the county council, the RNs could retrieve more information about the patients as well as read about decisions and treatments carried out by other professionals. In addition, another kind of extra information became available directly to the RNs when they used the medical equipment. For instance, they got fast test results and thereby information about the status of the patient to consider when deciding and planning for care.

Positive experiences of having more information available were summarised in the sub-category ‘a better basis for decisions about care’. According to the RNs such a basis favoured more secure and precise decisions, which could lead to faster execution of the right treatments and thereby less suffering for the patients. Moreover, the RNs described that the better basis of information made them as professionals feel more secure and safe in work when, for instance, making decision and informing relatives. The majority of the RNs also argued that this led to less dependency on consultations with physicians.

Considering the information that could be derived through the medical equipment, a negative aspect could though be described in the sub-category ‘ethical decisions’. The sub-category refers to the RNs’ fear about that all tests lead to a result that someone has to consider and take action on, whether it is the wants of the patient and relatives or not and whether the health care employees think it is the best for the patient or not. One RN described this in the following way:

“If the physician just allows a CRP test to be taken and not stand up for the decision and the test shows something, then the dying elderly patient must be sent to the emergency department. The emergency department will then call the RN and complain about the fact that she/he has referred a dying patient to the emergency department where they can do nothing.”
Possibility to follow up
The extra information available through the peep hole and fast test results from use of the medical equipment also entailed what was summarised in the sub-category; ‘possibility to check up medical test results, prescriptions and treatments carried out’. In general, the RNs experienced this as positive, since they for instance, could follow up about a patient and could respond faster to questions about test results to patients and relatives. For instance, one of the RNs described that:

“Through VAS [the peep hole] you can follow up tests….or what has happened to a patient after your decisions without having to call the physician or disturb the employees at the local care centre”.

Indeed, this positive experience of the RNs seemed to be much due to their possibility to find out about this information themselves without calling, and thereby disturbing, the physician or employees at the care centre. Moreover, the RNs described that they actually got an opportunity to learn from their actions when they could check up what had happened to the patients along the care pathway after their own decisions and treatments.

However, one sub-category also showed that the RNs also described that the peep hole created ‘fear of additional expectations from physicians and relatives and to be laid on additional responsibilities that should not be a part of the RN profession’:

“With VAS [the peep hole] there is a risk that the RN is given the responsibility to check up test results”

Additional and time consuming activities
The peep hole and medical equipment further implied that the RNs could make more decisions, follow up actions as well as both take tests and analyze them at the patients’ home in the nursing homes. Some of the RNs experienced these as increased burdens that would only facilitate the work of physicians but should not be a natural part of the RNs’ work or responsibilities. In contrary, others described these additional tasks as possibilities giving positive extension of work content and increasing their authority and possibilities in performing the work.

However, all RNs described that they, more or less often, also experienced the additional activities as time consuming and stressful. Moreover, they explained that the decision making took much longer when additional tests and information had to be considered in different ways and forms:

“During emergency hours, the technology is sometimes a stress factor. It takes time to arrange the equipment and perform the examination. If someone calls in with an emergency call in the middle of such an examination, I do not have time to finish or otherwise it becomes a stress factor.”

Functionality and accessibility
During the interviews and focus group discussions the RNs tended to focus much on practical aspects of the ICT platform, such as, lack of availability and difficulties in handling the equipment. One sub-category summarises what was expressed by all RNs; ‘heavy and bulky equipment’ that was difficult to carry with them to the patients at different nursing homes during emergency hours. Moreover, they complained about the functionality which is described in the sub-category ‘equipment was not functioning properly’. Many of the RNs
said that they had spent several hours to try to arrange, connect and log on to the equipment that was not functioning properly when it was needed. The RNs also seemed to be upset about the coordination around the ICT platform. Several RNs working at different nursing homes were supposed to share medical equipment and thus, had to plan how and when to pass over the equipment. One RN, for instance expressed that as:

“The ICT platform is not readily available, it is troublesome to go and get it and use it and this takes time”

5.2 Influences on the care pathway and work situation of RNs

Based on the observations, a generic chart was created to illustrate the care pathway when ICT was used in the eldercare. However, when comparing this chart to the chart established in the first part of the case study it appeared very similar entailing the same main activities as the chart illustrated in Figure 1. Thus on a generic level, the chart of the care pathway seems to be the similar whether or not the ICT platform is used in the eldercare. Nevertheless, within the five main activities described in the generic chart, this second part of the case study demonstrates several changes that seem to be a result of an extended flow of information along the care pathway and reallocation of tasks created by the use of the ICT platform. Many of these changes along the pathway also seem to have influenced the working situation of RNs.

Influences of ICT identified on the care pathway

When the ICT platform was used in the eldercare, the RNs had availability to extended information which appeared to influence the flow of information in communication and collaboration along the care pathway. The RNs reported a decreased need to consult the physicians as they could access the information they needed and do that by themselves. However, at occasions when contact had to be made, the RNs appeared to be more prepared and could more easily deliver the information requested by the physicians. Indeed, the observations showed that the ways in which the RN–physician contacts and collaborations were made did not seem to change. Instead of using the new applications of the ICT platform, such as video conferencing, the telephone appeared as the most common tool as it had been before the ICT platform was available.

The extended flow of information further appeared to be a precondition for the reallocation of tasks to the RNs who got the opportunity to perform a number of new, and also time consuming, tasks such as examinations, test analysis, independent decisions and follow up at the patients’ home, while at the same time physicians and care centres appeared to be less burdened with questions from the RNs.

The identified changes that seemed to be a result of the extended flow of information and reallocation of tasks are related to the main activities of the care pathway in Figure 5 and described in more detail below.

Decision making: The RNs experienced that they got the opportunity to gather more and better information about the patients and thus could make better decisions and provide for more secure decision making by the physicians when giving them better information. Indeed, the decision making at the patients’ home took much longer when ICT was used.
**Planning:** More information and secure decisions in turn could provide for a better planning for execution of care and also for the right care to be given faster to the patients, who thereby might have to suffer less.

**Execution:** The RNs could execute more examinations and test analyses at the patients’ at the nursing homes. Moreover, the ICT applications provided for distance examinations by physicians. For the RNs this implied more time consuming visits to the patients whereas the physicians might save time and transport by working at a distance. According to the RNs this might sometimes also be positive to the patients who could receive care fast and without having to go through an exhausting journey to the care centre or emergency department.

