**Aalto University
School of Economics**

Communicative Competence in project management: A case study in an agile environment

International Business Communication

Master's thesis

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Communicative Competence in project management: A case study in an agile environment

Aim of the study

The study focused on identifying the key communicative competences of a project manager in an agile project environment. The underlying assumption in the study was the idea that by viewing the communicative project environment and exploring the aspects of project managers' daily work it is possible to recognise communicative competences of a project manager.

Methodology and the Theoretical Framework

The study was conducted as a multi-method qualitative case study that collected the empirical data through a focus group interview and six semi-structured personal interviews. The analysis of the data based on the theoretical framework that included three types of communicative competences. The framework consisted of literature on communication in a contemporary project environment, and on communicative and management competences. The identified communicative competences were functional competence, social competence, and strategic competence. The competences were examined from a communicative perspective, and thus they were specific to a particular communicative project context.

Findings and Conclusions

The findings suggest that three components of the communicative environment; multileveled stakeholders, uncertainties and time pressure in a project, embellish the role of communicative competences. According to the present study (i) functional competence includes business knowhow and functional communicative ability, (ii) social competence refers to internal and external networking, and leading people, and (iii) strategic competence consists of adapting to situations, strategic problem solving and holistic decision making.

Key words: *communicative competence, project communication, agile project environment, international business communication*

Viestinnällinen kompetenssi projektijohtamisessa: Tapaustutkimus ketterässä projektiympäristössä

Tutkimuksen tavoitteet

Tutkimus kartoitti projektipäällikön viestinnällisiä kompetensseja ketterässä projektiympäristössä. Lähtökohtana tutkimukseen oli, että tutkimalla projektien viestinnällistä ympäristöä ja projektipäälliköiden päivittäistä työtä, viestinnälliset kompetenssit ovat löydettävissä.

Tutkimusmenetelmät ja teoreettinen viitekehys

Tutkimus toteutettiin tapaustutkimuksena. Tutkielman aineisto perustui kahteen kvalitatiiviseen menetelmään: ryhmähaastatteluun ja kuuteen teemahaastatteluun. Empiirisen aineiston analyysi pohjautui teoreettiseen viitekehykseen, joka koostui kolmesta viestinnällisestä kompetenssista. Teoreettinen viitekehys perustui aikaisempiin tutkimuksiin viestinnästä nykyaikaisessa projektiympäristössä, sekä viestinnällisistä ja johtamiskompetensseista. Havaitut viestinnälliset kompetenssit olivat funktionaalinen, sosiaalinen, ja strateginen kompetenssi. Näkökulma kompetenssien tutkimiseen oli viestinnällinen, ja pohjautui tietyn viestinnällisen projektiympäristön vaikutuksiin.

Tutkimuksen tulokset ja johtopäätökset

Aikaisemman tutkimuksen ja empiirisen aineiston perusteella voidaan todeta, että projektien viestinnällinen ympäristö koostuu kolmesta elementistä: laaja-alaisista sidosryhmistä, epävarmuustekijöistä ja aikapaineesta projektissa. Elementit korostavat viestinnällisten kompetenssien tärkeyttä. Tutkimuksen perusteella (i) funktionaalinen kompetenssi sisältää alakohtaisen tietotaidon ja toiminnalliset viestintätaidot, (ii) sosiaalinen kompetenssi käsittää verkottumisen ja johtamiskyvyn, ja (iii) strateginen kompetenssi koostuu tilannekohtaisesta mukautumisesta, strategisesta ongelmanratkaisukyvystä sekä holistisesta päätöskyvystä.

Avainsanat: *viestinnällinen kompetenssi, projektiviestintä, ketterä projektiympäristö, kansainvälinen yritysviestintä*

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1 INTRODUCTION

People accomplish ends through communication, intentionally and unintentionally. (Spitzberg and Cupach 1984, p.112)

In recent decades organisational design has changed, and Brotherton (1999) claims that these changes have also had an effect on management and behaviours. Additionally, in a contemporary project environment the role of communication has been acknowledged (Harshman and Harshman 1999; Johannessen and Olsen 2011). Furthermore, as the impact of individual competences on a project has been identified (Clarke 2010) and the fact that project managers spend their time in communicating (Binder 2008), the link between communication and individual competences in a contemporary business environment seems obvious.

Even though communication in general has an established role in project management and competences have been recognised as critical success factors in a project environment (Suikki et al. 2006), research on project managers' communicative competence in relation with managing project is still scarce. Similarly, according to Madlock (2008, p.61) the link between leadership and competence in communication is yet to be explored more thoroughly, and there is a need to better understand project managers' communicative competence (Gillard and Johansen 2004; Henderson 2008). Therefore, the focus of the present study is on understanding the link between communicative competences and managing projects. In addition, the project environment will be explored more closely.

While communication is understood to be a critical element, previous literature lacks the focus on its relation with management. Therefore, with the aim of the present study is to understand the relationship between management and communication. More specifically, the study concentrates on a networked project-based multinational, operating in telecommunications, and their program management. Consequently,

program managers' daily work in an agile environment is viewed from the perspective of communicative competences.

As the existing literature suggests, communication and competences are integrated elements of project management (e.g. Chin 2003). Therefore, the underlying assumption is the idea that by assessing program managers' daily work and the communicative project environment it is possible to recognise communicative competences. In this Thesis, however, any evaluations on the level of the participants' competences or success of the programs are not made but the Thesis focuses on identifying the main competences needed.

While the terms 'program' and 'project' are seemingly interlinked but yet slightly different, in the present study these two terms are understood as synonyms for the sake of clarification. Therefore, in the Thesis the term 'project' is used both in the literature review and the empirical research part.

Thus, the ultimate objective of the Thesis is to identify the communicative competences of a project manager, as well as establish a clear picture of the communicative environment of an agile project organisation. This is done by firstly studying earlier literature of communication and competences, and of the contemporary project environment, and secondly by conducting a multi-method qualitative case study.

1.1 Research objectives and questions

The present study focuses on the role of communication in managing projects, and thus project managers' planned and unplanned communicative actions and behaviour. The aim is to find out which communicative competences are central in a project manager's work. The assumption underlying the study is the idea that through examining the aspects of project managers' daily work it is possible also to recognise the required elements of project managers' communicative competence. Furthermore, the elements of project environment need to be better understood.

The study is conducted with a case approach and centres on examining project managers' perception on the management and communication in a project environment. Thus, the research questions are specific to the case organisational context. The present study views the problem through two general questions that are

What are the characteristics of a communicative project environment?
What are the key communicative competences of a project manager?

Additionally, the problem is examined through a more specified question of
How are communicative competences related to managing projects?

The research questions are discussed by (i) reviewing the previous literature on communication in project context, contemporary project environment, communicative competences and briefly on management competences, as well as (ii) analysing the empirical case data, and (iii) examining the findings against previous literature.

1.2 Structure of the thesis

This Thesis forms from a continuous, iterative process. It consists of three main segments: theory building, analysis and theory testing, and theoretical framework. The process is illustrated in Figure 1. The literature review provides a basis for the theoretical framework, which is used and further developed in the empirical data analysis stage. The final theoretical framework that will highlight the findings of the study relies both on the earlier literature reviewed and the analysis of the empirical data.
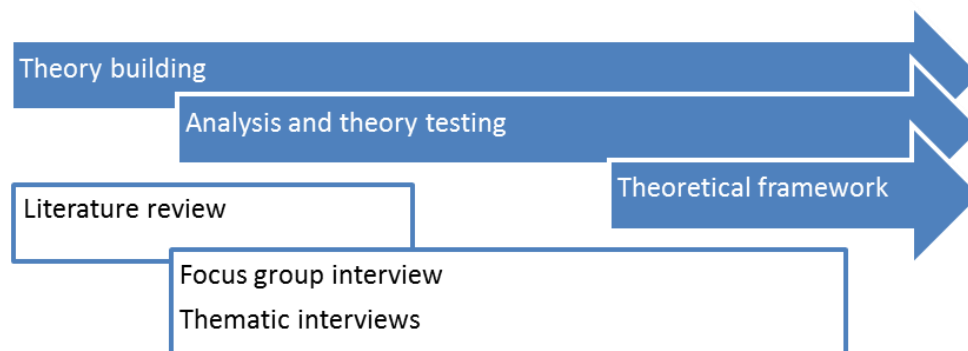
Figure 1 Thesis construction process

The first part of the present study concentrates on introducing the research focus and problems, as well as presents the research questions of the Thesis. The second part reviews the central theoretical literature in communication and communicative competence in a project context. A preliminary theoretical framework is also drawn in the second chapter. Thirdly, the data and methodology are discussed. In the fourth chapter of the Thesis the empirical findings are analysed, and finally, the preliminary theoretical framework is re-examined. In the final part conclusions on communicative competences in managing projects are drawn.

2 REVIEW OF LITERATURE

The literature review discusses communication in a project context in two ways. Firstly, communication is viewed in general by reviewing the complexity of a contemporary project environment and discussing the function of communication in that context. Secondly, the literature review focuses on the theories of communicative competence relevant to the present study, as well as briefly examines management competence theories discussed mainly in the management sciences.

The final part of the literature review concentrates on the theoretical framework for the present study. The theoretical framework draws conclusions of the earlier literature reviewed, and is used later in the empirical part of the Thesis to identify the key communicative competences of a project manager and assess how communicative competences are related to managing projects.

2.1 Communication in a project environment

This subchapter of the literature review focuses on discussing earlier research on communication in a project environment. Some of the key concepts related to project communication are presented, and the contemporary view on project environment is briefly discussed. This subchapter aims to present the complexity of a project environment, and thus, justify the significance of communication in that context.

2.1.1 Contemporary project environment

The terms 'project', 'network' and 'team' includes similar characteristics according to literature (see e.g. William 2002; Cleland and Gareis 2006; Viitanen 1998; Brotherton 1999); therefore the underlying assumption in this study is that a project environment includes all three elements: project, network and team. The definitions of the terms as understood in the present study are briefly discussed next.

William (2002, pp. 2-3) claims that a typical *project* has four elements. Firstly, a project has a common aim. Secondly, it consists of coordinated interrelated subtasks. Thirdly, a project has a specified duration and fourthly, it is unique. Correspondingly, Cleland and Gareis (2006, p.40) define a project as "a temporary organisation of a project-oriented company for the performance of a relatively unique short- to medium-term strategically important business process of medium or large scope."

Viitanen (1998, p. 48) specifies a *network* in a similar way by stating that it is a group of people interacting in a temporary constellation, rather than in a permanent structure. Brotherton (1999, p. 150) continues to describe networked environments by claiming that its participants often share common communicational codes such as aims, values or beliefs. Networked environments are easily accessible and open for integration and change, which makes them prone to innovation processes. Correspondingly, William (2002, pp. 7-8) identifies a *team* by stating that it is "a group of individuals organized for a particular purpose". William (2002) states that teams have a recognised purpose or aim. They have either permanent or temporary structures that have an explicitly or implicitly determined duration. Each team member has a specified function in a project. Additionally, team members have similar or different competences according to the project needs.

A traditional view on project management (PM) concentrates on issues such as planning, controlling and organising the project (Cleland and Gareis 2006, p.44). Taylor (2003, p.14) expands the definition by adding decision making and leadership to the concept. According to Cleland and Gareis (2006) contemporary research has noted that concepts such as flat organisational structures, team work, as well as organisational networking have an effect on the efficiency of a project. Consequently, a contemporary approach to project management concentrates on managing and constructing the dynamics of the project, the project boundaries, context and its complexity (Cleland and Gareis 2006, p.44).

Chin (2003, pp.2-3) seemingly agrees that the traditional project management methods are not as applicable any more in today's business environments and with the contemporary project requirements, thus new more adaptable methods should be employed. Further Chin (2003) continues that the traditional approach, while being effective in some cases, does not necessarily have a high tolerance or flexibility for continuous changes. Perspectives and demands are constantly changing, therefore the requirement to make dynamic shifts or modifications to the plan and execution is essential. However, in an agile project management environment, the focus is on the project execution phase, where the decisions are made during the development project and supported by advanced planning. (Chin 2003, pp.2-3.)

In practice, Whitaker (2009, pp.269-270) claims that a typical agile project workflow is a continuous process, where the actual development project is carried out in cycles called sprints. As a typical sprint cycle lasts from 15 to 30 days, the daily work is filled with continuous meetings, development, check-ins, builds, and tests, thus making the work of a project manager in an agile environment multileveled and complex. Additionally, a typical project requires a fairly active involvement in planning, operation, as well as in the conclusion stage as the work process requires knowledge of the overall project plan, vision of needed features and required work in the up-coming sprint, in addition to an ability to conclude and re-evaluate how to adjust the practices to make continuous process improvements in the next sprint.

Furthermore, Chin's (2003) explanation of an agile project management (PM) environment seems to support the arguments of the complex dynamics in a project environment. An agile project management environment can be defined by the following equation

Agile PM Environment = [Uncertainty + Unique Expertise] x Speed

(Chin 2003, p. 3).

As the above statement shows, the description of an agile project environment consists of three factors. Firstly, it is filled with both internal and external uncertainty and

secondly, it requires some unique expertise. Both of these factors are multiplied by speed. (Chin 2003, p.3.)

According to Chin (2003, pp.4-8) the internal uncertainties refer to issues such as technical obstacles, and project plan changes. These can be changes for instance in the schedule, scope, resources or decisions in a project. The effects of internal uncertainty seem to diminish with time and experience, which indicates that it is the highest earlier in a project or with a more inexperienced project manager. The issues that have an effect on project management, while a project manager has no control over them, are called external uncertainties. Chin (2003) argues that these are matters such as changed customer requirements, competitive moves or business strategy changes.

Unique expertise is understood as a pool of experts that contributes to different project areas. In an agile project management environment the project team construction is not interchangeable like in a traditional project management approach, therefore the use of different kinds of expertise is possible. Consequently, a larger pool of experts is at the project's disposal. Speed, or more precisely quickness, refers to changing schedules, overlapping cyclical delivery deadlines, or fast-tracking in a project. According to Chin (2003, p.8-11) uncertainty in a project increases with the pressure of moving faster. In practice, in an agile project management environment plans are created and decisions are made with less and less information, or interrelation, which emphasises the importance of a project manager to understand the business dynamics, drivers, and project management infrastructure as well as nurture a supportive environment.

This complexity and the unique nature of an agile project underline the importance of understanding the role of communication in completing a project. This aspect is under scrutiny next.

2.1.2 Communication in a project

In general, it is established that communication and project performance correlate with each other (Harshman and Harshman 1999). Additionally, Johannessen and Olsen

(2011, p.30) claim that the impact of communication on the project results increase in larger and more complex projects as communication influences the social mechanisms. Further, Binder (2008, p.79) argues that a large part of the project manager's time is used in communicating. Therefore, it is important to discuss the function of communication in this context.

