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# Challenges in an Open-Plan Work Environment: an Applied Research Study

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<p>The objective of the thesis was to produce recommendations for the case organization's management on overcoming unidentified challenges in the open-plan office. This research was conducted in a company where about 100 employees were moved from private offices to an open-plan office. This applied study provided a solution to a real business problem, and had practical value and relevance to the case organization.</p> <p>This was a cross-sectional action research employing a single case. Additionally, this was a qualitative multimethod inquiry with an inductive approach. Data were collected using semi-structured interviews with open-ended questions plus using probing questions and closing questions, unstructured participant observation diaries, and insightful emails. Inductive data analysis was applied to identify strengths and weaknesses.</p> <p>Despite a variety in opinions, a few strengths and challenges were readily identified. The new office was seen as fresh and modern. Communication and getting to know people was easier. Some of the employees, which had at first been opposing, had become more accepting towards the open-plan office. On the other hand, visual disturbances, noise, and lack of speech privacy inhibited concentration and hindered employee performance. Many employees voiced the need for off-site working. People were reluctant to use spaces created for retreating and quiet working, and people were monitoring each other's comings and goings. Silos between functions remained, and the top management was seen as distant and isolated from the rest of the floor. Hot-desking caused unhappiness. In addition, employees felt they were not well prepared for the change by management.</p> <p>This thesis focused on the challenges in the physical environment and change management. The findings were shared with management and following recommendations were co-created and validated with the organization improve acoustics, create zones with different levels of collaboration, convert two meeting rooms into quiet working spaces, co-create open-plan office guidelines together with employees, stop hot-desking, involve people in the change process, and continue action research or use Kotter's 8-step plan to manage the change. Being against the company's executive-level strategy, off-site work was removed from the recommendations.</p> <p>An open-plan office can support collaboration but the advantages of private offices are lost. Visual disturbances, noise, and lack of speech privacy inhibit concentration and hinders performance as cognitive tasks require peace and quiet. Thoughtful designing of the office and co-created guidelines can help others than just social extroverts to thrive in the open-plan office. Creating a sense of urgency and involving people to change process could support implementing the change.</p>	
Keywords	Open-Plan Office, Change Management, Noise, Speech Privacy, Acoustic Solutions, Off-Site Work, Action Research

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## Acronyms

AR	Action Research
dB	Decibel
FWA	Flexible Working Arrangements
EK	Existing Knowledge
ERP	Enterprise Resource Planning system
ESRC	Economic and Social Research Council
FSA	Finnish Standard Association
CF	Conceptual Framework
CEO	Chief Executive Officer
CSA	Current State Analysis
ICT	Information Communication Technology
IoT	Internet of Things
OD	Organizational Development

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## 1 Introduction

Open-plan office is like a red cloth – it is a topic that raises strong emotions and there are people both for and against it. Studies and arguments favouring open-plan office state it can support collaboration and communication. In addition, economic advantages are obvious. However, there are contradictory evidence of open-plan office's strong points. While highlighting collaboration some of the core strengths of traditional offices, such as privacy and concentration, are sacrificed.

Some also argue that the downsides of an open-plan office are much greater than the benefits. Fellow-workers have even reported having lower quality friendships in open-plan offices and in hot desking compared to private offices (Morrison, 2016). Thus, an open-plan environment can make employees antisocial and a recent study suggests that the traditional office with one or two employees would be the optimal solution (Morrison, 2016).

Whether they are the right solution for the business world of today or not, open-plan offices inspire researchers into the issues. Strengths and weaknesses of open-plan offices are frequently discussed in the media and articles related to open-plan environment are published in trustworthy and credible newspapers, business magazines, and academic journals on a regular basis.

It is highly unlikely that open-plan offices would face extinction any time soon even though the trend appears to be shifting back towards private offices. Many open-plan offices still exist, old offices are converted into open-plan, and even new office buildings are built from scratch as open-plan offices.

Thus, open-plan office is a contemporary topic and it is worthwhile to study. The following parts of the introduction will describe the business challenge, provide a context, and explain the objective for this applied qualitative research, and the thesis outline.

## 1.1 Business Challenge

This section examines the business challenge and introduces the organization where this qualitative research was conducted. Additionally, this section will describe how finding a solution will benefit the case company.

The organization being studied consists of about 100 professionals working in an office located in the capital area of Finland. The organization is going through an enormous change as people from two different floors were moved to work together in one floor, which was renovated as an open working environment. The number of people working in one floor doubled from approximately 45 to 100. People no longer have their own office rooms which has many consequences, not least less privacy.

Identifying challenges in the open-plan office could improve both the functionality of the company's current premises and organizational climate. Additionally, it could have a positive impact on personnel performance and engagement, which then could result as enhanced bottom-line and talent retention.

## 1.2 Context

Context gives essential information on the conditions where the change takes place (Denyer and Tranfield, 2011). Additionally, Patton argues that "... *qualitative inquiry elevates context as critical to understanding*" (Patton 2002, p. 63). Thus, this section examines briefly the context in which this research was conducted. Section 3.1. will present further detailed information about the people who were involved, the circumstances as well as the physical environment where the change takes place.

This study focused on a group of about 100 professionals whose work environment changed in autumn 2015. People working in two separate floors were moved from traditional private office rooms to an open-plan office. The lack of physical space was one driver for the new working environment. Additionally, the organization was looking to offer a more modern working environment that would better reflect the company image and also provide high-quality working stations for of its employees. The company decided to renovate one floor as an open-plan office and give up the second floor. Consequently, the new environment was half the size compared to the earlier and the square meters per employee were decreased to about half. Majority of the data were

collected when the participants had been working in the new open-plan office from six to ten months.

The participants worked in an international company that operates in the manufacturing industry. The company has multiple manufacturing plants and sales offices around the globe and it employs over 2000 people. They have a variety of educational and professional backgrounds. They are of all ages and there is approximately 50-50 split between male and female employees. They have different cultural backgrounds and even though the majority is Finnish, there are also other nationalities such as Belgian, Portuguese, Spanish, Hungarian, and Italian. The official company language is English but as employees originate from different parts of the world, other languages are also spoken in the office daily.

### 1.3 Objective

The research objective is to produce recommendations for the case organization's management team on overcoming unidentified challenges in the open-plan office. In order to achieve that objective, this thesis seeks to understand how changing from private offices to open-plan office has impacted personnel, what are the critical challenges that have a negative impact on the productivity in the open-plan office, and how to overcome them. A return to private offices was not an option and the organization will continue to work in the new open-plan office they built. Therefore, this thesis will not assess if an open-plan office should be or should not be used.

This was an applied research that will provide a solution to a real business problem and, therefore, has practical value and relevance to the case organization (Saunders, Lewis and Thornhill, 2016, p.9). Even though the focus of this study was on a specific context, it also aims to generate some knowledge that could, with limitations, be applied in another context. Reporting the issues that the case company personnel found significant might give some indication of the issues that other organizations could take into consideration when planning a similar change from private office rooms to open working environment.

Moreover, there is transferability and future utility. This thesis is not only about the recommendations that the organization could do now but also recommendations how they can implement changes in the future.

The outcome of this thesis is a list of recommendations regarding the physical environment as well as managing change.

Recommendations regarding the management style were presented to the organization but they are excluded from the main body of this thesis. Also Existing Knowledge (EK) related to the management style are excluded but recommendations for them are presented in Appendix 11. This exclusion was made to decrease the length of this thesis.

#### 1.4 Terms in Local Use

Next terms that were locally used are described.

*Fixi seat* meant a work desk arrangement where people had an assigned, permanent place in the office. People who had fixi seat came to the same desk every day. They could personalize their desk and at the end of the day they could even leave everything on their desk -coffee cup, papers, whatever they wanted. Fixi seats also had closets and drawers nearby for personal use. A minority of employees had a fixi seat.

*Flexi seat* was the opposite of fixi seat and the notion is also known as hot desking. People who had flexi seats could every day choose where they sit. These work desks were not personal and must be cleaned up after each day, making it possible for anyone to come and work there the next day. People who had flexi seats had a locked drawer in the hall way where they could leave their papers for the night. Flexi seats were not marked separately but people knew them by heart. Employees visiting the office from other locations were also using flexi seats and the local personnel helped the visitors to find available flexi seats. The majority of employees had a flexi seats.

The room designed for quiet working was called *the library*. The space was separated from the open-plan office by glass walls, and there are work desks for five persons. Phone calls or Skype calls were not allowed in the library as it was designed to be silent space. The room was not soundproofed nor had any acoustic elements.

*Aquarium* was the open-plan office designed particularly for the top management. It was an open-plan office within an open-plan office and it was separated by glass walls from the other parts of the office and contained two private, soundproofed phone booths.

## 1.5 Thesis Outline

The business problem presented in this thesis was researched by applying qualitative methods. *“Qualitative methods permit inquiry into selected issues in great depth and careful attention to detail, context, and nuance”* (Patton 2002, p.227). Moreover, this thesis was a cross-sectional Action Research (AR) employing a single case. Due the nature of the business problem, a Current State Analysis (CSA) was done in this research prior looking into Existing Knowledge (EK). It was necessary to examine the phenomenon and to identify patterns and themes from the data. Hence, this was the opposite to a theory-led inquiry.

This thesis is organized as follows. It begins with introduction to the topic. The open-plan office is discussed briefly as well as business challenge, objective, and context. The introduction is followed by Method section that also presents the Research Design. Furthermore, data collection methods and data analysis are described in detail as well as the notions of validity, reliability and ethics.

Thereafter, a CSA is done to discover the current state of organization. CSA describes further the physical change that was implemented in the case organization. Also, identified strengths and weaknesses are presented. The findings are presented with direct quotations from the members of the organization. Thus, CSA provides a trail of evidence. Next, the thesis examines the relevant EK related to physical environment, change management and off-site working. Physical environment encompasses topics such as open-plan office, noise, acoustic solutions for open-plan offices, sound masking, open-plan office guideline and hot desking. Change management addresses topics such as approaches for managing the change, challenges of the change, improving communication about the change, and creative destruction and creative recombination. EK section finishes with conceptual framework that summarizes the relevant EK.

Next is in-depth presentation of the recommendations for the physical environment and change management. Recommendations were co-created with the members of the organization. It is followed by validation of the recommendation. All findings were presented to management together with initial recommendations and management participated to the validation and co-creation of final recommendations. The validation section will also present some of the recommendations which were left out from the final recommendations, such as off-site work.

The final section in this thesis is conclusions and discussion. It also encloses reflections and afterwords, describing the experience of conducting an applied qualitative research in an organization.



## 2 Research Design and Method

This section examines the research design and methods used in this thesis. It will explain which philosophy, approach, methodological choice, and strategy were applied as well as state reasons why they were chosen. It will also describe how data were collected and analysed. Furthermore, research validity, reliability and ethics are examined.

### 2.1 Research Design

This section examines the design which is an overall plan for the whole research (Saunders, Lewis and Thornhill 2016, p.163). The design has an important role regarding both the reliability of the research and the interpretations that are made from it (Stone-Romero, 2011, p.302). Therefore, this section will also explain why this particular design will help solving the business problem. The research design is visualized in Figure 1.

The very first stage in the research was to define an objective which for this study was to produce recommendations for the management on overcoming unidentified challenges in the open-plan office. This was followed by a CSA. The CSA was a very important stage that included the first round of data collection and also provided a trail of evidence. It aimed to inform what was the starting point and what were the challenges regarding the business challenge.

Some researches begin with engaging with the EK first. However, in this research it was essential to do CSA first because the challenges were unidentified and it was impossible to know what which issues would emerge. Therefore, it would have been extremely difficult to find the relevant EK as it would have meant reading everything about every issue that organizations and open-plan offices can have.

The findings from the CSA directly led to the relevant EK. Thus, the next phase was to go through EK and find out what other researchers and authors have written about the themes that arose during the CSA. The Conceptual Framework (CF) for the study then emerged from the synthesis of the empirical findings and the EK.

The CF was used in creating the initial recommendations for the company. In addition, the second round of data collection took place in this phase including additional focus

group discussions. Consequently, the initial recommendations were followed by a third and last round of data collection including discussions with the management. Then, final recommendations were presented. The last stage for the research was to write-up of the actual thesis text with conclusions and discussions.

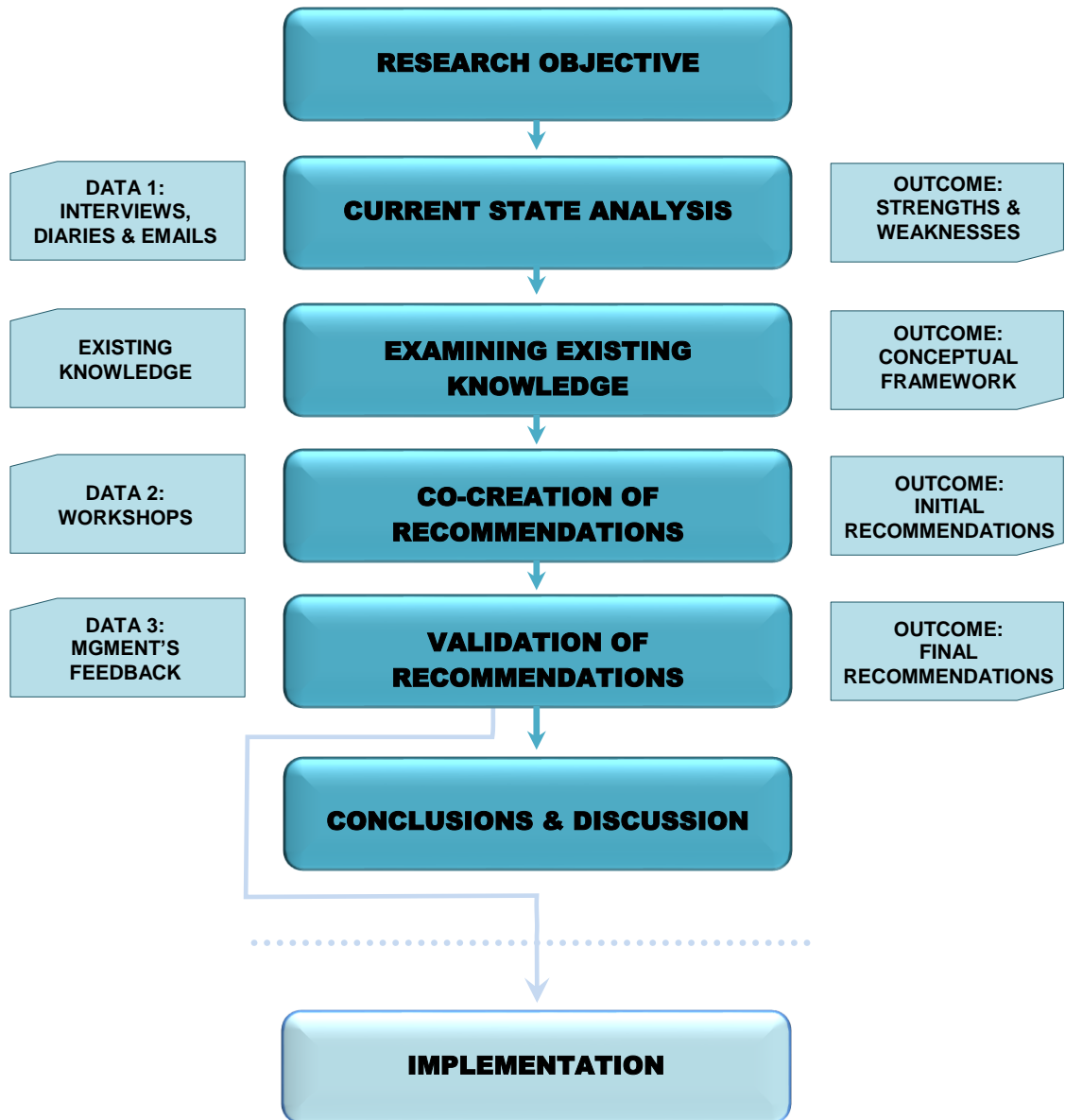


Figure 1. Visual presentation of the research design.

After the recommendations are presented, the management will make a decision whether they implement all, some or none of the recommendations. The implementation of the recommendations is excluded from this thesis due to time constraint.

Patton (2002, p.255) argues that findings are related to methods that are used. This research design offers a very rational and systematic approach for the thesis that seeks in-depth understanding in a narrow context and does not try to generate knowledge that could be generalized. Each phase shows a profound reason as well as a clear transition to the following phases. Multiple data collection rounds and various sources of data offer valuable points for reflecting as the story unfolds.

However, it must be acknowledged that the research design needs flexibility and openness due to the nature of qualitative inquiry:

A qualitative design needs to remain sufficiently open and flexible to permit exploration of whatever the phenomenon under study offers for inquiry. Qualitative designs continue to be *emergent* even after data collection begins. (Patton, 2002, p.255)

This research design offers a good framework for the research and, additionally, it is necessary to remember that certain flexibility and openness are needed.

## 2.2 Research Methods

This section will examine the research methods that were used in this research. Research philosophy, approach, methodological choices, strategy, and time horizon are examined in detail with the help of the *research onion* (Figure 2) by Saunders, Lewis and Thornhill (2012, p.128).

The research onion contains six different layers and all of them are equally important. The research onion can be peeled layer after layer, going from outer layers to the centre. The very first layer (or outer layer) is concerned with philosophy, moving inward followed by approach and methodological choices, then strategies and time horizon. Finally, in the very centre of the research onion is the data collection and data analysis. Following these layers, research methods are examined one at a time in the following chapters and, additionally, the rationale for the choices (circled in red) made will be made explicit.

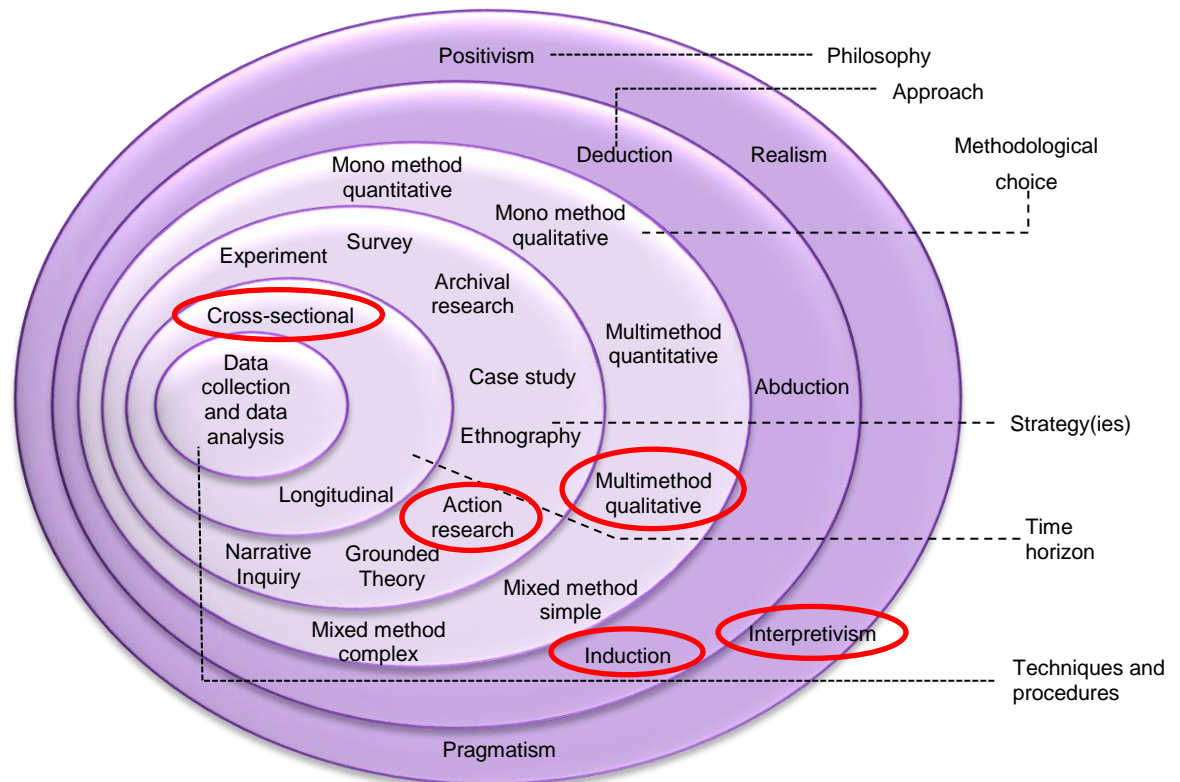


Figure 2. Thesis methods presented in the research onion (Saunders, Lewis and Thornhill, 2012, p.128).

Next each of the layers are examined individually.

### 2.2.1 Research Philosophy

This study tries to understand how the members of the case organization 'see the world' or more specific, how employees see the environment they work in and organizational culture that affects them. People have their own experiences and they create subjective meanings from their individual experiences (Creswell 2007, p.20). With several individuals, multiple diverse meanings are created and a deep understanding of these multiple meanings can be achieved by relying heavily on the organization's members' views of the situation (Creswell 2007, p.20). There is no single identifiable truth or reality that could be measured and studied as in positivism (Lincoln, Lynham and Guba 2011, p.102,114). On the contrary, truth and reality can be seen as constructed and continuously changing (Patton 2002, p.93; Saunders, Lewis and Thornhill 2012, p.140). Therefore, the research philosophy for this thesis is interpretivist.

According to Creswell (2007, p.19) the methodology of qualitative research is emerging, inductive and moulded by the researcher's experience in the data collection and analysis. Creswell (2007, p.21) also argues that qualitative research can also be referred as interpretive research because the researcher is trying to interpret how others see the world. After all, the researcher interprets what he or she sees, hears and understands and the interpretations that are made cannot be separated from the researchers preceding understandings, history, background or context (Creswell 2007, p.39).

A researcher's personal background influences his or her interpretation (Creswell 2007, p.21 and Patton 2002, p.115). As Creswell (2007, p.248) points out, interpretive qualitative research acknowledges that the researcher has a self-reflective role when interpreting the data and that the researcher is an individual when representing information. Thus, the researcher carefully thinks about his or her own behaviour and beliefs. Additionally, questioning oneself as well as understanding oneself is involved in being reflective (Patton 2002, p.64). Moreover, Patton (2002, p.113) argues that conditions also influence the interpretation. Patton uses theoretical approach hermeneutics to explain that "*...what something means depends on the cultural context in which it was originally created as well as the cultural context within which it is subsequently interpreted.*" (Patton 2002, p.113)

According to Saunders, Lewis and Thornhill (2016, p.141), interpretivist perspective is highly suitable for the business research and especially for organizational behaviour, which is exactly the case for this thesis. Saunders, Lewis and Thornhill (2012, p.137) underline that for this type of philosophy it is essential that the researcher takes on an empathetic stance, steps into the same social world with the research subjects and tries to understand how they view the world. The researcher was able to adopt the empathetic stance [REDACTED].

### 2.2.2 Research Approach

In this thesis, it was essential to have a better understanding of the nature of the business problem before looking into EK. Therefore, the starting point was to collect data first in order to examine a phenomenon and to identify patterns and themes that then were used in building a Conceptual Framework (Saunders, Lewis and Thornhill 2012, p.144-146). An opposite approach would have been starting with a theory from academic literature, create a hypothesis and then use data to verify or contradict the hypothesis (Saunders,

Lewis and Thornhill 2012, p.144). However, this theory-lead approach was unsuitable as the challenges needed to be identified first. Hence, inductive research approach was chosen.

By applying inductive approach this research is seeking multiple views of the phenomena and this is done by collecting qualitative data and using diverse methods in the data collection (Saunders, Lewis and Thornhill 2012, p.144). The data collection methods are presented later in this thesis in chapter 2.3.

This research follows an inductive logic and is not completely from a theory or from the inquirer's own perspective (Creswell, 2007, p.19). Patterns and themes are built from the bottom-up rather than from the top-down and, additionally, the researcher works backwards and forwards within the themes, listening the interviews again, reading the field notes again before a comprehensive set of themes is created (Creswell 2007, p.38-39; Patton 2002, p.58).

### 2.2.3 Methodological Choice

In this thesis, it was necessary to have a comprehensive and detailed understanding of the issue (Creswell 2007, p.40). This understanding could be gained by talking directly to the members of the organization as this research tries to create a precise reflection of what people said (Creswell 2007, p.40, 45). Quantitative measures focusing on numbers was inadequate and, therefore, a qualitative research method was chosen.

It would have been possible to combine both qualitative and quantitative methods by choosing mixed-methods. And as a matter of fact, in the early stage of this research process a questionnaire with anonymous replies was considered. However, the organization was already conducting multiple quantitative surveys throughout the year and was unlikely to conduct thesis related questionnaire later on. Taking into account the previous and that it was questionable if quantitative method would give remarkable additional information for solving the business problem, the researcher decided to conduct a qualitative research.

Qualitative approach includes doing the research in the participant's setting, conducting an inductive data analysis, creating themes, and interpreting the meanings of the collected data (Creswell 2009, p.232). Qualitative research can be defined as follows:

**Qualitative research** begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meanings individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is inductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, and a complex description and interpretation of the problem, and it extends the literature or signals a call for action.” (Creswell 2007, p.37)

Moreover, this is a multimethod research as the data are collected by using multiple techniques such as in-depth interviews, unstructured participant observation diaries, and focus group (Saunders, Lewis and Thornhill 2012, p.165). Using several data collection techniques provides a richer approach compared to mono method (Saunders, Lewis and Thornhill 2012, p.164). Therefore, this qualitative inquiry is more than just an interview research and, therefore, has a chance to get to the real roots of challenges.