**Evaluation:** Independent evaluations performed by the RNs could result in less burdening of physicians and care centres.

**Documentation and report:** Documentation and report was not mentioned at all by the RNs. The observations also reveal that this main activity appeared as unchanged from the use of ICT, even though the RNs had the opportunity to use the laptop for continuous documentation.

![Figure 5](image)

*Figure 5. Effects of the ICT platform could be identified within four of the five main activities of the generic care pathway. Moreover, the RNs argued that the care provided to the patient might be influenced.*

**Influences of ICT identified on the work situation of RNs**

Availability to extended information and several new tasks to execute for the RNs implied a changed working situation for the RNs. In Figure 6 the main changes, of the working conditions that were identified from the RNs’ experiences, are summarized in relation to the main activities of the chart of the care pathway.

The results show that the RNs had both negative and positive experiences of ICT related to their tasks within four of the five main activities. For instance, the transfer of tasks to the RNs seemed to increase the work load of the RNs within all main activities except for ‘documentation and report’ as the new activities and new examinations and decisions at the patient’s requires more time. Moreover, when additional tasks were introduced to RNs, who on a daily basis already performed several time consuming tasks at the same time, the intensity also seemed to raise and the work was described as more demanding.
On the other hand, the extended availability to information and medical equipment also seemed to lead to more secure and safe RNs, who felt that they could perform better, follow up and learn from work as well as got less dependent on the physicians. This, in turn, provided for more secure decisions about care and less needs of contacts, between for instance physicians and RNs, along the care pathway. As such, the ICT platform appeared to have dual effects on the working conditions. Positively, it seemed to offer conditions of extended work content and more control and security in work to the RNs. On the other hand, conditions such as increased burden, demands and stress affected the RNs’ experiences negatively.

![Figure 6](image.png)

**Figure 6.** The RNs described both negative and positive experiences of ICT. These experiences can be related to four of the five main activities of the care pathway. A plus in the figure indicates a positive effect of ICT, whereas a minus indicates a negative effect.

### 6 DISCUSSION AND CONCLUSIONS

#### 6.1 Conclusions

The study indicates that applications of ICT and medical equipment in eldercare is useful for information-sharing and home-based eldercare when used by municipal RNs. The ICT platform showed potential to shorten the care pathway by creating extended flow of information along the care pathway and reallocation of tasks. This in turn might provide for better care to be offered faster and more securely to the patients with improved but less contacts between physicians, care centres and RNs.

The study further shows that the ICT platform can cause dual effects on the working conditions of RNs and thereby might influence their work satisfaction both negatively and positively. On the one hand, the RNs in the study experienced that the ICT platform made their work more burdening, demanding, and stressful. On the other hand, the ICT platform seemed to offer conditions of extended work content and more control and security in work. Indeed, to take advantage of the potentials of the ICT platform, the study shows that not only the new technology but also the organization and resources that new technology brings with it should be adapted to the needs of the users. As such, the introduction of new ICT in eldercare appears to relate to general issues of implementation of new technology and change management in organizations.
6.2 Discussion about the findings

This paper shows that use of ICT applications in eldercare during a test period of eleven weeks caused changes in activities and flow of information in the care pathway. Not least, these changes seem to have influenced the work situation of RNs working along the pathway. When RNs get the opportunity to consider more information and follow up in their work they feel more secure and safe and can carry out more tasks independently. This, in turn, results in a transfer of tasks along the care pathway, from physicians and care centres to the RNs, and implies less need of direct communication among the actors. According to the RNs, this might in the end result in better eldercare provided faster and safer to the patients and thereby decrease their waiting and suffering. From these results, the potential of using the ICT platform in eldercare seems to be obvious. In addition, by providing better care faster with less communication and examinations performed at distance by physicians, resources as well as time and tasks of the care pathway might be reduced.

However, these results do not take into account the quality of the communication or effects on the relationship between physicians and patients which is just as important to the quality of eldercare; see, for instance, Arnold & Boggs (1995). Nevertheless, the reduced communication did not seem to result in less transfer of information, but rather a reduced number of consultations and information inquires. As regards positive influences of ICT, the authors could also observe several potentials of the ICT platform, which were not mentioned by the RNs. One example is that the laptop might be used by RNs for continuous documentation and report instead of writing all information twice, first using note pads at the patients’ home and then transferring the information to the electronic case book when back at the office.

The new ICT also appeared to compel new ways of performing the work and put new demands on the RNs in terms of competence, autonomy, ethical considerations and flexibility as described by, for instance, Johansson (2005) and Bradley (2003). Such changes and new demands affected the working conditions of the RNs negatively and resulted in feelings of overwhelming work loads and decisions as well as lost control and frustration. However, the study also indicates that the transfer of more tasks and responsibility to the RNs resulted in experiences of positive effects on the working conditions, for instance, independence, security and meaningful work content and possibilities to learning. Such experiences are important as they influence work satisfaction positively (Hackman & Oldham, 1976). In the end, the RNs’ positive feelings of security, authority and independence appear not only to be effects of the ICT platform but also prerequisites for the transfer of additional tasks and responsibilities to them.

An interesting result of the study is that the introduction of the ICT applications, despite the troubles with availability and functionality as well as more stressful and time-consuming work, appeared to be experienced positively by the majority of the RNs at the end of the test period. One explanation to this might be that the advantages of a more secure and independent work situation are valued highly by the RNs, who thereby can put up with some negative aspects. It might also be that the urgent need of information and possibilities to follow up and learn from work, which have been expressed by RNs in earlier studies, were fulfilled through the use of the ICT applications.

Nevertheless, in the long run, the RNs’ stressful work situation may lead to more sickness absence and not least poorer quality eldercare provision (Redfern et al., 2002; Chu et al., 2000; Karasek & Theorell, 1990). Thus, it should be of foremost importance to adapt the
organization and resources required by the ICT platform to the needs of the RNs. For instance, the transfer of tasks might indicate a need to provide more resources to the RNs so that they can handle the changed methodologies and requirements of work and be able to realise the potential of the ICT applications.