According to Hargie et al. (2004, pp.17-18) communication comprises of four levels: intrapersonal, interpersonal, network/organisational and macrosocietal levels as illustrated in Figure 2. The intrapersonal level refers to elements related to an individual such as emotions, cognition, beliefs, and self-awareness that affect the interpretation and response to different communicative situations. Communication at the interpersonal level takes place in one-to-one or small group contexts. It can be characterised as purposeful, transactional, and multi-dimensional. At the network/organisational level communication concentrates on collectively larger groups and their relationships, informal and formal communication channels and networks. The outer macrosocietal level refers to communication properties and activities of the social systems.
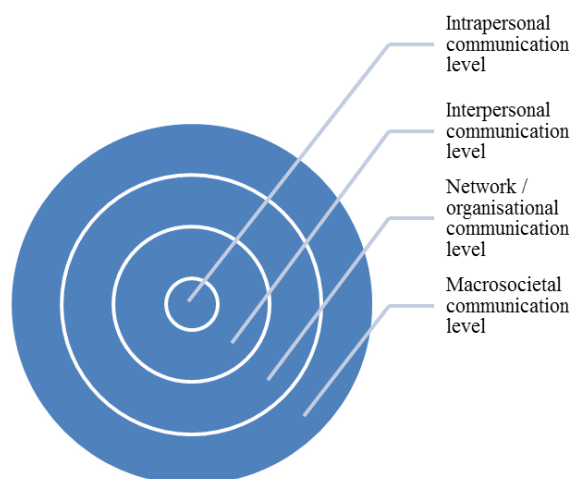
Figure 2 Communication process levels (Hargie et al. 2004, pp.17-18)

Brotherton (1999, p.150) notes that communication tends to act laterally instead of vertically in a networked group, and emphasises the importance of interdivisional and internal dialogue. Gillard and Johansen (2004, p.24) partly seem to disagree with

Brotherton as they claim that communication often functions both vertically, horizontally but also diagonally. However, they agree on the importance of having communication activities cross organisational and functional lines (Gillard and Johansen 2004, p.24).

Gillard and Johansen (2004, pp.24-26) identify various factors impacting the communication system and flow. These are for instance personal bias, purpose, location, group composition and group size. Sandberg and Skaar (2010, p.310) claim that communication challenges are even a greater issue in a multicultural environment with the variety of cultures, geographic distances and time zones, agreeing therefore, to some extent with Gillard and Johansen's (2004) views on the impacting factors. Gillard and Johansen's (2004) study on project managers revealed also other communicative challenges due to the complex nature of the project environment's interrelationships. Project managers, for example, often lead multi-discipline and cross-departmental teams, thus there might also be multilevel communicational challenges. Additionally, project managers can often have a unique organisational position. Some project managers have a dual-leadership role as they supervise both temporal and permanent members of the team, which creates "unique interpersonal challenges" (Gillard and Johansen 2004, p. 24).

Gillard and Johansen (2004, p.24) continue stating that project managers handle several end-users (customers) and have, therefore, often also varied demands. Project managers interact with a variety of communicative stakeholders. These stakeholders are illustrated in Figure 3. Project managers manage and interact with end-users, personnel and others working for the project. Secondly, project managers interact with their own supervisors and other management, who determine issues such as allocated resources. Finally, their responsibility is often to coordinate the work of various vendors, contractors and other outside agencies.

Even further, it can be claimed that communication has different roles in a project. Neher's (1997) list on the functions of organisational communication is also applicable here. According to it, the role of communication is to gain compliances. Additionally, it is leading, motivating, and influencing. Further, he claims that through communication we can make sense, solve problems, and make decisions. Furthermore, the role is to manage conflicts, negotiate, and bargain. Poole (2005) continues to argue that central communication processes are for instance exchanging information, developing mutual understanding, coordinating activities, influencing and socialising.

Hirst and Mann (2004, pp. 148-150) describe communication in teams by assessing it through Yukl's (2002) classification of four leadership roles in R&D environment. The first leadership role is to manage external relationships such as coordinating tasks, negotiating resources and goals with different stakeholders. As this role additionally includes scanning for information and ideas, it includes aspects of persuasive communication for instance to increase resource availability, as well as networking communication that widens the variety of information available to the team.

Secondly, Hirst and Mann (2004, pp. 148-150) claim that leadership includes facilitative leadership that supports an open and supportive atmosphere within the team

to encourage participation, idea sharing and open discussion. Thus, the role of communication is to provide a safe environment and offer means to share. Additionally, participatory communication supports understanding of potential problems as useful information is being shared. Thirdly, leaders proactively try to foresee opportunities in a project, and thus communication concentrates on reflective communication, where tasks and processes are continuously under discussion, and consequently being adapted to present or foreseen situations.

The final leadership role, directive leadership, focuses on structuring project development and work through directive communication and setting instructions, priorities and deadlines, i.e. task communication. Hirst and Mann (2004, pp. 148-150) argue that task communication has four affecting factors. Firstly, the clarity of objectives and feedback are highly correlative with the project performance. Additionally, due to the characteristics of non-routine and non-repetitive tasks in a project team, frequent information transmission aids the understanding of the complex interrelated activities. Fourthly, active communication and interaction with project customers offer an opportunity to understand better the needed features for customer requirements, and thus succeed in the project.

On the other hand, according to Thomson (2009, p.39) typical official communication responsibilities of a project manager include the communication planning process, information distribution, performance reporting, and managing stakeholders. The first task, communication planning process, focuses on identifying communication needs and stakeholders. Information distribution refers to making the needed information available, whereas performance reporting includes collection and communication of performance and its indicators. Finally, communication has to be managed as designed. (Thomson 2009, p.39.)

Project managers often use varied communication techniques to obtain information on project activities, build formal or informal networks, gather ideas or increase stakeholders' commitment levels (Binder 2008, p.79). Gillard and Johansen (2004,

pp.25-26) also argue that in practice, project managers' communication duties vary extensively. They could include for instance sending policy statements, giving assignments or conducting work evaluation. Further, project managers might or might not involve others in the decision making process as they might assign tasks to team members but never follow-up excluding the stakeholder influence. On other cases team members make suggestions and have influence in the decision making process (Gillard and Johansen 2004, pp.25-26).

Additionally to these concrete communication tasks it is argued in literature that communication's role in a networked and project type of environment is deeper. Madlock's (2008, p. 65) generalisation on employees and communication claims that "as employees experience more positive communication relationships, they also experience more positive job outcomes". Adams and Anantatmula (2010, p.92) seem to support the statement of increased outcomes as they argue that positive group emotions lead to mutual benefits. Further, they emphasise that the leader's positive emotions correlate with the influence towards others. Research moreover indicates that the importance of interaction and networking for project efficiency has been understood (Lewin and Massini 2004).

Johannessen and Olsen (2011) also argue that the important success factors in a project rely on communicative competences. Further, they claim that these communicative competences could be described as a combination of economic/technical communication, management communication, social communication and cultural communication. In other words, "they are the way in which communication is used strategically, managerially and operatively to achieve success" (Johannessen and Olsen (2011, p. 33). Therefore, it is essential to also review the literature of communicative competences and management competences to make assumptions of communication's role in a project environment.

2.2 Communicative competences in a project context

Several researchers have identified the importance and impacts of individual competences for organisations (see e.g. McClellan 1973; Boyatzis 1982). In more contemporary literature Hessami and Moore (2011, p. 230) define a competence as "the ability to generate success, satisfaction, value and excellence from the application of knowledge and a blend of other attributes".

There is also a clear link between project success and competences (see e.g. Clarke, 2010). Cavallo (2006) even argues that successful leaders can be identified by assessing their emotional competences. While the present study does not directly measure project managers' effectiveness, it is important to understand about competences in a project environment further. The first section focuses on the theories of communicative competences, whereas the second part briefly views the management competences through a communicative perspective.

2.2.1 Communicative competences

Communicative competence has been defined in several ways, e.g. as
> a form of an interpersonal influence (Spitzberg and Cupach 1984); or an ability to
> know when, where, how, what and in what manner to communicate (Hymes 1972).

The following subsections present theories in communicative competences that are viewed from the applied linguistics and interactional perspectives, in addition to presenting a more pragmatic view on communicative competences. In the following discussion the present study attempts to show the links between the various approaches and conclude on the principles of communicative competences for further examination in the analytical framework presented in the next subchapter.

Applied linguistics approach to communicative competences

Even though the communicative competence theories in applied linguistics research are not directly in the scope of this study, they are also somewhat applicable from a wider perspective. Therefore, a brief overview of the relevant theories will be discussed here.

Researchers in applied linguistics have developed communicative competence theories over several decades (see e.g. Hymes 1972; Canale and Swain 1980; Backman 1990; Peterwagner 2005). Recently, Louhiala-Salminen and Kankaanranta (2011) summed up the theories of Hymes, Canale and Swain, and Peterwagner in their parameters of communicative competence illustrated in Figure 4.
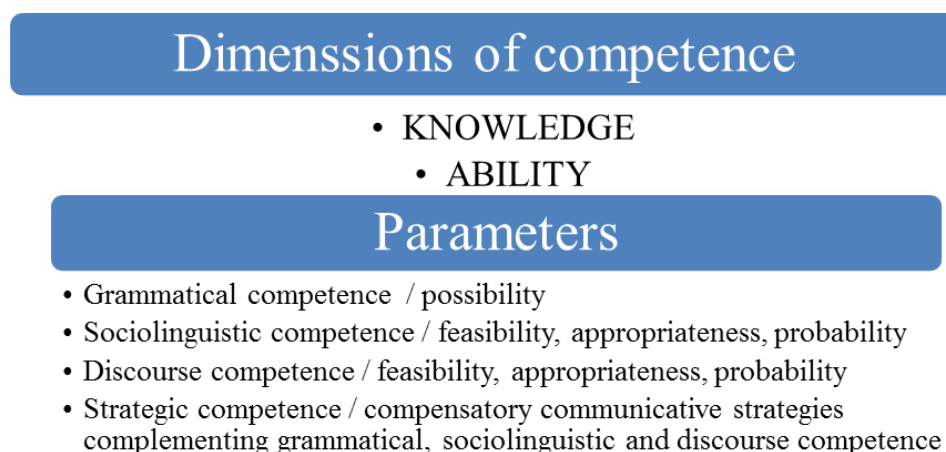
Figure 4 Parameters of communicative competence (Louhiala-Salminen and Kankaanranta 2011, p.251)

Louhiala-Salminen and Kankaanranta (2011, pp.250-251) claim that in a global context communicative competences base both on the *knowledge* of the language used in the particular communicative situation and an *ability to use* the language. This refers to Hymes' (1972, pp. 277-283) theory outlining that communicative competence consists of two concepts: (i) tacit knowledge, which includes grammatical and sociolinguistic competence; and (ii) ability (for use), which includes non-cognitive factors such as motivation, composure, level of confidence and abilities. In other words, a communicator knows how to use sentences both grammatically and appropriately

indicating, therefore, knowledge of when, where, how, what and in what manner to communicate.

Correspondingly, Hymes' (1972, p. 281) theory relies on four parameters adopted also by Louhiala-Salminen and Kankaanranta (2011): grammaticality, appropriateness, feasibility, and probability. Grammaticality refers to what is formally possible in communication, in both spoken and written text. Appropriateness stands for what is adequate and suitable for successful communication in a given context. Feasibility indicates whether communication can be implemented with the given means. Finally, probability refers to what is actually done. Interestingly, Spitzberg and Cupach (1984, p.65) point out that issues such as understanding appropriateness or assessing the behaviour of communication partners indicate behavioural choices.

Canale and Swain's (1980) theory consists of four main competences: grammatical, sociolinguistic, discourse and strategic competence. These were also included in the parameters illustrated in Figure 4. According to Canale and Swain (1980, pp.29-30) *grammatical competence* refers to knowledge of grammatical language use (e.g. phonology, vocabulary, sentence formation). *Discourse competence* stands for the knowledge on how to achieve cohesion in communication situations, in addition to both understanding and communicating in the forms of text, speaking or listening. Part of Backman's (1990) language competences are defined similarly. Additionally, Backman's (1990, pp.84-87) language competences also include the manner of speech, as well as contributors to appropriateness such as sensitivity to dialect or naturalness, and cultural references and figures of speech.

Canale and Swain (1980, pp.29-30) argue that *sociolinguistic competence* refers to knowledge of how to use sociocultural rules. Concretely, it refers to an ability to handle different social settings and communicative functions, as well as to use appropriate grammatical forms. Finally, Canale and Swain's *strategic competence*, referring to both verbal and non-verbal communication strategies, is used in situations where former competences fail (e.g. requests of repetition, slower speech, or clarification). Both

Johnson (2001, p.161) and Peterwagner (2005, p.19) argue that Backman, on the other hand, views strategic competences from a much wider perceptive.

Backman (1990, pp.98-107) claims that strategic competence includes three stages: assessment, planning and execution. Each stage focuses on achieving communicative goals. In the assessment stage communicators identify the needed information and available resources, in addition to assessing their communication partners. The planning stage is a combination of the used competences and plan formation. Communicators execute the plans by choosing an appropriate mood and communication channel.

While Johnson (2001, p.162) claims that Backman's (1990) strategic competences combine the communicator's knowledge and competences with the communication context, Johnson (2001, p.165) also criticises Backman of having a similarly narrow view on interaction as Canale and Swain (1980). According to Johnson (2001, p.165) Backman views interaction as stable, interaction relying solely on the individual communicator. The critique seems somewhat relevant when examining the other line of communicative competence research, where interaction is more emphasised. Monge et al. (1981, p.505), for instance, argue that communicator [communicative] competence is also defined by social or interpersonal competence developed in social phycology. Since Duran (1983, p.320) continues in the same direction and notes that communication competence refers to adapting to social constraints, it is also relevant to view communicative competences from the interactive perspective. The interactive approach to communicative competences is under scrutiny in the next subsection.

Interactive approach to communicative competences

Spitzberg and Cupach (1984, p.63) define communicative competence as "the ability to adapt messages appropriately to the interaction context". At the same time they argue that the interaction aspect is evident in the research introduced earlier. Spitzberg and Cupach (1984, p.63) claim that Hymes (1972) talks about individual abilities in the form of competences, extending the scope, therefore, already beyond knowledge of

language, e.g. the evident ability to explain behaviour and process information cognitively are aspects outside the concept of 'language use'. Even further, Spitzberg and Cupach (1984, p.63) argue that an issue as the consideration of what is appropriate communication in a given situation, is a clear indication of an interactive approach to communicative competences.

Further, Wiemann (1977, p.198) underlined the importance of "maintaining the face... within the constraints of the situation". While having similar views with Hymes (1972) about non-cognitive factors, Wiemann (1977, p.198) also claims that communicative competence is an ability to select and execute an appropriate communicative behaviour. In this approach the underlining assumption is that the focus is on achieving the objectives of the given communication situation. Furthermore, Spitzberg and Cupach (1981, p.1) state that competence is understood as a form of interpersonal influence, where a communicator realises communicative functions and goals (effectiveness), as well as maintains conversational and interpersonal norms (appropriateness). Additionally, Bachman (1990) also points out the importance of goals in the use of communication competences. Similarly, Louhiala-Salminen and Kankaanranta (2011) argue that effectiveness and appropriateness as well as the role of context are integrated in the communicative competence.

Keaton (2005, p.74) continues describing the relation between a social system and communication by stating that communication is both the process of interaction and the product of those interactions in a social context. Johnson (2001, p.175), again, suggests that some of the linguistics based communicative competence models are being replaced by interaction related competence theories. Interaction, while being undeniably present in the communication competence theories discussed in the earlier subsection, can be more thoroughly investigated through other related concepts such as interactional competence, relational communication, and interpersonal communication competence. These concepts are summarised in Table 1.

Table 1 Interactive competence concepts

Reference	Concept	Definition
Young (1999, p. 118)	Interactional competence	"A theory of the knowledge that participants bring to and realise in interaction and includes an account of how such knowledge is acquired."
Spitzberg and Cupach (1984, p.100)	Relational competence	"The extent to which objectives functionally related to communication are fulfilled through cooperative interaction appropriate to the interpersonal context."
Lakey and Canary (2002, p.221)	Interpersonal communication competence	"An impression formed by an interaction partner of an actor's communication behaviours that are performed to achieve his/her goals while also to respect the partner's goals."

Young (1999, p.188) starts relating interaction to competence by claiming that *interactional competence* theory is based on recognising that communicators' interaction is linked to competence. In other words, Young (1999, p.118) argues that participants "bring to and realise in interaction". Johnson (2001, p.176) continues to support the claim by stating that all participants in an interaction situation create the interpretation of that situation specific communication. Therefore, Johnson (2001) seems to emphasise that interactional competence exists only in a situation specific context.