#### 2.2.4 Research Strategy and Time Horizon

There is a variety of strategies from which choose. Due to the co-operative nature of this research and the researcher’s intended self-study, Action Research (AR) was selected.

AR is an approach that differs from other research in many ways. It is “*research in action rather than research **about** action*”, “*a collaborative democratic partnership*”, and “*a sequence of events and an approach to problem solving*” (Coghlan and Brannick 2014, p.5-6). Coghlan and Brannick (2014, p.5) presents a definition of AR created by Shani and Pashmore:

Action research may be defined as an emergent inquiry process in which applied behavioural science knowledge is integrated with existing organizational knowledge and applied to solve a real organizational problems. It is simultaneously concerned with bringing about change in organizations, in developing self-help competencies in organizational members and adding to scientific knowledge. Finally, it is an evolving process that is undertaken in a spirit of collaboration and co-inquiry. (201[1985]:439). (Coghlan and Brannick 2014, p.5)

Furthermore, in AR the members of the organizations are involved in the change process and, together with the researcher, they produce action plans which are addressing the possible issues within the organization and implement them (Coghlan and Brannick 2014, p.54, 55).

The starting point for an AR is defining context and purpose. After that there are various cycles and, as presented in Figure 3 (Coghlan and Brannick 2014, p.9), each cycle consists of four subsequent phases: 1) constructing, 2) planning action, 3) taking action, and 4) evaluating action. The first cycle of action is followed by another cycle until the organization has reached the desired state and the intended change is fully implemented.

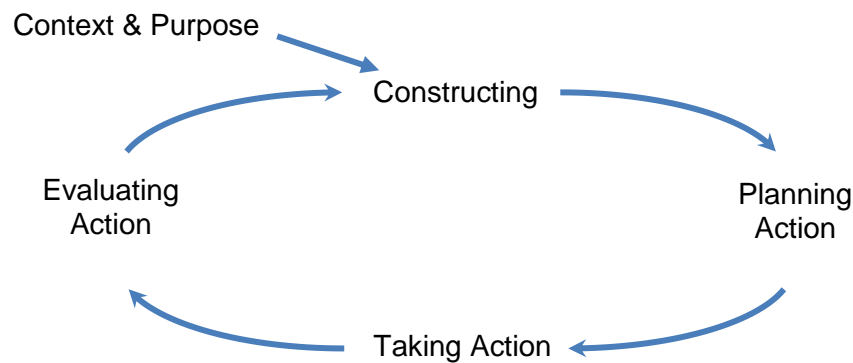


Figure 3. Four main stages in an action research cycle (Coghlan and Brannick 2014, p.9).

Due to time constraint, the implementation of recommendations was excluded from the scope of this thesis and only the first steps of the AR could be taken. The conducted steps were: defining the context and purpose, constructing, and planning action (as in co-created recommendations). Thus, taking action, evaluating that action, and conducting sequential AR cycles were excluded from this study.

This thesis was a cross-sectional research since it was a snapshot of a specific time. Undertaking a longitudinal research would have given the possibility to study how the situation changed and developed over the years (Saunders, Lewis and Thornhill 2012, p.190). However, due to time constraint it was impossible to study the case organization over a long period of time.

### 2.3 Data Collection

This section examines how data were collected. It will describe in detail the data that were collected during three data collection rounds. Additionally, the logic for selecting participants as well as choosing locations for the meetings are discussed. Furthermore, this section will also report how data were recorded and stored.



This thesis included three separate data collection rounds as presented in Table 1. The first round (Data 1) mainly collected data through qualitative, semi-structured interviews. Interviewing was done with open-ended questions using probing questions and closing question. Probing questions, or probes, are questions that are used to gain more in-depth understanding of something that the interviewee said. Probing questions are discussed more in sub-section 2.3.3.

In addition, unstructured participant observation diaries, insightful emails, and email interviews were used. The second round (Data 2) included two workshops in which the initial recommendations were co-created together with the members of the organization. The last round of data collection (Data 3) included discussions with the company's management and co-creating the final recommendations with them.

Table 1. Information of collected Data 1, 2, and 3.

Data 1	Data 2	Data 3
Qualitative semi-structured interviews	Workshops	Discussion with Management
Unstructured participant observation diaries	Earlier company survey	
Insightful emails		
Focus group discussions		

The duration of focus group meetings varied from 116 minutes to 150 minutes and the duration of the interviews in the first round varied from 5 minutes to 76 minutes. More details of each round of data collection are presented in the Table 2.

Data 2 included secondary data as the company shared their results of an earlier company survey (██████, 2016). The survey addressed the organizational functionality and replies were consolidated to protect the identity of the respondents. Additionally, results contained solely the replies from individuals working in the new open-plan office. The survey results were confidential and, therefore, not shared with the focus group.

Table 2. A summary of Data 1, 2 and 3.

Data	Description	Time	Duration/Length
Data 1	Focus group discussion (the same group of people co-creating the recommendations)	Nov 2015	120 min
Data 1	20 x Interviews	Nov 2015 – Apr 2016	Average 39 min/interview total 771 min
Data 1	6 x emails / email interviews (total of 10 emails received)	Mar – Apr 2016	Average 147 words/interview total 1466 words
Data 1	4 x participant observation diaries	Mar-Jun 2016	Average 716 words/diary, total 2863 words
Data 1	10 x interviews (check-up after analyzing data)	Jun – Jul 2016	Average X
Data 2	Workshop 1 (presenting findings from data 1 and existing knowledge plus initial thoughts for recommendations)	Jun 2016	116 min
Data 2	Workshop 2 (building the initial recommendations)	Jun 2016	151 min
Data 3	Presenting initial recommendations (validation & co-creation of final recommendations)	Jul 2016	117 min
Data 3	Presenting final recommendations	Aug 2016	60 min

Data were collected from total of 37 different individuals. From these 30 were interviewed, six wrote emails (from which four were turned into email interviews) and four individuals wrote observation diaries. Two neutral individuals were both interviewed and they wrote an observation diary. Additionally, one participant, who was not interviewed, wrote an email and an observation diary.

### 2.3.1 Interviews

In this research, it was particularly essential to understand what people genuinely thought and felt in addition to what were their opinions and perceptions. Hence, in-depth

qualitative, semi-structured interviews were conducted with open-ended questions, applying both probing and closing questions. An example of the invitation letter to interviews is presented in Appendix 1. Furthermore, examples of the questions that were asked in the interviews are presented in Appendix 2. The duration of one-to-one interviews varied from 5 minutes to 76 minutes as presented in Table 3.

Table 3: Data 1: The first set of personal interviews.

Number	Interview type	Recording type	Date	Duration
1	Face-to-Face interview	Audio recording	Nov 2015	76 min
2	Unofficial interview (in café)	Field notes	Feb 2016	10 min
3	Unofficial interview (next to a work desk)	Field notes	Feb 2016	5 min
4	Face-to-Face interview	Audio recording	Feb 2016	38 min
5	Face-to-Face interview	Audio recording	Feb 2016	59 min
6	Face-to-Face interview	Audio recording	Feb 2016	53 min
7	Skype video interview	Video recording	Mar 2016	29 min
8	Skype video interview	Video recording	Mar 2016	32 min
9	Skype video interview	Video recording	Mar 2016	34 min
10	Skype video interview	Video recording	Mar 2016	25 min
11	Skype semi video interview	Audio recording	Mar 2016	54 min
12	Face-to-Face interview	Audio recording	Mar 2016	57 min
13	Skype video interview	Video recording	Mar 2016	30 min
14	Skype video interview	Video recording	Mar 2016	37 min
15	Skype semi video interview	Audio recording	Mar 2016	38 min
16	Online video interview	Video recording	Mar 2016	25 min
17	Online video interview	Video recording	Mar 2016	48 min
18	Online video interview	Video recording	Mar 2016	48 min
19	Skype audio interview	Audio recording	Mar 2016	24 min
20	Face-to-Face interview	Field notes	Apr 2016	49 min

After analysing some of the collected data, another set of personal interviews were conducted. The purpose of these additional interviews was to confirm that the themes that had emerged from the data were correct ones. Details of these interviews are presented in Table 4.

Table 4. Data 1: The second set of personal interviews.

Number	Interview type	Recording type	Date	Duration
21	Face-to-Face accidental interview	Field notes	Jun 2016	10 min
22	Skype message interview	Written messages	Jun 2016	191 words
23	Phone call	Field notes	Jun 2016	10 min
24	Skype message interview	Written messages	Jun 2016	126 words
25	Skype message interview	Written messages	Jun 2016	16 min 329 words
26	Skype message interview	Written messages	Jun 2016	22 min 373 words
27	Skype message interview	Written messages	Jun 2016	28 min 266 words
28	Skype message interview	Written messages	Jun 2016	50 min 154 words
29	Skype message interview	Written messages	Jul 2016	33 min 358 words
30	Phone interview	Field notes	Jul 2016	29 min

A total of 30 different individuals were interviewed during November 2015 and July 2016. What's more, the number of words presented in the Table 4 are only the participants' words and exclude the researcher's replies and comments.

### 2.3.2 Emails and Participant Observation Diaries

Interviewing was only one of the methods used for collecting data. During the data collection phase the members of the organization shared their views and feelings by sending spontaneous insightful emails. Some of these emails were turned into short email interviews with one or two rounds. Email interviews are, therefore, considered as interviews, whereas other emails are seen as providing insights from the organization. More details about emails are presented in Table 5. Reported response lengths are excluding researcher's questions and replies are therefore showing exclusively the participant's own writing.

Table 5. Data 1: Insightful emails and email interviews.

Number	Interview type	Date	Length
31	Insightful email	Mar 2016	49 words
32	Email interview	Mar 2016	102 + 88 words
33	Email interview	Mar 2016	73 + 66 words
34	Email interview	Mar 2016	318 + 260 words
35	Insightful email	Apr 2016	414 words
36	Email interview	Apr 2016	46 +50 words

Moreover, five persons from different parts of the floor with diverse job descriptions kept unstructured observation diaries for about one week, writing down anything and everything as they felt needed. As argued by Patton (2002, p.253) participant observation is an ideal approach for qualitative inquiry. More details about unstructured participant observations are presented in Table 6.

Table 6. Data 1: Unstructured participant observation diaries.

Number	Interview type	Date	Duration
37	Participant observation diary	Mar-Apr 2016	5 days, 467 words
38	Participant observation diary	Mar-Apr 2016	4 days, 688 words
39	Participant observation diary	Mar-Apr 2016	7 days, 1422 words
40	Participant observation without dates	June 2016	286 words

There were no restrictions on nor a specific form for how participants should write about their observations. Furthermore, the topics that people chose to write about were completely out of the researcher's influence and this increased the validity of the findings.

### 2.3.3 Interview Method

Patton (2002, p.348) mentions that in qualitative interviewing gives participants a chance to *"express their own understandings in their own terms"*. According to Patton (2002, p.21) open-ended responses can give in-depth understanding about how the interviewee sees the world. The purpose of open-ended interviewing is not to put things in someone's mind (for example, the interviewer's preconceived categories for organizing the world)

but to access the perspective of the person being interviewed (Patton 1990, p.278). Patton (2002, p.345) argues that in-depth interviewing style encourages the interviewees to talk – especially about their feelings, opinions, experiences, and knowledge. Furthermore, genuinely open-ended questions give interviewees the possibility to describe their emotions and perceptions with any words they like as well as take the discussion in any direction they feel is important to them (Patton, 2002, p.354). Dichotomous questions, with a possibility to answer “yes” or “no”, are more interrogation than in-depth dialog (Patton, 2002, p.355).

Therefore, primary data were collected by using qualitative interviews with truly open-ended questions in addition to avoiding dichotomous questions. As argued by Patton (2002, p.21), intensive, in-depth interviews can be a good source of high-quality information from the members of organization.

In this thesis, sensitive topics were likely to emerge and therefore a structured question frame was unsuitable. Fylan (2005, p.66) states that particularly semi-structured interviews offer a possibility to understand what the respondent has experienced as well as what they feel and think about the phenomena that is being examined. Additionally, a semi-structured interview is a good approach when sensitive topics are discussed (Fylan 2005, p.67). Fylan (2005, p.65-66) argues that the semi-structured interview differs greatly from the structured interview, in which pre-set list of questions are repeated in the same order in each interview.

According to Cassell (2011, p.503) *“In highly structured interviews, the aim is to minimize any bias that may occur from the role of the interviewer, hence the standardization of the questions and format”*. On the other hand, qualitative interviews employing unstructured approaches are ideal for a research as this present study as they enable the interviewees to take *“an active role in constructing the nature of the interview”* and directing the interview as needed (Cassell, 2011, p.503).

Furthermore, semi-structured interviews are more flexible than structured interviews: *“...conversation is free to vary, and is likely to change substantially between participants”* (Fylan 2005, p.65). Semi-structured interviewing also gives room for very open questions and allows the discussion to have variable directions until the topic in question has been fully covered (Fylan, 2005, p.66).

So, questions and areas of interest can be adjusted as needed during the interview. Each interview is unique, and there is a possibility to grasp emerging themes during the interview and take discussion deeper with the interviewee. Fylan (2005, p.66) also mentions that using a semi-structured interview will give a deeper understanding of the issue and also answer the question 'Why'. Considering the sensitive nature of this research and the need for an in-depth understanding of the issue, the semi-structured interview was chosen.

Additionally, notes during face-to-face and Skype video interviews were made. Notes have multiple benefits. They, for example, 1) help interviewer during the interview to create new questions during the interview as well as check what has been said earlier in the interview, 2) are vital for spotting the emerging themes during the interview, 3) will later on make data analysis easier as well as detecting important quotations from the recording, and 4) can be used as a backup if the recording fails or later on gets lost or erased by mistake (Patton, 2002, p.383). Furthermore, taking notes has additional significance as it gives non-verbal cues to the interviewee what is "noteworthy" (Patton, 2002, p.383). As a result, it will encourage interviewee to discuss about the issue at hand with greater length.

Writing notes also creates silent moments. Pause is an indicator for the interviewees to reflect and expand upon their answer (Bryman and Bell, 2007, p.486) as well as that the interviewer is waiting for the interviewee to continue (Patton 2002, p.374). So, a silent moment gives the interviewees more time to continue their story. This proved a very useful tool when conducting interviews. However, sometimes interviewees bring up rather interesting topics during interviews without explaining them more in detail. This also happened during the interviews of this thesis. In these situations, probing questions were used. Probing questions, such as "*That's interesting. Tell me more about it*", offer a chance to explore the interesting responses from interviewee in greater depth (Saunders Lewis and Thornhill, 2016, 408). Patton (2007, p.347) describes probing as follows:

Probing is a skill that comes from knowing what to look for in the interview, listening carefully to what is said and what is not said, and being sensitive to the feedback needs of the person being interviewed (2007, p.347).

In addition, rich data and new directions worth exploring can be acquired with the 'closing question' – asking interviewees if there is anything else in their mind that remained

uncovered (Patton, 2002, p.379). Thus, both probing and closing questions were applied in the interviews.

#### 2.3.4 Sampling

The change of workplace from private office rooms, located in two different floors, to open working environment in one single floor could have had an impact on some of the members of the organization. In that sense, everyone working in the new working environment possessed valuable information. Due to limited resources, it was impossible to interview all 100 people. Additionally, even with small sample it is possible to gain "*depth, detail and meaning at a very personal level of experience*" (Patton, 2002, p.17). Thus, 30 individuals were selected.

Individuals in this qualitative research were selected using purposeful sampling. Purposeful sampling is used especially in cases where the inquiry aims to develop in-depth information about a phenomenon rather than enabling findings to be generalizable to a population (Patton 2002, p.40). Moreover, the collected data were free from manipulation because each individual with unique feelings and experiences was equally important to this qualitative inquiry.

Furthermore, individuals were selected with maximum variation strategy which "*aims at capturing and describing the central themes that cut across a great deal of variation*" (Patton 2002, p.234). Additionally, it is important to have participants with as many values, beliefs, and behaviors to explore as possible (Fylan, 2005, p.65). Hence, participants were carefully chosen in order to get a representative sample of the employees working in the floor.

The long office building maintains a vast distance between people working at the opposite ends in addition to fragmenting people in east-west direction. It was important to have views from all parts of the floor. Hence, the interviewees work in different parts of the floor. Because sub-cultures and micro-climates exists among different job functions as well, it was important to make sure that interviewees were from different job functions. Also, it was necessary to learn how people from different job roles think and feel. This was also taken into consideration when choosing the interviewees. The participants were from various age groups and both genders. In addition, the interviewees were selected



so that there was an equal representation of people who worked earlier in floor A and B before the consolidation of the two floors onto one.

Initially 20 individuals were selected for the interviews. Later an additional 10 people were interviewed in order to confirm that the themes that emerged from the data were correct and to gain additional insight. Also selected in a similar way were the participants who were to write personal unstructured observation diaries. In addition, the researcher was unable to have an impact on who wrote spontaneous insightful emails. Each member of the organization had an equal chance to share her or his views and thoughts. Furthermore, the researcher tried to interpret from the style of each email was written if that person had more to say and would be willing to reply to some additional questions. Thus, in some occasions, insightful email was turned into a short email interview. The content of the message or the tone didn't play any role when further questions were asked.

In addition, a group for workshops was nominated. The primary reason for nominating a group was to have members of the organization as an integral part of this thesis and co-create the initial recommendation. A secondary reason was to offer a chance to increase the validity and reliability of the study by reducing the researcher's own bias. The group possessed a wide range of views and expertise as the members of this group came from all hierarchy levels, including the Director, middle management, and even assistants. The focus group met three times and the duration of the meetings varied from 116 minutes to 151 minutes, as previously presented in Table 2.

The workshop group members were selected partly the same way as the interviewees. They were working in different parts of the renovated open-plan office and represented equal share of former floors A and B. However, there were few important distinctions compared to the selection of other research participants. Each individual chosen to the focus group was likely to a) have a positive approach towards change in general, b) they were expected to have the ability to speak up their mind in front of other people, as well as c) respect and encourage other people to share their views and feelings. The workshop group included both extroverts and introverts. All the above mentioned were essential for constructive and encouraging discussions about the challenges as well as for co-creating recommendations for the management.

### 2.3.5 Locations

The location of the interviews plays an important part. When choosing a location for an interview it should be considered what kind of data is desired to make explicit. Locations are nothing but neutral, they “*should be analysed as part of the overall social context of the study*” and, additionally, acknowledged to impact on the knowledge produced in the interview as well as on the interaction (Cassel 2011, p.504).

Thus, intensive and confidential face-to-face interviews were conducted in a sound proofed meeting rooms that are located outside the open-plan office. Interview schedules were organized so that the interviewees did not meet each other, even accidentally. Furthermore, no official list of interviewees was published. These actions were taken in order to protect the anonymity of interviewees as well as to create the best conditions for confidential discussions where genuine feelings and insights could be safely expressed and revealed, without a fear of other people overhearing the conversation.

Similarly, it was necessary to provide a neutral ground for workshop group’s confidential discussions and, accordingly, meetings were held in soundproof meeting rooms outside the open-plan office. All together three focus group discussions were held - one was for analyzing the current state and two were for co-creating the initial proposal.

### 2.3.6 Recording and Storing the Data

Interviews as well as discussions with the workshop group and the management were recorded with the approval of each participating individual. Recording gives the data analysis additional reliability as it offers researcher the possibility to go back to each interview and focus group discussion later on and listen again to what actually was said, what tone was used in addition to any hesitation or a pause before answering some specific question (Patton, 2002, p.280-281). By returning to the original recordings during the analysis it is possible to reduce the chance of mistakes remembering inaccurately as well as incorrect interpretations made by the researcher.

Furthermore, Patton (2002, p. 290) argues that “*capturing the precise language of participants honors the emic tradition in anthropology: recording participants’ own understandings of their experiences* (Patton, 2002, p.290). Also, it is necessary to learn participants’ own language “*in the setting or program they are observing in order to*

*faithfully represent participants in their own terms and be true to their worldview”* (Patton, 2002, p.290).

All recorded data were also transcribed in order to offer a better chance to reveal emerging patterns and themes from all collected data. In addition, a written version of actual discussion was needed in case the original recording would unexpectedly be lost.

All sensitive material, such as recordings and transcriptions from interviews, were stored in a computer to which only the researcher had access to and the login was password protected. A back-up file was copied to another hard drive to be used in case the computer containing original data was damaged. Furthermore, interview invitations in outlook calendar were marked as private and participant’s names were excluded from meeting room reservations so the identity of interviewees truly remained unknown for others.

Handwritten notes from the interviews were stored in a secure location in the researcher’s home office. Creswell (2007) argues that the participants’ anonymity could also be protected by disguising their names. Therefore, all data, such as handwritten notes as well as digital recordings from interviews and transcriptions, were marked and saved with codenames instead of using participants’ real names. To guarantee the full protection for participants, the encoding list, which included both code and real names, was stored in another place separated from the transcriptions and other research materials.

## 2.4 Data Analysis Methods

Analysis was done through strengths and weaknesses analysis of a new open-plan office. In this research, the challenges were particularly interesting as the objective of the study was to produce recommendations to management on overcoming unidentified challenges in the open-plan office. Furthermore, this study focuses on the most critical challenges.

An inductive approach was chosen for this thesis and, accordingly, data analysis was inductive. Inductive analysis is a technique used specially when analysing qualitative data and it includes finding themes and patterns that emerge from the data through the

researcher's interaction (Patton 2002, p.453; Saunders, Lewin and Thornhill 2016, p.729).

Furthermore, the majority of the data used in this study was collected from interviews and, thus, analyzing interviews plays an important role. Interviews are not isolated incidents but more of the components of a complex inquiry context (Cassel 2011, p.506). Interviews develop as the story unfolds because insights from previous interviews can be used in subsequent interviews (Cassel 2011, p.506). Therefore, this qualitative inquiry goes beyond what participants have reported in interviews and data interpretation will be done *"in the wider social context in which the research is taking place"* (Cassel 2011, p.506).

Even though this is an AR, data analysis and presentation of results were similar to Case Study, which is presented in Figure 4 (Creswell, 2007, p.151, 156-157).

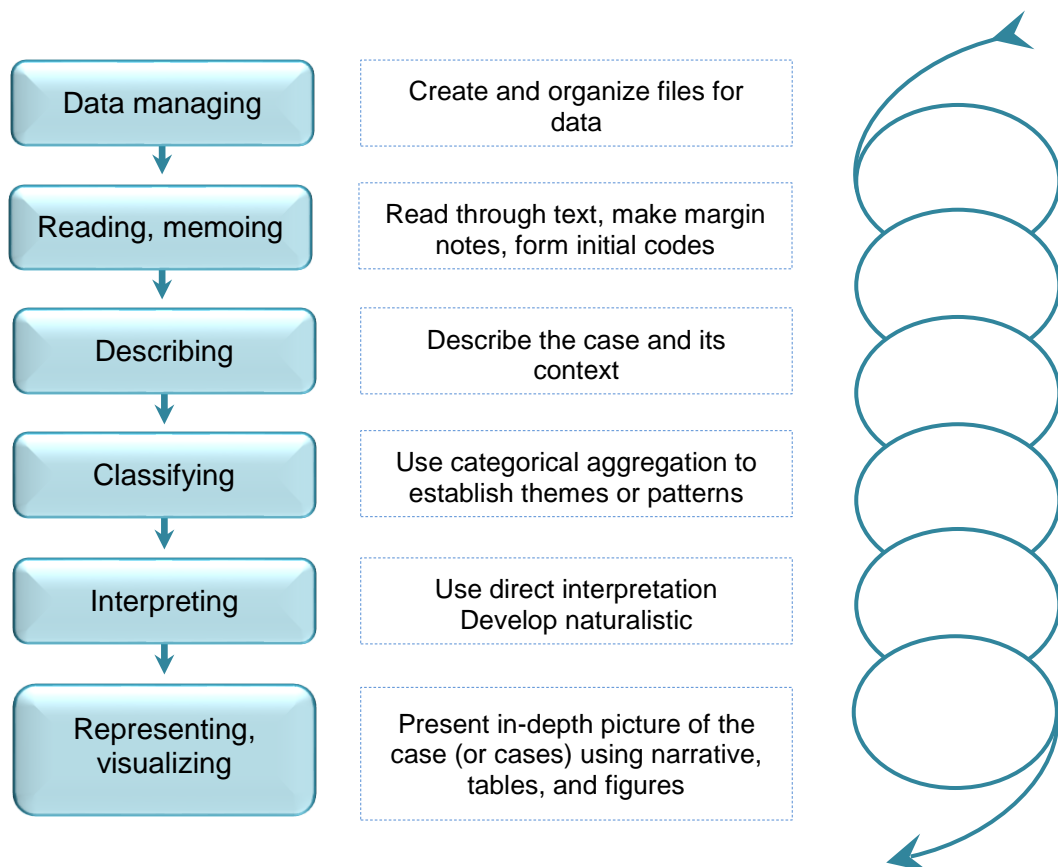


Figure 4. Data analysis and representation for Case Study (Creswell, 2007, p.151, 156-157).

This is due to the fact that this thesis covered only the first steps of AR, excluding taking action and evaluating that action, as well as conducting several sequential AR cycles.

This study consisted of several data analysis rounds, going back and forth with the material. Themes were discovered by using inductive analysis and, finally, several challenges were moved under the same reason.