It should be mentioned that the results of this case study are mainly based on the experiences of only a few of the applications of the ICT platform that were used more frequently by the RNs than other applications. Nevertheless, the descriptions of the RNs show that the choice of applications and frequency of use seem to depend on the advantage the RNs experienced with a specific application and not on the functionality, time consumption or issues related to the use of it. For instance, the RNs described the advantage of using the information from the CRP in decision making. At the same time, the CRP instrument was mentioned as time-consuming and related to complicated handling. Nevertheless, considering the complaints about heavy equipment and the frequency of use of some applications, the question about whether all applications should be included in such an ICT platform for RNs could be raised.

However, the frequency of use also seemed to differ between the RNs in the study. This might be a result of differing needs of the applications depending on the occurrences during work shifts. Moreover, it might be due to different value-laden attitudes among RNs to the use of new technology in eldercare as discussed by Sävenstedt (2004). It is tempting to believe though that the frequency of use of different applications among different RNs was caused by the bad functionality and availability of the ICT platform, which also might have influenced the attitudes and motivation of the RNs to use the applications. In addition, the RNs, after having used the applications for some time, seemed to realize the advantages of the ICT platform for their own work and this in turn seemed to effect the overall impression and attitude positively. This result should point at the necessity of adapting the technology to the users, make sure it functions in a good way and is available. Moreover, effort should preferably be put on making the employees see their individual returns of using the new technology before introducing it and forcing them to change their methodologies. The necessity of this is also discussed in literature about change management, for instance, by Balogun & Hailey (1999).

6.3 Methodological considerations

This paper may be seen as the second part of a case study describing the care pathway and work situation of RNs and how these are affected by the use of ICT applications. The case study was performed in cooperation between researchers from two areas, quality management and nursing. The different backgrounds of the authors supported the discussions with the RNs working in municipal eldercare in northern Sweden. The participants were indeed mainly female. However, this is typical for the population of RNs in the Swedish health care sector (Statistics Sweden, 2007).

A strength of this second part of the case study should be that several data sources have been used to look at possible influences from some different views. The identification of influences at the care pathway and work situation of the RNs along this pathway was performed from a consensus of both the outsider perspective, obtained from the observations and interpretations of the authors, and the registered nurses’ perspective. In addition, interviews, reflective dialogues and discussion in focus groups added to the description of the RNs experiences of using ICT in eldercare. The methods used were also intentionally chosen to allow comparison to the results of the first part of the case study when searching for changes resulting from ICT.
Heowever, none of the focus groups generated new information but helped structure and deepen the experiences from the interviews and reflective dialogues in relation to the care pathway. The results showed an agreement between the two different groups but not least reflected a need of the RNs to meet and compare, discuss and exchange experiences about such aspects as the use of ICT in their work.

Nevertheless, in this study, the RNs were encouraged to use the ICT applications in their work for a test period of eleven weeks. Based on this limited test period, one may question if the results of this paper actually consider influences of the use of new ICT applications or if it is the effects and experiences of an introduction that are described. For instance, it could be that the different attitudes of the RNs to new technology and the practical problems around availability and functionality of ICT that they described are results from uncertainty experienced in the change process and initial problems in the introduction of new ICT applications. However, this should further confirm the importance of involving and motivating the employees during an introduction of ICT to shape their attitudes and experiences positively and thereby increase the likelihood of successful use of the ICT.

6.4 Practical implications

After having performed the case study and reflected on the findings, some recommendations to managers or other persons considering the adoption of new ICT in their organizations could be suggested:

- Clarify the purpose of the ICT and in particular describe the positive effects that it may bring to the employees and to the patients they are responsible for.
- Adapt the ICT to the needs, capacity and competence of the users. The intended users should be involved as early as possible in the development of the applications and the workplace it is to be used in.
- Make sure the ICT functions as intended before it is introduced to the users. In case of problems, users should have easy access to fast support.
- Make sure that the changes in organization, structures, routines and resource needs that the new ICT necessitates the organization are adapted to the needs of the users.

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APPENDIX I

Case description of
FöreningsSparbanken AB, FSB (Swedbank)
Case description of FöreningsSparbanken AB, FSB (Swedbank)

FöreningsSparbanken AB, FSB, was founded in 1997 through the fusion of Sparbanken Sverige and Föreningsbanken which had their roots in the early 19th and 20th centuries respectively; see Table I. In 2004, FSB was one of the largest banking groups in the Nordic area and represented in Sweden as well as Norway, Finland, Denmark and the Baltic countries. It had around 15,000 employees, of which approximately 9,000 worked in Sweden. The same year, the bank also had about 8.4 million private customers including independent savings banks and partly owned banks in Sweden and the Baltic States. (FöreningsSparbanken AB, 2005a,b).

Table I. A selection of important events within the bank since 1997, when it was founded.

<table>
<thead>
<tr>
<th>Year</th>
<th>Activity in FöreningsSparbanken</th>
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<tr>
<td>1997</td>
<td>FöreningsSparbanken AB was founded through a merger of two banks</td>
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<tr>
<td>1997-1999</td>
<td>Staff reductions as consequence of the merger</td>
</tr>
<tr>
<td>2000</td>
<td>A co-determination agreement was established</td>
</tr>
<tr>
<td>2001-2004</td>
<td>Professional roles of employees and managers were defined</td>
</tr>
<tr>
<td>2001-2004</td>
<td>Programs for managers were carried out to support managers and improve leadership</td>
</tr>
<tr>
<td>2002</td>
<td>A staff reduction program, involving more than 500 employees, was run</td>
</tr>
<tr>
<td>2002-2004</td>
<td>A health project was carried out to cope with increasing levels of sick leave</td>
</tr>
<tr>
<td>2003</td>
<td>The bank received the national Alecta award “Sweden’s best workplace”</td>
</tr>
<tr>
<td>2003</td>
<td>A new CEO was appointed</td>
</tr>
<tr>
<td>2003 &amp; 2004</td>
<td>FSB was the most profitable major bank in the Nordic region</td>
</tr>
<tr>
<td>2004</td>
<td>Received an award as “The Competence Company of the year”</td>
</tr>
</tbody>
</table>

According to FöreningsSparbanken (2005 a, b) the bank’s core values are long-term sustainable development and a strong relationship with local communities. It prioritises customer satisfaction and aims to be a bank for everyone and an attractive employer. Moreover, the bank stands for security, humility, respect, openness and involvement. For instance, a characteristic of the bank is the co-determination agreement aiming at inviting employees to take part in the bank’s operations through insight, involvement, and responsibility. The agreement is called IDA, which is the Swedish acronym for Insight, Involvement, and Responsibility. The personal development reviews that each employee and manager within the bank has with his or her manager is an important tool in the IDA process. The reviews lead to individual action plans aimed at promoting personal development.