Hall (1993, p.218) claims that interactional competence includes three components: observation, reflection and creation of own responses. Firstly, observation refers to finding out interactive patterns of the situation. Secondly, reflection specifies those observations by viewing others' participatory moves and reactions, which are then construed by creating reflecting responses to the situation patterns. Interactional competence, thus, seems to have similar features to Backman's (1990) strategic competence of assessment, planning and execution as well as Hymes' (1972) underlying theories of knowing when, why and what manner to communicate.

Contrary to this view, Spitzberg and Cupach (1984, p.152) claim that behaviour or cognitions do not alone explain "competence in communicating", *relational competence*. Spitzberg and Cupach (1984, p.100) further define that relational competence fulfils communicational goals by appropriate interaction in an interpersonal context and consists of several components that are likely to occur with a competent communicator. According to Spitzberg and Cupach (1984, pp.117-142) a competent communicator is likely to be motivated to communicate. Secondly, a competent communicator is assumed to possess knowledge of how to communicate including also an understanding of behavioural patterns, tactics and strategies. Competent communicators apparently should be skilled in communication and successful in accomplishing appropriate outcomes applicable to interpersonal relationships.

Lakey and Canary's (2002, pp. 220-221) definition of *interpersonal communication competence* seems to discuss similar issues as explained above. Their definition (see Table 1) indicates that interpersonal communication competence takes into account achieving goals in addition to respecting partners' goals. Furthermore, in interpersonal communication competence general sensitivity towards the communication partner increases effectiveness and seemingly success in interactive situations. Parks (1994, p.611) describes interpersonally competent communicators further by claiming that they employ both adaptive and collaborative control in social interaction, which seems to relate to Hymes (1972) parameters of communicative competence discussed earlier.

In the next subsection the theories above in this subsection and in the previous subsection are discussed in more pragmatic terms.

Pragmatic approach to communicative competences

In more recent literature Louhiala-Salminen and Kankaanranta (2011) present a study on *Global Communicative Competence* (GCC) of business professionals. While the analysis was made through communicative competence theory presented in the earlier subsection in the form of parameters, it also includes aspects of other communicative

competences. In the more precise conceptualisation Louhiala-Salminen and Kankaanranta (2011, pp.258-259) claim that the global communicative competence of a business professional requires three other competence levels: multicultural competence, competence in BELF (Business English Langua Franca), and business knowhow. These are illustrated in Figure 5.
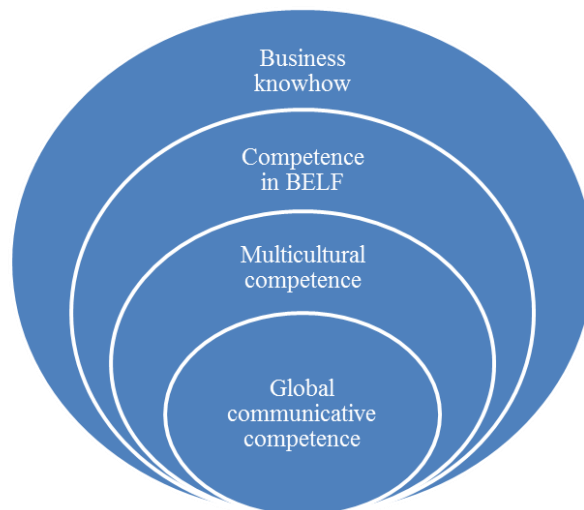
Figure 5 GCC in a business context (Louhiala-Salminen and Kankaanranta 2011, p. 258)

Multicultural competence refers to sociolinguistic and discourse competence in a multicultural environment. According to Louhila-Salminen and Kankaanranta (2011, p.259) this means "a sensitivity towards different ways of doing things". This, yet again, refers to skills such as listening skills and accommodation skills, as well as understanding varieties of language. Louhiala-Salminen and Kankaanranta's definition of multicultural competence, however, seems somewhat wider than the concept intercultural communicative competence (ICC). Hajek and Giles (2003, p.952) define ICC as a process of achieving desired communicative goals by managing communicative expectations that are affected by a cognitive awareness of cultural orientations and history, and motivation.

On the other hand, according to Witteborn (2003, p.189), in Martin and Hammer's (1989) studies of behaviour and communicative competence in an intercultural

communication context communicative competence is expressed through three different behaviours that indicate similar findings to Louhiala-Salminen and Kankaanranta's (2011). These are nonverbal behaviour (e.g. listening carefully, direct eye contact, smiling), verbal behaviour (e.g. sharing information of one self, seeking topics that interest the communication partner), and thirdly, conversational management behaviours such as asking questions about others.

The second level of Louhiala-Salminen and Kankaanranta's (2011) GCC (see Fig. 5), a competence in *BELF*, refers to an ability to use English as a lingua franca and, at the same time, use it in a situation-specific way. Kankaanranta and Louhiala-Salminen (2010, p. 205) argue that BELF "is used in the business domain to get the job done, it automatically implies certain roles for the language users (e.g. buyer, seller, manager), the kind of jobs they do (e.g. negotiate deals, manage projects, lead people), the issues they discuss (e.g. prices, recruiting, finance), and the genres they use (e.g. business email, intranet, meetings)."

According to Louhiala-Salminen and Kankaanranta (2011, p.259) BELF could appear in three different ways. In some cases BELF competence refers to a very basic use of English. In other cases it can appear as a use of "standard" English. Thirdly, the elements of strategic competence, such as sensitivity towards explicating and ascertaining messages, are included in BELF competence. A successful BELF communicator aims to achieve shared understanding also by asking questions, repeating statements and using more than one communication channel.

The third competence level of GCC (see Fig. 5), *business knowhow*, refers to field-specific professional competence. According to Louhiala-Salminen and Kankaanranta (2011, p.259) it is a fundamental and un-separated part of the whole global communicative competence. While Sharbrough et al. (2006, p.326) do not stress its importance in their study, they also seemingly indicate that communication competence includes job-specific skills. They (2006) further emphasise that employees with

management or leadership duties employ broader communicative competences than other employees.

Communicative competences reflect a strong emphasis on people and, therefore also, on social relationships. According to Louhiala-Salminen and Kankaanranta (2011, pp.255-256) business professionals acknowledge the needs of their communicative partners while emphasising the factual business needs over the interactional needs of creating an emphatic atmosphere. Correspondingly, Johnson (2001, p.161) also argued that Canale and Swain's (1980) strategic competence includes a partnership, especially in situations of misunderstanding. Johnson (2001) suggests that a successful implementation of strategic competence is only achieved through assistance or collaboration between communicative partners.

Purhonen (2008) also highlights the importance of interpersonal communication competence for networking and collaboration. While the study focuses on small and medium sized businesses (SMEs), the theories can be generalised to apply also to a multinational corporation (MNC) environment. Purhonen (2008, para 29) finds interpersonal communication competence in networking and collaboration to consist of five central areas (see Fig. 6): information sharing, management of diversity, adaptation and adjustment, integrative negation, and creation and management (of relationships). All levels are interconnected and contain the three dimensions of interpersonal communication competence; knowledge, skills, and motivation discussed previously (Spitzberg and Cupach 1984).

KNOWLEDGE SKILLS MOTIVATION

Information sharing

Management of diversity

Adaptation and adjustment

Integrative negotion

Creation and management

Interpersonal communication competence in
networking and collaboration
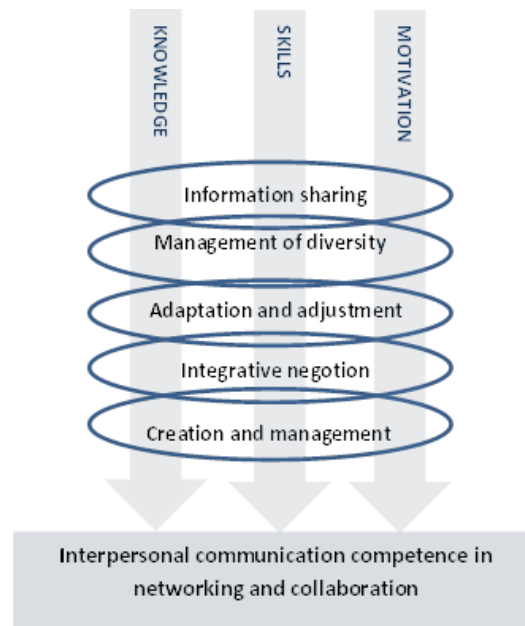
Figure 6 Areas of interpersonal communication competence in networking and collaboration (Purhonen 2008, para 29)

According to Purhonen (2008, para 30) in a collaboration and networking environment competent *information sharing* includes mutuality, reciprocity and openness. Purhonen (2008, para 31) further claims that recognising what kind of information and resources are included within the interpersonal networks and how these could be employed is essential for managers of collaborating groups. The argument coincides with Backman's (1990) theories of strategic competences and the need to recognise the needed information and resources.

Purhonen (2008, para 32) continues to describe the second level, *managing diversity*, by stating that diversity in networks is often multileveled (see Fig, 6), which Lakey and Canary (2002, p.219) support with a claim of multiple goals. Communicators have to have knowledge and understanding of the multileveled diversity. In addition to paying attention to the diversity of associations around, the impacts onto goals and interaction in a wider scale should be acknowledged. Additionally, a networked environment emphasises respect and equity (Purhonen 2008, para 33). Similarly, Wiemann (1977,

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p.198) earlier indicated that a competent communicator has mutually accepted relationships.

The third element, *adaptation and adjustment* is added to the interpersonal communication competence in a networked environment, because according to Purhonen (2008, para 34) while being customarily temporary, networked groups often experience rapid and demanding changes. Louhiala-Salminen and Kankaanranta's (2011) studies also seem to indicate that communicative competences are adaptable to changing business environments.

Whereas *integrative negotiations*, the fourth element in the interpersonal communication competence model (see Fig. 6), refers to integrative or cooperation negotiation tactics. Purhonen (2008, para 36-37) claims that despite employing these tactics over distributive or competitive ones, in collaboration situations communicators must seek and accept compromises for mutual benefit. Finally, according to Purhonen (2008, para 38-40) the *creation and management* (of relationships) includes managing relational communication that creates understanding, mutuality and trust, which further support the claim that effective communication is an ability to build trust and rapport (Louhiala-Salminen and Kankaanranta 2011, p.260).

Effectiveness of business communication in an international business context is often described to consist of three main factors: directness, clarity, and politeness. Additionally Louhiala-Salminen and Kankaanranta (2011, pp.255-256) claim that it is important to learn about the needs for argumentation and explanations. Sharbrough et al. (2006, p.326) agree by also including clarity of expression, appropriate language use, timely response and attentiveness into the general communication competence items. In Louhiala-Salminen and Kankaanranta's study (2011, pp.255-256) clarity of communication seemed to rise as the most influential feature for communicative success, especially in a multicultural and multilingual environment. However, they (2011) partly argued against it as they highlighted the relevance of sociolinguistic

competence by continuing to claim that politeness or directness might be more relevant than clarity with particular audiences.

Further, Louhiala-Salminen and Kankaanranta (2011, p.255) claim that the international business context requires accommodation skills and flexibility, especially with interactions with business colleagues and partners. Professionals working in a global environment seem relatively understanding towards culturally bound sociolinguistic and discourse competences such as the level of talkativeness or the level of politeness. Duran (1983) clearly agrees with the claim of accommodating behaviour and flexibility. Duran (1983, p.320) continues to argue that communicative competence is interconnected to adaptability. Communicative adaptability, in practice, refers to an ability to recognise socio-interpersonal relationships and adapt interaction and behaviour goals accordingly. Duran (1983, p.320) claims that communicative adaptability requires both cognitive (ability to perceive) and behavioural (ability to adapt) skills. Adaptability also takes into account differences in the communication context.

As discussed in this and two previous subsections, theories of communicative competence, interactional and relational competence, interpersonal communication competence, GCC and ICC are highly related and share many common elements. As they largely seem to include similar factors, they can be all regarded as relevant for the general term of communicative competence. The theories of management competences are briefly reviewed in the discussion of next.

2.2.2 Management competences of project manager

In his review on competences in management science Brinckmann (2007) categorises management competences under three main headings; functional, social, and conceptual competences. These are illustrated in Figure 7. According to Brickmann (2007, pp.33-36) functional competences refer to "to knowledge and domination of special methods, procedures, techniques, and practice in a certain area". Social competences stand for an

ability to interact effectively with others, whereas conceptual competence in general refers to holistic, strategic, goal-forming and methodical abilities. Brinckmann's (2007) detailed competence review and categorisation can be found in Appendix A. The enclosed table in Appendix A that highlights literature relevant to the present study, is an extract of a more extensive competence review.

Conceptual management competences

Social management competences

Functional management competences
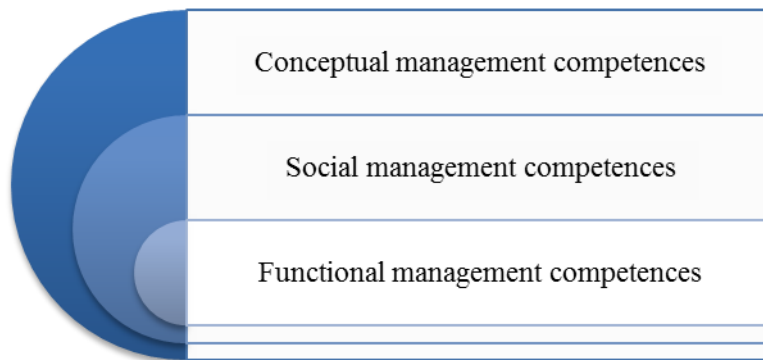
Figure 7 Management competences (Brinckmann 2007, p.33)

According to Brinckmann (2007, p.35) *functional competences* can be understood to refer to industry related expertise, or abilities related to value creation or functional skills (see e.g. Bunk 1994; Thommen 1995; Salomo 2001 in Appendix A). Other frequently used terms describing functional competences in the literature are technical skills such as (i) expert knowledge or techniques in a specified field (see Katz 1974); (ii) functional qualifications for example task specific skills or initiative to learn (Gerig 1998; Grunwald 2000); or (iii) functional skills referring to knowhow of references or relationships (Kauffeld and Grote 2002).

Similarly Louhiala-Salminen and Kankaanranta (2011) claim that business knowhow, e.g. field-specific knowledge, is a part of global communicative competences. While Chin (2003, p.88) argues that especially in an agile project management environment technical skills and knowhow are essential elements, it could be concluded that earlier research largely confirms that in complex, socially embedded business environments functional competences alone are not ample enough to guarantee success in work but

additional competences are required, i.e. social and conceptual competences (Brinkmann 2007, p.35).

This assumption seems to be in line with Chin (2003, p.87), who claims that in an agile project environment so-called 'soft skills' such as an ability to maintain relationships, interact with various levels of organisation, and flexibility characterise an agile project professional. Similarly, according to Brinckmann (2007, p.34) *social competence* is described as an ability to cooperate, interact, and solve conflicts (see Thommen 1995; Gerig 1998; Salomo 2001; Kauffeld and Grote 2002). Brinckmann (2007, p.34) argues that Katz (1974) also gives a seemingly similar description of these social competences under the term 'human skills', where abilities such as teamwork, cooperation, leadership and communication are categorised. (See Appendix A)

Brinckmann (2007, p.34) continues to describe that competences such as adaptability, team-spirit and cooperation are a part of social competences (see Bunk 1994). Further, Brinckmann (2007) argues that Bunk (1994) distinguishes two levels of social competences: innerpersonal [intrapersonal] and interpersonal, including therefore the levels of communication (Hargie et al. 2004) into competence assessment. Kotter (1982) as cited by Brinckmann (2007), however, claims that social competences are purely network building that consists of the development of internal and external relations and leadership, coinciding thus with Chin's (2003, p.87) 'soft skills'. Brinckmann's (2007) findings related to social competences seem to align with the characteristics of competent communicator discussed previously (Spitzberg and Cupach 1984), as well as several aspects of Purhonen's (2008) interpersonal communication competence.