## 2.5 Validity and Reliability

The notions of validity and reliability are, in some disciplines, referred to as credibility and trustworthiness. In terms of key authors, they are related (Lincoln and Guba, 1985). Here in this particular context validity and reliability mean the same as credibility and trustworthiness.

Validity and reliability provide a foundation for rigorous research. Validity is the most essential criterion of research (Bryman and Burgess, 2007, p.41) and according to Saunders, Lewis and Thornhill (2016, p.730), it has two meanings:

(1) The extent to which data collection method or methods accurately measure what they were intended to measure. (2) The extent to which research findings are really about what the profess to be about. (Saunders, Lewis and Thornhill, 2016, p.730)

This is a cross-sectional qualitative inquiry with semi-structured interviews and establishing validity can be a challenge (Brink, 1991, p.173). Pragmatic validation is obtained through the written records and interviews of the participants' observations (Brink, 1991, p.173). Moreover, observation diaries were unstructured and participants could choose themselves what they wrote about and the researcher had no influence on the diaries. Furthermore, findings are built on several source of information. Additionally, the initial recommendations were co-created with the members of the organization and the recommendations were validated with the company's management. Also, the final recommendations are in away co-created with the management. All these considerations increase the validity of this research.

The research validity is more than just about the methods how research was conducted. It includes also researcher's validity because the researcher is in the centre of the qualitative inquiry (Patton 2002, 566). The researcher's background and experience had an impact on interpreting the data because it is impossible to exclude it in a qualitative research. Due to personal reasons, I was unable to conduct all interviews in person and some of the interviews were conducted via Skype. However, contrary to my preliminary

concerns, online meetings generated reliable data indicating that I had been able to build trust and the employees in the organization saw me as a neutral channel to bring forward their feelings and concerns.

Reliability concerns making the research process transparent. It means, as argued by Saunders, Lewis and Thornhill (2016, p.726):

The extent to which data collection technique or techniques will yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data. (Saunders, Lewis and Thornhill, 2016, p.726)

In this thesis reliability is achieved with triangulation. Triangulation of methods was used as data were collected using different methods, such as interviews, unstructured participant observation diaries and emails, and these, according to Patton (2002, p.556), help to verify the consistency of the findings. Furthermore, sources triangulation was used. Qualitative data were collected from total of 37 different individuals. In other words, multiple methods and sources were used to collect in-depth and rich information.

In addition, the following actions enhance the reliability and the validity of this thesis: 1) transcriptions were made by the researcher that gave an accurate description about interviewee's thoughts, 2) thick and rich description about the settings were provided for the reader, 3) negative information that contradicts the identified themes were presented, and 4) the researcher had an in-depth understanding of the context and participants from spending a prolonged time in the actual setting (Creswell, 2009, p.190-192).

Since this is an AR using a single case, replicability or generalizability are unrelated. However, there might be transferability to other contexts and, therefore, the methods used in this study are described in detail.

## 2.6 Ethics

This thesis was conducted with high ethics and the main principles by the Economic and Social Research Council (ESRC) (2015, p.4) were followed. These principles are presented in the Appendix 3. In addition, research interviews are for gathering high-quality data and not changing people and, therefore, the researcher should remain neutral, not a judge nor a therapist (Patton 2002, p.405). However, it is common that

interviewees open up to the researcher turning the interview into a confession (Patton 2002, p.405). The participants of this study were protected in every way.

The research problem was selected so that the study would benefit the individuals who participated to the research (Creswell 2009, p.88). The members of the organization, the very same people working in the open-plan office, were most likely to benefit from this thesis.

Additionally, the purpose of the study, producing recommendations for management on overcoming unidentified challenges in the open-plan office, was described to the participants (Creswell 2009, p.88). All the individuals who shared their personal thoughts and revealed their in-depth understandings of the new open-plan environment, participated in the research with full awareness of the purpose.

### 3 Current State Analysis

This section describes what a Current State Analysis (CSA) is and how it was conducted in this thesis. It will also offer further information about the context where this qualitative inquiry was conducted. More importantly, this section will report the findings of the CSA. Identified strengths and weaknesses of the case company's new open-plan office are presented together with illuminating direct quotations from the participants.

In this qualitative research Data 1 were collected employing three methods: 1) semi-structured interviews with open-ended questions, probing questions and closing questions, 2) unstructured participant observation diaries, and 3) insightful emails. Examples of the questions asked in interviews are presented in Appendix 2. As shown in the Figure 5, the data collected in CSA were used to identify strengths and weaknesses.



Figure 5. A snapshot from the research design with CSA.

A CSA, also known as a situation analysis, is an analysis of the current state in the organization. Its purpose is to give rich and deep understanding of the possible challenges – what organization is actually doing – or not doing – at the moment and finding out what is happening right now in the organization. Analysing the current state gives the researcher valuable information regarding the research. It will shed light on what is the locus and the extent of the research as well as which are the processes in question. CSA will also state who are the agents and what are the interfaces. Moreover, it will help in identifying the organization's strengths and weaknesses. It is also possible to carry out an analysis of 'needs' and 'gaps'/'wants'. (Collins, 2016)

Typically, the first round of data collection takes place during the CSA. Interviews, questionnaires, and observations conducted by the researcher represent the primary data. Secondary data, such as interviews and questionnaires conducted by other parties as well as e.g. company documents and manuals, may also be used in order to examine the current state. (Collins, 2016)



Most importantly, CSA will lead the researcher into the relevant Existing Knowledge (EK). According to Patton (2002, p.5), ample raw data from qualitative inquiring needs to be organized into readable form in order to identify major themes, concepts and patterns, in addition to reach understandings and insights. Conceptual Framework then emerges from the synthesis of CSA's findings and Existing Knowledge.

In this research, the open-plan office's challenges were unknown, therefore, it was necessary to do CSA prior looking into EK and therefore a theory led approach could not be applied.

### 3.1 Physical Environment of the Organization

Before presenting the findings from the CSA, the physical environment of this qualitative inquiry will be examined in greater depth. The following chapters will give detailed information about the circumstances where the research was conducted and additional photographs from the new open-plan office are presented in Appendix 4.

To start with, the company was operating in an old, long, and narrow office building with limited amount of space. Prior to the change, the employees were working in two separated floors and both floors had two long corridors and conventional office rooms with doors as presented in Figure 6. Approximately 45 people were working in each floor.

The number of people working in the premises had been constantly increasing because new resources were needed to strengthen the current teams and new job positions were also created. Both floors were already fully occupied and there was no extra space available for additional private office rooms. Some employees travelled frequently due to their job role and spent only few days in a month in the company premises. Additionally, employees from other business units were visiting the office regularly, creating a need for supplementary use of office rooms.

In autumn 2015, the personnel of the company were moved from two separate floors to one floor that had been renovated into an open-plan office. The layout of the original floors A and B with private offices are described in Figure 6 and Appendix 5.

Each floor had two meeting rooms, private office rooms and a small kitchen. Also, floor A had an additional meeting room for CEO's and management's use and floor B had one fully open-plan office and one semi open-plan office.

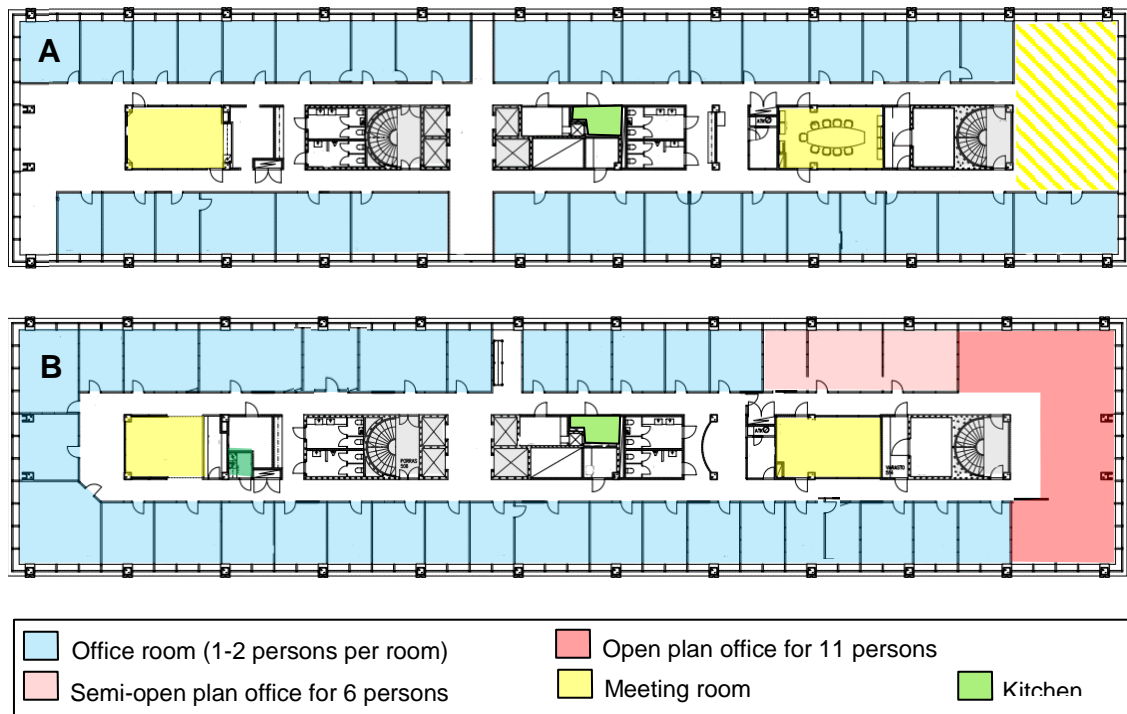


Figure 6. The layout of the original floors A and B before the renovation.

In the new open-plan office, people were working side by side and face to face. The number of workers had doubled from 45 to 100 desks per floor. The company's office rental costs were reduced by half after the new open-plan office was taken into use because all employees were working on the one and same floor making it unnecessary to rent two floors.

The new open-plan office was open and bright. The floor was covered with a carpet and the corridors were no longer separated from the working area by walls as can be seen from Figure 7. Each working station were equipped with a modern desk that allows working both in sitting and in standing position. Prior to the open-plan office, the electronically adjustable desks were allowed only to a small number of employees who had a recommendation from a doctor.

Only a minority of the desks were assigned leaving the majority of people hot desking. The so-called flexi seats were not reserved for anyone particular and people could pick their places when they come to the office.



Figure 7. Office view before and after the renovation.

The layout of the renovated floor is presented in Figure 8 and Appendix 6 and it differed a lot from the original layout presented in Figure 6. Private office rooms were converted into open-plan office with phone booths meeting rooms around the floor.

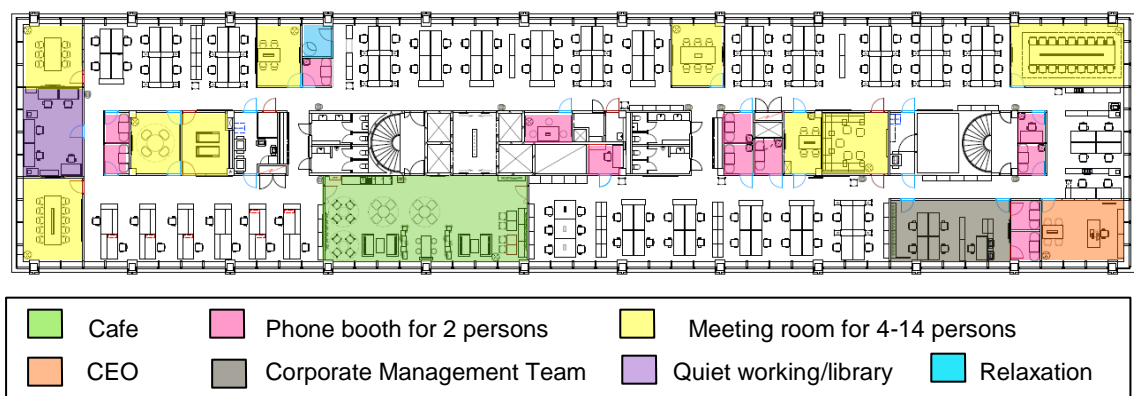


Figure 8. Open working environment after the renovation.

Phone booths and meeting rooms had glass walls, glass doors, and were not soundproofed. Some of the meeting rooms were bookable, other meeting rooms as well

as all phone booths could not be reserved in advance. All meeting rooms had a large screen with possibility to share presentations with other people in the room.

One of the meeting rooms was designed to be an idea and brainstorming room. It lacked both windows with outdoor view and tables. The only furniture was a large sofa in three sides of the room. The appearance of this meeting room A is presented in Figure 32. Another meeting room was designed for meetings 'on the go' with two treadmills and two standing, enabling people to walk while having a meeting. The appearance of this meeting room B is presented in Figure 33.

The CEO had his own private office with traditional walls and door. The management team were working in a so-called *aquarium* which was an open-plan office within the open-plan office. The aquarium was separated from the other space by glass walls and contained two soundproof phone booths. The floor also had a big working café, a library that was designed for quiet working, and a special room designed for relaxing. Additional photos from the new open-plan office are presented in Appendix 4.

### 3.2 Identified Strengths and Weaknesses

Following sub-section will first present the organization's strengths and weaknesses that were identified during CSA. The findings are examined further and illustrated with direct quotes from the participants. Moreover, the findings are presented as what occurred and free from judgements, as Patton argues: "*The data do not include judgments about whether what occurred was good or bad, appropriate or inappropriate, or any other interpretive judgements*" (Patton, 2002, p.27). Patton (2002, p.28) quoted sociologist John Lofland, who suggested that:

... there are four people-oriented mandates in collecting qualitative data. First, the qualitative methodologist must get close enough to people and situation being studied to personally understand in depth the details of what goes on. Second, the qualitative methodologist must aim at capturing what actually takes place and what people actually say: the perceived facts. Third, qualitative data must include a great deal of pure description of people, activities, interactions, and settings. Fourth, qualitative data must include direct quotations from people, both what they speak and what they write down. (Patton, 2002, p.28)

Furthermore, direct quotations reveal participants' perceptions, experiences, how they have organized their world, what they think about what is happening as well as the depth of their emotions (Patton, 2002, p.21). Direct quotations give the readers the possibility

to draw their own conclusions from the collected data. Direct quotations are an important part of a rigorous research and, therefore, this thesis includes direct quotations from interviews, unstructured participant observation diaries and insightful emails. Quotations are anonymous to protect the participants and the organization. Additional quotations are presented in Appendices 8, 9, and 10.

The objective of this thesis was to produce recommendations for management on overcoming unidentified challenges in the open-plan office. Identified strengths will also be briefly reported, but as these research challenges were a particular point of interest they are examined in greater depth.

Strengths related to the physical environment were identified during the CSA are presented in Table 7. The new office was seen as fresh and modern. Employees felt that communication and getting to know people was easier in the new open-plan office. As reported by one participant: *“There is a big improvement to the earlier: exchanging information and distributing it is a lot easier.”* One participant even noted that the new environment had encouraged people to reach out to the person in question: *“Many of the younger employees have approached me with questions, seeking advice, and asked my opinion. This would not have happened in the old office. People would not have come knocking my door.”* Those employees who were given assigned desks were happy. In addition, electronically adjustable tables were warmly welcomed by many employees.

Table 7. Identified strengths with themes.

Fresh and modern office	Physical environment
Communication was easier – controversial	
Getting to know people was easier - controversial	
Some of the employees, which had at first been opposing, had become more accepting towards the open-plan office.	
Those employees who were given assigned desk were happy	
Employees liked the electronically adjustable tables	

Some of the employees, which had at first been opposing, had become more accepting towards the open-plan office. As noted by one participant: *“If someone would have asked me earlier if I would like to move to an open-plan office, I would probably have said ‘No thank you!’ if it would have been a choice. But it wasn’t. Now, to my surprise, in a way I feel OK. Communication within our team has improved and I have learned to know the people in whole company in a different way.”*

Also, some employees commented on what they liked about the life around them. As noted by one participant: *"In the old office people sat in their offices and kept their doors shut. It was very closeminded place. I dare to say that the new office is completely different. It is like a market place, full of life like. I would not want to change back to private offices. I would definitely like to have more peace and quiet to do my work but I do not long for own office. Another noted: "I would not want to return to my empty office."*

However, some of the identified strengths were controversial because there was a variety of, and often contrary, opinions. As an example, some of the employees reported that communication was easier in the open-plan office compared to the old private office and then again others felt the exact opposite and reported that communicating was more difficult than earlier. Similar variety of opinions was discovered for how easy getting to know people was.

In addition to strengths, several challenges were identified. Visual disturbances, noise, and lack of speech privacy prohibited concentration and hindered employee's performance. Many employees voiced the need for off-site working. People were reluctant to use spaces created for retreating and quiet working, and people were monitoring each other's comings and goings. Silos between functions remained, and the top management was seen as distant and isolated from the rest of the floor. Hot-desking caused unhappiness. Also, employees felt they were not well prepared for the change by management.

Some of the reasons behind moving the personnel from private offices to open-plan office was to change the way people work and how they think about work and that new environment *"supports cooperation and new way of working"* (██████, 2015). The findings from the CSA revealed that this change did not take place. Physical appearance of the office had changed from closed to open but people were working the same way as they did in private offices. Work that was done next to person's desk was seen as important, meaning that employees did not value the work that was done for instance in café as highly as work that was done next to their desk. There was a mentality that people were doing 'real work' only when they were sitting next to their desk. Thus, employees were not using the space as designed.

The identified weaknesses are listed in Table 8 and can be roughly divided into three categories: 1) physical environment, 2) change management, and 3) management style.

Table 8. Identified weaknesses with themes.

Visual disturbances and noise inhibits concentration & it was exhausting to work in open-plan	Physical Environment
Lack of speech privacy	
Loss of privacy impacting boss work and personal phone calls	
Soundproofing was missing from phone booths and meeting rooms	
Communication was too easy, unnecessary discussions	
Increased negative talk & gossips - controversial	
Hot desking caused unhappiness	
Guidelines for working in the floor needed	
Blocks for library usage: distance from 'regular desk', the lack of docking stations and screens, and transparency	
People were longing back to their private offices - controversial	
More phone booths needed - controversial	
Meeting rooms were used for Skype meetings, occupying the whole meeting room by one person	
Ergonomic issues in phone booths and meeting rooms	
Temperature in the office was too hot or too cold	
Lights misplaced or not providing the needed light	
Less communication than earlier - controversial	
People felt alone and it was difficult to get to know people - controversial	
Cleanness of the office worried people, bacteria spreading from café's door handles and floor carpet not cleaned often (more sick leaves)	
ADHOC meetings increased and people do not prepare in advance to meetings, time wasted	
Off-site working needed but it was not allowed - controversial	
Some people worked overtime from home during evenings to get things done	Management Style
Employees were not well prepared for change by management	
Reason for change was not communicated clearly	
Feeling of being left alone during the change	
Management was seen as distant and isolated from the rest of the floor	
Silos and barriers between functions remained	
Mentality that only the work done next to your desk is valuable	
Lack of trust	
People were monitoring each other's comings and goings	
Employee diversity unnoticed nor appreciated, people felt they are forced to fit one mould	
One block for library, relaxation room and walking treadmill meeting room usage: fear	
People were missing joint events and coffee breaks	
Company surveys were answered untruthfully due to e.g. fear and a desire to make your team look better)	

What is more, many employees voiced the need for off-site working. Findings related to off-site working are presented together with comments regarding the physical environment.

The following sub-sections will examine the identified challenges in-depth and additional direct quotations are presented in Appendices 8, 9, and 10.

### 3.2.1 Physical Environment

One of the key findings of this inquiry was that people were unable to concentrate on their work. People felt that both visual and vocal distractions decreased their efficiency. One participant reported: *"It is challenging to work in your place. You cannot tell people to go to hell when you are working with something important."* And another participant voiced: *"It is much more difficult to concentrate to your work here (versus private office)."* Several participants also reported how seeing people move around the office distracted them. One participant noted: *"It is irritating when people are walking by you to meeting rooms. And sometimes people just walk back and forth. Why the hell they cannot just stay in their desk? Although, it can depend where you sit. Some places can have less traffic."* Even the sound of key boards was adding the noise in the office. As stated by one participant: *"The sound of people typing can be loud. We have quite a few typewriters here in the office and the sound reminds of a machine gun."*

Moreover, the strength can also become the weakness as one participant described: *"In a way the biggest challenge (in the open-plan office) is that it is easy to reach people and information is shared. So in a way the biggest strength becomes the biggest weakness as you get disturbed so easily."* This was also controversial as some employees felt that the open-plan office was not as bad as they had feared. One participant noted: *"I think it is surprisingly calm here. Nothing like in an advertising company where people are throwing papers in the air and pulling their hair."*

Additionally, some employees felt that it took longer time to get things done in open-plan office compared to private offices. *"Sometimes when you need to concentrate it is challenging and it takes longer time to get things done than earlier."* One participant reported that working from home during evenings and coming to the office early in the morning was one solution: *"I have solved the problem (distractions) by doing challenging*



*work in the evenings from home and by coming to the office around 7 o'clock when it is really quiet."*

Working in open-plan office was exhausting and made people feel frustrated and angry towards their colleagues. As reported by one participant: *"Sometimes I want to yell and swear but I just cannot do that."* Another participant described how draining working in the open-plan office was: *"There are days that you are really tired when you come home. It's the noise and hassle that makes me tired some days. Sometimes I have a feeling that I just have to leave the workstation for an hour because you cannot sit there no longer."* Quiet days with less people in the office was experienced more enjoyable and yet in those days people were still seeking for more solitude from the open-plan office by working in phone booths. One participant revealed *"During holidays when there aren't so much people in the office it's possible to use phone booths more easily for work and hide from others."* Thus, some employees felt more comfortable to use phone booths for private working than the library.

Hot desking caused unhappiness among employees. The idea behind hot desking was not logical to people. As noted by one participant: *"I can understand what it would mean for someone who is away all the time and comes to the office only once or twice a month. But I'm in the office every day. I rarely go to business trips."* Majority of the employees felt that flexi seats did not work and would have preferred assigned desk instead. As noted by one participant: *"I think it was the biggest mistake when we were told that now when we are in open-plan office everyone should each morning look for a free desk. It doesn't work. At all."* Another participant stated: *"Everyone should have been given their own desk in the beginning."*

Some employees had marked down that people did not use flexi seats as designed. One participant noted: *"The number of personnel has increased so that we need more desks or then the **real** flexi seats – so that people would use them as they were meant to be used. After the end of the day you should clean up the desk so that someone else could use it the next morning. But it doesn't work like that. People keep desks to themselves."* Few employees had tried to work with flexi seats in the beginning but soon noted that it was not supported by their colleagues. One participant revealed: *"My colleague and I, we tried to switch our flexi seats in the beginning. Went to a different desk each morning but other people didn't take it so well. They were like 'what the hell are you coming to our places' even though they were flexi seats and not assigned to anyone particular."*

Several employees mentioned that negative talk and rumours had increased. This created unpleasant atmosphere and disturbed working as noted by one participant: *"Sometimes I wish that the gossipers would stay in their own place and not disturb others. It is difficult to be impolite in open office, meaning that you need to listen all kind of gossips even though you have a lot of work to do."* This unwanted phenomenon was invisible in the old private offices and the open-plan office had made all employees part of it, even the ones who preferred to distant themselves from those. As described by one participant: *"My main discovery of the open office is that you are surrounded by negative discussions more. Earlier people could shut the doors and discuss but now the complaining has become public."*

There were, however, some individuals who were undisturbed by the negative talk and gossips. One participant reported that: *"I am work-centred person and I couldn't care less not to mention take part to gossiping and complaining. In every work place there are always some people who are not content and like to complaint about things."*

Furthermore, there was a variety of opinions regarding the amount of negative talk and gossip. In a way, the open-plan office had even improved some individual's ability to concentrate on work as they were no longer required to act as therapists. As one participant noted that: *"People used to come to my office several times a day, close the door behind them and start to discuss about their personal issues and I couldn't say no to them. Because of the new open environment people cannot do that anymore and I am left in peace."*

People also had noted that new environment had changed how and what about people talk. One participant noted: *"I think that it (open-plan office) has changed the dynamics of people talk. Everyone around listens and comments so the privacy is of course gone, but it is fine. You are in a workplace and should discuss work issues."*

Working in the open-plan office was experienced in the opposite way by different individuals. Some employees felt brave and confident to walk to another person and start talking. As stated by one employee: *"I give people a chance to say: Don't be here (and disturb my work)."*

Electronically adjustable tables were offered to everyone, which was seen as a very positive thing. However, some people avoided using the table in up the upright position.