Health promotion
In late 2004, a special organization integrating health and wellness issues with work-related health issues was established in FSB to ensure an enduring and
systematic approach to health concerns. The starting point to this organization was a health project, which was aimed at reducing sickness absence, lowering the costs associated therewith and profiling the bank as an employer that looks after the well-being of its staff. The project was initiated in 2002 after several years of increased sickness absences. A project leader was appointed to implement the project and to make activities sustainable both by getting managers to commit themselves to the project and by starting activities in the organization. From the very beginning, the whole project started with an evaluation regarding the health status in the bank and the costs connected to sickness absence and illness were also calculated. As a result, special measures were identified and introduced to increase the focus on healthy employees and to intensify rehabilitation of those absent due to sickness. For instance, the new measure ‘long-term healthy employees’, which is defined as “a maximum of 5 sick days per 12-month period”, was introduced. The project also analyzed sickness absence by unit, age, gender and length of absence and set a goal to reduce sickness absence from 4.8 to 3.8 percent. Between 2002 and 2004 the results of the health related measures developed as presented in Table II and Table III.

Table II. The results of ‘long-term healthy employees’ and sickness absenteeism of FSB between 2002 and 2004. (Results from FöreningsSparbanken, 2005a and the interview performed with the project manager in 2004)

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of long-term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>healthy employees</td>
<td>71,3%</td>
<td>73,2%</td>
<td>74,8%</td>
</tr>
<tr>
<td>Sickness absenteeism</td>
<td>4,8%</td>
<td>4,6%</td>
<td>4,3%</td>
</tr>
</tbody>
</table>

Within the Swedish Retail operations, rehabilitation eliminated approximately 70 percent of the cases of employees on long-term sickness absent. In about 60 percent of these cases, the employee returned to work full- or part-time.

Table III. The development of human capital, in terms of the indices measured in FSB since 2003. ‘Satisfied Employee Index’ measures employees’ opinions of their personal situation in the company, ‘Well-being’ measures employees’ opinions on health-related issues and ‘Value-adding ability’ measures employees’ opinions of their ability to create value for customers. (Results from FöreningsSparbanken, 2005a)

<table>
<thead>
<tr>
<th>Development of Human Capital (Local banks in Sweden)</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied Employee index</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>Well-being</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Value-adding ability (private and business customers)</td>
<td>75</td>
<td>77,5</td>
</tr>
</tbody>
</table>

Some examples of the work FSB performed in 2004 to promote health are:

- Frequent evaluations of human capital (employees) and market capital (customers) in relation to profitability together with initiation of actions
Based on the results. Among the indexes used are the ‘Satisfied Employee Index’, which measures employees’ opinions of their personal situation in the company; ‘Value-adding ability’, which measures employees’ opinions of their ability to create value for customers, and ‘Well-being’, which measures employees’ opinions on health-related issues.

- Consistent identification of risks and prevention of psychosocial disabilities through a Wellness Index followed up with actions.
- Provided guidance and personal support to employees through an outside counsellor.
- Offered “health money” to support individual or group activities that promote employee health.
- To stimulate and retain the skilled employees over the age of 55 the bank developed a program consisting of individualized competence development, annual health screenings, opportunity to an hour of exercise a week during work time, and the opportunity to, after the age of 58, cut back to an 80-percent work schedule with a 90-percent salary.

**Organizational structure and operations**

In 2004, the bank provided its products and services through subsidiaries; see Figure I.

![Organizational structure and operations diagram](attachment:image.png)

**Figure I. The bank is organized into four main business areas and one unit of Shared Services and Group Staffs. (From: FöreningsSparbanken, 2005a)**

The business area of Swedish Retail Operations was a focal division of the bank since it included the network of offices and the responsibility for all Swedish customers within its business. For instance, Swedish Retail Operations included the Bank Branches, the telephone and internet banks and also some other subsidiaries.
Appendix I

Case description of FöreningsSparbanken AB, FSB (Swedbank)

The Bank Branches was further divided into geographic regions and encompassed the network of the local bank offices; see Figure II.

In 2004, around 490 offices were divided into 75 local banks spread throughout six regions. The same year the Bank Branches employed more than 5 000 of the 6 600 employees within the business area. (FöreningsSparbanken, 2005a)

**Figure II.** The figure shows a simplified description of the two units, Bank Branches and Group Staffs. The Bank Branches, which encompassed a network of local banks and offices was one unit within the business area Swedish Retail operations. The Group Staffs was a part of the Shared Services and Group Staffs of the bank and was therefore relevant to the operations of the Bank Branches. For instance it included the Human Resource work, under which the project manager of the health project operated.

**Bank offices**

In 2004, a large proportion of the bank's offices were private banking offices, business offices and advisory offices that did not handle cash. The role of the offices included the responsibility for private and business customers, qualified advice, sales and service. Around one million customers had their own personal economical adviser in the bank and the number of very satisfied customers had increased continually. In 2004 that number rose to 28% from 24% in 2003. (FöreningsSparbanken, 2005a)
Case description of FöreningsSparbanken AB, FSB (Swedbank)

To meet the needs of the various customers, work to specialize the roles of office employees was carried out between 2001 and 2004. As a result all the professional roles encompassed by the Bank Branches’ operations had been identified and described. Also, the employees and managers had been employed in these professional roles.

The bank had an IT-based competence system to encourage employees’ participation and to stress the ties between competence development and operating objectives. This competence system was used to define the competence requirements and identify competence gaps between roles and individual competence levels. The system also served as a support in employees’ competence development, knowledge assessment, training and selection from the bank’s different courses. Training, knowledge assessments and in the end certification for around 6,000 employees working close to the customers had been carried out within the bank in the 21st century based on the new Financial Advisory Services to Consumers Act.

Local banks and offices studied

Two different local banks, Local bank A and Local bank B, from two different regions were examined in the case study of FSB. In addition employees from one office of each local bank, Office Ω and Office Ψ, were studied. These units are briefly described here but more details can be found in Bäckström et al. (2005).

Local bank A and Office Ω: In 2004, Local bank A was divided into ten offices which were located in a region more than 1000 kilometres from the head office in Stockholm. In total the local bank had approximately 130 employees.