A number of the above social competences can be detected also in Mehta's (2007, pp.266-267) study on the desired abilities of a project manager. On Mehta's list there are several interpersonal and interactive abilities e.g. listening skills, flexibility, supportive ethics and knowing strengths and weaknesses of the team. Additionally, abilities such as open-minded, fair, honest and trustworthy attitude and sense of humour

seem to characterise project managers. Additionally, Mehta's (2007) findings suggest that project managers seem to have a role of team builder and buffer as well as take responsibility of mutual ownership and decision making.

Similarly, on Mehta's (2007, pp. 266-267) list of project managers' desired abilities some of the attributes such as technical knowledge and organising are related to Brinckmann's (2007) functional competences, and to Louhiala-Salminen and Kankaanranta (2011) business knowhow. While functional competences are present, Mehta (2007, p.267) makes further conclusions that functional competences are not the primary abilities for the project manager, whereas Louhiala-Salminen and Kankaanranta (2011) claimed that business knowhow is an inseparable part of the global communicative competences.

Mehta (2007, pp. 266-267) continues to explain that while having extensive responsibilities, project managers seldom have official authority over everyone in the project. Thus, they have to be influential, persuasive, and negotiate, which seems to be consistent with the attributes of a project manager listed above. While the content of social competences in the above discussed literature seems to support the arguments related to the required competences in an agile environment, Chin (2003, p.90) points out that the agile project environment consists of complex and multiple project lanes that should be simultaneously explored, thus a mix of intrapersonal and interpersonal competences is not enough but more holistic thinking is required.

Brinckmann's (2007; see Appendix A) *conceptual competences* dimension seems to be extensive in its context than social competences. Accordingly, various researchers (see e.g. Katz 1972; Thommen 1995; Gerig 1998; Grundwald 2000; Kauffeld and Grote 2002) describe conceptual competences as embracing change, complex thinking, problem-solving, goal setting and creativity for instance under such terms as innovation competence, conceptual qualifications, self-competence, and management competence. These seem to correlate with Mehta's (2007, pp. 266-267) findings, where e.g. good decision making and clearing road blocks are also included.

The common factors in Brinckmann's (2007) review seem to be the abilities to understand, utilise and manage different kinds of knowledge and situations by using conceptual competences to achieve goals. Additionally, Brinckmann (2007, p.37) highlights that particularly Kotter (1982) and Bunk (1994) distinguish the difference in proactive competences such as goal setting and problem solving with actual activities such as the enforcement of an agenda or decision making.

We could also argue that both the social and the conceptual competences discussed above could be understood as having their foundation on emotional intelligence (EI). Emotional intelligence by definition refers to "noticing and understanding emotions and their implications and using this understanding to improve cognitive thinking including the quality of actions and decisions" (Druskat and Druskat 2006, p.78). EI has been defined to include (Goleman et al. 2002) (i) personal competences; self-awareness (e.g. emotional self-awareness), and self-management (e.g. transparency, adaptability, initiative), as well as (ii) social competences; social awareness (e.g. empathy, organisational awareness), and relationship management (e.g. influence, conflict management, building bonds, and team work and collaboration).

Druskat and Druskat (2006, p.78) emphasise that emotional intelligence is an essential competence especially in a project environment, because project interactions and relationships occur and develop at a fast multidimensional pace. Clarke (2010, p.17) suggests that emotional intelligence and empathy somewhat explain individual differences in project managers' conduct affecting project outcomes. Similarly, Cavallo (2006) concludes in her study that high performing managers have considerably higher EI competences. The levels are higher compared to less successful managers in self-awareness, self-management, social skills, and organisational savvy, indicating therefore an emphasis on Brinckmann's (2007) social and conceptual competences, as well as linking with Hall's (1993) claims of observation, reflection and creation of own responses in interactional competences.

In sum competences in management science can be defined as follows (see e.g. Brickmann 2007; Chin 2003; Mehta 2007). Functional competences refer to field-specific knowhow and abilities to manage context specific issues. Social competences are related to managing social context, interaction and construes, whereas conceptual competences focus on a holistic approach to managing situations and context.

The theoretical framework of the competences in a communicative project environment is presented in subchapter 2.3 below.

2.3 Theoretical framework

This subchapter introduces the theoretical framework, which is used in the present study to analyse the empirical data to retrieve the key competences related to managing projects in an agile environment.

As the presented literature suggests, an agile project management environment is networked and consists of continuous development processes that are subject to changes and time pressure (Cleland and Gareis 2006; Whitaker 2009). The environment can be characterised as multidimensional as it is filled with a number of communicative stakeholders, uncertainties and requirements (Chin 2003; Gillard and Johansen 2004). Thus, managing and communicating in a project are also multifunctional activities and require several competences.

Furthermore, the significance of communicative competences seems to be present in a project manager's daily work (Gillard and Johansen 2004; Mehta 2007). While applied linguistics approach to communicative competences is not directly in the scope of the present study, research offers a wide basis for the theoretical framework. Additionally, the discussion above indicates a high interlinkage between literature on communicative competences and management competences; hence the theoretical framework is a combination of the approaches presented.

The required competences in the present study are viewed from a communicative perspective, and thus they are specific to a particular communicative project context. The framework, illustrated in Figure 8, describes the communicative competences relevant to the present study: functional, social, and strategic competences. As the illustration suggests the competences seem to some extent be interlinked and merged. While the terms 'functional' and 'social' seem to indicate an emphasis on management competence (see Brinckmann 2007), the content consists largely of communicative competence aspects discussed above. Correspondingly, although the term 'strategic' refers to communicative competence literature (e.g. Backman 1990), it includes aspects of conceptual competences discussed in management science.
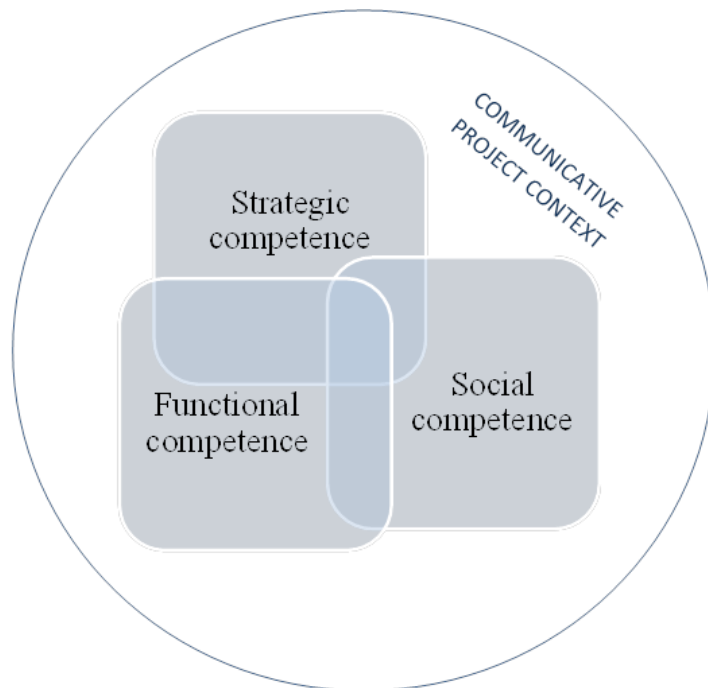
Figure 8 Theoretical framework of communicative competences in a project

As pointed out in the previous subchapters Hessami and Moore (2011, p.230) claimed that a competence is "an application of knowledge and a blend of other attributes". Additionally, communicative competence research seems to suggest that competences are based on two variable factors: knowledge and ability (see e.g. Hymes 1972; Spitzberg and Cupach 1984). Knowledge refers to knowing how to act (Brinckmann

2007) and communicate (Louhiala-Salminen and Kankaanranta 2011), whereas ability includes the idea of being able to do it (Hymes 1972). The underlying assumption in the presented framework is that the three types of competences include the dimensions of effectiveness, appropriateness and possibility (Louhiala-Salminen and Kankaanranta 2011), additionally to being situation specific.

In the framework *functional competence* consists - as Brinckmann (2007), and Louhiala-Salminen and Kankaanranta (2011) claim - of knowledge and abilities in a specific business domain. It can, for instance, refer to industry related functional skills or business knowledge. *Social competence* in general refers to the interpersonal and intrapersonal abilities, which are connected to interacting in the social environment (e.g. Purhonen 2008; Brinckmann 2007), whereas *strategic competence* focuses on achieving a set of communicational and operational goals in that environment (e.g. Backman 1990; Spitzberg and Cupach 1984).

The analysis of the characteristics of the case organisation's communicative project environment and related competences are discussed in Chapter 4.

3 METHODOLOGY AND DATA

The methods, data as well as trustworthiness and limitations of the present study are discussed in the present chapter.

3.1 Methods

The present study was conducted as a qualitative case study, which focused on examining communicative competences of a project manager in a multinational corporation operating in telecommunications. The main advantage of qualitative research is that it allows a focus on a specified phenomenon or research problem (Hirsjärvi and Hurme 2001). Research literature indicates that a case study is particularly useful, when the phenomenon cannot be clearly distinguished from the context (Yin 1994, 13). In the present study the researched phenomenon, project managers' communicative competences, and the communicative context, project environment, are closely intertwined, thus any clear distinctions are next to impossible. Therefore, a case study approach as the most appropriate design is chosen.

The empirical data was gathered in two stages. Firstly, it was collected through a focus group interview, and secondly by six semi-structured personal interviews. The choice of the focus group and interview method was made for the following reasons.

Firstly, Syrjälä (1994, p.11-12) argues that a multi-method approach enables a more thorough understanding of the underlying environment and phenomenon in a case study. Sekaran (2003, p.220-221) claims that focus group interviews aim at obtaining the participants' interpretations and perceptions. The researcher continues that focus group interviews offer help to obtain valuable insights from the snowballing effects of the participants as the participants discuss the nuances of each thought process. Additionally, the focus group interview has a group composition focus, which refers to a specifically defined group of individuals (Gillhan 2005, 60).

The empirical data were analysed thematically by a three phase analytical process that consisted of description, classification and construction of correlation (Hirsjärvi and Hurme 2001). The description phase focuses on grouping thematically the empirical data, whereas the classification phase creates a basis for the actual analysis. In the construction phase the data is analysed in an attempt to show the correlations between the themes and classified components. In the present study the correlative analysis in the findings is presented through a competence components analysis tool.

3.2 Data

The empirical research of this study was conducted in a multinational corporation, which operates in telecommunications. The case organisation operates internationally offering their services and products both to internal and external customers. The corporation can be described as a networked, project based organisation, which consists of several business units and departments. The official corporation language is English and the corporation employs approximately 70 000 professionals around the world.

The interview group consisted of six Finnish ICT professionals who worked as a team in managing a group of platform programs. It included five Program Managers and one Head of Program Managers. The Program Managers supervise internationally operating teams that include several hundreds of ICT professionals around the world. Five of these ICT professionals were male and one was female, and three were under 40 and three over 40 years of age. For the present Thesis report, the interviewees were numbered from 1 to 6; therefore, each quotation discussed in the Findings chapter is marked by e.g. i2 for person No.2 to indicate a particular interviewee. The empirical data were collected, tape recorded and transcribed in Finnish, and the quotations used have been freely translated into English by the researcher.

This particular group of project professionals was selected for this empirical research, because (i) they were theoretically a fitting sample of a project environment (e.g. William 2002; Viitanen 1998), and (ii) they were a fairly heterogeneous representation

of program managers. The sample represented a team of managers that managed one of the case organisation's key R&D platform program services. The interviewed ICT professionals all had several years of experience in project management but their years as Program Managers varied. Two of them had worked 2-3 years as Program Managers, three had 5-7 years of experience and one had 10 years of experience as Program Manager. In addition to having some differences in the earlier work experience as project managers, their educational background also varied somewhat as four of the professionals had a background in technology and two had Masters of Science degrees.

Although the titles of the interviewees were Program Managers, in this study terms 'project' and 'program' are understood as synonyms, of which the word 'project' is used throughout the study. This choice has been made for three reasons. Firstly, research on project management is much more extensive than the literature focused solely on program management. Secondly, the distinction between a project and program is not always clear. During the interviews the participants described their work as "being a project manager" (i6). Additionally they stated that the terminology is context specific, where in other fields of business Program Manager could be called Project Manager. Finally, according to Roberts (2007, p.25) a program can be defined as "a portfolio of projects specially pulled together to deliver a particular business objective". Thus, it could be generalised that a program is a larger entity of a project.

While a program and a project share similar features, there are some differences defined by Roberts (2007, pp.25-28) that should be briefly discussed here. Projects characteristically are either funded or lead by a defined part of the organisation. There may or may not be dependencies between different projects whereas a program includes interlinked projects, the dependencies of which must be acknowledged and managed. As programs are often at the core of business objectives, Roberts (2007) claims that their failures also have a greater impact on the whole corporation, whereas a project's failure might be contained as it often focuses on the deliverable on-hand.

Further, Roberts argues (2007, pp.25-28) that project benefits are often seen straight after its completion as it has more a narrowly focused scope. A program also carries higher risks with the wider scope, in addition to delivering benefits and outcomes in phases. Finally, Roberts claims that a program is impacted by and affects other parts of the business (including other programs). These specified features are in line with the few project/program differences that emerged in the interviews. The participants emphasised that they manage larger contents and carry the responsibility of the whole platform project and its budget instead of a specified section of the project process.

The empirical data were gathered through a total of seven interviews, of which the focus group interview concentrated on understanding project managers' work in general, while the understanding of related competences was enhanced through the personal interviews. The focus group interview, held first in December 2011, lasted for 1.5 hours. In December 2011 it was followed by six personal interviews of 50 minutes each.

The aim of the interviews was to be conversational and open to ideas, and they followed no strict structure. The focus group interview and the personal interview questions followed three themes. Three themes in the interviews were (i) the programs and work description, (ii) working methods, behaviour and management style; and (iii) communication. The outline of the questions is discussed thematically here below. In the focus group interview the tone of the questions was more general, whereas in the personal interviews more specific.

Firstly, through a set of questions the participants were asked to describe the programs that they lead and their work. The questions varied from general questions such as "Could you describe the program you lead?" to a more detailed question of "Walk me through your work day yesterday". Additionally the interviewees were requested to visualise the particular project environment by "This is <you>, could you draw me a picture of what is around you?". The aim of these questions was to get a clear picture of the environment and the tasks they work with. The discussions were lively on the characteristics, typical responsibilities, stakeholders, and needed abilities. The main

questions initiated also several sub-questions, for example on the types of meetings or communication style with various stakeholders, and requests for clarification such as the differences between a project and a program manager.

Secondly, the participants were asked about their working methods, behaviour and management style. These questions ranged from "How do you describe yourself as a leader?", or "Do you have different kinds of tasks or responsibilities during the project cycle?" to more exact ones such as "Talk to me about your decision-making process, what does it entail?", "Could you give me an example of a successful or challenging situation and how did you handle it?", or "Is networking important to you and why?". The main focus of these questions was to gather information on the underlining competences.

While the participants were aware of the researcher's interest of communication, the main focus of the questions was on the previous two themes. This approach was decided by the researcher in an attempt to diminish any narrow connotations of communication in general or in the use of communication in managing projects. Despite this decision, the participants were also asked direct questions about communication. These were for instance "Could you describe the situations where communication has been challenging or successful?" or "What kind of communication skills does your work require?". This question set was included in the interviews to understand the subjective perceptions of the role and function of communication to each project manager.