Also, the seriousness of work was raised by multiple employees. As noted by one participant: *I'm not using the table in up-right position. You could see further in the office but we have not come to work to watch the scenery but to work.* Another employee reported that: *I'm using it but I think that other people who don't have problems with their backs might not use it perhaps because they don't want to be facing other people while working.* In addition, some people reported that they could concentrate standing when they had their own office but now in the open-plan office it was easier for them to concentrate when they were sitting. As reported by one participant: *If I have to concentrate to something then I have to sit. It's too difficult to concentrate when you are standing, I find. So I have to go sit.*

Several employees voiced the need for private offices even though some of the employees, which had at first been opposing, had become more accepting towards the open-plan office. One participant said: *I would take my old office room back in a heartbeat. For me and the work I do private office works far more better than the open-plan office with constant circus.* Another participant stated strongly: *I really need my own office back. The trend to use open-plan offices is already gone. Other companies are changing back to private offices and I cannot understand why we are doing the opposite.*

Majority of employees voiced the need for soundproof places. As noted by one participant: *The most essential thing for open-plan environment it that you have to have soundproof spaces. You have to be able to discuss confidential matters without the whole office overhearing you.* Another participant stated that: *Private phone calls cannot be made here at all! And you have a feeling that you are doing something wrong because there shouldn't be any privacy here at all. You are just working here.*

Many employees also had noticed how open-plan office impacts on a boss's work. Earlier confidential boss-subordinate conversations could be held behind closed door in boss's office, even extempore. Now a separate place needs to be reserved in advance. As noted by one participant: *It's not possible to discuss any issues related to boss work in the open office. You need to take those in the koppero (= a nick name for phone booth) or somewhere else but not in that floor. Things are no longer discussed in the office but in somewhere else.* One participant also mentioned that going to phone booth with someone made colleagues even more interested of what was happening: *Communication feels impossible sometimes because of ears dropping. Colleagues get*

*even more interested if they see you going to a phone booth with someone so that you wouldn't disturb others."*

Generally, people were hoping that there would be more meeting rooms and phone booths and that it was not easy to find one when you needed to. As noted by one participant: *"The size of the meeting rooms is quite OK but they are extremely busy all the time."* Another participant stated: *"The office could be more practical. More meeting rooms and phone booths are needed because of the poor availability. It is so damn often when you are searching for a free phone booths, you have someone on the other end of the phone waiting and you just cannot find a place even though you are galloping around the office. That is not an ideal situation."*

The use of meeting room caused frustration among some employees. Meeting rooms were used, as an example, for online meetings and one person was reserving the whole meeting room. As noted by one participant: *"The phone booths should really be bookable. What happens now is that big meeting rooms are unavailable for meetings because one person is having a Skype call. There is a huge demand for the meeting rooms and my opinion is that they should not be used by one person only."* Employees needed to make sure that they had a place for the planned online meetings and therefore, single individuals needed to book big meeting rooms. Moreover, several employees mentioned that not all people respected the reservations as reported by one participant: *"People don't respect the booking system. Even though you have made a booking, there could be still people having a meeting when you enter the meeting room."*

Also, as an addition to frustration, people mentioned that valuable time was lost before because the booked meeting room was in someone else's use. This was reported by people both who had made the booking and by people who had found a free meeting room and taken it to their use without checking the online booking system. As noted by one participant: *"It takes time when they need to pause their meeting, collect all their things, and find another place to continue the meeting."*

Moreover, meeting rooms that could not be booked beforehand were reserved by employees a long time before they actually needed it, just to be sure they had the meeting room for themselves when they needed. As voiced by one participant: *"You need to go there (unbookable meeting room) at least half an hour before. Other vice it can be already taken when you need it and then you have no place to go."*

Surprisingly, there were two meeting rooms that were often available but a majority of people were unwilling to use them. One meeting room described by one participant: *"It is like a bunker. I try to stay away from it. There's no windows and the space just doesn't work."* One of the employees had found the same meeting room particularly convenient because it was always available. According to one participant: *"Nobody else likes that meeting room but I use it a lot."*

One of the findings was that people did not use the library that was designed for the quiet working. Some employees felt they needed to be available at their desk for all times, as noted by one participant: *"It would be nice to have a possibility to use the spaces that are designed for quiet working. But you cannot just disappear."* For other employees, the distance came as an obstacle, as claimed by another participant: *"I'm not able to use the library because it is in the other end of the building. It is too far away. And the phone booths next to my desk is always in use."*

In addition, several employees voiced their concern about increased sick leaves after moving to the open-plan office. As commented by one participant: *"Since we have the open office I think there is a lot more people that get sick at the same time. I think that in the beginning of the year with the flu season half of the people were ill."* People had observed others getting sick more often and also getting sick themselves. One participant noted: *"This is the first time in my life when I have had a flu. Is it the open environment or am I just getting old?"* However, some employees wondered if the open-plan design had made people's absence more visible than earlier as one participant mentioned: *"It certainly feels like there has been influenza epidemics but perhaps it is easier to detect if people are away now when we work all in the same floor with open design."*

The cleanness of the office was another commonly mentioned issue. One participant noted: *"I wish the floor would be cleaned more often. It doesn't seem to get vacuumed. But I once heard someone said they really narrowed down the budget for cleaning so... I guess we will get maybe two cleanings per year. You just see the yak gathering."* Another participant mentioned: *"The door handles in the café are touched by everyone so many times every day. They must be full of bacteria."*

### 3.2.2 Change Management

Employees felt they were not well prepared for the change by management. Also, some felt that the change was done despite them. As noted by one participant: *“The statement from the CEO was that everybody will move to open working environment, whether you want it or not.”* Another participant reported: *“It came without discussion – this is how it will be done.”* One participant noted that: *“We were informed only after places were designed already and possibly it had already been decided who sits where. We got a map of the new environment and your own desk.”* Furthermore, one participant noted: *“This is what top management wanted and this is how we need to live now. It doesn’t matter if you disagree. They have decided how people should work.”*

Majority of employees felt that the reason for change was not communicated clearly. According to one participant: *“Reasons for change was not communicated.”* Other participants were uncertain what the reason was. One participant commented: *“I have no idea. Could it have been that change was to have costs savings from office rent and have whole organization in the same floor?”* Another participant said: *“I guess this was our CEO’s modern view.”* The whole change was also questioned: *“The biggest question mark for me is that this open office was promoted as a modern solution but recent research clearly states that it is not the best or most peaceful place to work.”*

There was a variety of opinions why the change was implemented and this was controversial as some individuals felt they knew what was the reason behind this change, however their answers were diverse. One participant reported: *“I think that the change was communicated and justified well enough and the outcome is mostly successful.”* Another participant provided a detailed description: *“I guess that it was for searching 1) modern office space was so something had to be done, 2) revenue for the constructions costs was received from savings - renting one floor instead of 2 floors, and 3) more open climate/atmosphere which the new office enhances.”*

Some people felt that they were left alone during the change and to survive in the open-plan office. As noted by one participant: *“After the move (to open working environment) it was pretty much everyone’s own problem to figure out how to make it work around here – how to arrange your work and so forth.”* Another participant commented: *“We live here like this and everyone has adapted in some way.”*

Furthermore, employees seemed to pick up the information differently and from different channels. One participant reported: *“There was some announcement in the intranet but we didn’t receive other info really.”*

### 3.2.3 Off-Site Working

Some people had, due to some personal reasons, an individual interim arrangement with their supervisors that they could occasionally work from home. This caused them to feel bad about themselves while doing work outside the office as noted by one participant: *“Remote working would highly improve well-being and I currently have a permission from my supervisor. But the group policy is against remote working so it makes me feel bad every time.”*

Many employees voiced the need for off-site working. People felt that working from home would increase their productivity. As noted by one participant: *“It is remarkably more efficient to work from home office. It’s quiet, peaceful and you can concentrate properly. Other solution would be to book a meeting room from the office so that you could work more privately.”* Another participant mentioned: *“Off-site working would probably increase productivity. In certain tasks you need some peace and quiet and then you could arrange the tasks which require social activity for the days you are in the office. It would be ideal for arranging your own work.”* People had already experienced that they are more productive off-site as noted by one participant: *“I can accomplish more home where there are no distractions. I feel more relaxed and peaceful – and still the work result is at least the same as in the office unless even better.”*

Off-site working was also seen as a chance to change the way other people worked, if some people would be occasionally unavailable. One participant mentioned: *“I have a lot of ad/hoc tasks which could be difficult to deal with if working off-site. On the other hand, our organization could unlearn the ad/hoc things. It is taken for granted that we are always here and run and jump when told. I’m not the only one who suffers from this. Perhaps it (remote working) would make people think a bit more and they would plan better work.”*

Some people did not understand why off-site work was prohibited and what was the point in restricting work to on-site. One participant commented: *“I don’t think that we would NEED to be in the office.”* Another participant claimed: *“Off-site working is not*

*officially allowed which is really old fashion.” Furthermore, off-site working was seen as a logical step for the organization as noted by one participant: “The development in this company has reached only the mid-point. Flexi seat arrangement usually means that people are also working off-site. Perhaps we are going to that direction. I don’t know.”*

Some people also revealed that they did first a full day in the office and then continued working from home in the evenings as they were unable to accomplish certain tasks in the open-plan office. These were people from all parts of the floor and with different job descriptions. Conclusion is that noise and distractions at work effected people equally despite where they sit in the office. So there was not one single spot that was creating problems in concentrating to cognitive tasks but the challenge was experienced in all parts of the floor.

Off-site work was raised by the participants and it was a controversial topic. While clear majority of employees were hoping for a possibility to work off-site some people did not feel the need for it. As reported by one participant: *“I suppose that remote working is not forbidden but I haven’t had the need for that.”* Some employees also wanted to work in the office. One participant noted: *“I do occasionally few hours from home but ... I need to come to the office every day because I need all my papers, not everything are in my computer. And I also need the people around me.”* Another participant mentioned that off-site work might not be possible considering the job requirements but could still be worth a try: *“Other people do that (off-site work) – especially in the evenings – (additionally to full day at the office) but I’m not sure if it could work with my job which requires physical presence. But it could be tried.”* One participant noted that: *“I prefer working in the office but it would be nice to work off-site occasionally when needed and agreed.”*

Some employees preferred to avoid mixing work and home life. For these people keeping the boundaries between work and home was to separate work to be done strictly in the office, leaving whole home environment and ‘off-the-clock’ time for relaxing and unwinding. One participant mentioned: *“I could sit next to my kitchen table but it is not the same. I’m working in the office. I don’t want to work when I’m home. I feel that when you are working you should be in the office.”*



### 3.2.4 Management Style

The CSA revealed that despite the fact that walls had been torn down people were working in the same way as they were earlier in private offices and silos between functions and departments have remained. One participant noted: *"People still work as they were in private offices."* Another participant mentioned: *"People come to their workstation, then they go to eat and then then return to their own seat."* Also, breaking the boundaries was seen as a challenge which people didn't have a courage to do. As reported by one participant: *"People do not dare to break the boundaries. We are in same silos as in the old office."*

Some employees felt that barriers had even got higher compared to private offices. As noted by one participant: *"Now all departments just talk about their own things. Boundaries between different departments has been raised up. As an example I don't go to different department unless I have some official reason and even then I go there just briefly."* Furthermore, the employees felt that there was a lack of support to cross the boundaries, as one participant voiced: *"...And you have no business there so if you come there they almost wonder what's he doing there."* Another participant noted: *"I feel I have less in common now with other departments than I used to. Earlier I could easily go over and chat but now I don't dare to go there! I think I'm disturbing. Everyone are in their own little cells and if you have some business related issue then you go and take care of it but there is no longer small talk or such natural discussion and thinking things together. It has completely ended."*

Several employees expressed their loneliness because of the silos. As stated by one participant: *"People involved in this project (renovation) seems to think that this is all a success and how wonderfully things work now in this floor but I don't see it like that. We have no contact to HR department anymore, for instance, or to any other department for that matter."*

Some employees felt that overcoming the silos would have a positive impact on the cooperation. As stated by one participant: *"I feel that there are silos between different functions... ... Increasing interdisciplinary action in the floor could improve the cooperation"* Cross-functional barriers were also seen hindering the communication. One participant noted: *"Our company is very old fashion and line organization led. Information flows in the line but not in the matrix."*

People felt they were monitored by both the management and their own colleagues. As stated by one participant: *“People are monitoring your comings and goings even though we do not have time cards. Colleagues say nasty things if you come around 11 to your desk and they don’t even know that you have been in meetings the whole morning. This kind of commenting is really annoying. Very negative thing that we should all work within same time frame.”*

Furthermore, top management was seen as distant and isolated from the rest of the floor. One participant noted: *“Think about where they (management) sit, for instance. The visibility of management in this floor is minimal. They walk from the lift to their aquarium. You don’t see them unless you get a glimpse next to the coffee machine. I think that management really should be more visible.”* Another participant stated: *“Now that we have an environment that enables better communication then does people feel that the top management and leaders are visible enough? But I think that we both know the answer to that question.”*

Several employees hoped that management would be more among the employees and lead by their example. One participant noted: *“Top management should be more visible and people from other departments do not walk around in the new office. It is just the same silos as before.”* Another participant stated: *“It does make a difference if someone high from the organization walks around in the office and talks to people. It creates an atmosphere of approachability and sincerity. And be interested about what people daily do. It should be part of top managements job.”* One participant stressed: *“You should walk the talk.”* In addition, one participant mentioned: *“Top management could walk around in the office and ask people who work in different departments how is it going... you can first find out from function leaders if there is something special to be able to make good questions and then top management can go and talk with people.”*

However, some employees felt that there was an improvement compared to how things were in the private offices. As noted by one participant: *“Perhaps top management is in a bit more visible here (compared to old working environment) and they talk more to people than they used to.”* One participant even stated: *“I think that it is obvious that because of this change top management is joined as a group and they have also got closer to the organization.”*

Generally, employees also felt that management was in an advance position compared to the rest of the employees. As noted by one participant: *"You cannot work as you used to with phone calls. Top management don't realize this as they have their own private phone booths and their own aquarium where they can talk."*

Some employees expressed the relationship between employees and management with the presence of fear. As noted by one participant: *"You have to be on your toes all the time."* Another participant stated: *"It is easy for people to comment about the positive things, but they don't have the courage to talk about the things that don't work and should be improved."* Management was rarely seen in outside their aquarium which caused speculations. As noted by one participant: *"When some particular person (high ranking) enters the space, people start to speculate what that means."*

The fear impacted also the use of different spaces in the open-plan office. One meeting room containing two treadmills for walking, for example, was seen as a place to avoid if you valued your job in the company. As noted by one of the participants: *"When the time comes to fire people, the ones who have used the forest walk room will be let go first."*

A surprising finding was that the fear and lack of trust showed also in company questionnaires. It became evident that due to various reasons several employees were unable to answer questionnaires honestly. One participant revealed: *"I cannot answer questionnaires truthfully. Earlier I did but I stopped because there were consequences."* Employees also found it difficult to answer completely honestly to questions asking if they were seeking a job in another company. One participant mentioned: *"I answer truthfully questions except the intention to stay. I am afraid that he answers can somehow be tracked down to the individual who replied."*

Moreover, employees felt that the true intention of questionnaires was not to really improve the organization and people's wellbeing but to keep up the appearances. One participant noted: *"Getting better numbers each year (in organizational functionality questionnaire) is important. More important than what actually goes around in the organization and how people really feel."* This phenomenon showed in individual level. One participant revealed: *"I tell white lies in questionnaires as a favour to our team. To make it look better than it actually is."* There were also people who did not have difficulties speaking their minds in questionnaires. One participant noted: *"I think that I answer all questions truthfully."*

What is more, the room that was designed for relaxing was unused. People did not understand why it was built. One participant stated: *"I haven't understood how on earth it could or should be used for."* Another one said: *"I don't think that it works at all and nobody ever uses it."* Several employees described that if you have time to go there, you don't have enough work to do. One participant even suggested that employees might use it in their own, unpaid time if the company would install a time card device next to the relaxation room as one participant stated: *"Perhaps people could dare to use it if they could log themselves out from work when they go in."* Several employees suggested that it should be turned into a phone booth. One participant noted: *"It is not used and I prefer it would be turned into a normal phone booth."*

And yet, people couldn't use it as a phone booth before any official announcement would be made because their colleagues might think that they were relaxing and didn't have enough work to do. It appeared that being busy and doing seriously work was seen important.

What is more, several employees felt they were forced to fit one mould and that employee diversity was not cherished nor valued. One participant expressed: *"I feel that everything are now harmonized and done in the same way. Departments have cultural differences, we have lots of diverse people. Some are more open and some are more quiet people but the fact is that we ARE different. And there are about 100 of us. We cannot all fit into the same mould. Not all of us are engineers, not every-one was born in the same mould."* Another participant stressed: *"Not everyone are extremely social and you cannot demand that people start to change who they are"*.

Some people even felt that management was unsympathetic towards other employees struggling to work in the open-plan office. One participant stated: *"I bet that the top management thinks that it doesn't matter where you do your work. They just don't see how important the environment is to each individual. Each tasks have their special peculiarities. Furthermore, not all people are socially active and people cannot be demanded to start changing themselves."*

## 4 Existing Knowledge

This section will present the relevant Existing Knowledge (EK). The objective of this thesis was to produce recommendations for management on overcoming unidentified challenges in the open-plan office. During CSA these challenges were identified and next EK related to physical environment solutions, change management, and off-site working are examined in detail. The outcome of this section is a Conceptual Framework (CF) as presented in Figure 9. CF emerges from the synthesis of EK and CSA and it will be used in co-creating the recommendations.



Figure 9. A snapshot from the research design with Conceptual Framework.

One of the major challenges related to physical environment were visual disturbances, noise and lack of speech privacy. Consequently, employees were unable to concentrate to their work. Hence EK related to open-plan offices and their challenges will be examined. Additionally, employees felt they were not well prepared for the change by management. The change from private offices to open-plan office could have been implemented in another way. Physical change was done as new open-plan office was renovated and people were moved to work there. However, further change management is needed in order to fully implement the change. Thus, EK related to change management is examined. Lastly, many employees voiced the need for off-site work. EK related off-site working is examined.

EK related to the identified challenges in management style will not be examined. However, recommendations to relevant EK is presented in Appendix 11.

### 4.1 Physical Environment

The following chapters will examine EK related to physical environment and it will shed light to open-plan office, noise, acoustic solutions for open-plan office, sound masking, open-plan office guidelines, and hot desking.

#### 4.1.1 Open-Plan Office

The appearance of offices has changed over the time. Part of the work that was earlier done in private offices behind closed doors has shifted to different kinds of open-plan spaces, changing the whole nature of work places. Even though studies have shown open-plan office generates high blood pressure and stress, the era of open-plan office is not over (Khazan, 2015, p.25).

Open-plan offices became popular in the 90's but the roots go as far back as 1906 when the Larkin Administration Building in New York was opened (Hickey, 2015). The open-plan design landed in Europe in the 1960s with the *Bürolandschaft* movement, also called as "office landscape" (Beck, 2014, p.16; Hickey 2015). The idea of the two brothers behind this movement was to de-emphasize status and boost efficiency and communication (Beck, 2014, p.16). The use of open-plan offices started to increase 1970s and peaked at the 1990s ((Rasila and Jylhä, 2015, p.455; Hickey 2015). The development of the modern office is presented in table 9 (Hickey, 2015).

Table 9. The development of the modern office (Hickey, 2015).

<b>1856</b>	A UK government report on office space layouts says: "for the intellectual work, separate rooms are necessary so that a person who works with his head may not be interrupted; but for the more mechanical work, the working in concert of a number of clerks in the same room under proper superintendence, is the proper mode of meeting it"
<b>1906</b>	The Larkin Administration Building, the first modern office, designed by Frank Lloyd Wright, opens.
<b>1939</b>	The Johnson Wax company's open-plan office, designed by Frank Lloyd Wright, opens.
<b>1958</b>	Architect Mies Van Der Rohe designs the Seagram building in New York, the type of workplace now recognised in dramas such as Mad Men.
<b>1960s</b>	The Bürolandschaft office landscaping movement emerges.
<b>1980s</b>	Hot-desking, borrowed from hot-bunking where submariners shared their bunks, begins to be used in offices.
<b>1990s</b>	The rise of the 'office hotel', where space management is improved and there is a wider range of spaces to work in.
<b>2000s</b>	The barrier-free office comes of age, giving people a variety of places to work.

In 2012, open-plan design appeared to be the most wanted environment which promotes innovation and collaboration while simultaneously increases productivity (Armstrong, 2012). Furthermore, already for decades companies have tried to balance between private and public workplace that would support collaboration in the best way (Gongdon, Flynn and Redman, 2014, p.52). The need for increased privacy and avoiding distractions brought cubicles with high walls into workplaces. Then again, in the 1990s need for privacy had changed to the need of increase interaction and have access other people, hence, working environment design evolved towards more open spaces (Gongdon, Flynn and Redman 2014, p.52). Also, going from one end to another in the spectrum may have been too much as recent research suggest people have a vast need for privacy in order to cope with today's intensive nature of work (Gongdon, Flynn and Redman, 2014, p.52).

Open-plan offices have several benefits compared to traditional individual offices. According to Congdon, Flynn and Redman (2014, p.52), open office can promote learning, foster collaboration, and nurture culture. Additionally, Roelofsen (2008, p.203-204) notes that in addition to economic advantages, open offices promote better work involvement, transparency and openness, plus offers modern and fresh design. However, open-plan environment highlights the importance of collaboration and communication at the expense of privacy (Beck, 2014, p.16).

On the other hand, especially noise and disturbances are hot topics. Employees working in an open-plan office know first-hand how negative impact noise can have on performance and this could partly be solved with sound masking (Siltanen, 2011). When employees are moved to an open-plan office the intended cost savings in office rent might remain unachieved due to a remarkable drop in job satisfaction, followed by decrease in performance (Partanen, 2016, p.58). Employees report that it is difficult to get work done in an open-plan office with noise and lack of personal work space and that reducing noise could significantly improve their ability to concentrate to work and reduce the number of mistakes (Kantola, 2016).

Distractions are severe and can have a heavy impact on the employee performance. It has been studied that after an interruption it can take up to 25 minutes before a person can get back to the original level of concentration (Molloy, 2013). Cain (2013, p. 85) mentions that being disturbed is one of the major challenges for productivity.

Figure 10 (Hongisto *et al.*, 2012, p. 46) visualises different zones for an activity based office. The zones are developed using Ehrlich's and Bitter's framework that the basic idea is that an office should have four different work spaces that support 1) concentrated individual work, 2) concentrated team work, 3) individual work where interruptions are tolerated, and 4) team work where interruptions are tolerated (Hongisto *et al.*, 2012, p.46).

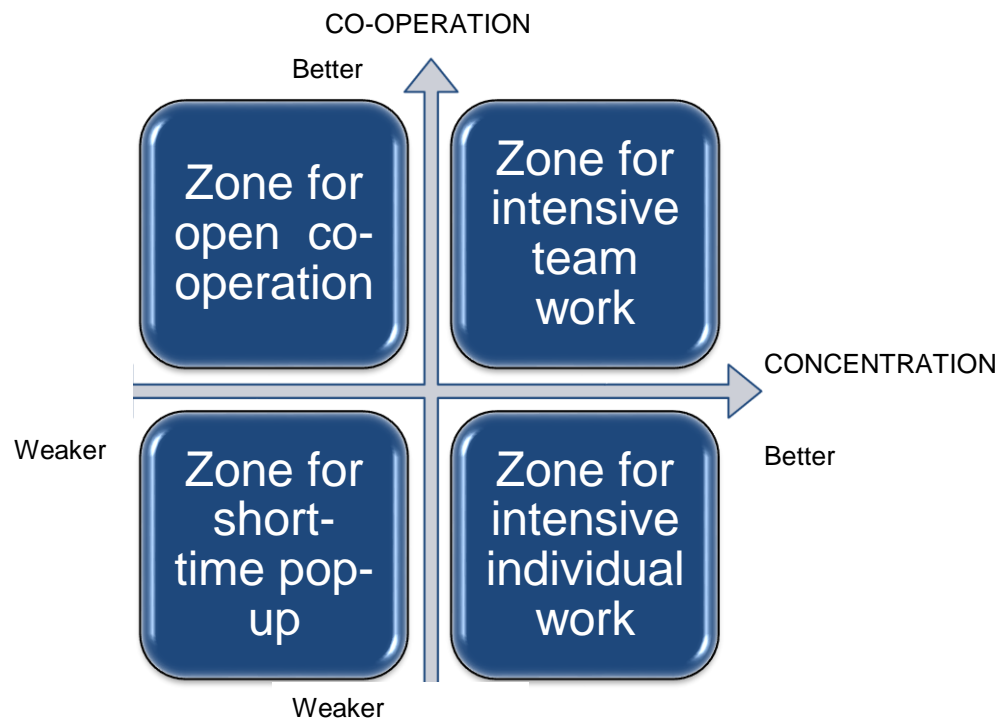


Figure 10. Four zones in activity based office based on Ehrlich's and Bitter's model (Hongisto *et al.*, 2012, p. 46).

In addition, physical environment also calls for *flow* because the environment has a strong impact on employees' job satisfaction, feeling of coping with the work, and psychological state (Haromo, 2016, p.2). Flow space creates optimal conditions where individuals can feel increased empowerment and positive flow as well as unwinding and relaxing (Haromo, 2016, p.2)

Physical working environment is a sum of several elements and when the space is designed successfully, it is impossible for a person to identify what specific element is generating the good feeling and flow (Haromo, 2016, p.3,6). Furthermore, even though plants do not have an impact on office acoustics (Hongisto, 2008, p.2-3), they do have a positive impact on the flow (Haromo, 2016, p.5).