The local bank manager had been a local bank manager since 2000 and before that he had also worked as an office manager. In his role, he operated under the manager of the region and was responsible for the ten office managers, among others. He held regular meetings with these subordinates by telephone because of the long distance between the offices. In his position he received directives from the manager of the region. The information about the health project had come from the Human Resources Department but activities related to the project had generally been adopted late within the local bank.

The manager of Office Ω had been an office manager since 1975 and in 2004 he was responsible for nine female employees of varying ages, who worked at the office. The office handled cash and therefore was specific compared to most other offices.

The office manager and each employee had formal performance reviews twice a year but the manager also held individual reviews once a month to support and facilitate the work of each employee. Issues regularly discussed during the reviews,
were goal setting and follow up. Everyone in the office had personal goals set to fulfil personal targets, and the objectives of the bank. Within the office they also competed together between themselves as a group and their shared goals. Every week there was a meeting where the manager and all employees had a chance to exchange information and discuss their business. The manager also had daily contact with the employees to make sure they felt well, were satisfied and had a pleasant working environment. For instance, the manager offered vitamins and opportunities such as light therapy that the employees could choose to use. In 2004, they had not had any sickness absence at all within the office.

Local bank B and Office β: In 2004, Local bank B was one of three local banks located in the same region as the head office of FSB. In local bank B there were 13 offices and all together around 250 employees.

The manager of the local bank had been in the position for two years and regularly visited all offices in the local bank to show his interest in, support and get to know the employees. His subordinates were made up of 21 managers of whom 13 were the office managers within Local bank B. However, the manager was keen on also getting to know all 250 employees in the offices by name and to be aware of each person’s defined professional role. He had the responsibility to make sure that the objectives and activities initiated at higher organizational levels of the bank were fully implemented in the local bank. He had received the information about the health project from the Shared Services and Group Staffs and from that had chosen activities and further focused on the project and rehabilitation of absent employees within his local bank.

In 2004, Office β had eight employees with a range of ages, defined professional roles and of both genders. The manager of this office was recruited to her position in 2003 but had been in the bank since 1987. She was operating under the manager of Local bank B and thus had meetings with him and other office managers within the local bank every second week.

In the office they worked with individual sales goals which were adapted to the restrictions of the bank region. The goals of each person and the progress made were on display in the lunch room for everyone to see. The goals were also followed up in discussions between the office manager and each individual once a week. Every week there was also a meeting where the manager and all employees together had a chance to exchange information and discuss their business.

References
APPENDIX II

Questionnaire used in interviews
with executive managers
APPENDIX II

Questionnaire used in interviews with executive managers (The HR manager and The Project manager)

(In Swedish)

"NIVÅ 1" – Koncernledning/Styrelse

UTSKICK INNAN

Syftet med intervjun
Frågestruktur
Genomförande (bandspelare etc.)

INTERVJUUNDERLAG

Tid: Ca 1 timme

Inledning

Presentation av oss och projektet
Syfte med intervjun
Tid och upplägg för intervjun

Bakgrund

1. Berätta kort om Dig själv
   • Nuvarande befattning?
   • Arbetsuppgifter?
   • Tid inom företaget, som ledare och på nuvarande befattning?
   • Antal medarbetare Du ansvarar för/direktrapporterande?
2. Hur ser Du på Din roll som ledare?
   - Hur arbetar Du som ledare?
   - Ansvar och befogenheter?
   - Drivkrafter?
   - Förebild/mentor?

3. Hur skulle Du, med fem ord, vilja beskriva Föreningssparbankens värderingar (företagskulturen på FSB)?

Hur har Ni tänkt och agerat? Vad blev resultatet?

Planera

4. Varför startade förbättringsarbetena (med fokus på delaktighet och hälsofrämjande ex Offensiv hälsa, IDA, 55+...)?
   - Ge, på en tidsaxel, en kort beskrivning av viktiga händelser med relation till arbetsmiljö, personal- och hälsofrämjande åtgärder inom Föreningssparbanken.
     - Vad var syftet?
     - Varifrån kom idén, kravet, förebilden, inspirationen?
     - Vem tog initiativet?
     - Vem hade ansvar att starta projektet?
     - Hur fördelades ansvaret/befogenheter?

5. Vilka strategier hade Ni för genomförandet av förbättringsarbetet?
   - Satte Ni upp särskilda mål?
     - Vilka och hur?
   - Kommunikation?

6. Vilken är/var Din roll i Föreningssparbankens utveckling/ arbete med att förbättra hälsoläget?
   - Vad har varit styrande i Ditt arbete?
   - Ansvar?
   - Är det några särskilda frågor som Du medvetet drivit?
   - Hur har Du i så fall realiserat dessa?
7. Hur (och varför) arbetade Du för att få med Dig personalen i förändringsarbetet?
   - Facket?
   - Styrelsen?
   - Ledningen (Lokalbankscheferna och kontorscheferna)?
   - Medarbetarna – vilka deltog aktivt?
   - Hur gjorde Du för att skapa förtroende?
     - Mellan ledare och medarbetare?
     - Mellan medarbetare?

8. Arbetade Ni aktivt med kultur/värderingar? I så fall hur?

9. Hur (och varför) delegerade Du ansvar och befogenheter?
   - Till vem, när och vad?

10. Hur fungerade kommunikationen praktiskt under utvecklingsarbetet/hälsoarbetet?
    - Vilka aktiviteter fokuserade Ni i ledningen (Nivå 1) på?
      - Hur och varför?
    - Kommunikation – vad, hur, när, vem…?
      - Styrelse/företagsledning?
      - Lokalbankschefer/Kontorschefer?
      - Medarbetare?
    - Form/särskilda medel (personlig, intranät, mail…)?
    - Dialog- vilken infrastruktur och vilka förutsättningar för dialog fanns?
    - Kunde alla delta på samma villkor?

11. Hur gjorde Du/Ni för att möta eventuella behov att utveckla ny kunskap?
    - På organisationsnivå?
    - På individnivå?
12. Vilka effekter har Ni sett av hälsoarbetet?
   - Utfall mot målsättning?
   - Har medarbetarnas ”hälsa” förbättrats?
     - Hur mycket?
     - Trend?
   - Har medarbetarnas engagemang och delaktighet förändrats?
     - Bevis?
   - Har företagets konkurrenskraft/lönsamhet ökat?
     - Bevis?
     - Varför?
   - Ändrade fysiska/tekniska förutsättningar (arbetsmiljö)?