The analysis and findings of the data is discussed in Chapter 4.

3.3 Trustworthiness and limitations of the study

Guba (1981) argues that trustworthiness in a qualitative study should be examined through four criteria: credibility, transferability, dependability, and confirmability. Each criterion is shortly examined next.

Credibility refers to the assumption that the empirical research focuses on the actual research problem. According to Shenton (2004, pp. 64-69) it can be for instance viewed by assessing (i) the early familiarity of the participating organisation, (ii) randomness of the sampling, (iii) triangulation (multiple methods), (iv) tactics to ensure honesty to the participants, (v) member checks, and (vi) examination of previous research findings.

In the present study the researcher received general information of the organisation, project team and projects before the actual collection of the empirical data, thus supporting familiarity. Additionally, while the participants selected represented one whole team, the sample of the participants was randomly selected. The decision to collect data from multiple sources supports validity as Sekaran (2003, p. 256) states that good research includes data from multiple sources and through multiple data collection methods. Shenton (2004, p. 65) notes that while a focus group interview and personal interviews both have similar limitations, they have different methodological strengths.

Additionally, the researcher ensured the participants of the confidentiality and anonymity in the study. While the interviews were taped and transcribed, the collected data is only at the researcher and university's disposal, and in the empirical part of the study participants were referred to by numbers. As Shenton (2004, pp. 66-67) suggests, the participants were encouraged to be frank and honest. Additionally, a representative of the participants was given an opportunity to check the accuracy of the empirical findings (Cuba 1981). Finally, the discussion in the present study indicates that the empirical data corresponds in a fairly high degree with the findings in previous literature.

While Shenton (2004, p.69) states that the situation specific characteristics of the findings in a qualitative study do not permit generalisations to other situations or populations, he proposes that sufficient contextual information of the phenomenon enables a reader to assess the significance of the findings in other situations. The dependability of the present study is shown by detailed descriptions of the empirical research project, whereas confirmability in a study refers to the objectiveness of the

researcher (Patton 1990). In the present study the interview style and documentation of empirical data and analysis were attended to ensure the objectivity. While the role of the researcher was to lead the discussion to encourage all participants to equally participate, the role ultimately was to observe, consequently not participate in the actual discussion.

As with all qualitative research, the present study is subject to limitations. One limitation is the fact that the present study assessed the competences of the participants only by group and personal interviews, which as such is subject to personal bias, i.e. personal perceptions. However, as the present study was interested in finding out work related communicative competences and not assess the effectiveness of those competences, the selection of the research methods can be justified.

Furthermore, while the group of the participants in the empirical research presented one whole team of managers, which fitted into the definitions of a project environment (e.g. Viitanen 1998; Brotherton 1999), the group did not necessarily represent a selection of typical ICT professionals, because of the varied backgrounds. On the other hand, the mix of backgrounds, and as such the heterogeneity, supported a wider view on communicative competences of project managers.

An additional limitation is the simplification of the theoretical framework in the present study as a comprehensive list of competences of a project manager is likely to depend on a number of additional factors than communication. Further, while the questions focused on general work and project environment related issues, the participants were aware of the underlying interest on communication, and consequently communicative factors in the interviews might have been emphasised. On the other hand, the participants themselves did not make any profound analysis of their communicative competences but this was left for the researcher.

Despite the limitations, the present study presented a fairly valid description of a project manager's communicative competences by combining a wide range of theoretical literature and multi-method empirical studies. The findings and their discussion is presented next.

4 ANALYSIS AND FINDINGS

The analysis and findings chapter presents the analysis of the data and the empirical findings and reflects the findings against the research literature presented earlier (Ch. 2). The first subchapter focuses on the findings related to communicative project environment and project managers' work, and aims to give an answer to the research question of 'what are the characteristics of a communicative project environment'. The second part views the related communicative competences, and thus focuses on the research question of 'what are the key communicative competences of a project manager'. The final subchapter concludes the discussion and answers the research question of 'how are communicative competences related to managing project'.

As the study was conducted with a case approach, the findings should be viewed in a context of the specific case organisation. Therefore, any general conclusions made on the basis of the present study are subject to the particular organisational context.

4.1 Communicative environment of project managers

Agile PM Environment = [Uncertainty + Unique Expertise] x Speed
(Chin 2003, p. 3)

In the literature review (see Ch. 2) Chin (2003, p.3) argued that an agile project management environment consists of three key components that impact communication. These components are (i) uncertainties that affects a project, (ii) unique expertise working for the project, and (iii) speed in a form of e.g. changing schedules and pressure of cyclical deadlines. Additionally, Cleland and Gareis (2006, p.44) claimed that the contemporary project environment focuses on leading the dynamics of the project, i.e. project boundaries, context and complexity. In this subchapter the present study attempts to assess the theories of an agile environment through communicative perspective.

In the case organisation projects are led in continuous four week work cycles, sprints that consist of three official parts: planning, execution, and follow-up, thus being in line with Whitaker's (2009) claims of a typical agile workflow. Additionally, projects are subject to undergoing changes. The participants describe that while projects are "connected to different specs, plans and time tables, everything changes all the time" (i5). Furthermore, the findings indicate that the overall project life cycle has some effect on the project manager's work, thus also to the function of communication. The participants claimed that in the earlier stages of a project life cycle the work typically has more aspects of planning and risk management. Communication is characteristically more proactive, whereas later in a project life cycle it is more reactive and centres more on maintenance and problem solving.

Although the participants manage projects that are in various stages of project life cycle, there were four main responsibilities that could be detected to apply for every project manager. Project managers' responsibilities are project coordination, problem solving, leading people and decision making. The main responsibilities coincide with Neher's (1997) and Poole's (2005) claims of the functions of communication, thus supporting the relevance communication in this context. The responsibilities are illustrated in Figure 9. As the illustration suggests the responsibilities are interlinked and the distinction between them is not always detectable. The project managers described their role e.g. as follows

"Work as some sort of coordinator… making sure that things go forward and everything gets done." (i2)

"Our job is to find the solutions even if everyone is not ready for it" (i5),
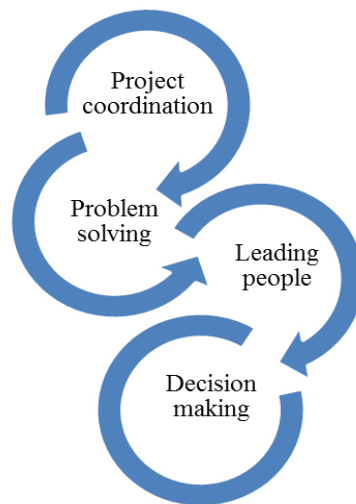
Figure 9 Key responsibilities of a project manager

Project coordination seems to include several forms as the findings suggests that project management is about coordinating time, people, needed requirements and demands, as well as the undergoing and up-coming work. In general, project coordination could be described as managing a project holistically, while attending to different parts of the project environment. Problem solving seems to have similar aspects as the participants emphasise that they need to be both proactive and reactive with problem solving. It consists of knowing the project requirements and assessing the problem situations from a wider perspective, as well as acting efficiently.

The findings further indicate that project managers lead projects that involve a wide selection of people. Additionally, project managers have different roles in a project environment, which emphasises the importance of being aware of the situation and differences in behaviours. Thereby, project managers should have an ability to lead people in a situation specific way. While the findings suggest that the project managers aim at finding consensus, it is evident that the participants are also subject to making difficult choices. Further, it is emphasised that the participants have to make decisions daily. The decisions are interlinked to all three previous responsibilities through understanding the wider picture, people and context of the issues in hand.

These responsibilities detected have similarities with both the approaches of traditional and agile project management discussed earlier in the literature review. Cleland and Garies (2006, p.44) argue that traditional project management includes planning, controlling and organising the project, of which all are valid in the case organisation. Similarly, Taylor's (2003, p.14) claims of decision making and leadership are included in the participants' jobs. While these seem to suggest a fairly strong emphasis on the traditional side of project management, the evidence for an agile environment is more explanatory through the following discussion of the environment and stakeholders.

The empirical data clearly supports Chin's (2003), Cleland and Gareis' (2006) claims of the complexity of the project environment. The findings indicated that the project environment is multilevel, and the role of the project managers is situated between various stakeholders, issues and tasks. The participants' illustrations of the project context, i.e. drawings of their environment, additionally support the statement (see Fig. 10). The illustrations describe project managers' stakeholders and links between them, as well as the characteristic work tools present in their daily environment.

(i1)   (i5)
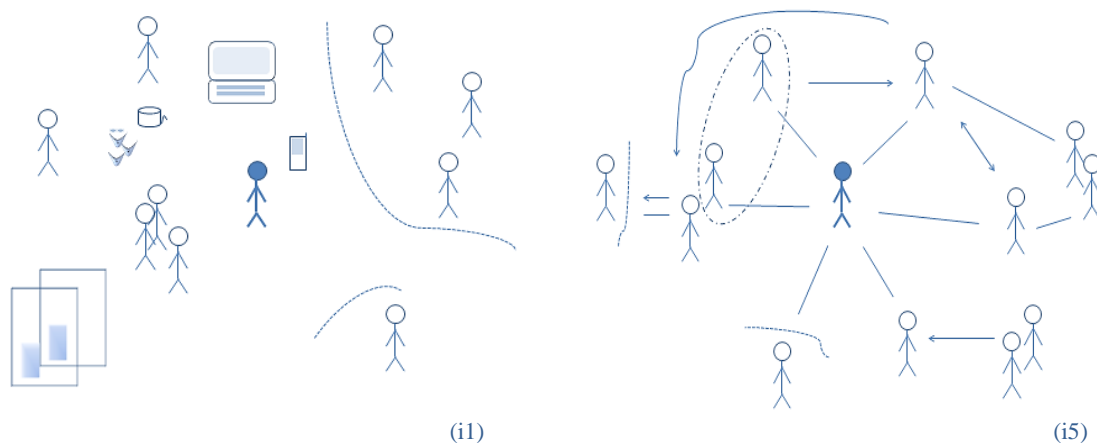
Figure 10 Examples of project environment

In Figure 10 there are two examples of the illustrations drawn by the interviewees. All six illustrations are shown in Appendix B. In the illustration on the left the participant (i1) highlighted different communicative tools of project managers' work: emails,

telephone, meetings, as well networking and a friendly atmosphere. Those were viewed as an integrated part of the job as can be seen e.g. in the following quotes:

> "When I think about my job description, it is quite a lot all about laptop and live meetings" (i4)

> "There is always a laptop and lots of meeting rooms… then there are phone calls here and there… and then over here, I like to walk and sort things out face-to-face" (i1).

Similarly, during the interviews the importance of these typical communicative tools was emphasised. The findings evidently show that project managers spend most of their time either in meetings, or otherwise interacting. The interaction could be, as claimed, by telephone, web meeting, and email or through unofficial chatting. Therefore, it is obvious that communication and interaction are indispensable elements of project managers' work. This claim was also presented by Binder (2008, p.79) stating that communication is a major part of project manager's work.

In Figure 10 there are clear signs of the variety of communicative stakeholders, which Gillard and Johansen (2004, p.24) also claimed in the literature review. The findings suggest that the participants associate with both internal and external stakeholders. In addition, they have cross-departmental and cross-organisational stakeholders, of which some are more active participators in the project. In the right hand example there is a clear indication of the centralised key working partners as some of the people are circled. The participant (i5) viewed the environment also through the links between different stakeholders. The arrows show how stakeholders are connected to each other indicating that the environment is highly networked and responsive to happenings in the surrounding.

All six illustrations were combined into one description of a project manager's communicative environment, which is illustrated in Figure 11. In this description different components of the examples are merged, thus creating a sample of project

surroundings in a multinational business environment. The different components are discussed in more detail next.
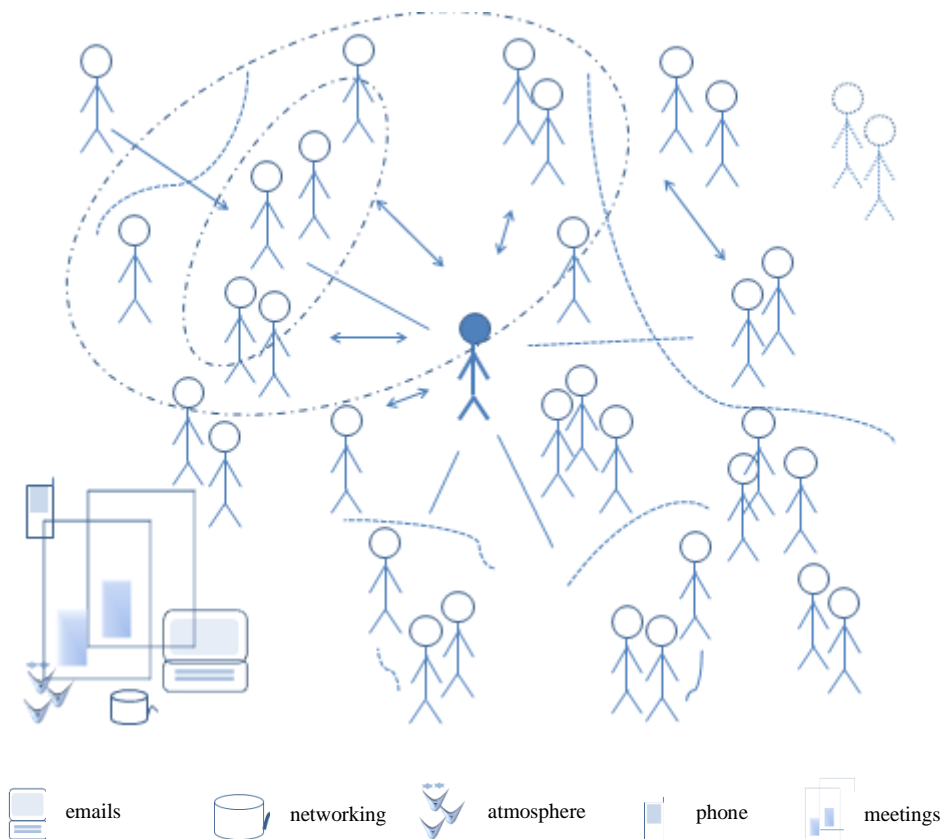
Figure 11 Description of communicative project environment

A project manager works in the middle of all activity and takes different roles according to the situation, e.g. "a proxy" (i3) or "a facilitator" (i6). The findings indicate that project managers are involved with several stakeholder groups and therefore, subject to a variety of objectives and requests. These objectives and requests also might change during the sprint cycle. Further, optimising resources, work and components in the most favourable order for all the projects was seemingly challenging. Chin (2003), and Gillard and Johansen (2004) made similar conclusions. Gillard and Johansen (2004, p.24) stated that multiple end-users often lead to varied demands. Similarly, Chin (2003, pp.7-11) emphasised changing customer requirements as part of uncertainties in a

project. Additionally, Chin (2003, p.7) continued that project plan changes such as resources, trade-offs or technical obstacles might hinder a project.

The findings also evidently suggest that the participants' projects are pressed with time and as a consequence, time management has a fairly significant role in the participants' work. Chin (2003) also claimed that the level of uncertainty increases with the pressure of time. The statement is also somewhat supported in the present empirical study as the findings indicated that the time pressure might have a multiplying effect for instance on the difficulties in problem solving or in day-to-day operations. The participants reviewed the pressure of time by commenting e.g. as follows

> "When you are not that busy, you have time to read pretty much all of your emails but if you have a bad day about 70 % is left untouched and you just concentrated on what the most important… the less important either come up later or take care of themselves." (i6)

> "When you have a problem that you have to solve in three days, it is sometimes really hard… these come all the time and when you are dealing with one, there are at least five more in the background." (i3)

Similarly, the findings also suggest that different departments or projects are highly linked as they often share same or highly-similar features such as software components, hardware and resources. Furthermore, the projects are impacted by the decisions and activities in the environment. Thus, the project managers must be aware of the links and dependencies in the projects. Similar conclusions were made by Gillard and Johansen (2004, p.24) as they argued that a communicative project environment is filled with complex interrelationships that create unique communication challenges for the project managers.