Google's Mountain View headquarters Googleplex in California presents an extreme example of open-plan design. A total of 20 buildings creating a campus-site including a dog kennel and volleyball field. Collaboration and concentration were considered as key principles in the design. The office was developed into different zones based on social interaction levels and how employees would use the space. Additionally, design took into account different needs for public and private areas, as seen in Figure 11 (Young, 2012), as well as space needed for quiet concentration, relaxation, collaboration, large scale gatherings and informal meetings. (Young, 2012)

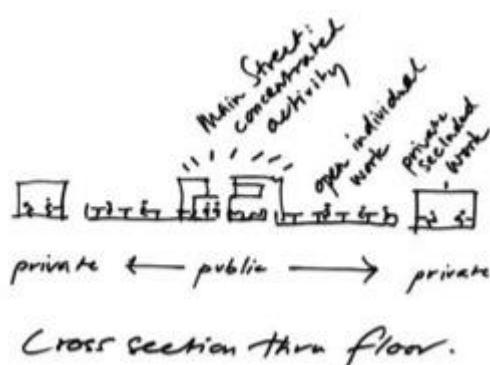


Figure 11. Designers idea of the flow between public and private spaces in an open-plan office (Young, 2012).

All conversations were forbidden in the Larkin Administration Building when it was opened in 1906, and the ones in charge had their own separate spaces. This, however, is not the case in today's open-plan offices and, thus, the downsides of an open-plan office are much greater than the benefits, and that collaboration and ideas sharing cannot compensate for the noise and distractions. (Molloy, 2013)

Combining both privacy and collaboration, which are quite the opposite to one another, in an open-plan office can be done by giving employees the possibility to choose where they do the work (Armstrong, 2012). Choose do they want to be physically present in the office and which space in there suits them best, or do they want to work off-site which then should be both supported and encouraged by the cultural environment of the organization (Armstrong, 2012). Additionally, choice can be demonstrated in both the physical and cultural aspects of an organization's work environment.

Open-plan design might be favoured because the amount of space needed for one employee is substantially smaller, modifications to the office layout are easier to make

and, additionally, renting an open-plan office is easy (Roelofsen, 2008, p.203). The economic advantages that open-plan office has can be increased further as follows:

1. The shorter working distances
2. The promotion of better:
  - communications
  - information routes
  - colleague relations
  - work involvement
  - transparency and openness
  - fresh and modern architecture

(Roelofsen 2008, p.203-204)

Open-plan offices are designed with maximizing the use of space and enclosing as many functions into the same space as possible. However, different work has different requirements and open-plan environment is not suitable for everyone. It is inappropriate for the work that calls for intensive concentration, excessive talking on the phone, or persons who need extreme privacy such as HR function. Best results can be achieved with activity-based offices where employees can choose their working place from various different spaces such as open-plan office, private office room, meeting room, mobile work desk, team work room or work off-site. (Anteroinen, 2009, p.44-45)

#### 4.1.2 Noise

To begin with, the employees are most productive in a healthy and comfortable working environment. Noise has a negative impact on employee's concentration and, moreover, their feeling of 'well-being'. People perceive the disturbance of any sounds differently making it subjective how noise affects different individuals. Furthermore, disturbance level depends on the assignment the person is working on and more challenging assignments require deeper concentration. Also Schlittmeier and Liebl (2015, p.71) note that optimizing acoustic conditions might be challenging due to subjective well-being and performance. Noise generates irritation, interruptions and loss of performance and, in addition, even have a negative impact on short-term memory. Without a question, noise is an undesired element in the office when employees are expected to perform at their best and be creative. Roelofsen (2008, 202-203) states that "*Noise is a problem which is, currently and unfortunately, rarely recognized by the management in a corporate organization (Russel, 1999)*". (Roelofsen 2008, p.202, 203, 206).

Also, recent studies have shown that speech can reduce work performance up to 50 percent and bad acoustics can even increase the negative impact (Laaksonen, 2016). Of all noise, speech is proven to be the most disturbing as it is understood in the working memory of human brain (Laaksonen, 2016; Armstrong 2012; Schlittmeier and Liebl, 2015, p.64). Intelligible speech heard from 20 meters away with regular voice is sufficient to distract (Laaksonen, 2016)

Open-plan offices have led to increased intolerable noise in the workplace. Conversations and working head-to-head have a negative impact on a person's performance in an open working environment. The impacts on concentration caused by lack of speech privacy and overhearing other people's conversations are often overlooked by companies because companies rather pay attention on the advantages that come with an open-plan office and expect the employees to get used to the noise level in the long run. (Roelofsen, 2008, p.203, 204)

All things considered, of all the sources of noise, speech is the utmost disturbing one in the open-plan office and once a person gets distracted, returning to the original concentration level takes ten minutes or even more. Over-hearing conversations that a person can follow and recognize the content are most disturbing, hence, conversations in a foreign language might be less as disturbing compared to conversations in person's native language. With this in mind, as open-plan office is an environment where speech is constantly generated, reducing speech intelligibility is important. (Roelofsen (2008, p.204, 205)

People react to sound more or less instinctively and, therefore, hearing new sounds has an impact on person's concentration: it disturbs creative thinking and/or may lead to overlooking some important detail (Roelofsen 2008, p.206). Background noise with or without speech weakens an individual's ability to do mental mathematics and impairs memory (Beck, 2014, p.16). Still, it needs to be acknowledged that noise in office environment is perceived differently by different individuals working with different kinds of tasks (Rasila and Jylhä, 2015, p.457). As a result, noise in the same environment can be perceived differently by different employees (Rasila and Jylhä, 2015, p.457).

The following conclusions were made by Rasila and Jylhä:

- *The perception of the noise environment is closely related to the specific job type and personal traits of individual workers.*
- *The noise in the open-plan office should be understood as one aspect of a greater entity, the workplace.*
- *The same aspects of noise may have both positive and negative consequences for the office workers.*
- *The information content of the noise matters a lot.*

(Rasila and Jylhä, 2015, p.460, 461)

At the same time, it is hardly possible to create a completely silent environment (Rasila and Jylhä, 2015, p.461; Schlittmeier and Liebl, 2015, 71). As eliminating all noises from the office completely is practically impossible, a more suitable approach would be balancing noise environment (Rasila and Jylhä, 2015, p.461).

In particular, closed spaces should be included in an open-plan office to offer employees a place to 1) work on tasks that requires higher level of accuracy and/or creativity, or 2) have phone conversations (Roelofsen, 2008, p.210). Privacy in open-plan office is not an enemy for collaboration but rather nurtures it. Collaborative activities can actually be strengthened and enriched by improving employees' privacy to include space where people can go for peace and brush away distractions (Gongdon, Flynn and Redman, 2014, p.53). Architectural privacy, such as being able to close one's door, is closely associated with psychological privacy which in turn correlates with performance and job satisfaction (Beck, 2014, p.16). Thus, open-plan office that encloses adequate number of private spaces for individuals to retreat to can have a positive impact on the bottom line.

Then again, as stressed by Baker and Holding (1993, p.352), noise should not be generalized. Several factors, such as time of the day, individual's gender, type of noise, and how challenging the cognitive task is, can have an impact on employee's performance. Thus, it is absurd to make generalizations regarding how noise impacts all employees. (Baker and Holding, 1993, p.352)

On the positive side, Waber, Magnolfi and Lindsay (2014) argue that one of the most valuable activities that take place in an office are face-to-face collaborations. Furthermore, performance can be improved by creating unplanned 'collisions' and gatherings by chance between people. The space can help creating more 'collisions' and increased collisions generate positive outcomes (Waber, Magnolfi and Lindsay, 2014;

2013, p.16). For example, one company experienced a huge productivity improvement after they enlarged the break room and allowed their employees to spend more time there with their fellow workers. Another great example came from a sales team where a 10 percent increase in collaboration with people working on other teams correlated to a 10 percent increase on the person's sales figures. Also, the notable value of discussions in the hallway and cafeterias were one of the reasons why for example Yahoo repealed off-site work possibility from their employees. (Waber, Magnolfi and Lindsay, 2014)

As a matter of fact, a cafeteria is a good place where employees can have unplanned encounters with one another. Waber, Magnolfi and Lindsay (2014) state that "*Sometimes circulating, exploring, engaging, and increasing the number of people's collisions is more important than individual productivity or creativity.*" Co-working spaces pop-up lofts that give employees a chance to work with researchers, their customers et cetera are another example where powerful interaction can take place. (Waber, Magnolfi and Lindsay, 2014)

At the same time, Waber Magnolfi and Lindsay (2014) also state that we should challenge the way workplace is defined. It should be about *how* the work is done instead of *where* it is done. The office of the future will be about thinking and working outside the office that once was defined including meeting rooms, desks, and common spaces. (Waber, Magnolfi and Lindsay, 2014)

#### 4.1.3 Acoustic Solutions for Open-Plan Office

Noise is energy and acoustic material has the ability to absorb it more compared to traditional material (Schlittmeier and Liebl, 2015, p.65). Good acoustics solutions could significantly decrease the negative impact of speech to cognitive work and consequently increase peoples' happiness to the space acoustics (Hongisto *et al.* 2012, p.13; Schlittmeier and Liebl, 2015, p64). This requires three elements to be used in the open-plan space simultaneously: 1) large amount of noise absorbing materials, 2) high space dividers, and 3) ample noise masking (Hongisto *et al.* 2012, p.13). In other words, investing heavily in only one element is not enough to generate the needed improvement to acoustics if the other two elements are absent (Hongisto, 2008, p.2).

The Finnish Standards Association (FSA) has created recommendations for different buildings regarding acoustics. Recommendations for office environments were published in 2004 and in 2008 they were also added to the building's indoor air classifications

(Anteroinen, 2009, p44). They can be found from Appendix 7 and spaces that are relevant for open-plan offices are highlighted.

Moreover, class A represents the best possible circumstances and can be achieved only when all three elements are combined: adequate amount of high quality absorption materials, space dividers and sound masking. For spaces where discussion between desks is absolutely necessary and expected, target level can be C. What is more, it should be noticed that absorption levels A, B, C, D, and E are different from acoustic classes A, B and C. (Hongisto 2008, p.3)

First and foremost, to prevent sound waves travelling over space dividers, sound absorbing materials are needed in the ceiling. Best results are gained when the ceiling of the entire open-plan office is covered with acoustic material that has the highest absorption level A (EN 11654, range from E to A). Considering the space required by house technique – for instance air condition and plumbing – the surface that can be covered with acoustic panels is about 80 percent. (Hongisto, 2008, p.2)



Figure 12. Functional and colourful ceiling panel installation off the ceiling (Hyppölä, 2016).

Additional to selecting the right kind of material, it is important that it is installed in the office in the correct way. All panels should be installed with minimum of 5 millimetres

distance to ceiling, to maximize the sound absorption and reduce sound echo to an approved level (Haromo, 2016, p.5). Figure 12 (Hyypölä) presents hanging installation of a ceiling panel as an example.

Also walls and wall-like surfaces needs to be considered. The absolute minimum absorption level requirement for wall panels is C or B (EN 11654, international standard for sound insulation in buildings) and the amount of the material should equal the amount of square meters in the office space. As an example, if the office space is 100 square meters then the required amount of absorbing material in the walls is 100 square meters. Additionally, thick and porous curtains can absorb noise and reduce horizontally travelling sound waves. (Hongisto, 2008, p.2)

With the use of space dividers, it is possible to reduce sound even further when ceiling and walls are covered with sound absorbing materials. This is because a space divider blocks the sound going directly from one desk to another, and the reflection through ceiling or walls is as well blocked. The best result is achieved with tall space dividers and it can be said that the taller they are the better the result. However, it must be acknowledged that raising the height of dividers alone does not help if the ceiling and walls are not covered with sound absorbing material. (Hongisto, 2008, p.2)

In particular, the recommended absorption level for space dividers is C or B (EN 11654). In addition, less than 1,6 meters tall dividers should be used only in spaces where high level of collaboration and cooperation is expected. This is also noted by Schlittmeier and Liebl (2015, p.72). Target class is usually A, which is the most desired level. If the nature of the work calls for constant discussion between desks, high dividers should not be used at all. In these cases, lower absorption materials, such as C, can be used. Correspondingly, the speech created within one team should not disturb other teams and, hence, high space dividers are needed between teams. (Hongisto, 2008, p.2-3)

Further noise reduction can be achieved by covering the office floor with textiles as to reduce the sound of walking. Bad experiences from the 70's have been overcome by the significantly improved quality of carpets and improved maintenance practices. Carpet has an additional 'library' effect as employees tend to behave more quietly in spaces that have carpet. The library effect enhances employees' ability to work. (Hongisto, 2008, p.2-3)

And what is more, in the ideal situation good quality acoustic materials are installed to the office in the building phase. Nevertheless, unsuitable materials or low quality materials can be taken down and replaced with new ones. It is possible to increase employees performance in an open-plan office by improving the acoustics. The cost of improving acoustics for one square meter is about 100 euros and maximum of 200 euros. Usually open-plan offices have about seven square meters per employee, thus, the investment pays itself back in a few years. (Laaksonen, 2016)

Still, it must be remembered that even with good acoustics solutions, it is impossible to overcome distractions that come from the noise created in the nearest work desks (Hongisto *et al.* 2012, p.13). Thus, other solutions are additionally needed, such as guidelines for communicating. (Laaksonen, 2016)

#### 4.1.4 Sound Masking

Sound masking is described as: *“the process of adding a low level, unobtrusive background sound to an environment to reduce the intelligibility of human speech and reduce noise distractions in that environment”*. It is used in reducing noise distractions, protecting private conversations and increasing focus and productivity. (Cambridge sound, 2016).

Sound masking systems consists of a control unit and several small speakers which can be planted seamlessly and discretely into ceiling panels or above them (Cambridge Sound, 2016). As described in Figure 13 (Audico, 2016), a properly installed sound masking system can create a consistent optimal volume level to the entire open-plan office. Hot and cold spots with too high or low volume can be avoided and, additionally conference rooms and private offices situating next to the open-plan office are left undisturbed.



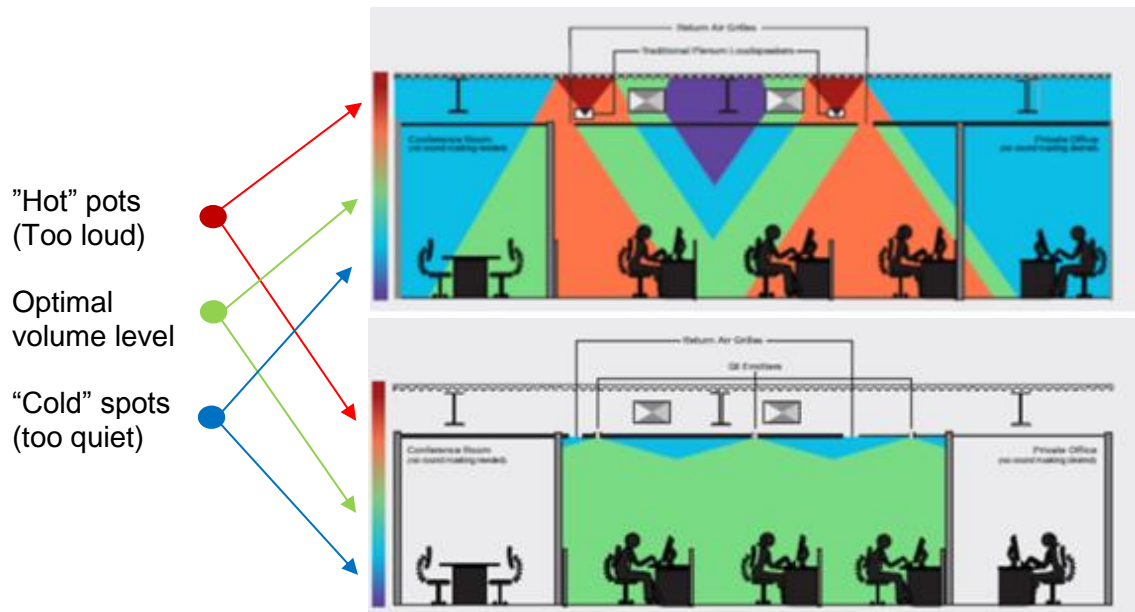


Figure 13. A sound masking system in operation (Audico, 2016).

To point out, sound masking system have endless possibilities and is easy to install even to an existing office. Masking sound makes undesired speech from long distance unintelligible and offers privacy and reduces distractions. Speakers can be very small, as presented in Figure 14 (Cambridge Sound 2016). It is possible to control even a big space because each speaker can be individually tuned.



Figure 14. An example of a sound masking speaker (Cambridge Sound 2016).

Speakers can also be integrated to a ceiling panel with sound sensors and lights, as presented in Figure 15 (Audico 2016). Ceiling panel can be adjusted to change colors as an example to red when the noise in the space increases above certain decibels. For instance, employees see the colour changing to red as a signal to turn down their volume. As a result, when the noise level is controlled automatically employees are liberated from asking their colleagues to lower their voices. (Audico, 2016)



Figure 15. An acoustic ceiling panel with noise sensor controlled lights (Audico 2016).

In order to be effective, the level of background noise should be around 43-45 dBA in those parts of an open-plan office where the disturbing conversations take place, but it should never be over 48 dBA (Hongisto *et al.* 2012, p.25; Roelofsen 2008, p.210). The sound masking is not meant to annoy employees (Schlittmeier and Liebl, 2015, p.72). Furthermore, level should not be less than 35 dB as other vice sound masking is unable to bring the desired benefits (Schlittmeier and Liebl, 2015, p.72).

With today's cutting edge technology, it is possible to limit how widely the sound from one speaker is spread and, moreover, create silent zones between different areas in the open-plan space. A speaker can be installed to the roof right above the desk as shown in Figure 16 (Panphonics 2016). Alternatively, speakers can be placed on top of the desk as shown in Figure 17 (Panphonics 2016).

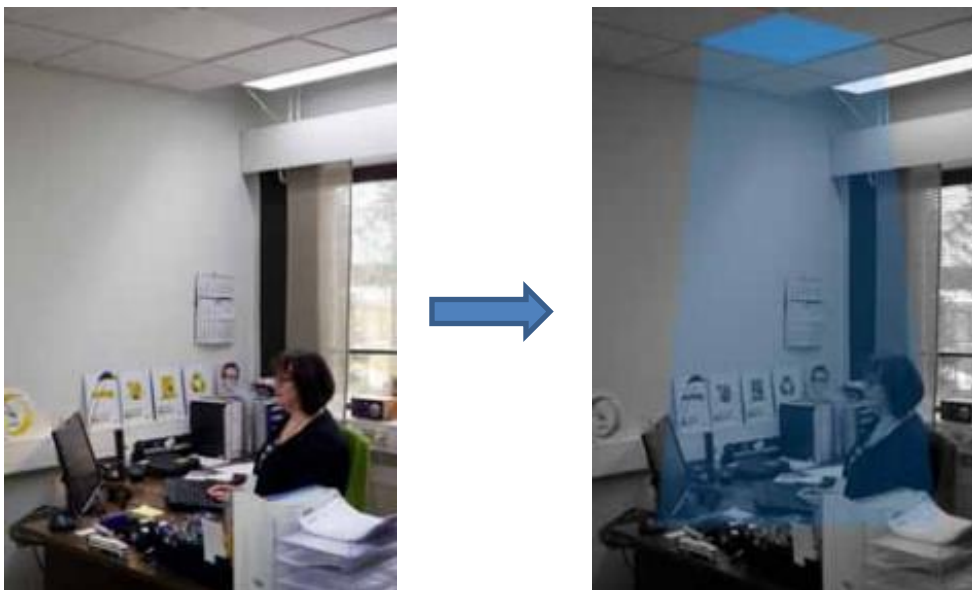


Figure 16. Directing the sound from a speaker integrated into a ceiling panel (Panphonics 2016).

What is more, it is possible to personalize the sound for each employee. This is necessary as individual preferences can vary. As an example, one study showed that background music had a negative impact on introverts' work compared to extroverts' (Beck 2014, p.16). Furthermore, another study revealed that people preferred the natural sounds, such as flowing water, over the white noise (Khazan, 2015, p.24).



Figure 17. Personal speakers and control unit for work desks (Panphonics 2016).

All things considered, masking sound is essential for the open-plan offices, even more essential than in private offices. According to a research conducted by the Finnish Health Department, speech decreases the performance up to 10 percent of work that consist of cognitive tasks. Performance is confirmed to be higher in an environment where a sound masking system is installed compared to environment lacking it. The sound masking should be as unnoticeable as possible and irritation-free. It seems that the most suitable sound masking is consistent natural sounds. It produced the highest acoustic happiness and made distant speech unintelligible. Music and especially music including singing is rated equally disturbing as speech and, thus, is not recommended to be used in sound masking. (Hongisto, 2008, p.3-4)

Installing a sound masking system to an office afterwards contains some challenges and special attention details is essential. Also, sound masking system should not be installed to spaces where active team work with discussions between desks are intended to take place. This is because sound masking inhibits communication with distance. (Hongisto, 2008, p.4)

Furthermore, it is important that the office atmosphere and the culture is positive towards change. Getting used to the sound masking is a relatively short process which takes only couple of weeks however, employees might at first have diverse opinions about it and not all of it is positive. (Hongisto, 2008, p.4)

#### 4.1.5 Open-Plan Office Guidelines

It is possible to influence the amount of noise in an open-plan office with guidelines or 'the house rules'. Guidelines on how people should behave in the office is recommended to be written in a style that suits the organization (Hongisto, 2008, p.4). Some suggested guidelines are presented in Table 10 (Hongisto, 2008, p. 4-5).

Table 10. Example of guidelines for open-plan office (Hongisto, 2008, p. 4-5).

1	Employees' should take into consideration their colleagues and guarantee work peace.
2	Long discussions should be held in closed spaces such as unoccupied meeting rooms.
3	The discussions that are absolutely necessary in the open-plan office should be held in a moderate volume, including phone conversations.
4	Communication over desks and space dividers or to another room should be avoided. If necessary, people should get up and walk to the person in question.
5	Matters and issues that all should know should be discussed separately during meetings or breaks, not continuously in the open-plan office.
6	Mobile phones are suggested to be taken along when leaving desk for a while.
7	If there are landline phones on the desk, calls must be transferred when the person is not present at the desk.
8	Using noisy shoes in the space can be discussed jointly if employees feel they disturb.
9	When working with something that requires deep concentration, employees should retreat early enough to separate spaces where it is easier to concentrate.
10	Employees who talk a lot on the phone are advised to start using a special, high quality head set. Better speech quality decreases the need to raise your voice on the phone. A head set also increases privacy with sensitive issues as the microphone takes sounds only from close distances.
11	For long phone discussions and online meetings that are held at a person's desk in the open-plan office it is advised to create a method or a signal that indicates other people working in the same area that the person in question is busy.
12	Visitors should also be informed about the created guidelines.

Acoustic solutions are vital for an open-plan office. However, additional office guidelines can improve the environment even further and increase the likelihood of being able to work efficiently in the open-plan office. Partanen (2016, p.58) claims that guidelines play an important role in an open plan office, as presented in Figure 18 (Partanen, 2016, p.58)

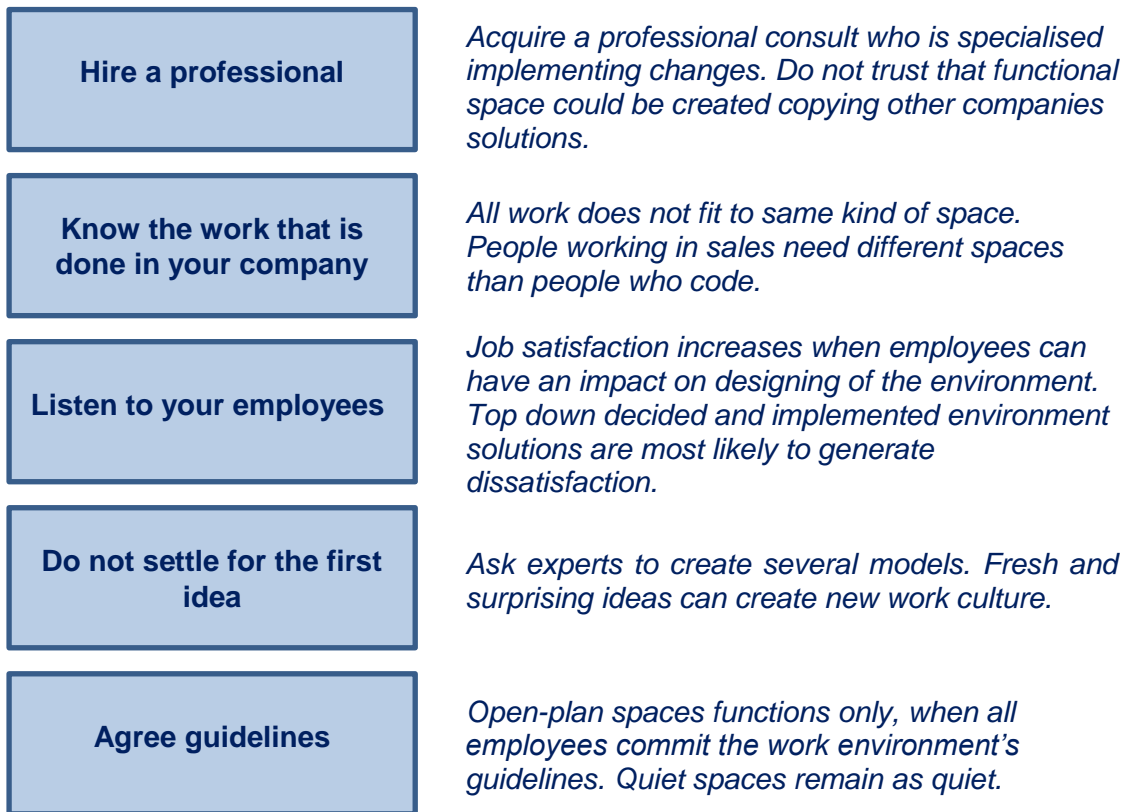


Figure 18. A check list for moving into an open-plan office (Partanen, 2016, p.58).