13. Genomfördes arbetet som planerat?
   - Fungerade/ändrades strategierna?
   - Flexibelt, ad hoc eller strukturerat?

14. Har den formella strukturen haft betydelse för arbetet och utvecklingen? I så fall på vilket sätt?

Lär

15. Vilka anser Du är de viktigaste erfarenheterna Ni fått från arbetet med att förbättra hälsoläget?
   - Anser Du att hälsoarbetet så här långt varit framgångsrikt?
   - Vad har fungerat bra/mindre bra?

16. På vilket sätt har Ni utnyttjat dessa erfarenheter?
   - Har följande ”påverkats”:
     - Medarbetarrollen
     - Organisation/Struktur
     - ”Det dagliga arbetet – Arbetssätt”
     - Värderingar

17. Hur har arbetet med hälsofrämjande påverkat Dig som ledare?
   - Skulle du tänka och agera annorlunda om hälsoarbetet skulle starta nu?
   - Ledarrollen?
- Appendix II -

Questionnaire used in interviews with executive managers

- Ansvar?
- Arbetsätt?

18. Hur gör Du/Ni för att fortsätta upprätthålla/förbättra hälsoläget?
   - Integrering i det dagliga arbetet? Konkretisera!

19. Hur tycker Du att man ska leda ett förändringsarbete så att det skapar en miljö för hållbar hälsa (där medarbetarna mår bra och håller sig friska)?
   - Vilka ledaregenskaper är viktigast?

TRÄDDIAGRAM (under intervjun)

a) Träddiagram

20. a) Varför är Ni Sveriges bästa arbetsplats?
   - Varför 5 ggr/träddiagramsfrågorna
   - Skiljer sig Föreningssparbanken från andra stora organisationer?

21. a) Vilka arbetssätt/projekt anser Du varit mest framgångsrika (nämnn 5 och motivera)?

22. a) Är det något Du skulle vilja tillägga eller särskilt framhålla?

b) Frågor om tid ej finns för träddiagram

20 b) Nämnn fem faktorer/arbetssätt som varit avgörande för Föreningssparbankens hälsoförbättring?

21 b) Är det något Du skulle vilja tillägga eller särskilt framhålla?

- Får vi återkomma om något är oklart eller om vi har ytterligare frågor?

TACK!
APPENDIX III

Questionnaire used in interviews with middle managers and lower level managers
APPENDIX III

Questionnaire used in interviews with middle managers (Local bank managers) and lower level managers (Office managers)

(In Swedish)

"NIVÅ 2 ” och ”NIVÅ 3”– Lokal bankchef och Kontorschef

UTSKICK INNAN
Syftet med intervjun
Frågestruktur
Genomförande (bandspelare etc.)

INTERVJUUNDERLAG
Tid: Ca 2 timmar

Inledning
Presentation av oss och projektet
Syfte med intervjun
Tid och upplägg för intervjun

Bakgrund

1. Berätta kort om Dig själv
   • Nuvarande befattning?
   • Arbetsuppgifter?
   • Tid inom företaget, som ledare och på nuvarande befattning?
   • Antal medarbetare Du ansvarar för/direkt rapporterande?
2. Hur ser Du på Din roll som ledare?
   - Hur arbetar Du som ledare?
   - Ansvar och befogenheter?
   - Drivkrafter?
   - Förebild/mentor?

3. Hur skulle Du, med fem ord, vilja beskriva Föreningssparbankens värderingar (företagskulturen på FSB)?

Hur har Ni tänkt och agerat? Vad blev resultatet?

Planera

4. Varför startade förbättringsarbetena (med fokus på delaktighet och hälsofrämjande ex Offensiv hälsa, IDA, 55+…?)
   - Ge, på en tidsaxel, en kort beskrivning av viktiga händelser med relation till arbetsmiljö, personal- och hälsofrämjande åtgärder inom Föreningssparbanken.
     - Vad var syftet?
     - Varifrån kom idén, kravet, förebilden, inspirationen?
     - Vem tog initiativet?
     - Vem hade ansvaret att starta projektet?
     - Hur fördelades ansvaret/befogenheter?

5. Vilken är/var Din roll i Föreningssparbankens utveckling/ arbete med att förbättra hälsoläget?
   - Vad har varit styrande i Ditt arbete?
   - Ansvar?
   - Är det några särskilda frågor som Du medvetet drivit?
   - Hur har Du i så fall realiserat dessa?

6. När och hur blev Du involverad i arbetet?
   - Vilket ansvar och vilka befogenheter tilldelades Du?
   - Direktiv uppför från?
     - Vilka och hur?
   - Hur påverkades Ditt arbete/agerande av detta?

7. a) Vilka strategier hade Ni i Lokal Bank Norr/Stockholm C för genomförandet av förbättringsarbetet?
   - Satte Ni upp särskilda mål?
     - Vilka och hur?
   - Kommunikation?
7. **b) Vilken var Din strategi för genomförandet av förbättringsarbetet på Haparanda-/Luleå-/Hornstullkontoret?**
   - Satte Ni upp särskilda mål?
     - Vilka och hur?
   - Kommunikation?

8. **Hur (och varför) arbetade Du för att få med Dig personalen i förändringsarbetet?**
   - Facket?
   - Styrelsen?
   - Ledningen (Lokalbankscheferna och kontorscheferna)?
   - Medarbetarna – vilka deltog aktivt?
   - Hur gjorde Du för att skapa förtroende?
     - Mellan ledare och medarbetare?
     - Mellan medarbetare?

9. **Arbetade Ni aktivt med kultur/värderingar? I så fall hur?**

10. **Hur (och varför) delegerade Du ansvar och befogenheter?**
    - Till vem, när och vad?

11. **Hur fungerade kommunikationen praktiskt under utvecklingsarbetet/hälsoarbetet?**
    - Vilka aktiviteter fokuserade Du på?
      - Hur och varför?
    - Kommunikation – vad, hur, när, vem…?
      - Styrelse/företagsledning?
      - Lokalbankschefer/Kontorschefer?
      - Medarbetare?
    - Form/särskilda medel (personlig, intranät, mail…)?
    - Dialog- vilken infrastruktur och vilka förutsättningar för dialog fanns?
    - Kunde alla delta på samma villkor?