Further, according to the interviews the projects (and managers) share several working partners and key experts, in addition to working with the teams assigned to a specific project. It seems that the project teams are very flexible in their use of resources but also

dependent on the resource allocation of other projects. This is in line with Chin (2003, p.8-11), who claimed that in an agile project management various kinds of experts contribute to the project process.

As pointed out above, some of the stakeholders are internal and some are external operators. The participants work mainly with their internal customers but recognise also the external customers as one of the important stakeholder groups. The relevant stakeholders to the participants are e.g. internal customers (applications) and external customers (e.g. operators), R&D area product managers, customer's R&D and testing, product management, developers, architecture team, testing, supervisors, vendors, and other experts. Additionally participants associate with direct colleagues (other project managers in the platform project team) and other experts or contacts in their personal network.

According to six interviews colleagues hardly have any role in each other's projects. The findings indicate that their role is supportive and reflective. One of the participants claimed that the colleagues offer "guidance" (i2), whereas some participants stated that they interact mainly unofficially and use each other for instance as a way to "ventilate frustrations" (i1). The findings further suggest that while some of the other contacts in the project managers' network do not necessarily have a direct link to the project, they are useful for supportive assistance in problematic issues.

The list of detected communicative stakeholders seems to be more detailed than Gillard and Johansen's (2004) findings. They recognised altogether five stakeholder groups, which all can be detected in the case organisation. While Gillard and Johansen's (2004, p.24) categorisation is a fairly extensive collection of communicative stakeholders, they seemed to exclude the aspects of unofficial interaction. The findings in this empirical research suggest that unofficial interactions with different professionals in the personal networks or with colleagues are valuable and useful. Consequently, unofficial networks should be included in the list of the important communicative stakeholders.

The complexity of the project stakeholders is a clear indication of the multilevel and multidirectional communication needs. This correlates more closely with Gillard and Johansen's (2004) view on how communication functions than Brotherton's (1999). Gillard and Johansen (2004, p.24) claim that communication acts vertically, horizontally and also diagonally. Additionally, the claims of a networked and team environment are supported as the findings indicate that the work is done in teams and by using a network of experts (William 2002; Viitanen 1998; Brotherton 1999).

The participants also clearly recognised communication to be a part of the job description. The findings further suggest that communication is strongly linked to the completion of the four major responsibilities presented above. Additionally, the participants are fairly strongly aware of the impact and practicalities of their communicative behaviour. The findings even indicated that the participants are attentive of their influence as project managers, and therefore try to act accordingly and pay attention to their communicative behaviour as e.g. one project manager quotes:

> "It is not useful always to be impatient or demanding… but try to focus the energy on the most needed assignments" (i3).

Other participants claimed that especially with difficult requests it is better to "understand" (i6) to motivate people, whereas the findings also hint of the necessity to be persuasive and have a selling attitude to gain support for the decisions or solve problems. These findings seem to support Neher's (1997) wide list of the uses for communication. Neher (1997) claimed that that communication is for instance used for leading, motivating and influencing, as well as bargaining and negotiating. These tasks are clearly present here.

The argument of the importance of communication is also supported by the literature as many of the regular project manager's tasks include aspects of communication (e.g. Neher 1997; Binder 2008). Binder (2008, p.79) discusses the relevance of communication techniques to building networks and obtaining information. Neher (1997) continues by stating that communication is useful for solving problems and

making decisions. Similarly, the findings suggest that Adams and Anantatmula's (2010, p. 92), as well as Madlock's (2008, p.65) arguments for positive environments seem to be somewhat supported as the friendly atmosphere was included in the environment. In addition to that, the aspects of networking that emerged indicate a validation for Lewin and Massini's (2004) argument of the understanding of the positive effects of interaction and networking on a project.

Although communication is recognised to be relevant in a project environment, the participants seem to partly have a fairly narrow view on the definition of communication, when asked directly. More traditional roles for communication are recognised as the participants view communication as being (i) information sharing, gathering and transfer; (ii) preparing documentation and reporting, (iii) doing presentations and updates, but also (iv) networking and interacting with others. Tasks such as "getting the information from A to B" (i4) or sharing information within the team are named as concrete work related communication. On the other hand, also listening, follow-up and unofficial networking and "scouting information" (i1) are among concrete communicative tasks.

These findings suggest similarities with the official communicative tasks outlined by Thompson (2009). Thompson's (2009, p.39) information distribution and performance reporting tasks are clearly identified as a set of the communication tasks also by the participants. Additionally, managing stakeholders could be understood as networking and interacting with others, whereas Thompson's (2009, p.39) communication planning process is not as easily explained. The participants, however, describe their problem solving process to include essentially finding out "what needs to be done and who the right person to do it is" (i4). This seems to indicate similar features than Thompson's (2009) generalisation of communicative responsibilities.

The findings suggest that challenging communication situations include for instance writing cohesive messages that are received and understood. Further, the aspects related to the multinational corporation such as the multiple number of sites, nationalities and

working cultures as well as the pragmatic difficulties of time zones and English accents emphasise the challenges, thus also the need of appropriate competences. The findings seem to support Louhiala-Salminen and Kankaanranta's (2011) claims of needed competences in a global business environment. Further, they coincide with Sandberg and Skaar's (2010) indications of the prominence of communication challenges in a multicultural environment, as well as Gillard and Johansen's (2004) arguments of impacting factors, e.g. location and group composition, to communication system and flow.

It can be concluded that the factors in Chin's (2003, p.3) equation; internal and external uncertainties, unique expertise, and speed are clearly evident in the case organisation. Therefore, the findings suggest that Chin's (2003) definition of an agile PM environment seems to be valid and aptly describe the present communicative project environment. Additionally, the findings indicate that the project environment is complex in its nature, i.e. the people involved and the situation specific context. Therefore, project managers should employ a fairly wide range of competences in this environment. The needed competences are under scrutiny in the next subchapter.

4.2 Functional, social and strategic communicative competences

As was discussed in the literature review Hargie et al. (2004, pp.17-18) defined a communication process with four levels, of which the focus in the present study is on the intrapersonal, interpersonal and partly networked communication level. These communication levels are also useful the analysis of the required competences in project management. In the literature review three types of competences were identified i.e. functional, social, and strategic competence and they were included in the theoretical framework of the present study (See subch. 2.3). The framework is used as a basis for this analysis. As suggested, the competences are somewhat linked and intertwined, this

chapter attempts to explain each competence through analysing the data by a competence components analysis tool.

Functional competences

As earlier literature suggests functional competences are an integrated part of business professionals' competences (Brinckmann 2007; Louhiala-Salminen and Kankaanranta 2011). While the participants emphasised that they are not technical experts, the findings suggest that some functional abilities, knowledge or competence in technical and business related issues are important in their work. Yet, the participants found it difficult to name direct abilities or competences. However, the previous background and years in project management seemed to shape the focus and have some effect on the overall work, suggesting as Chin (2003, pp. 4-8) claimed that an experienced project manager might reduce some impacts of the internal uncertainties such as technical obstacles or changes in a project. The participants e.g. stated that

> "As the same program manager manages the whole project throughout the life cycle, it is important that you know how to do everything. However, everyone has their own special strengths in certain areas… Some are better in the planning stage and others in the maintenance stage." (i6)

> "It is probably the background... Everyone has different backgrounds… it does affect… It feels natural to work with something that you have done for years… or it just is more effective as you know so much about it." (i3)

When viewing functional competences through the key responsibilities discussed in the previous subchapter, two main competence components relevant to the present study can be detected. They are field (i) specific business knowledge and (ii) managing projects through communication. Table 2 presents an overview of the findings regarding the functional competences. The table shows the main and sub components that explain how functional competence can be understood.

Table 2 Communicative competence analysis: Functional competence components

Responsibility   Main competence component   Sub component
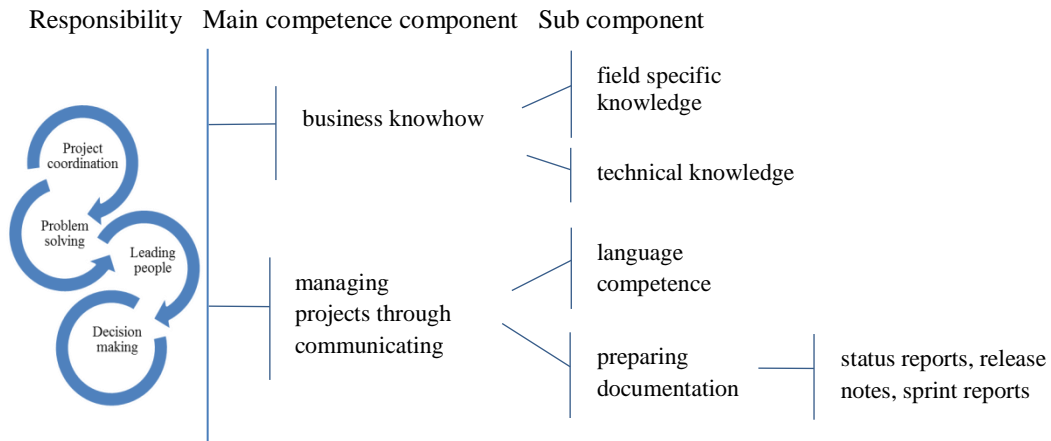
The findings indicate that while the participants do not have technical expertise to the extent of solving highly technical problems, people expect them to know about technical information and make quick decisions on the technical issues. Furthermore, project managers should be competent in general project management abilities such as coordinating tasks, in addition to understanding the business related content of the projects. These seem to support project managers at their work and also add to their communicative trustworthiness. One participant defines the aim of this key component when stating that

> "I push things forward. I try to see and find what is now important… so that the release is done in time and it includes all the relevant components." (i3)

Additionally, they should have technical knowledge of evaluating risks as the participants aim to control the risks for instance through identifying them before they materialise. Furthermore, as the participants also included budgeting as one of their responsibilities, knowledge and technical abilities in the project finances should be included in the functional competences. However, the findings clearly propose that technical and business knowledge or technical project management abilities alone do

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not cover the extent of functional competences, thus the aspects of functional communicative competences are included in managing projects. The empirical study suggests that in a multinational corporation project managers should have some language competences, coinciding with Louhiala-Salminen and Kankaanranta's (2011) argument of having an ability to at least use English as a lingua franca in addition to language competences in the mother tongue.

While the participants did not emphasise other communication competences as a part of the functional competences, the findings clearly indicate that they have to be able to speak in front of several hundreds of people, need to have knowledge of how to report and do documentation, as well as use office tools. Further, the participants attend and lead several meetings, which indicate general communicative abilities to function. Therefore, it can be concluded that project managers also have to have some technical communicative abilities and know technical language related to their field of business.

The detected functional competences are very much in line with Brinckmann's (2007, p.35) views on management competences. The participants for example clearly had industry related expertise in the form of technical and project related knowledge. Similarly, Louhiala-Salminen and Kankaanranta (2011) also argued that business knowhow is an integrated part of the global communicative competence. As functional competences are very much interlinked with the day-to-day operations and activity, it would be impossible to exclude the relevant business knowhow from the competences.

Similarly, Sharbrought et al. (2006, p.326) also claimed that technical skills were part of communicative competences. The claim is further supported by the fact that the participants had to be able to report, present and document technical issues as well as use technical equipment competently. The argument also somewhat coincides with Hymes (1972) claims of the basis of communicative competences. Accordingly, the participants should have an ability to communicate in a grammatically and sociolinguistically appropriate technical language. Therefore, the functional competence includes some aspects of tacit knowledge and ability to use the language (Hymes 1972).

Social competences

The second competence in the presented framework (Subch. 2.3), social competence, reflects many of the interpersonal and social competence theories presented both in management and communication literature (e.g. Spitzberg and Cupach 1984; Purhonen 2008; Mehta 2007). Table 3 presents the analysis and findings related to social competence components. Altogether two main competence components were found. These are (i) networking internally and externally, and (ii) leading people.

Table 3 Communicative competence analysis: Social competence components

Responsibility	Main competence component	Sub component	
Project coordination	networking internally and externally	regular meetings with the project team	emailing, face-to-face, web, phone
Problem solving		actively interacting with other key partners	official communication
Leading people		accessing and sharing information	unofficial meetings and "chit chats"
Decision making		creating trust	
	leading people	being fair and respecting others	supportive and direct communication
		reducing personal bias or provocative behaviour	using humour

The findings indicate that the participants value relationships, while they do not actively try to create them. However, the participants seem to acknowledge that they have created beneficial relationships and networks over time. Part of the participants' official procedure is to have regular meetings with various stakeholders. The empirical study clearly suggests that while the participants might be often overly occupied with the meetings, they see several benefits of attending as it gives a chance to interact and learn more intensely about what is happening, which seems to highlight the influence of

interactional competence (Young 1999). Furthermore, the meetings with the project team are especially important, when working with people in multiple sites or external vendors. In the case organisation, many of these meetings are held through teleconferencing. Similarly, the findings also indicate that for instance daily meetings with the customer give project managers a chance to develop relationships and create mutual understanding.

As noted in the earlier subchapter, the findings suggest that the participants use different channels to interact with the stakeholders, thus indicating that social competence includes understanding the effects of various communication channels. The reasons behind the choices of channels seem to be effectiveness, practicality and the implication that some channels are more personal. Further, it seems that some participants find face-to-face contacts to be the most efficient and personal way to communicate, whereas some valued emailing as it gave them a chance to keep a record of things. Furthermore, telephone seemed to partly be preferred over emailing, because of the personal factor. The follow comments describe these issues

> "Probably mostly I communicate by talking and then through emails. I aim as much as possible to have face-to-face conversations, because I think that it is the most effective way to get the message trough and you see that the other party gets it." (i5).

> "In difficult cases I rather call there than always send an email… because calling is more personal" (i3).

In addition to the official interaction situations it was obvious that project managers also deal with others unofficially. The present study proposes that unofficial situations are a chance to get more information, build networks and relationships, in addition to being useful for follow-up. Further, there are indications that in unofficial interactions surveying the underlying currents is more accessible than in official interaction situations. Thus, the findings propose that Hirst and Mann's (2004, pp. 148-150) claims

of the significance of participative communication and open communication seem to be valid to some extent.

While the participants actively seemed to try to respond to emails and other inquiries, they admitted that the time constrains referred to in the earlier subchapter pushed them also to prioritise communication. The findings also suggest that perhaps project managers should delegate some of their duties as many of the participants argued that their work could be more efficient for instance if they had someone handling the technical entity, or if the environment was less complex. One participant commented e.g. as follows

> "If we could reduce the amount of information sharing and acting as 'proxy' between different stakeholders… it would ease up the daily work." (i3)

As the above discussion argues, networks are an integrated part of project managers' work. According to the interviews networks are used in several ways. Firstly, they are useful for gaining, accessing and sharing information with different stakeholders. While networks have been created often over time, it seems essential to foster them continuously. The findings clearly confirm that in a networked environment trust is essential, thus the participants also seemingly emphasise that they avoid taking advantage of the trust, i.e. they nurture the relationships, and thus gain benefits also in the future.