Also Schlittmeier and Liebl (2015, p.64) stress the importance of reducing background speech and suggest defining phone times and silent times to the office as one solution. Also “No-Talk Thursdays” (Cain, 2013, p.86) are used - meaning that on that specific weekday people are prohibited to talk to each other.

#### 4.1.6 Hot Desking

The notion of hot desking originates from submarines where sailors took turns using their bunk beds and it became popular in the business world in the 1980s (Hickey 2015).

When planning open-plan environments it is essential that the company's management is aware of what kind of work will be done in the work place because different jobs have different requirements. An ideal worker for an open-plan office is a person who works with a laptop as they can easily move around. However, it might be that only management and people who travel on a regular basis can work solely with laptops as other employees might have lots of paper and double screens. Also, it is important to know how many of the employees are working daily on site and how many are working off site. (Partanen 2016, p.58)

Moreover, the minimum size of each work desk is six square meters and the distance between two desks should be more than 2,5 meters. This is an absolute necessity for creating a good acoustic environment in the open-plan office and increasing speech privacy. (Hongisto, 2008, p.4)

Millward, Haslam and Postmes (2007, p.552) state that team identification is stronger for employees who have assigned desks and the likelihood of valuing face-to-face communication is higher compared to employees who are hot desking. Also, in their study from positive descriptions about desks with "*sense of belonging/ownership*", "*team spirit and continuity*", and "*comfort zone/personal space*" as high as 92 percent came from employees who had assigned desk (Millward, Haslam and Postmes, 2007, p.553). Whereas 93 percent of negative descriptions about desks came from employees who didn't have assigned desk (Millward, Haslam and Postmes, 2007, p.553). Thus, employees valued a desk that was assigned for them. Also, those people hot desking seemed to value electronic engagement over face-to-face discussions and had higher identification to their organization than to their team (Millward, Haslam and Postmes, 2007, p.554).

Both assigned desks and hot desking have an impact on employees. As Millward, Haslam and Postmes (2007, p.555) argue: "*the impressive capacity for employees to actively adapt and psychologically reconcile themselves—through engagement—to the arrangements provided by the organization.*"

Waber, Magnolfi and Lindsay (2014) noted that a company that was hoping to increase employee's interaction and unplanned 'collisions' by introducing hot desking suffered a huge drop in productivity and revenue. Unassigned seating plan did not work as planned

as people didn't leave their workstations after they got there. As a matter of fact, hot desking caused 45 percent drop in communication. (Waber, Magnolfi and Lindsay, 2014)

The functionality of the office should be discussed with the employees as well as ensure that employees have a peaceful working environment as well the possibility to work regardless of their location (Kantola, 2016).

From one third to almost a half of the people are introverts (Cain, 2013, p.265). Thus, organizations are likely to have a great number of introverts in their workforce. And not all introverts appear to be one. As extroversion are perceived to be more preferred type, some introverts try to appear as extroverts (Cain, 2013). Workplaces and especially open-plan offices seem to favour extroverts, which creates a danger alienating introverts and failing to benefit from their potential. Chapman (2015) states: *"But by overlooking introverts and their preferred ways of working, business are failing to make the most of their workforce"*.

As Stephen Hawking has said "Quiet people have the loudest minds" meaning that the extroverts might not be the ones who have the best ideas. With more flexible working practises, increased use of modern technology, and giving time alone introverts can have a better chance to thrive in the modern work life with hot desking, open-plan offices and group brainstorming (Chapman, 2015).

## 4.2 Change Management

The following sections will examine Existing Knowledge related to change management and shed light on different approaches for managing change, the challenges of change, and describe creative destruction and creative recombination. Change is something that organizations in today's fast phased and highly competitive business environment are unable to escape. Change is needed for survival, nevertheless, change is also challenging as it takes a lot of time and resources and, thus, organizations don't start change processes lightly. However, with good change management it is possible to decrease the negative impact that change can have on employees. Different approaches for managing the change exist, and each company can choose the one that suits best to their organization and for the change they are implementing. The next sub-section will examine different approaches: Lewin's three-step model, Kotter's eight step plan, action research and organizational development.

#### 4.2.1 Approaches for Managing Change

This section will present four approaches for managing the change. These are Lewin's three-step model, Kotter's eight-step plan, action research, and organizational development (OD) (Robbins and Judge, 2013, p.618, 620, and 621).

**Lewin's three-step model** presents one of the first known change models (Elrod and Tippet, 2002, p.274. Kurt Lewin is "*considered the intellectual father of the philosophies of OD, applied behavioral science, action research and planned change*" (Al-Haddad and Kotnour 2015, p.236). Figure 19 (Robbins & Judge, 2013, p.619) presents the change model that consists of three steps: unfreezing, movement and refreezing.



Figure 19. Lewin's three-step change model (Robbins & Judge, 2013, p.619).

Unfreezing the status quo requires overcoming pressures resisting the change (Robbins and Judge, 2013, p.618-619). Unfreezing also prepares staff for accepting the coming change and forces the organization to realize that change is needed for survival (Brisson-Banks, 2010, p.245). Change resistance can be overcome by increasing forces that move organization in the desired direction, or decreasing the forces that keep the organization in the earlier, familiar state or, as a third option, try affecting both the increasing driving and the decreasing restraining forces. Restraining forces can be powerful especially in radical changes (Robbins and Judge, 2013, p.619).

The second step is the actual change process that moves the organization to the desired end state, and the third step is making the change permanent and in a way, a new status quo. So the emphasis on Lewin's model is on reinforcing the change and ensuring that the change is permanent. Even though Lewin's model has received some criticism, it remains valid. As Burnes (2004, p.997) points out, by referring to Bargal and Bar, the model is "*on building understanding, generating learning, gaining new insights and identifying and testing (and retesting) solutions*" (Burnes 2004, p.997).



Kotter (2007, p.99) provides another framework for implementing change known as **Kotter's eight-step plan**. The framework is presented in Figure 20 (Kotter, 2007, p.99).

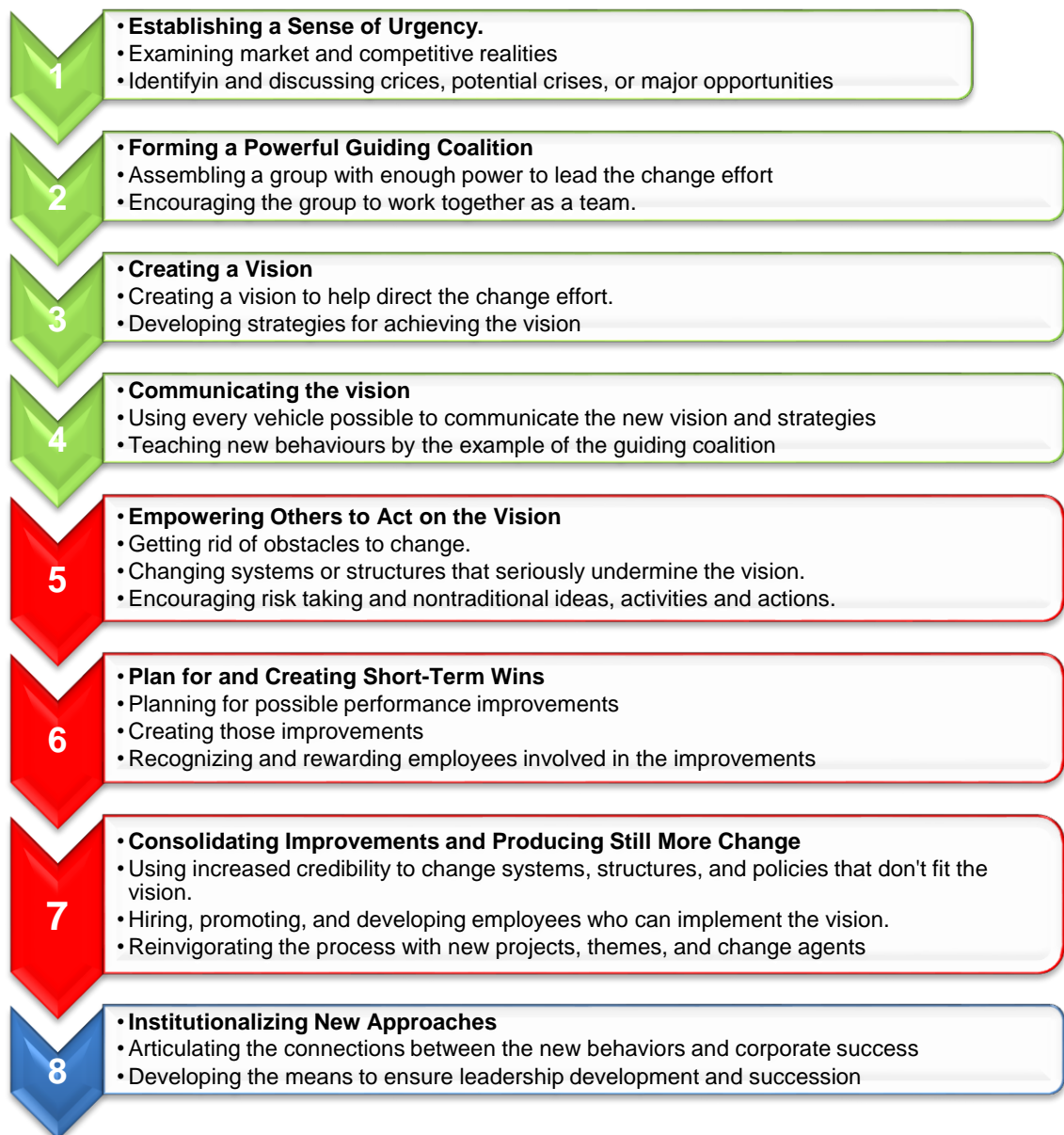


Figure 20. Kotter's eight-step plan for implementing change (Kotter, 2007, p.99).

Robbins and Judge (2013, p.620) suggests Kotter's plan is built on the classic three-step model created by Lewin. The first four steps describe the 'unfreezing', the next three steps the 'movement' and the last step the 'refreezing'. The resemblance is visualized by using same colours in Figures 19 (Robbins & Judge, 2013, p.619) and 20 (Kotter, 2007, p.99). Moreover, Kotter's approach for implementing change offers an in-depth

description and, thus, offers better guidance for organizations to overcome the possible challenges and implement changes successfully.

Each step with descriptions is presented in Figure 20 and the most important one is the first step as it all starts with creating a sense of urgency in the organization. It is crucial that the members of the organization really see and feel the need for a change. Kotter (2008, p.13) argues that many organizations stumble in the first step and it can have serious consequences regarding to the success of the change. The true sense of urgency and its importance are discussed further in section 4.2.2. Challenges of Change.

Robbins and Judge (2013, p.621) suggested **Action Research (AR)** as one option for managing the change. A preliminary introduction to AR was provided in chapter 2.2.4. Furthermore, according to Coghlan and Brannick “*action research is about undertaking action and studying that action as it takes place*” (Coghlan and Brannick 2014, p.177). As described in Figure 21 (Coghlan and Brannick 2014, 83), AR contains several cycles of action with each cycle having four steps: constructing, planning action, taking action, and evaluating action. After each evaluation, a new loop is started until the desired state is achieved and planned change is completely implemented.

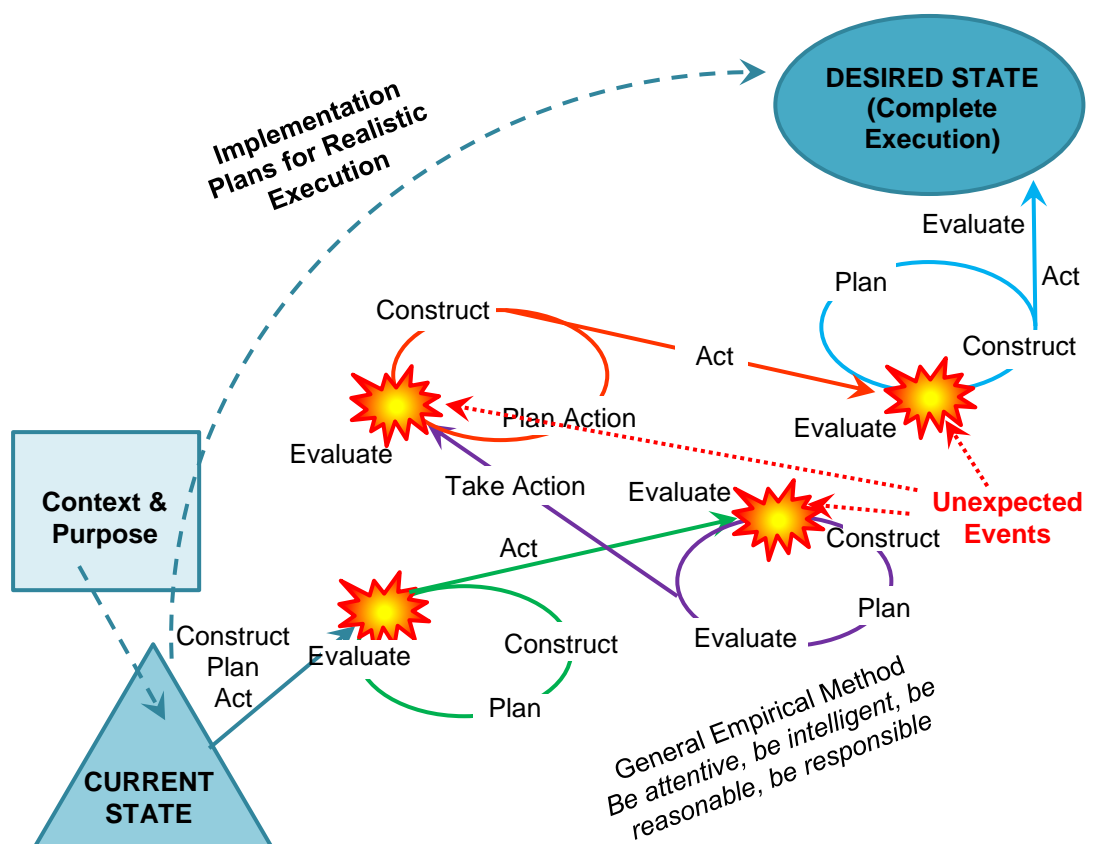


Figure 21. Action research framework with multiple cycles (Coghlan and Brannick 2014, 83).

The fourth framework for managing the change is **Organizational Development (OD)**. OD is more than just a method, it is a collection of different methods that are used in order to improve both employees' well-being and organizational effectiveness (Robbins and Judge, 2013, p.621). Most organizational development efforts contain the following underlying values: 1) respect for people, 2) trust and support, 3) power equalization, 4) confrontation, and 5) participation (Robbins and Judge, 2013, p.622).

There are various techniques that are used in OD efforts and six of them are presented in Figure 22 (Robbins and Judge 2013, p.622-625).

<p><b>Sensitivity Training</b></p> <p>Training groups that seek to change the behavior through unstructured group interaction.</p>
<p><b>Survey Feedback</b></p> <p>The use of questionnaires to identify discrepancies among member perceptions; discussions follows, and remedies are suggested</p>
<p><b>Process Consultation</b></p> <p>A meeting in which a consultant assists a client in understanding process events with which he or she must deal and identifying processes that need improvement.</p>
<p><b>Team Building</b></p> <p>High interaction among team members to increase trust and openness.</p>
<p><b>Intergroup Development</b></p> <p>OD effort to change the attitudes, stereotypes, and perceptions that groups have of each others.</p>
<p><b>Appreciative Inquiry</b></p> <p>An approach that seeks to identify the unique qualities and special strengths of an organization, which can then be built on to improve performance.</p>

Figure 22. Techniques used in organizational development for managing change (Robbins and Judge 2013, p.622-625).

Furthermore, according to Hongisto *et al.* (2012, p.29) when doing changes in the physical working environment it is important to pay attention to how the process is executed. Well-handled change process has an impact on employees' perception about the space as well as increases their satisfaction about the space and, therefore, employees should be genuinely included in the change process (Hongisto *et al.*, 2012, p.29). Furthermore, space process should be seen as a continuous process to which employees should have a possibility to participate instead of sudden or abrupt changes (Hongisto *et al.* 2012, p.29).

Also, change resistance can be expected if employees are left outside the planning phase. It is vital that employees feel they have a real chance to have an impact on the new environment and not be handed a ready-made decision. Senior management can improve employees' job satisfaction in the new environment by implementing the change well and treating the employees equally. And as previously presented in Figure 18 (Partanen, 2016, p.58) it is important to know what kind of work is done in the company as not all work fits the same kind of space. (Partanen, 2016)

#### 4.2.2 Challenges of Change

Not all planned organizational changes are success stories and despite good intentions and great efforts, sometimes organizations fail in implementing change. Kotter (2007, p.97) argues that big mistakes can also be made by very capable people. The following chapters will examine some of the challenges that case organization faced when implementing the change of working environment and, additionally, how to overcome the challenges when implementing proposed new changes. Many of them have an impact on change resistance as well as talent retention.

The very first thing in getting on the right track when implementing change is to create a high sense of urgency among a large enough group of people, as underlined by Kotter (2008, p.14). It is important to recognize a true sense of urgency from complacency and a false sense of urgency. According to Kotter (2008, p.15, p.23), organizations with earlier success have a tendency to be complacent and people cling to the status quo. False urgency, on the other hand is quite the opposite. As argued by Kotter (2008, 23), it is filled with energy and people are driven by anxiety and anger. Hence, creating activity but not productivity. Additionally, a true sense of urgency can also help succeeding in other steps, as shown in Figure 23 (Kotter 2008, p.14-15).

Kotter (2008, p.26) emphasis that it is very difficult for people to recognize if they are complacent or have a false urgency as it is in human nature to hide feelings of anger and fear even from themselves. Luckily a true sense of urgency can be created and increased.

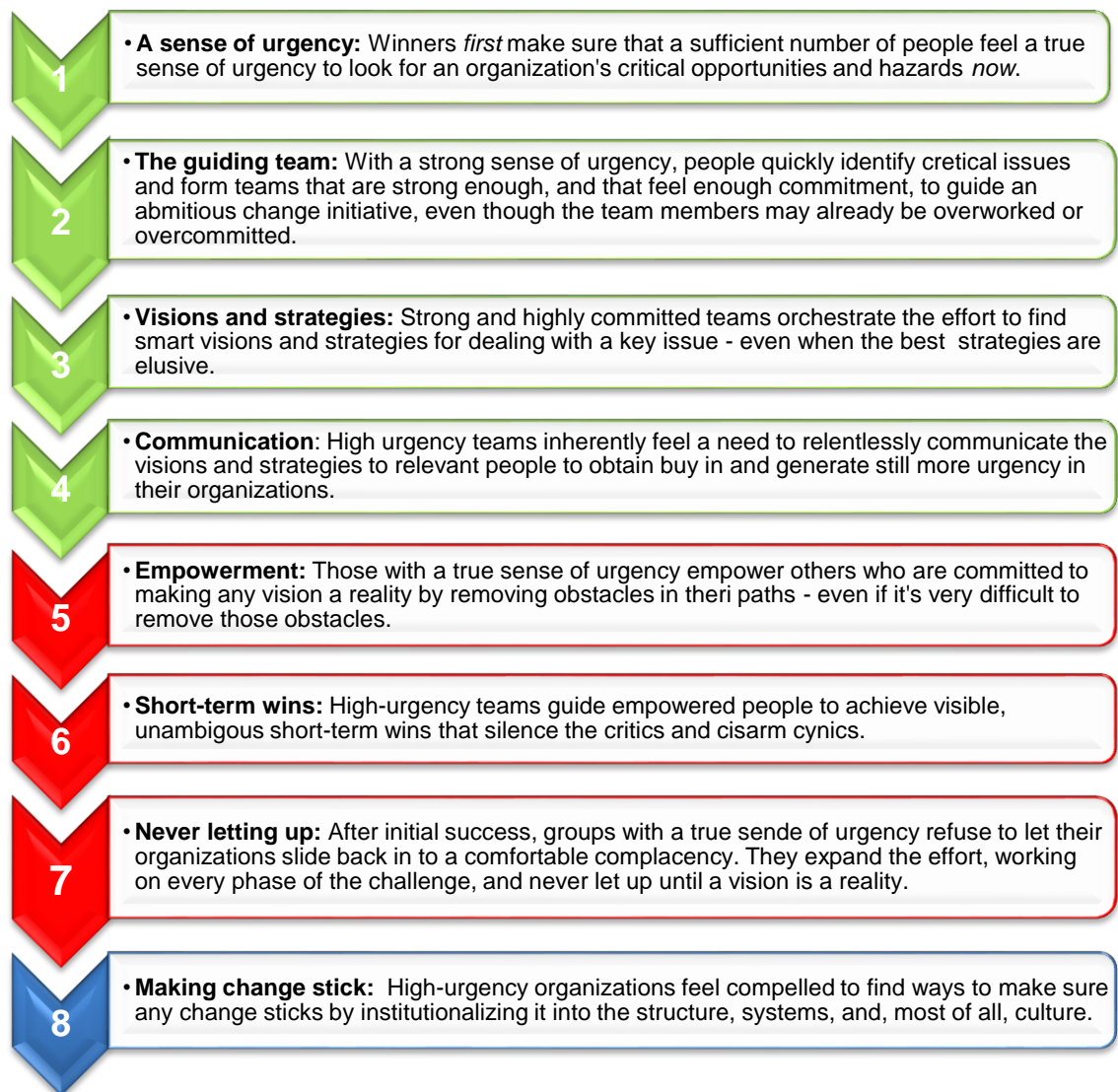


Figure 23. Kotter's eight-step plan emphasizing urgency (Kotter 2008, p.14-15).

There are four tactics that can be used to increase a true sense of urgency:

- 1) bringing the outside in,
  - 2) behaving with urgency every day,
  - 3) finding opportunity in crises, and
  - 4) dealing with the NoNos
- (Kotter, 2008, p. 60-61).

Accordingly, as stated by Kotter (2008):

- 1) The firm should try to recombine opportunities and hazards from outside the organization with the internal reality and present data that is emotionally compelling. As Kotter (2008, p.57) mentions people need more than just facts. Winning people's hearts, not just minds, can increase a sense of true urgency.
- 2) The members of the organization should be taught what a true urgency really is and how to demonstrate it visibly, every day and in all interactions - including emails and meetings. People should also avoid acting angry, anxious or contentious.
- 3) Crises should be seen as friends that offer opportunities instead of only as enemies. Simultaneously, people should remain a bit cautious with crises as they may also be fatal.
- 4) Organizations should remove the people who are trying to kill urgency, make the organization cling on status quo or even create destructive urgency.

It must also be acknowledged that people go through many emotions during a change process. Figure 24 (Bourne, 2014) illustrates the various stages.

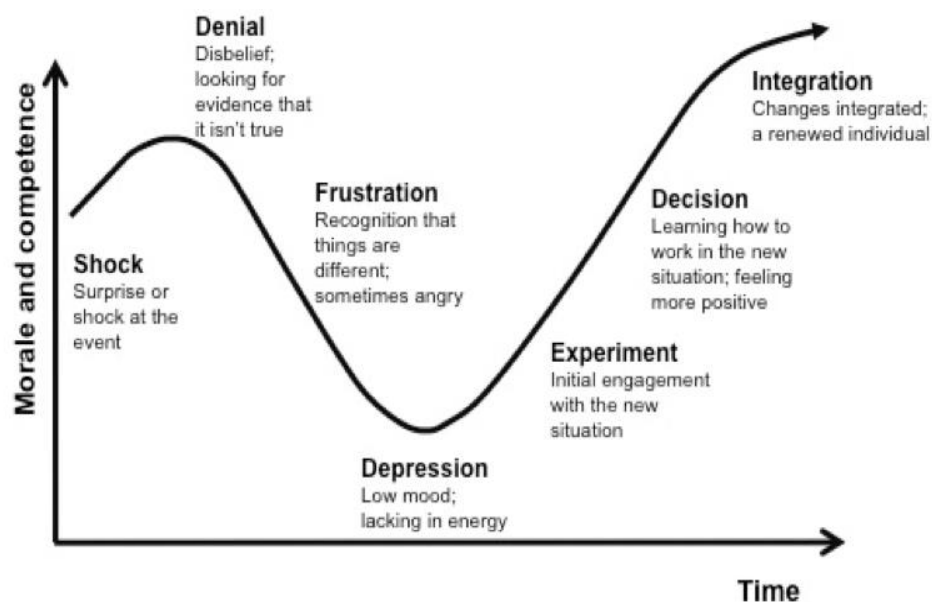


Figure 24. Kübler-Ross change curve with emotions over time. (Bourne, 2014).

First comes the shock, followed by denial, then morale drops as the feelings of frustration and depression are experienced. After the lowest point of the curve has been reached, the incline begins. First comes the experiment phase with initial engagement. Second, decision and finally integration phase where change is fully integrated and the individual is renewed.

#### 4.2.3 Creative Destruction and Creative Recombination

According to Abrahamson (2004, p.13) creative destruction, is a change process that includes immense destabilizing and creates unnecessary pain. Abrahamson (2004, p.23) introduces the notion of change without pain and he urges organizations to look to their 'basements' in order to know what they already have, identify which organizational elements could be reused, and, then recombining them. This is called **creative recombination**. Abrahamson (2004, p.23-37) presents the elements that can be recombined (people, culture, networks, processes, and structure) as well as how they can be recombined (cloning, customizing, and translating).