12. **Hur gjorde Du/Ni för att möta eventuella behov att utveckla ny kunskap?**
    - På organisationsnivå?
    - På individnivå?
Studera

13. Vilka effekter har Ni sett av hälsorbetet?
   - Utfall mot målsättning?
   - Har medarbetarnas ”hälsa” förbättrats?
     - Hur mycket?
     - Trend?
   - Har medarbetarnas engagemang och delaktighet förändrats?
     - Bevis?
   - Har företagets konkurrenskraft/lönsamhet ökat?
     - Bevis?
     - Varför?
   - Ändrade fysiska/tekniska förutsättningar (arbetsmiljö)?

14. Genomfördes arbetet som planerat?
   - Fungerade/ändrades strategierna?
   - Flexibelt, ad hoc eller strukturerat?

15. Har den formella strukturen haft betydelse för arbetet och utvecklingen? I så fall på vilket sätt?

Lär

16. Vilka anser Du är de viktigaste erfarenheterna Ni fått från arbetet med att förbättra hälsoläget?
   - Anser Du att hälsorbetet så här långt varit framgångsrikt?
   - Vad har fungerat bra/mindre bra?

17. På vilket sätt har Ni utnyttjat dessa erfarenheter?
   - Har följande ”påverkats”:
     - Medarbetarrollen
     - Organisation/Struktur
     - ”Det dagliga arbetet – Arbetssätt”
     - Värderingar

18. Hur har arbetet med hälsorfrämjande påverkat Dig som ledare?
   - Skulle du tänka och agera annorlunda om hälsorbetet skulle starta nu?
   - Ledarrollen?
   - Ansvar?
   - Arbetssätt?
- Appendix III -

*Questionnaire used in interviews with middle managers and lower level managers*

19. Hur gör Ni/Du för att fortsätta upprätthålla/förbättra hälsoläget?
   - Integrering i det dagliga arbetet? Konkretisera!

20. Hur tycker Du att man ska leda ett förändringsarbete så att det skapar en miljö för hållbar hälsa (där medarbetarna mår bra och håller sig friska)?
   - Vilka ledaregenskaper är viktigast?

TRÄDDIAGRAM (under intervjun)

a) Träddiagram

21. a) Varför är Ni Sveriges bästa arbetsplats?
   - Varför 5 ggr/träddiagramsfrågorna
   - Skiljer sig Föreningssparbanken från andra stora organisationer?

22. a) Vilka arbetssätt/projekt anser Du varit mest framgångsrika (nämnn 5 och motivera)?

23. a) Är det något Du skulle vilja tillägga eller särskilt framhålla?

b) Frågor om tid ej finns för träddiagram

20  b) Nämnn fem faktorer/arbetssätt som varit avgörande för Föreningssparbankens hälsoförbättring?

21 b) Är det något Du skulle vilja tillägga eller särskilt framhålla?

- Får vi återkomma om något är oklart eller om vi har ytterligare frågor?

TACK!
APPENDIX IV

Case description of the eldercare in Luleå, Northern Sweden
Case description of the eldercare in Luleä, Northern Sweden

Context
In Sweden, county councils and municipalities serve as the major providers of health care within their respective areas. Health care is mainly tax-financed through county and municipal taxes; see Molin & Johansson (2005). As regards the eldercare, there was a change to these provider and financial responsibilities in The Eldercare Reform in 1992. Since then, several employee categories from both the county councils and the municipalities have been involved in eldercare. Thus, when an elderly patient is treated, they go through a chain of treatments and actions performed in different organizations by different actors. This chain of treatments and activities may be described as the care pathway. Along this care pathway extensive cooperation between the county council and municipality is required and the competences of different professions are obliged to provide care of high value for the patients; see Thorslund et al. (2001); Shortell & Kaluzny (2000).

In 2006, the municipality in Luleä in Northern Sweden employed registered nurses (RNs), occupational therapists, assistant nurses, needs assessments officers, and supervisory employees, whereas physicians were employed by the county council. The case included 15 municipal nursing homes arranged in three different geographical areas. The 15 nursing homes together employed around 26 fulltime RNs in 2006. Of those RNs the majority worked full-time whereas some worked part time during day, emergency or night shifts. The RNs were the most highly qualified medical professionals and thus had the greatest responsibility to ensure the patients were given good quality care within the municipalities. They worked in the home environment instead of hospitals, in an organization with few levels of decision making and little contact with colleagues. Thus, the RNs’ profession encompassed many sub-roles, for instance, clinician, instructor, researcher and consultant. At the same time their responsibility also involved making decisions about demands, treatments and attention of physicians.

In the Swedish health care system, it is the RNs who have the primary decision making role as regards eldercare. Accordingly, those who worked the day shift, were responsible for providing the right care of appropriate quality, around the clock to 18-27 patients living in a nursing home. Most of these elderly patients were over 80 years and suffered from some degree of dementia and therefore had high demands in terms of nursing care and hospitalisation. To fulfil these demands, each of the RNs worked during the day with planned and preventive health care as well as more acute demands evolving in the nursing home where she/he was in
charge. When doing so she/he worked alone but was highly dependent on cooperation with other professions such as the assistant nurses and physicians. The RNs who worked the day shift also worked on-call hours according to a planned schedule. During on-call hours, one RN handled acute demands of around 300 patients within several nursing homes in a geographically delimited area. During the night shift, ‘night RNs’ worked with acute demands within the same area.

**The ICT platform**

The ICT applications, introduced in the eldercare in Luleå during a test period of eleven weeks in the spring 2007, were parts of an ICT platform developed to provide distance communication between physicians and RNs. Among the applications were a laptop with mobile connection to the documentation and case book system, video conference technology and a digital camera. Moreover, medical equipment, for instance a bladder scan, a CRP-instrument for detection of infections, a haemoglobin measurement device, an instrument for measuring peak expiratory flow and an instrument for pulsoximetry, were included in the platform to support the communication\(^1\). The laptop and the rest of the equipment were packed in a trolley for RNs to bring to the patients’ at the nursing homes; see Figure I.