The second component of the social competences category is leading people. As the previous subchapter and the discussion above indicate, the case organisation's environment is multidimensional; consequently the participants manage projects that involve a large number of people. The participants point out that they pay attention to their surroundings and the people, who they are working with, which indicates that maintaining a professional and respectful working environment is important in project managers' work. Additionally, they emphasised that this kind of environment would be beneficial in the long run as it helps in getting the needed tasks done. Further, there is a

clear indication that the participants should try to reduce any personal bias or provocative behaviour, in addition to being able to handle pressure. The participants commented on the leadership e.g. as follows

> "An aggressive or fearful leading culture suppresses people… when you are supposed to encourage people." (i4)

> "You have to be somewhat persistent that you do not quit in the middle of things, when the situation gets heated. You must handle pressure well, because there are so many negative comments around." (i2)

The findings further suggest that in the work of a project manager it is essential to consider your own behaviour as it seems to have a fairly high impact on the atmosphere. The participants recognised communication style to be important and it clearly has several implications. The study indicates that project managers might act as ventilators between different stakeholders. On the other hand, the participants also emphasised that it is important to be able to tell difficult news to other project members. The findings suggest that the key to telling difficult or negative news is to do it constructively and remaining professional. Further, there are clear indications of the project managers' being selective and cautious in the personal behaviour as some of the statements show e.g. the following:

> "If needed, it is you that filters and adapts the message to the context… there would be quite a job in front of you otherwise" (i1)

Thus, the findings suggest that the participants assess the situation also from the behavioural point of view and are willing to adapt to some extent. It seems that the participants would like to be relatively deeply involved in their projects. Some participants claimed that the involvement is essential in order to control the project, whereas the findings also indicated that an active leadership supports the managing of a project also as well. It is important to understand the underlying rules, in addition to controlling the direction of the work. This finding seemingly coincides with aspects

related to both relational competence (Spitzberg and Cupach 1984) and interpersonal competence (Lakey and Canary 2002) as they emphasise appropriateness and sensitivity to the situation and communicative partners.
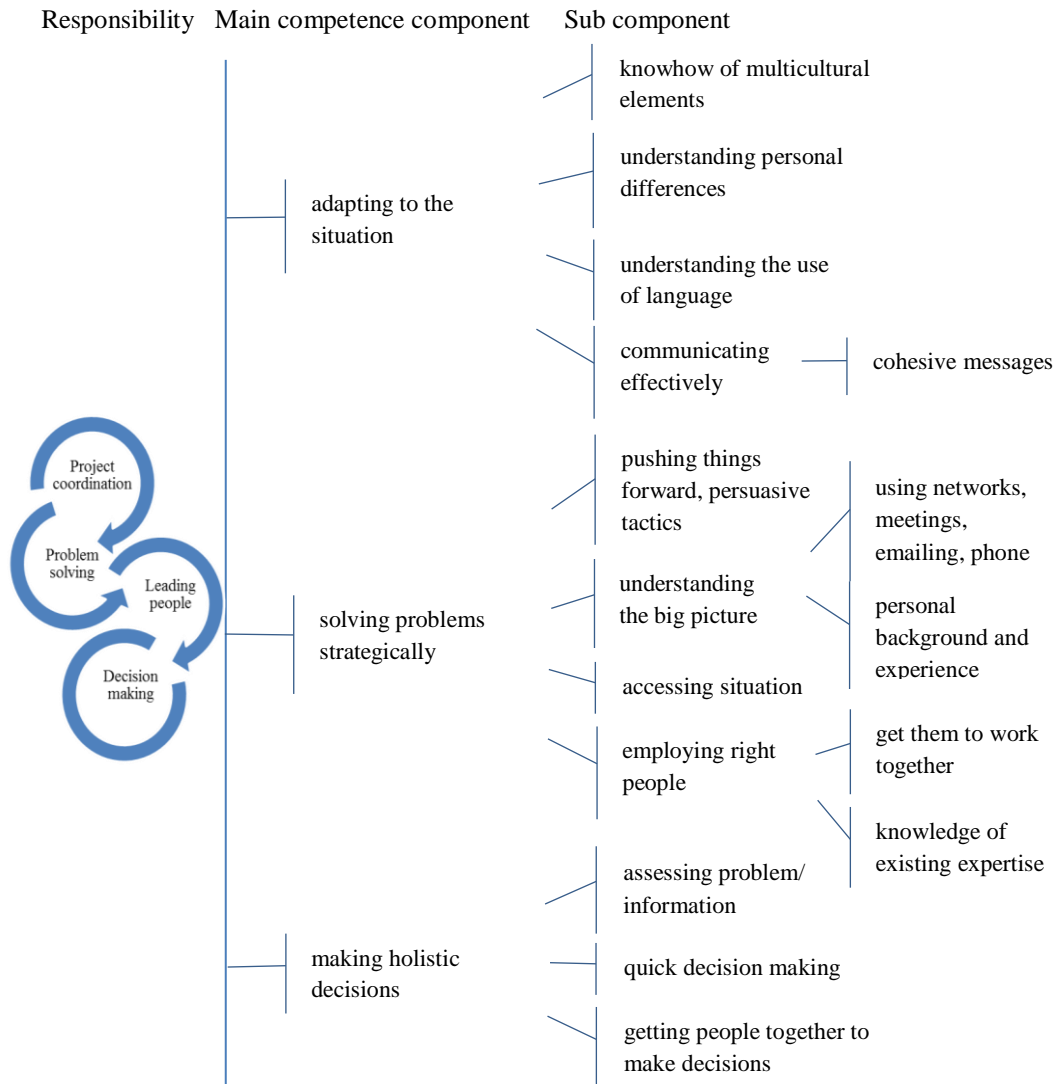
The social communicative competence components link with both Hargie's et al. (2004) communication levels and Druskat and Druskat's (2006) definition of emotional intelligence. As many of the components are affected by cognition, self-awareness and adaptability, it has both indications of an intrapersonal communication level (Hargie et al. 2004, p.17-18) but also emotional intelligence that suggests of being emotionally aware but also being able to manage one's behaviour (Goleman et al. 2002).

Additionally, social competences can be viewed at the interpersonal level of communication as the present finding show that communicative behaviour and the transactions of the participants are multidimensional (Hargie et al. 2004, p.17-18). Similarly, Hargie et al.'s (2004, p.17-18) networked communication level is somewhat present in the form of nurturing the complex network interrelationships. Furthermore, Druskat and Druskat's (2006, p. 78) definition of emotional intelligence referring to noting the implications of emotions and using them to affect one's behaviour is clearly present in the empirical study as the participants' behaviour reflected the insinuations of the environment.

Strategic competences

Similarly, there are indications that emotional intelligence also affects fairly strongly strategic competences as the component analysis for strategic competences in Table 4 shows. Shortly, the main strategic competence components can be analysed under three headings. Firstly, strategic competences consist of adapting to the situation. The second strategic competence is solving problems strategically, whereas the third main component is making holistic decisions.

Table 4 Communicative competence analysis: Strategic competence components

Responsibility   Main competence component   Sub component

	Main competence component	Sub component	
Project coordination / Problem solving / Leading people / Decision making	adapting to the situation	knowhow of multicultural elements	
		understanding personal differences	
		understanding the use of language	
		communicating effectively	cohesive messages
	solving problems strategically	pushing things forward, persuasive tactics	using networks, meetings, emailing, phone
		understanding the big picture	personal background and experience
		accessing situation	
		employing right people	get them to work together
			knowledge of existing expertise
	making holistic decisions	assessing problem/ information	
		quick decision making	
		getting people together to make decisions	

Within the first component, understanding multicultural and personal differences is apparent in the findings. Further, there is an indication that the participants do not necessarily behave or communicate similarly in every situation, because of these differences. The findings have indications of adaptive behaviour and tailored situation specific communication style, of which Spitzberg and Cupach (1984, p.63) discussed in the literature review by stating that communicative competence includes an ability to adapt messages situations specifically. The findings, additionally, support the arguments

of Hymes (1972) that communicative competence stands for knowing when, where, how and in what manner to communicate.

While the use of corporate language, English, did not come up in several occasions in the interviews, the findings indicate that the strategic use of BELF (Louhiala-Salminen and Kankaanranta 2011), e.g. using repetition in communication seems to present also in the case organisation. Furthermore, the findings suggest an awareness of the fact that e.g. with some nationalities communication should be fairly straightforward and include instructions, whereas in some others asking several questions might be more appropriate. The participants' comments were e.g.

> "The word 'yes' does not mean that he will do it, it might mean that he understands what you are saying or just simply that he heard you." (i3)

Furthermore, these findings correlate with Louhiala-Salminen and Kankaanranta's (2011, p.259) claim that business professionals have to have "a sensitivity towards different ways of doing things". They argued for having accommodation skills, partly similarly to Hajek and Giles' (2003, p.952) arguments for achieving communicative goals by being aware of cultural orientations. While earlier arguments seemed to focus on sensitivity towards multicultural aspects, the present study suggests that the focus of the sensitivity should be much wider and in line with Duran's (1983, p.320) general claim that communication adaptability is a reflection of differences in the communication context.

The findings further indicate that the participants should be as cohesive in their communication as possible, as it would make their work easier. The finding reflects Canale and Swain's (1980, pp. 29-30) discourse competence. Additionally, the participants reported that they should make fairly quick choices, when screening for instance in the incoming emails. The findings indicate that there is a need to know fairly quickly the relevant connection of the message to the project to assess the reaction level.

Furthermore, it was indicated that both experience and understanding the situation specific codes, such as differences in behaviour or information content, positively influence cohesiveness. Additionally, as the discussion in the previous subchapter and above suggests, the participants use an array of communication channels situation specifically. Some participants argued for face-to-face contact as often as possible as it gives an opportunity to read the signs, posture and mood better, and it was often a quicker way to have an answer, which is effective. In cases, where face-to-face is not possible, telephone or teleconferencing is a good way to interact. On the other hand, some of the participants clearly favoured email as the best and most sufficient medium.

The second main strategic competence component, solving problems, has an obvious relation to Bachman's (1990) strategic competences. The findings suggest that problem solving includes assessing information that is gathered from different sources. Furthermore, the participants should critically analyse the information and problems, i.e. inspect the source and nature of the information. They use fairly effectively networks of experts and actively try to influence people to get together to solve problems. The participants stated e.g. that

> "It starts to unravel itself when you get the right people to work and you make sure that the work also continues... whether they need anything else, or if someone else is still needed." (i2)

Project managers seemingly also use their previous knowledge and experience to assess the given information and problems. The findings suggest that when the overall view is under control, it is easier to know what the issue is and manage possible problems. Further, it is indicated that conflict situations are better managed by taking an outsider's role and "assess the situation from outside forward to see whether the problem stems from the clashes in personalities or issues" (i1).

The features of Bachman's (1990) strategic competence are, therefore, apparent. Bachman (1990, p.98-107) argued that strategic competence consists of assessment, planning and execution, which aim at achieving the set communicational goal. In a

wider problem solving perspective, the participants clearly indicated that they assess their environment for pending issues additionally to making assessments of the needed information and available resources. Further, their behaviour shows that they use a variety of competences to obtain the information and secure the completion of the task. Additionally, the participants use several communication channels and different moods to attain the goal.

While the findings propose that project managers can proactively control risks, and thereby achieve goals more effectively by taking part for instance in the negotiation of priorities, somewhat surprisingly the findings further indicated that all participants did not feel that they had an active role in the negotiations, whereas some participants saw it as a way to influence. Further, it is also evident that the participants use persuasive communication tactics and proactively take care of issues up-front. Additionally, the findings suggest that by prioritising jobs themselves project managers could have influence on the outcome and even the quality of the service to some extent. The participants commented for instance the following

> "I took up myself to proactively first propose the final content for this certain feature, then I went to product management and checked the priorities with them… everything was done in time. When no-one took an active role, I took it and said that 'right this is what we can do' and I made it happen and persuaded the customer also to accept it." (i6)

The findings suggest that personal background and experience have an immense effect on achieving goals. While it was obvious that the participants aim to act as knowledgeably as possible, the time constraints in the project environment discussed in the previous subchapter pressure the participants to act quickly. Consequently, it could be generalised that learned behaviour and intuition in various situations seem to have some role in proactive project management, thus supporting the claims of personal competences in emotional intelligence (Goleman et al. 2002). The participants described their relation to intuition e.g. as follows

"While the problem is new, when you have done this for long time the cases are similar… it comes somewhere from the spine… the way to act" (i3),

"It is some kind of feeling that you know, which way to pull so that things go forward." (i2)

Correspondingly, the participants stressed of the need to think holistically. Furthermore, the participants' way of working can be described by stating that it is typical to identify different options and explicate them. It is also typical to do some sort of background checks or analyse and combine different information to gain a rational view on the issue. However, the findings further suggest that this competence level might not be enough, because as discussed above, project managers work with several stakeholders and are also dependent on the priorities and requests of other projects. Therefore, project managers should also have strategic competences to understand the vast array of interlinkages in the environment and in the different projects.

The empirical study indicates that an effective way to obtain the big picture is to use multiple methods. The participants "consulted" (i1) their networks, used email and telephone efficiently. While the participants recognised meetings as a source of information and an opportunity to gain more insights, the findings indicate that the resources of meetings are not always fully employed. On the other hand, the participants have in occasions gained access to valuable information especially in unofficial face-to-face interactions but also in official meetings. It is evident that the above discussed abilities such as negotiating, coordinating tasks and risk assessment include aspects of communication as the participants have the knowhow of the important experts and knowledge on how to act and what to do for instance in problematic situations.

Finally, the findings suggest that decision making should generally include as much information as possible. A variety of information channels is employed and the personal networks of experts and trusted colleagues are used for added value effect especially in difficult technical matters. The findings also indicate that it is typical that the project

managers get professionals from different departments together to a meeting to solve problems and make decisions. Additionally, the findings suggest that while the participants employ others in the decision making process, they also often have to rely solely on themselves to make the decision. Thus, the findings support the argument that the level of involvement from others in project manager's decision making process varies (Gillard and Johansen 2004, pp.25-26).

It was, however, clear that project managers often have to make decisions urgently or under pressure. Furthermore, the findings seem to indicate that the level of general knowledge seems to ease decision making. On the other hand, there were also differences in the decision making process that are clearly related to personality, for example in the level of delegation and personal need to keep everything under control, or in the level of confidence in decision making. However, it is somewhat clear that all participants favoured proactive rather than reactive decision making. Additionally, the findings stress that it is important to be able to make difficult decisions.

While some of the participants claimed that they do not need any persuasive tactics or selling attitude with decision making, in general this seems to be the opposite as the participants also claimed that a project manager should for instance "be able to do charts, which show the truth, making it harder to defy" (i5). Thus, when assessing the participants overall behaviour both in problem solving and decision making situations, it indicates that project managers use persuasion and personal selling in their work, while perhaps occasionally also unintentionally.

As the above discussion shows project managers' communicative competences consist of several elements. The theoretical framework (see subch. 2.3) proposed of three types of communicative competences. In the empirical analysis various components of the competences were identified. Hence, functional competences include field-specific knowhow and functional communication abilities, whereas social competences internal and external networking and leading people. Strategic competences, on the other hand, consist of adapting, strategic problem solving and holistic decision making. The next

discussion reviews more explicitly how these communicative competences are connected to managing projects.

4.3 Discussion

Previous literature argues that communication is a large part of project managers' daily work and overall project efficiency (Binder 2008; Johannessen and Olsen 2011). The empirical findings of the present study also have strong indications of multiple roles for communication in managing projects. Additionally, both the present empirical study and previous literature (e.g. Brinckmann 2007; Mehta 2007; Louhiala-Salminen and Kankaanranta 2011) emphasise the significance of communicative competences in a contemporary business context.

As noted above the case organisation's project context resembles Chin's (2003) definition of an agile environment, which consists of a variety of experts, uncertainties in a project and pressure of time. Consequently, the findings clearly show that the participants have several communicative stakeholders, and the official and unofficial networks seem to emerge highly important in the project managers' daily work. Additionally, the daily work is affected by a variety of uncertainties in the project environment as both earlier literature (e.g. Clealand and Gareis 2006; Chin 2003) and the empirical data suggest. These include changing demands, impacts of other projects, and the multileveled and partly merged responsibilities of a project manager. As the time constraints are added to the equation, the need for a vast array of communicative competences is understandable.