Additionally, many change initiatives can exhaust organizations and, hence, lower the chances for implementing a change successfully. As Abrahamson (2004, p.14) stresses, creative destruction comes with multiple change initiatives that cause initiative overload which, in turns, creates change resistance. Creative destruction also generates change-related chaos and employee cynicism. Therefore, it could be advised to use creative recombination instead of creative destruction.

#### 4.3 Off-Site Working

Off-site working has multiple benefits: enhanced productivity, possibility to work flexibly regardless of office hours when-ever and where-ever, increased well-being, and lower stress levels (Grant, Wallace and Spurgeon 2013, p.532, Robbins and Judge 2013, p.283). Furthermore, off-site working reduces carbon emissions from the transportation, the need of office space is diminished, and the employer can choose employees from a bigger talent pool (Robbins and Judge 2013, p.283).

Furthermore, according to Anderson and Kelliher (2009, p.14) employees with flexible working arrangement are more committed to the organization and are loyal to their

company. Flexible workers also tend to possess higher level of job satisfaction and the flexibility is perceived as trust from the employer's side. With additional freedom to arrange their own work, flexible workers often go 'the extra mile' and do more than is expected of them (Anderson and Kelliher, 2009, p.14-15)

Indeed, working off-site from home has several factors that impact positively on peoples productivity. According to (Grant, Wallace and Spurgeon 2013, p. 538, 541) these factors are:

- interruption free quiet working,
- getting work done on time,
- being able to concentrate while writing big documents,
- allowing the employee to exclude her or himself from the office's social processes,
- avoiding open-plan office related challenges such as lack of privacy and noise,
- off-site working can also improve personal relationships

On the other hand, off-site working can increase over-working and impact negatively on people's health and lead to burnout (Grant, Wallace and Spurgeon 2013, p. 542) and, as noted by Grant, Wallace and Spurgeon (2013, p.529), the employee working off-site requires support both from employer and from employer's family.

What is more, Michielsens, Bingham and Clarke (2013, p.58) mention that companies that had Flexible Working Arrangements (FWA) in use were unworried about where and when employees worked. FWA gives an opportunity to hire a diverse talent pool as well as helps to retain it (Michielsens, Bingham and Clarke, 2013, p.58; Anderson and Kelliher, 2009, p.15). Also, it can be a means to diversity as it might be easier for women returning from maternity leave (Michielsens, Bingham and Clarke, 2013, p.58). Off-site working was problem-free because people can be reached at all times thanks to modern technology and it is important that the job gets done – regardless where it is done (Michielsens, Bingham and Clarke, 2013, p.60).

It is, however, recognized that FWA can create moments when individuals are unavailable, which in today's hectic world is a challenge. People are expected to be available all the time and the one who responds the quickest gets the clients and



business deals (Michielsens, Bingham and Clarke, 2013, p.61). FWA can have a negative impact on career development, especially making employees reluctant to apply it.

Stevenson and Weis McGarth (2004, p.127) noted that off-site teams are emerging as organizations are turning more and more into networks and virtual teams. According to Stevenson and Weis McGarth (2004, p.127), Casio (2000) reported that after adopting virtual team culture, IBM was able to increase productivity from 15 to 40 percent and, due to reduced need of office space, gain annual savings from 40 to 60 percent per site. In addition, Hewlett Packard doubled sales people's revenue (Stevenson and Weis McGarth 2004, p.127). This indicates that off-site working generates cost savings and increases efficiency. According to Stevenson and Weis McGarth (2004, p.129) effective team leader, team hierarchy, clear work structure, and good reporting procedures were perceived to be very important for off-site working in addition to off-site teams being more likely to face communication breakdowns compared to on-site team. Thus, developed leadership is required for off-site working.

Furthermore, off-site work with virtual teams have multiple benefits such as decrease in cost and increase in productivity. As an example, Hewlett Packard's sales people's revenue doubled after virtual teams were taken into use. Also, IBM was able to achieve significant cost savings up to 60 percent in multiple sites as the required office space was reduced. Virtual teams are perceived to benefit from good team leadership, commitment, and regular personal contacts. However, personal contacts do not need to be face to face. (Stevenson and McGarth, 2004, p.127, 130,131)

More importantly, flexibility in working arrangements, such as when and where the work is done, is important for the well-being of employees. However, setting employees "free" does not automatically give them genuine freedom. Breaking old habits is difficult and, additionally, the "freedom" is constrained by business pressures, employer's needs, prioritizing customer's expectations and demands, and desire for new career opportunities (Donnelly 2006, p.95; Michielsens, Bingham and Clarke 2013, p. 50).

Given these points, off-site work has clearly many benefits but there is also a down side of working from home. According to Grant, Wallace and Spurgeon (2013, p.532) off-site working includes a risk of overwork as technology enables people to work 24/7 as well as blurs the line between work and home leading people to work long hours. Therefore,

working off-site diminishes the healing effect that comes from working from home. Additionally, some individuals prefer to keep work and home separate while others wish to integrate the two. (Grant, Wallace and Spurgeon, 2013, p.532)

Furthermore, working off-site too much can generate its own problems as an example disconnecting from the company culture and isolating from colleagues, reducing knowledge transfer, decreasing employee engagement (Gongdon, Flynn and Redman, 2014, p.52; Donnelly 2006, p.91). Furthermore, off-site working comes with new distractions and making it more difficult to collaborate (Gongdon, Flynn and Redman, 2014, p.52). Hence, off-site working does not solely solve the possible problems regarding privacy in the office.

It can be said that physical presence of employees make it easier for managers to check if employees are doing what they are supposed to be doing. It also makes teamwork possible when all members are physically present at the same time and have more opportunities to meet. But also trust matters. Trust is emphasized as an important factor in off-site work. While working off-site, employees have the responsibility of their work's success and people taking pride of their ownership and self-regulating much more can be achieved compared to top-down management. (2013, p.16)

To gain all the benefits from flexible working, implementation should be done carefully. For example, the flexible working arrangement should be available for everyone and none of the employees choosing that should suffer from the disadvantage regarding promotions. Guidance should be offered to employees. Also, managers should be trained (Anderson and Kelliher, 2009, p.17; Thomson, 2008, p.21).

Moreover, the support from senior managers should be visible and they should also be ready to change their own management style to further accommodate the flexible working. Thomson reported in one case study that flexible working had decreased sickness absence by 50 percent and increased productivity by 20 percent (Thomson, 2008, p.20). Implementing flexible working turned the business from poor performance to a success story winning awards and the result was so good that it was stated: *"for every four home workers the increase in performance is equivalent to one job"* (Thomson, 2008, p.20-21).

The best practices implementing flexible working successfully are presented in Table 11 (Anderson and Kelliher, 2009, p.16-17). Firstly, it should be made available for all employees. Secondly, it is vital to ensure that people who are working off-site have equal opportunities for promotions. Lastly, both employees and managers should be guided and trained to make the most of flexible working. (Anderson and Kelliher, 2009, p.16-17)

Table 11. Successful implementation of flexible working (Anderson and Kelliher, 2009, p.16-17).

Make it clear that flexible working is <b>available to everyone</b> and raise the awareness of the success stories of flexible working
Ensure that flexible workers are <b>not disadvantaged</b> in promotion decisions – make sure that the factors needed for successful promotion are known and accessible to all.
Provide <b>guidance</b> for those taking up a flexible working option, ensuring that employees consider how they will manage the boundaries between work and home, as well as manage expectations from colleagues and managers.
Provide <b>training</b> sessions for managers, allowing concerns to be voiced and discussions of suggestions for managing flexible workers to ensure that goals and objectives are met.

To summarize, off-site working has several strong points and implementation needs careful planning.

#### 4.4 Conceptual Framework

This sub-section presents the Conceptual Framework that emerges from the synthesis of CSA findings and Existing Knowledge (EK). It will summarize the EK that is contextually relevant for this thesis.

As has been noted in Chapter 4 by multiple authors, noise is extremely harmful in an office environment. Furthermore, noise is perceived differently by different individuals and, thus, employee diversity should be considered when planning and further improving the environment.

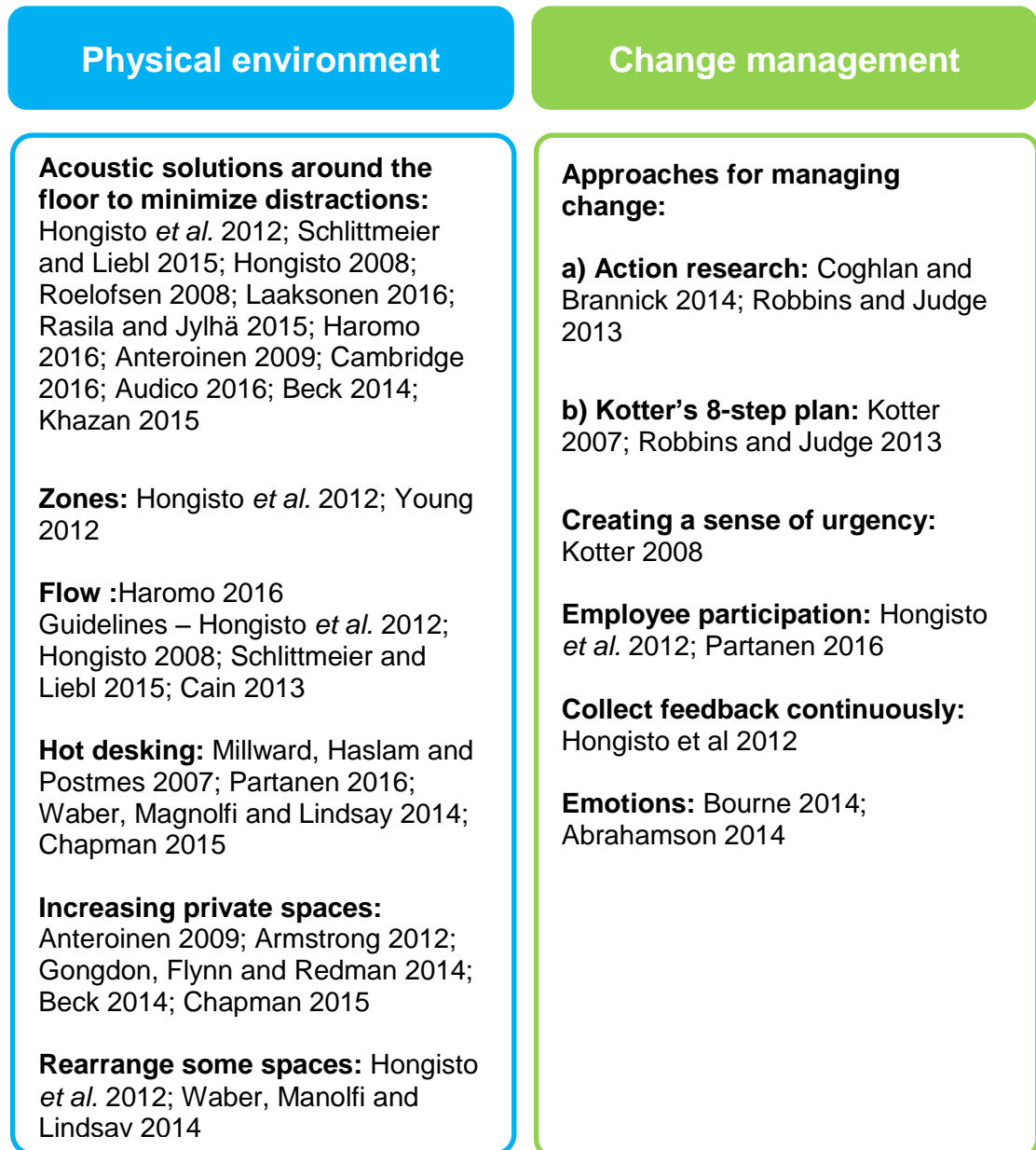


Figure 25. Conceptual Framework.

Furthermore, the Conceptual Framework for off-site work is presented in Appendix 12. The off-site work recommendation was removed during the validation process because it was against the company’s executive-level strategy.

## 5 Recommendations

This section will present the final recommendations. The initial recommendations were co-created with the members of the organization during two workshops in June 2016.

Also, co-creating the recommendations was considered as a second data collection round for this thesis. The recommendations were then validated by the case organization's management and changes made based on the received feedback. This process is presented in Figure 26.

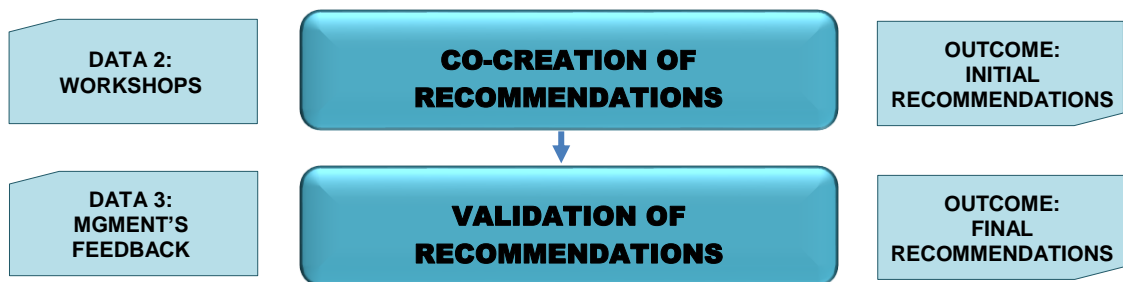


Figure 26. A snapshot from the research design with co-creation and validation of the recommendations.

The final recommendations for the physical environment and change management are presented in the following sub-sections.

### 5.1 Physical Environment

One of the key findings from the CSA was that people are constantly distracted affecting their ability to focus on their work. This section will present a proposal on how the organization's physical environment could be changed to minimize distractions and support efficient working.

#### 5.1.1 Block Vocal and Visual Distractions

Firstly, the open-plan office acoustics could be improved. One challenge in the case organization was noise that travels through the office. Sound waves are reflecting from ceiling, walls and windows. Therefore, absorbing materials should be brought to the environment.

The office building's shape was long, narrow, and included lots of glass surface. Windows provided a nice scenery of the outside world for the employees but at the same time acted as an efficient sound carrying element. Additionally, phone booths and meeting rooms were partly built from glass, increasing the negative impact glass has on the office acoustics. Therefore, currently used regular curtains should be replaced by acoustic curtains. Figure 27 (Hyypölä, 2016) presents two kinds of acoustic curtains: traditional and a modern see-through type of curtain. By choosing a functional white coloured acoustic curtains or the modern see-through acoustic curtains the office appearance would remain fresh and light and improve acoustics. To maximize the acoustic absorption ability, traditional acoustic curtains should be folded three times, producing a thick layer of absorbing material. This includes the open-plan office, phone booths, meeting rooms, café, library, and the new additional private working desks. Acoustic curtains could be placed as proposed in Figure 39.



Figure 27. Two examples of acoustic curtains (Hyypölä, 2016).

In addition to glass surface, the hard concrete ceiling should also be covered with acoustic panels. The most vital place for these panels would be directly above the source of the noise, which in open-plan office means the places where people work. The ceiling in closed spaces, such as phone booths and meeting rooms, should also be covered with acoustic panels. To fully utilize the acoustic absorbing ability, ceiling panels should be installed so that there is a space between the ceiling and the panel. Acoustic ceiling panels could be placed as proposed in Figure 39.

After blocking the sound waves traveling through the windows and ceiling there is one more surface to take care of – the walls. The acoustics of the case organization's open-plan office could be improved further by mounting acoustic panels on the walls. Similarly to ceiling panels, wall panels should be installed off the wall, leaving a space between the panel and the wall. Acoustic wall panels could be placed as proposed in Figure 39.

The same acoustic material can be used both for ceiling and walls. Ceiling panels are usually more simple whereas wall panels are preferred to have interesting and eye catching designs. Acoustic panels are available in all shapes and colours so the company is likely to find a design and colour that would suit the premises. One example is presented in Figure 28 (Hyypölä, 2016).

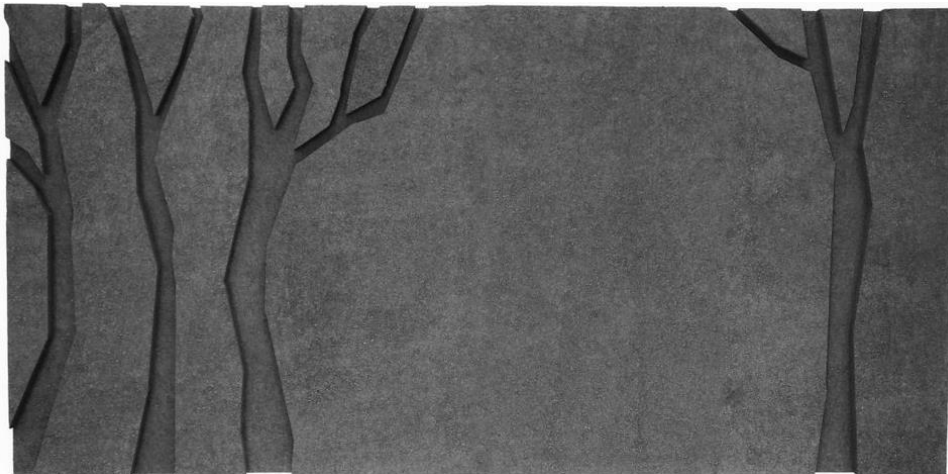


Figure 28. An example of acoustic wall panel made from peat (Hyypölä, 2016).

For acoustic panels, there is a wide range of materials including Finnish peat. Peat brings a nice natural element to the office addition to having a great noise absorbing ability.

*This Figure was available for the evaluation of this thesis but is removed from published version due to confidentiality reasons.*

Figure 29. An acoustic wall panel with company logo (Hyypölä, 2016).

Secondly, distractions in open-plan office could be reduced by using space dividers, the height varying from low models up to 170 centimetres tall depending on the location. Installing space dividers would benefit the case company in two ways. First of all, they would block visual distractions by preventing people from involuntarily seeing all the movements within the open-plan office. Space dividers come with sound absorbing ability, improving the speech privacy by decreasing the speech intelligibility, as well as providing more privacy for the employees.

Space dividers could be made from the same material as ceiling and wall panels. However, a plastic see-through material might be more suitable for the case company as they prefer to keep the fresh look in the office which could be disrupted by heavy looking, dark coloured dividers. Figure 30 (Innofusor, 2016) demonstrates how light and fresh looking a space divider can be. In addition, space dividers should be used where they are mostly needed. Preferably between each person but at least in areas where deep level of concentration is required. The best acoustic outcome is achieved with space dividers that are 170 centimetres tall.

Thirdly, open-plan office should be equipped with sound a sound masking system. The sound masking system could be installed to the whole floor, covering the open working environment, meeting rooms, phone booths, and working café.



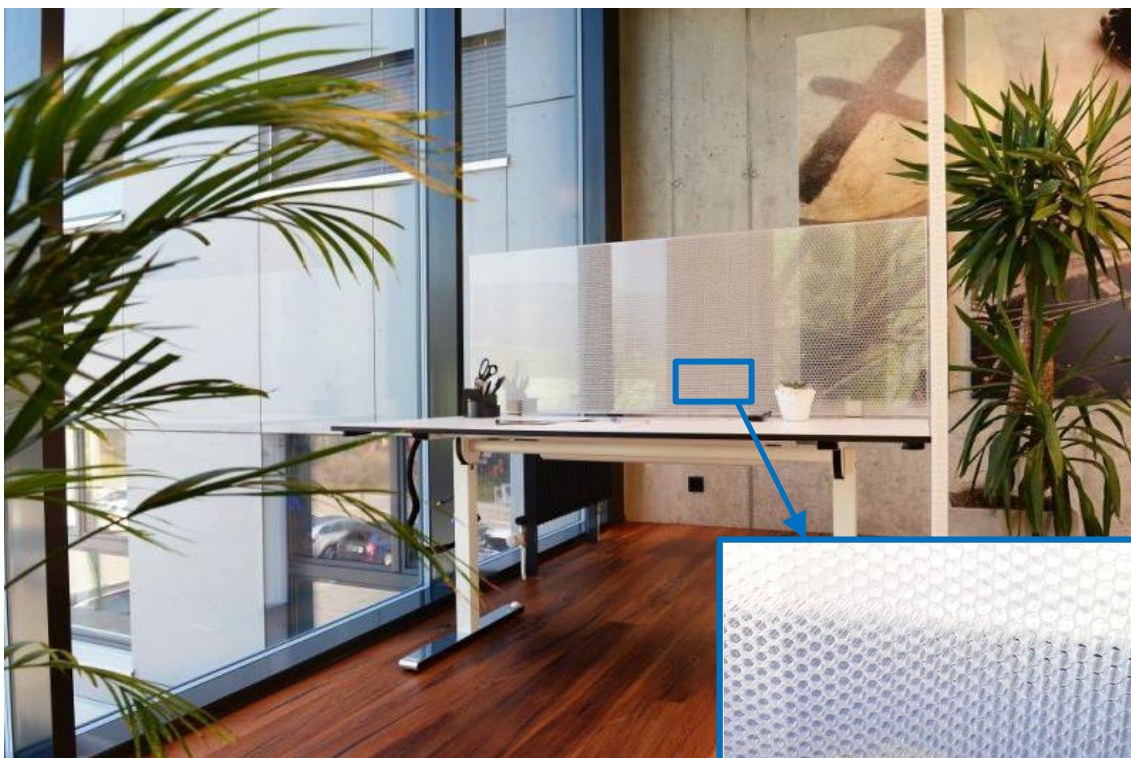


Figure 30. An example of a modern acoustic space divider (Innofusor, 2016).

In the case company's open working environment sound masking system could be used to provide natural like sounds (music with vocal singing can be disturbing and should be avoided) . Employees should be consulted, if possible, to find out which solution would suit them best.

What is important is that all three elements are required. The adequate amount of acoustic materials, space dividers, and a sound masking system are needed together to reduce noise and make speech unintelligible over distances.

Phone booths and meeting rooms are lacking soundproofing and sound masking, Adding the soundproofing and sound masking with acoustic ceiling panels and curtains, could enhance significantly speech privacy. It could also decrease the disturbance of people working next to these places. More importantly, investing to improve acoustics in the phone booths would create, for employees, a truly private spaces that are currently missing.

In the working café and in other spaces where lively co-operation takes place, sound masking speakers could be integrated into ceiling panels with sound sensors. Then the

lighting could be automatically adjusted to the noise level. Although the café is intended to have some life in it, limiting the noise level could make it more pleasant and efficient to both work there and enjoy peaceful discussions with colleagues.

### 5.1.2 Create Different Zones

The whole floor is designed to function in the same way, except the closed spaces such as meeting rooms. The employees are surrounded by noise in each corner of the office and, additionally, they are lacking privacy. In a busy day phone booths and meeting rooms are needed for other purposes and cannot be used for quiet working. In addition, the library with five working station is insufficient to provide peace and quiet for all the 100 employees working in the floor. Therefore, dividing the floor into different co-operation zones could help additional to converting two meeting rooms into quiet working spaces.

Different zones could be created to support the diverse needs as described in Figure 10 (four zones based on Ehrlich's and Bitter's model). For example, one zone could be designed to enable deeper concentration while another zone designed to enhance cooperation and sharing knowledge. The floor could include zones for increasing employees energy levels and zones for calming and relaxing.

The zone where concentration is important could be shaped into more closed ones. Numerous high space dividers and lots of sound absorbing materials could be brought to this zone. Furthermore, talking on the phone or chatting with colleagues would be minimized with a general agreement, and it would further decrease disturbances and distractions. Employees could retreat to this zone to do cognitive work, work that requires deep thinking and creative activities such as creating presentations or documents, learning new, and trying to understand complex things.

The zone supporting cooperation and knowledge sharing should be, on the contrary, shaped as open as possible. It could include low space dividers and the atmosphere should encourage discussions and exchanging ideas. Nevertheless, acoustic sound absorbing materials are much needed in this zone. Sound absorption is needed both to minimize cacophony in the co-operation zone and to prevent distracting people who are working in the other zones. Zones could also be separated from each other's by selecting different coloured acoustic ceiling and wall panels. Calm and soothing colours for the

concentration zone, bright and energizing colours for the zone where active co-operation and interaction with colleagues takes place. The flow of different spaces should be considered.

### 5.1.3 Rearrange the Café and the Library

To make the open-plan office more functional, changes to closed spaces are also recommended. One of the findings from CSA was that working in the library was not seen as an option. It was seen as a place to hide/escape from working, even though it was designed as a place to work intensively. Working stations in the library were placed so, that the workers need to sit with their backs towards the door, as presented in Figure 31. Additionally, there was only a glass wall with a transparent curtain that separated the space from the office. Consequently, individuals in the library, as well as their laptop screens, were visible to others who were working close to the library or walking by.



Figure 31. Library to be rearranged.

Furthermore, the library could be equipped with docking stations and big screens. This would increase people's ability and willingness to work in the library. Some tasks, such as working with big spreadsheets or creating material, is immensely easier using big screens. Currently people need to choose from two options: 1) whether to stay in the noisy open-plan office, where they have one or two big screens, or 2) go to library and

work using small laptops screen. Bringing docking stations and screens into library would the improve functionality of the space.