![Figure I. The laptop, camera and medical equipment were mobile and packed in a trolley (although another, but similar, trolley than the one in the picture) for RNs to bring with them to the patients. The laptop or the stationary computer at the RNs’ offices could be used by the RNs to connect to the document and case book systems, of both the municipality and the county council, to read information about the patients. (From: CDH, 2007)](image)

**References**


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\(^1\) The platform is described in more detail in Wreder et al. (2007).
- Appendix IV -
Case description of the eldercare in Luleå, Northern Sweden


APPENDIX V

Questionnaires used in individual and reflective interviews
APPENDIX V

Questionnaires used in individual and reflective interviews

(IN Swedish)

INDIVIDUELLA INTERVJUER (Vad ska vi fråga "under tiden"?)

Bakgrund (Berätta kort om dig själv…)

1. Namn, ålder
2. Arbetsplats
3. Nuvarande befattning
4. Erfarenhet, utbildning
5. Tid på nuvarande befattning

Sjuksköterskans yrkesroll och arbetsuppgifter

6. Vilka arbetsuppgifter ingår i ditt arbete?
7. Vilket ansvar har du i rollen som ssk?
   a) Hur många vårdtagare har du ansvar för under en ”arbetsdag”?
   b) Hur planerar och prioriterar du ditt arbete?
8. Vilka befogenheter har du att uppfylla detta?
9. När och hur ser du resultatet av ditt arbete?
10. Trivs du med ditt arbete?
11. Vilka drivkrafter har du i ditt arbete/rollen som ssk?
12. Vad är viktigast för att du ska ”uppnå” arbetstillfredsställelse?
13. Kan du berätta vad som är särskilt bra med ditt arbete?
14. Kan du påverka ditt arbete, i så fall hur?
15. Vad skulle du vilja förbättra med ditt arbete?
   a) Vilka möjligheter/befogenheter har du att göra detta?

Relationer och samverkan

16. Kan du beskriva vilka du samarbetar med för att utföra ditt arbete?
17. Hur (och när) sker samarbetet med dessa personer? (Tillgänglighet)
18. Vilket samarbete är viktigast för dig?
19. Vilken kontakt har du med vårdtagare/närstående?
   (Har du möjlighet till att etablera relation till vårdtagare/anhörig?)
20. På vilket sätt kan vårdtagare/anhörig påverka den vård som vårdtagaren får?

Ledarskap

21. Hur ser du på ledarskapet i organisationen?
   a) Ditt ledarskap i ssk-krollen?
   b) Hur samarbetar du med din närmaste chef? (vem?)

IKT

22. Litar du på IKT?
23. Hindras nya arbetssätt/IKT av lagar och förordningar?
24. Anser du att det ”nya” arbetssättet/IKT är etiskt lämpligt/olämpligt?

Intervjuer före införandet:

Intervjuer efter införandet:
26. Hur har chefer/arbetsgivare arbetat för att införa IKT och nya arbetssätt?
27. Varför tror du att man väljer att införa IKT?
28. Hur var informationen samt utbildningen inför teknikens införande?
29. Hur upplever du att IKT har påverkat ditt arbete?
   a) Påverkar IKT dina arbetsmetoder ex. rutiner, instruktioner…?
   b) Hur påverkar IKT ditt arbetsinnehåll?
30. Hur påverkar IKT din kontakt/arbete med läkare och övrig vårdpersonal?
31. Upplever du att vårdtagare och anhöriga litar på IKT?
32. Hur upplever du att IKT påverkar resultatet av ditt arbete?
   a) Hur upplever du att IKT påverkar vården/omvårdnaden du ger vårdtagarna?
   b) Hur påverkar IKT din vårdkontakt med vårdtagaren?
REFLEKTIVA INTERVJUER

**Figur I.** Gibbs reflektionscykel översatt till svenska. (Inspirerad av Gibbs, 1988)

- Utgår ifrån att vi ber sjuksköterskan välja en situation (förutsatt att det har varit flera) som hon/han vill reflektera över.
- Börjar med att be sjuksköterskan berätta om vad som hände i situationsen.
- Följer därefter alla steg i Gibbs (1988) reflektionscykeln (Figur I)

**Beskrivning**

A. Vad hände?
B. Vad föregick ….?
C. Hur agerade du?
D. Vilka kommunikerade du med? Hur? Vilken information utbyttes?
E. Vilka samarbetade du med?
F. Varför agerade du så? Vad styrde handlandet?
G. Vilka beslut fattade du?
H. Vilken utrustning använde du?
I. Vad fokuserade du på?
Känslor
J. Vad tänkte du?
K. Vad kände du?

Värdering
L. Vad var bra med erfarenheten du fick då…..?
M. Vad var dåligt med erfarenheten du fick då …..?

Analys
N. Hur kunde du förstå situationen?

Slutsats
O. Kunde du ha gjort något mer eller något annorlunda? Vad hindrade dig i så fall att göra detta?
P. Kunde någon aktivitet/samverkan som föregick…. ha genomförts annorlunda?

Handlingsplan

TACK!

Referens
APPENDIX VI

Checklist used in observations
**APPENDIX VI**

**Checklist used in observations**

*(In Swedish)*

**Vårdprocessperspektiv:**

- Start och Slut (+ tid/plats?)
- Aktiviteter - "att"……..(ex. att ta tempen, att föra in provsvar i VAS, att överlämna röntgensvar, att ta betalt)
- Drivkrafter (ex. kundbehov, beslut, remiss etc.)
- Kunder - vad flödar/tillförs värde (vårdtagare…anhörig…)
- Samband mellan aktiviteter och flödesvägar
- Arbetsmetoder – "hur" (ex. anvisningar, instruktioner, vårdprogram, kvalitetsplan, säkerhetsplan……hur man kan/bör/ska göra)
- Resurser (ex. personal/aktörer, material, utrustning, verktyg)

**Omvårdnadsperspektiv:**

- Vad händer?
- Vad föregick händelsen?
- Hur agerar ssk?
- Vilken utrustning använder ssk?
- Vilka arbetsmetoder använder ssk?
- Hur fattas beslut …?
- Vad fokuserar ssk på?
- Med vilka samverkar ssk? Hur? Attityd/roll?
- Hur kommunicerar ssk med patienten? Attityd/roll?
Appendix VI

Checklist used in observations

- Hur reagerar vårdsagaren?
- Vad är resultatet?
- Hur agerar ssk efteråt?

➢ Vad är bra och vad är dåligt?
➢ Vad kan göras annorlunda? Hur?