Hargie et al. (2004) claimed that communication has four different process levels, of which all can be detected in the project manager's work. Firstly, as the findings indicate, communicative actions of the participants are affected by their own perceptions and interpretations of different communicative situations, i.e. adaptive

behaviour is clearly present. Secondly, as the project environment can be characterised as being full of interactions, the project managers' communicative processes also include the interpersonal level that is especially supported by the social components of communicative competence. The complexity of the project environment emphasises the importance of understanding network and organisational level communication. As the discussion in the previous subchapters suggests, it is evident that a project manager should be able to understand the interlinkages in the environment and manage the effects of those interlinkages to the project, i.e. she/he should have strategic competence. While the most outer level of communication process, macrosocietal communication, is not within the scope of the present study, it might be concluded that Roberts's (2007) claims of the general importance of programs in an organisation could indicate its presences in the participants work as well.

According to the present empirical findings we could agree with Johannessen and Olsen's (2011) argument that communicative competences are used strategically, managerially and operatively in the daily project environment. The present study classified the communicative competences through three components of communicative competences: functional, social, and strategic competence.

The findings in the present study indicate that it is essential for a project manager to understand also technical and business related issues to be able to communicate and manage a project, thus the functional competence of a project manager includes business knowhow that consists of technical abilities and field-specific knowledge, as well as a functional ability to communicate. Due to the complex environment and multi-levelled interrelationships (Gillard and Johansen 2004), project managers are under constant social constraints, and thus need social competences. The present study defines social competences of a project manager through issues related to interaction in a social context. In more practical terms, social competences seem to form the basis for interacting with others and managing the environment through those interactions, i.e. networking and leading people.

Strategic competences of a project manager are goal orientated competences that support the efficiency and success in a project as the empirical findings suggest that they consists of adapting, holistic decision making and tactical problem solving. While the empirical research does not directly measure the need of each particular communicative competence, it suggests that in the case context and when reflecting the required responsibilities (i.e. coordinating, problem solving, leading people and decision making) two communicative competences seem to emerge as more important. These are social and strategic competences, which coincide with the findings in earlier research (Mehta 2007; Brinckmann 2007).

Furthermore, the presented findings correspond to some extent with Louhiala-Salminen and Kankaanranta's (2011) dimensions of global communicative competences (GCC). As pointed out, the outer level of GCC, i.e. business knowhow, is clearly present in the functional competences of the present study. Similarly, in the previous subchapter understanding of multicultural elements was addressed and included in the strategic competences. However, while language competences were recognised in the present study, the importance of BELF was not emphasised to the extent of Louhiala-Salminen and Kankaanranta (2011). Therefore, it could be concluded that BELF, while being present in the communicative competences of a project manager, should be viewed as part of functional and strategic competences.

Similarly, Hirst and Mann's (2004) classification of leadership roles and communication is integrated in the presented communicative competences. Managing relationships is under strategic competences, whereas networking communication falls into social competences along with participatory communication to support an open atmosphere. Persuasive communication, task communication and active interactional communication have an obvious link with strategic competences, because of the underlying connection to improvements and efficiency.

Correspondingly, Purhonen's (2008) study on interpersonal communication competence in networking in SMEs is somewhat similar to the present study's findings of

communicative competences of a project manager. While Purhonen (2008) used the term 'interpersonal communication competence' in the study, the present study used further classifications under the terms 'social' and 'strategic' competence. Thus, for instance the aspects of recognising an applicable information source in a network and employing that knowledge in action seems to be related to strategic competence. On the other hand, integrative tactics in negotiations referring to cooperation has elements of social and strategic competence. The ability to interact in collaboration situations indicates of social competence, whereas understanding personal differences as well as aspects of compromising relates to strategic competence.

Based on the discussion above and in the previous subchapters, it could be concluded that communicative competences are an integrated element of managing projects. While this study did not assess the success of the competences or projects, the statement above proposes as Harshman and Harshman (1999) argued that communication and project performance are interlinked, hence communicative competences should be regarded as imperative success factors in a project environment (Suikki et al. 2006).

5 CONCLUSION

In this conclusion chapter a research summary, practical implications and suggestions for further research are presented.

5.1 Research summary

In the present study the objective was to explain the relationship of communicative competences in managing projects. While earlier research indicated a connection between competences and project performance (Suikki et al. 2006) the relationship seemed still somewhat unclear. Furthermore, the complexity of a contemporary project environment (e.g. Viitanen 1998; Brotherton 1999) and the multileveled dynamics of projects (Cleland and Gareis 2006) motivated the direction of the research project as the environment seemed to have clear indications for the a role of communication. Hence, the research problem was addressed by searching answers to the following questions:

> What are the characteristics of a communicative project environment?
> What are the key communicative competences of a project manager?
> How are communicative competences related to managing projects?

The research project was conducted as a multi-method qualitative case study that focused on identifying and analysing project managers' communicative competences in an agile project environment. The study employed two empirical research methods; focus group interview and six personal semi-structured interviews. In addition to reviewing earlier literature on communication in projects, communicative competences and management competences as well as on contemporary project environment, the present study attempted to create a framework for communicative competences of a project manager that based on earlier literature.

Shortly, earlier literature revealed that an agile project environment is subject to complex dynamics of a project (Cleland and Gareis 2006), i.e. constant changes, several communicative stakeholders, uncertainties and time pressure (Chin 2003). Additionally,

project environment consists of multiple communication levels (Hargie et al. 2004), where communication functions multidimensional (Gillard and Johansen 2004). The principals of Hymes' (1972) theoretical outline of knowing when, where, how, what and in what manner to communicate seemed to conclude the core of communicative competence theories throughout, and additionally resemble theories of management competences (Brinckmann 2007).

As a result of the study, three types of communicative competence were detected. These were functional competence, social competence, and strategic competence. Functional competences referred to field-specific business knowhow and functional communication abilities, whereas social competences to internal and external networking and leading people. Strategic competence was classified as adapting to situations, holistic decision making and strategic problem solving, and had strong emphasis on efficiency and achieving goals. Furthermore, the study proposed that a project manager utilises communication fairly widely in the daily work as the study determined four main responsibilities, which were seemingly connected to communication and communicative competences. The responsibilities were project coordination, problem solving, leading people, and decision making.

In general the findings corresponded fairly well to earlier research. The list of the main responsibilities resembled Neher's (1997) wide list of uses for communication, thus a claim of the importance of communication seemed valid (Binder 2008; Clarke 2010). Similarly, shared aspects of communicative competences were identified earlier in management science by Brickmann (2007) and in communicative competence research by Louhiala-Salminen and Kankaanranta (2011).

Additionally, the research findings suggested that the case organisation's communicative project environment consists of three main components that intensify the importance of communicative competences. The findings confirmed those of Chin (2003) that indicated an agile project environment to consist of multileveled

stakeholders (unique expertise), changes and multiple demands (uncertainties), and time pressure (speed).

The practical implication of the present study is that competences of a project manager should be assessed by going beyond the field-specific knowledge, and thus by viewing communicative competences through a wider perspective. It should be noted, however that the theoretical framework created for the present analysis may be regarded as a simplification as project managers' competences are likely to depend on a number of other factors than communication. However, the present study could be used as a basis for a more thorough examination on interlinkages between the components of communicative competence or a quantifying study on factors of communicative competence components.

5.2 Managerial implications and suggestions for further research

Due to a rather limited literature on communicative competences of project managers (see, however, Madlock 2008; Henderson 2008), researchers and organisations might be challenged to understand the extent of the communicative competences needed. However, as a result of the present study, the link between communicative competences and project management in an agile project environment emerged as the most important; thus some potential managerial implications can be detected on the basis of the study.

The present study attempted to examine critically literature on communicative competences and approached the topic from multiple angles. Consequently, the relations in the various approaches of the previous communicative competence literature were brought to attention, and thus some narrow connotations to communicative competences might have been diminished. Furthermore, as the present study offered a fresh outlook on communicative competences in a contemporary project environment, suggestions of a more profound link between management competences and communicative competences seems to be present.

Further, the study implies that organisations should pay attention to the competences of project managers. Competences should not be assessed only by narrowly limiting oneself to the field specific issues. The present study clearly indicates that communicative competences in a project environment have a fairly strong emphasis on the daily work, thus they should be taken into consideration and viewed equally to field-specific competences.

The findings in the present study support the connection of communicative competences to managing projects (Johannessen and Olsen 2011). Further, as there are fairly strong indications that communicative competences seem to represent the daily drivers in project managers' responsibilities, they are an essential element of the overall project managers' competence kit in an agile project environment.

While the present study highlights these findings, the results cannot be generalised as such as the study was conducted as a qualitative case study. Therefore, it could be interesting to compare the present findings outside the limited scope of the case study. Furthermore, future research could also expand the research by providing further discussion on the communicative competences of a project manager, and thus develop the interlinkages between the competences further.

Additionally, although in the present study the decision of a qualitative case study approach was made, future researchers could explore the factors related to communicative competences also through a quantitative approach. A number of directions could be advocated as future research could, for instance, attempt to quantify the factors of each communicative competence, i.e. competence components, or conduct a comparative study on the phenomenon in several different agile project environments.

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APPENDICES
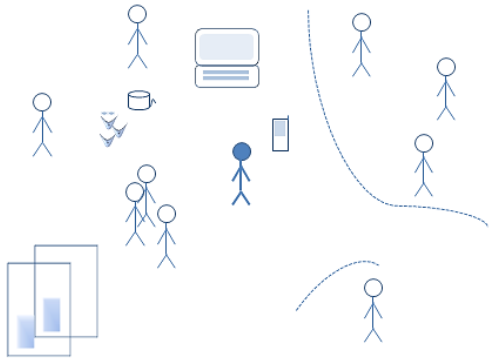
A. Competence oriented concepts of management science

Table 5 Competence oriented concepts of management science (Adapted Brinckmann 2007, pp. 33-34)

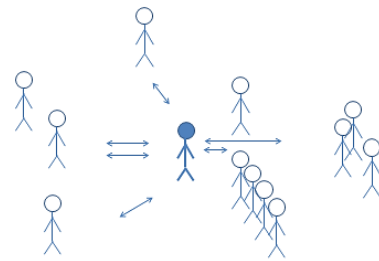| Reference	Functional competences	Social competences		Conceptual competences	
Katz, R.L. 1974	Technical skills: expert- and special knowledge, functional abilities, specific to tools and techniques in a discipline	Human skills: teamwork, cooperation, leadership, personal development, empathy, communication		Conceptual skills: holistic thinking, identification of complex relationships, creativity, awareness of change, impact assessment	
Kotter, J.P. 1982		Network Building: development of internal and external relations, leadership of employees		Agenda Setting: goal setting, developing, strategies, planning	Execution: enforcement of agenda by using social networks, budgets etc.
Bunk, G.P., 1994	Functional competence: specific knowledge, expertise, job/task/ industry related, job enlarging, firm specific	Social competence Inner personal: enthusiasm, adaptability	Social competence Inter personal: cooperation, fairness, honesty, team-spirit	Methodical competence: variable work processes, problem solving, independent work, adaptability	Participation competence: coordination, organisation, combination, decision making, responsibility, leadership
Thommen, J.-P., 1995	Functional competence: abilities related to the chain of value creation, specific knowledge	Social competence: autonomic and self-confident actuation, ability to cooperate, responsibility, development of a social system		System competence: understanding of complexity, interdependence. dynamism	Methodical competence understanding of general business practices/processes, problem solving, decisional skills

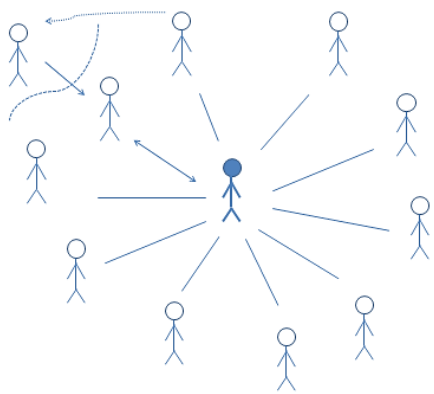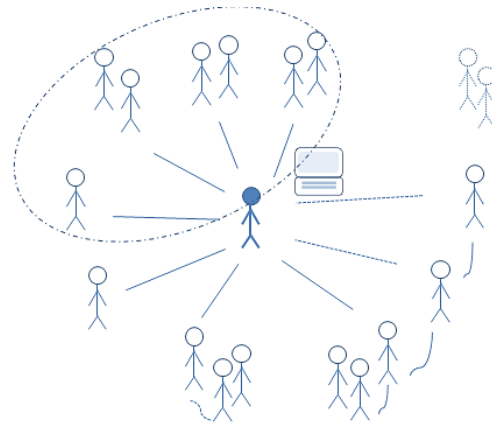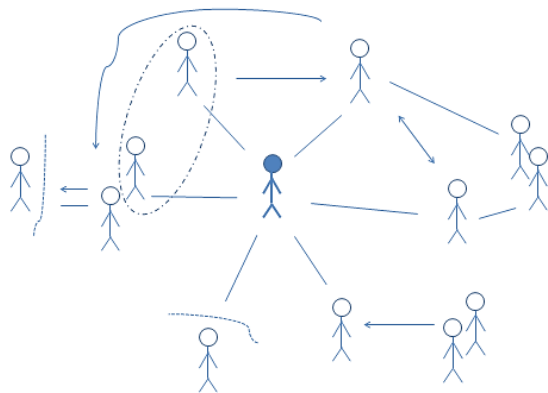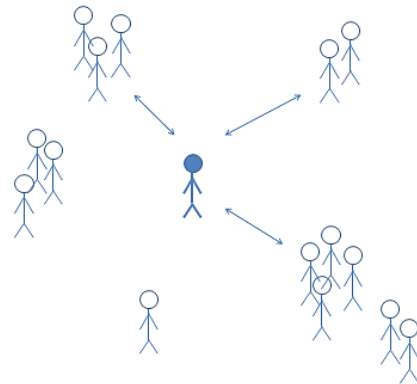|				
Gerig,V. 1998	Functional qualifications: functional skills, technical skills, task specific skills	Social Competence: self-esteem, communicational skills, interaction and cooperation skills, sensibility, conflict solving	Innovation competence: creativity, scenario thinking, originality, problem-solving	Management competence: conceptual qualification, methodical qualification
Grunwald, W. 2000	Functional qualification: know-how/ methods of an area, work experience in an area, initiative to learn in an area	Communication qualification: inner state, development of own personality, interpersonal relationships · Social responsibility: human ethics, corporate ethics, leadership ethics	Conceptual qualification: complex thinking, strategic thinking, prioritising, dealing with insecurity, future orientation	Methodical qualification: individual methods of working, decision skills, creativity techniques, team work techniques
Salomo, S. 2001	Functional competence: functional skills, know-how, expertise, firm-specific knowledge	Social competence: ways of actuation, communication abilities, willingness and ability to co-operate	Methodical competence: analytical skills, flexibility, information processing, conceptual skills	Actuation competence: decision making, dynamism, risk-taking
Kauffeld, S. and Grote, S. 2002	Functional skills: Knowledge concerning the organisation, procedures, machines, know-how references, relationships	Social competence: Encouragement, mutual support, understanding, positive working environment, mutual responsibility	Self-competence: embracing change, responsibility, willingness to design, planning of implementation, proactiveness	Methodical competence: structuring, priorities, task sharing, time management
	Functional, social and conceptual related competences			
	Actuation and execution related competences			

B. Illustrations of project environment

(i1)

(i2)

(i3)

(i4)

(i5)

(i6)

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