The café could also be modified for a better functionality. It is separated from the open-plan office by doors and walls, thus, providing a break from the hectic open-plan office routines. The café with the original layout and furniture is presented in Figure 32. Bringing more furniture and re-arranging the current ones could improve the space's usage for relaxed working and quick meetings.



Figure 32. The café to be re-arranged and additional standing working space to be created.

Moreover, current doors could be replaced by motorized opening mechanism. This would support employees moving around in the office as currently opening doors is a challenge as people are often carrying laptops and papers in one hand and a coffee cup in the other. This also appeared to be one reason why people from one end of the floor didn't feel that it was possible to use the library – they have too much to carry and felt it was easier to stay in their desk (and be disturbed by the noise). Motorized doors would also help to keep some of the noise generated in the café out from the open-plan office because after each opening, doors would be closed. Motorized doors would support handicap accessibility, too. Subsequently, people working next to the café would be liberated from closing the door themselves.

To enhance a privacy and tranquillity, the company should study alternatives to the traditional desk and chair setup. For example, cosy individual sofas, as presented in Figure 33 (Haromo, 2016, p.8) provide for privacy and create a pleasant and inviting environment.



Figure 33. Example of additional private working stations (Haromo, 2016, p.8).

Additional private working stations could also be added to the new private working spaces that are presented next.

#### 5.1.4 Convert Two Meeting Rooms into Private Working Spaces

Additionally, private working stations with docking stations and big screens in closed spaces could be created. With these proposed changes, there is an opportunity to triple the capacity, making quiet working spaces more accessible for a larger number of people. Thus, increasing productivity and thereby benefiting the case organization.

Meeting room A is in the opposite end of the building compared to the existing library. It was stated as unattractive and despite it was practically always available majority of the participants did not use it. Furthermore, the existing library was said to be too far away preventing people from using it. To reduce the distance and encourage people to use the library for quiet working, the unused meeting room could be turned into a second library. This space could accommodate 6 work desks. The meeting room is presented in Figure 34.



Figure 34. The meeting room A with sofas.

Another meeting room, B, near the original library could be converted into private working desks. The meeting room B, which is presented in Figure 35, was another example of hardly used space in the open-plan office. The notion of walking while working was perceived as not working hard enough, accompanied by an impression to be fired. The meeting room has space for two to four private working desk with space dividers. The unused meeting room B could be put to better use and increase the much-needed additional space for private working.



Figure 35. The meeting room B with treadmills.

To address the problem of lack of private working space, a method of reserving some of the working stations could be established. Thus, some of the working stations in the library, meeting room A, and meeting room B could be reserved similarly as the meeting

rooms are. Employees could then reserve a quiet space for those moments when they absolutely have to get work done without any distractions or disturbances.

#### 5.1.5 Utilize Technology

The meeting rooms reservations could be made visible for example by installing an electronic device next to each door, showing all reservations for the day. Currently reservations can only be seen from an online reservation system. Besides, occupied and vacant –signs are used in the door handles as shown in Figure 36.

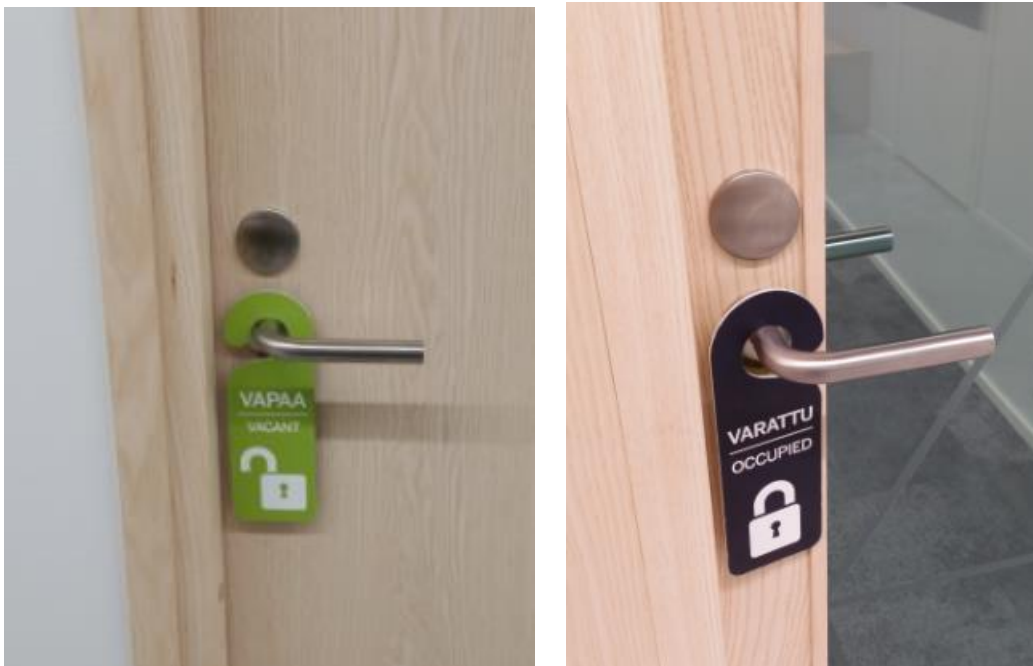


Figure 36. The availability of meeting rooms shown in door handles.

This has caused many problematic situations when employees have used the space without checking the booking situation from online application in advance. Unoccupied meeting rooms have been used for an incidental meeting, a phone conversation, or a Skype meeting. When there has been a simultaneous reservation, it has created inconvenience both to those who had booked the space, having to wait for others to clear out, and to those who need to exit the meeting room and find another space to continue their activity. So, to maximize the usage of the meeting rooms and avoid double 'booking', reservations could be presented in front of each meeting room by using an info wall.



Additionally, Information Communication Technology (ICT) systems should be upgraded to support flexible working within the office. Technology was one barrier that prevented employees using phone booths both for planned and unplanned Skype meetings. Leaving your desk with your laptop comes with a high price as detaching laptop from docking station means losing all connections and, thus, having to sign up to all necessary programs again, including Enterprise Resource Planning system (ERP). Upgraded systems would support employee flexibility in moving from desks to phone booth and, additionally, increasing the use of closed spaces for Skype meetings could help decrease the undesired distractions in the open-plan office.

Private working stations throughout the floor should be possible to reserve in advance, and the availability of each private working station could be made visible similarly to meeting room reservations.

Employees are occasionally absent, for instance due to holidays and business trips. To fully utilize the premises, their desks should be available for visitors during their absence. Moreover, there should be a way to announce when the desk can be used by visitors. One solution could be an application such as *DeskMe*. It is an Internet of Things (IoT) enabled application that allows people to see which desks are currently available (Stockman, 2017). The application also enables people to find each other as it can show in a 3D office layout where people are currently located, as presented in Figure 37.



Figure 37. Locating people and available desks in the office with *DeskMe* (DeskMe, 2017).

It can be extended to include also external partners, for instance within the same office building. *DeskMe* also makes it possible for employees to inform if they are working off-site and from where they are working from (Stockman, 2017).

Moreover, it can be synchronized with *Skype for Business* and the device on top of the desk will change colour according to your Skype status as presented in Figure 38 (DeskMe, 2017).

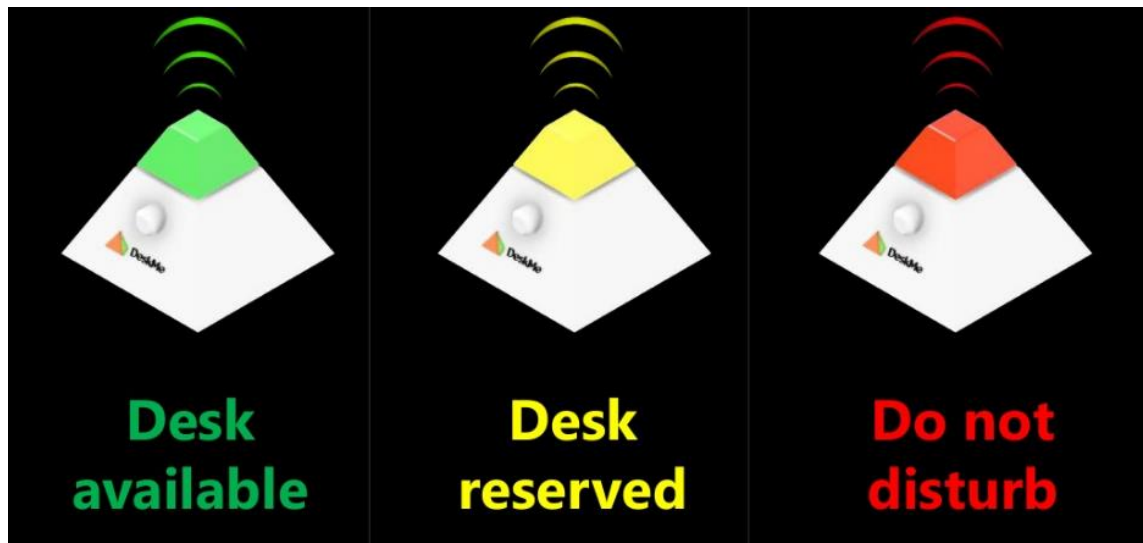


Figure 38. *DeskMe* device synchronized with Skype (DeskMe, 2017).

The *DeskMe* application is in a start-up phase (company founded in January 2017) and was discovered in Spring 2017. Therefore, this application was not presented to the management in Autumn 2016 when the recommendations were presented and validated.

#### 5.1.6 Stop hot desking

One of the findings from the CSA was that hot desking caused unhappiness. The flexi seats were not used as designed. Not all employees with flexi seat emptied their desks at the end of each day. This was partly due to convenience reasons and partly due to status and personal space reasons.

People need to have a sense of belonging and being valued as an employee. Having an assigned desk might help in this. For the mentioned reasons, hot desking should be

stopped and each employee who work in the floor on a regular basis should be given an assigned desk. Moreover, employees should also be allowed to personalize their desks as they wish.

### 5.1.7 Summary of the Physical Environment

The physical environment could be changed as presented in Figure 39.

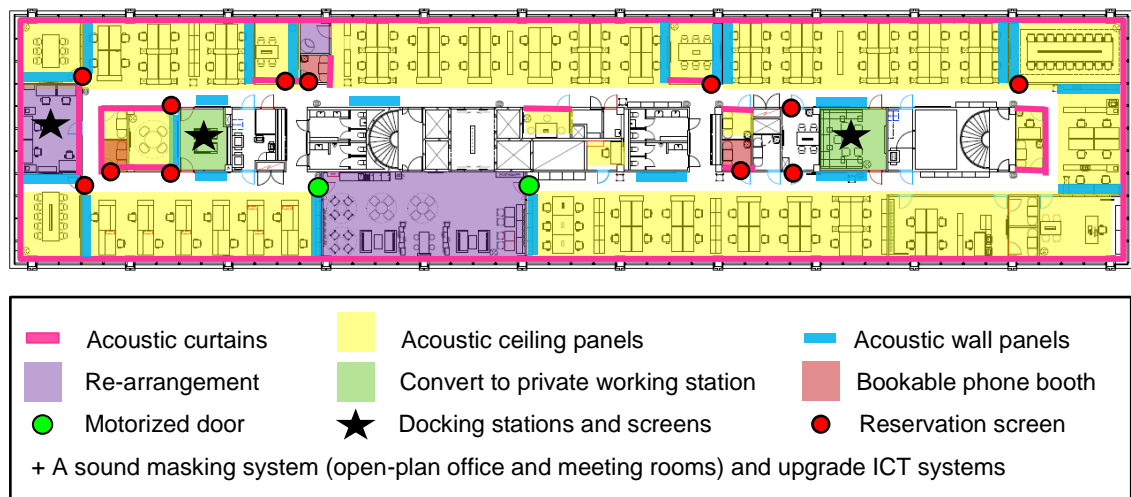


Figure 39. Open-plan office layout with the proposed changes.

In short, the recommended changes in the physical environment are:

- Block both vocal and visual distractions – make unwanted distant speech unintelligible and improve acoustics. This would require adding sound absorbing materials, add space dividers between people and traffic areas (170 centimetre tall especially for the quiet zone) and add a noise masking system.
- Create different zones. As an example, one zone to enhance concentration, one zone to support cooperation and knowledge sharing and so forth. Flow of spaces could be used when creating zones.
- Rearrange café and library and add few working desks or individual sofas with table as in Figure 34 (Haromo, 2016, p.8). Docking stations with screens to the library.
- Convert two meeting rooms into private working spaces. With docking stations and screens.

- Utilize technology. Add online reservation information in front of each meeting room. Upgrade ERP, and other relevant solutions, to enable smooth changing of work spaces within the floor. Make reserving private working stations possible and make the availability of both private working stations and assigned desks visible.
- Stop hot desking, allow employees to personalize their desks and inform visitors which desks are available.
- Make some of the phone booths bookable.

## 5.2 Change Management

Some of the findings from the CSA were that the change from private office to open-plan office was not fully accepted by the entire organization and changing the environment where people work was insufficient to bring about the real change on the attitude or how people thought about working. People are working in the new open working environment as they did not have a choice. Further improvement is still needed before the full potential of the whole staff can be achieved. This section will present a recommendation for implementing both the changes recommended in this thesis and other changes in the future.

Continuing Action Research (AR) might be the most suitable approach for the company to manage the change. Additionally, in case an action researcher not available internally, Kotter's eight-step plan could be applied. Both approaches are presented in chapter 4.2.1.

Findings from the CSA indicate that the firm failed to create a sense of urgency among the necessary amount of people. The reasons why change was needed might have been clear for the CEO and top managers, but the message didn't reach to all levels of the organization. People faced the fact that they would be moved from private offices into an open-plan office but they didn't have a true sense of urgency. They didn't understand why the change was necessary, which created a bit of change resistance.

Failing to create a sense of urgency during the change to the open-plan office makes it very challenging to create the urgency needed for future changes, including changes coming out of this study. Therefore, to have the best possible start for the new changes,

the case organization should focus strongly on creating a sense of urgency by honestly explaining to employees what was the real reason behind the original change moving from private offices to open-plan office; what mistakes were possibly done and, more importantly, what lessons were learned and how the new round will be different. The explanations can be discussed in private conversations and group discussions anyway so playing with open cards and having an open discussion about the challenges might be useful. Openness and honesty could also build much-needed trust.

It is important to win over the hearts and minds of people. Change is always challenging as people go through many emotions during the change. With good change management, the company can have a positive impact on the change curve presented in Figure 24 (Bourne, 2014). The curve can be both less deep and shorter. A smaller dip means less pain is created for the members of the organization. Shorter time reduces the time for employees to make it from the low valley of depression to the final integration stage. Thus, implementing change takes less time and can establish motivation and productivity at a new, improved level.

Training for team leaders and managers should be provided. Training could help them to understand the emotions their team members and subordinates are going through, not to mention the emotions they themselves are experiencing as they are also part of the change. And by understanding the emotions, team leaders and managers could help the members of the organization to move forward on the change curve and reach the integration stage.

Furthermore, to increase buy-in from employees and decrease change resistance, the organization should involve its members in the organization to the change process. How the floor would be divided into different zones and how the zones would be equipped could and should be discussed with employees. Also, it would benefit to jointly agree with the employees which guidelines should be followed in each zone as well as in closed spaces, such as libraries and café. The guidelines could, for example, include office etiquette for:

- greeting and interacting with people (regarding the time of the day and the zone in question)
- where phone calls and Skype meetings should be made

People commit more easily to decisions they have been creating themselves, thus, letting employees participate to the creation of zones and the guidelines would most likely increase their likelihood of following the co-created guidelines. They would not be dictated from top-down but be co-created from bottom-up. It is essential to listen to people and hear out what kind of needs and ideas they have.

Moreover, employee participation should not be seen as a one-time action but a continuous process. Organization could have scheduled check-up meetings where employees could freely voice their concerns and ideas about the functionality of office.

Would also be beneficial to nominate a person to run the show, as an ombudsman. Someone who could be contacted at all times and would take forward all related issues. This would also give the introverts an equal chance to get their voice heard as they might not be so eager to raise their voice above others in big meetings. Furthermore, feedback on what is working and what is not working should be collected on a regular basis. It could be related to the physical facilities or people's behaviour in the office - anything really that impacts the work in the open-plan office.

It should also be acknowledged that people are not the same and should not be tried to fit to one same mould. Employees are individuals that have diverse needs. It can be about their personality, cultural background, job description, stage of life. Organizations should actively seek ways to give voice also to 'the silent ones'.

### 5.3 Summary of the Recommendations

This thesis focused on the challenges in the physical environment and change management. The findings were shared with the management, recommendations were co-created with the organization's personnel and finally validated with the management. This section will present a summary of the recommendations.

Main recommendations were: 1) improve acoustics, 2) create zones with different levels of collaboration, 3) convert two meeting rooms into quiet working spaces, 4) co-create open-plan office guidelines together with employees, 4) stop hot-desking, 5) involve people in the change process, and 6) continue Action Research (AR) or use Kotter's 8-step plan to manage the change. The summary of the co-created and validated recommendations is presented in Figure 40.

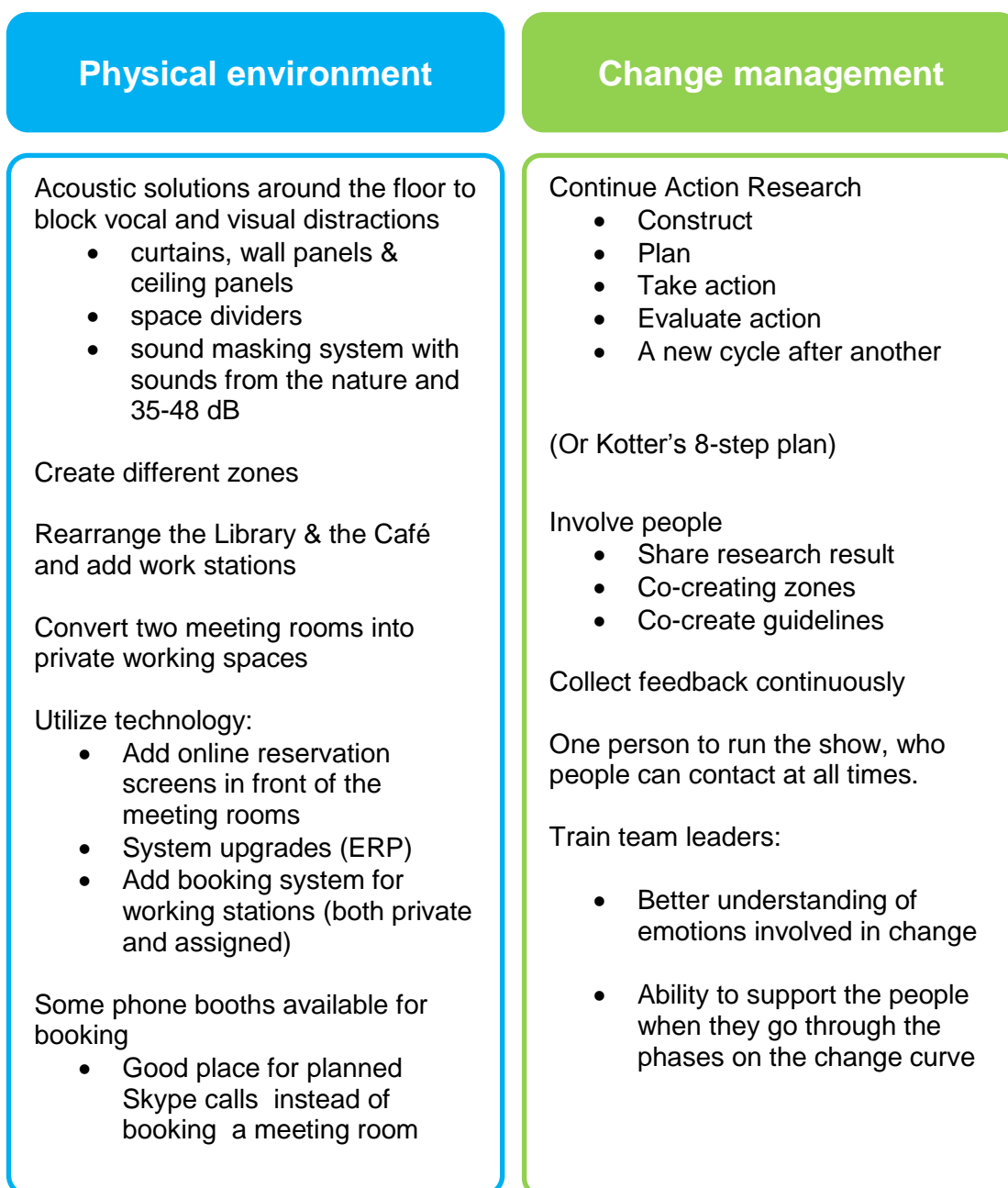


Figure 40. The summary of the recommendations.

Moreover, the organization is at risk of losing talent. An environment favouring extroverts might alienate introverts and they might be tempted to search for peace and calm elsewhere. It is necessary to keep in mind, that even though extroverts thrive in an open-plan office, they are not the only ones who have creative and extremely valuable ideas. To fully benefit from the potential within each and every individual, the organization should create an environment that suits the many needs of diverse staff.

## 6 Validation of the Recommendations

This section will examine the validation process along with the parts which were left out from the final recommendations.

The initial recommendations were presented to the organization's management for validation in July 2016. The findings from the CSA as well as Existing Knowledge were discussed in great detail. The presentation included direct quotations from the members of the case organization. Quotations were used to give the management a chance to draw their own conclusions and, moreover, to offer a reliable, in-depth description of the organization's current situation.

Based on the received feedback, the recommendations were then revised and final recommendations created, as presented in Figure 41. Additionally, some parts were completely left out from the final proposal because they were not aligned with the company's executive-level strategy. Off-site working was one of them. Furthermore, a new layout idea was also presented to the management. However, it was intentionally left out from the recommendations because it would have required the whole floor to be rebuilt.



Figure 41. A snapshot of the research design with validation of the recommendations.

The validation process enhances the credibility and validity of the Thesis. The initial recommendations were co-created with the members of the organization and the final recommendations were co-created with the organization's management.

### 6.1 Excluded Parts from the Recommendations

This section will examine introducing off-site working and re-inventing the so-called flexi seats both of which were removed from the recommendations during the validation process. In addition, this section will also present an idea of the optimal floor layout. The layout idea was presented to the management but had to be excluded from the



recommendations due to cost reasons. It was known that the company was planning to convert other locations from private offices into open-plan offices. For that reason, these ideas, utilizing corners and bringing the top management and the CEO closer to the organization, were presented to the management even though this change was out of boundaries in this specific location where the research was conducted.

One of the challenges in the organization was how people thought about the work and how important it was to be working next to your 'own' desk. The need for physical presence, among other factors, might have led to the culture where people monitored each other's comings and goings. To have a positive impact on the organizational culture, initial proposal included both re-inventing the so called flexi seats and introducing off-site working.

The open-plan office could be divided into different zones, as presented in chapter 5.1. When people would come into the office, they could every day decide which zone would suit their working on that particular day. If their day would be running from one meeting to another, they could easily take a seat from the cooperation zone. Then again, if they had a deadline approaching and needed to finish some presentation or for some other reason would need some peace and quiet, they could choose a seat from the concentration zone, where it would be more quiet. Or, reserve in advance a private working desk from one of the meeting rooms that would have been turned into private working spaces.

Having different people sitting next to you would enhance getting to know different people. Furthermore, interacting with different people would help lowering the barriers between functions and removing silos. Keeping an eye on colleagues work would also lose its meaning since one could never know where their colleague is working. Office would adapt in a better way for different purposes instead of being always the same and favoured the extroverts working style. Moreover, the members of the management team could lead by their example and show that it is acceptable to work in different parts of the office and select a new work desk every day.

Giving a possibility to work off-site could increase employees engagement as they would have more autonomy about where and when they work. It could increase motivation, which emerges from showing trust to your employees. Furthermore, as the space was getting more crowded, off-site work could have made it possible for several people to

work in the same floor because everyone would not be on-site every day. It would be possible for the employees to enjoy about the positive aspects of an open-plan office and, when needed, work from home without all the unwanted distractions and noise from the office. Employees could be more productive when working remotely with higher level of concentration. Consequently, people would have more time to reflect. This would decrease the chance of burnout and enhance employees' creativity, thus, they would be able to deliver higher quality work. On the other hand, off-site work decreasing the time needed to finish one task, more work could be done in the same time at home compared to the open-plan office environment.

People could plan their week according to what they need to accomplish. They could go to the office when they have meetings and need to brainstorm and throw ideas into the air together with their colleagues. Then again they could work remotely when they need to concentrate when working on their own. Coming to the office would then always be your own choice and, hence, be a delight and refreshing. Furthermore, being physically present would be irrelevant, since the results as well as the quality of the work is more important to the case company.

The proposal regarding re-inventing flexi-seats and introducing off-site working could have a positive impact on people. It could make people start to think differently about what good and efficient working is all about. In addition, people would be less stuck in their 'own' desks and the need to monitor their colleagues comings and goings could fade away. Quality work would be seen as good work, regardless where it is done, contrary to the current situation where sitting next to your desk is perceived to be important.

In addition, there was an idea that was intentionally left out from the official proposal because it would have required a massive alteration to the newly reconstructed environment. This alteration would have been extremely costly and it would have generated a huge challenge relocating all employees for the reconstruction time. Hence, the idea was left out from the official proposal. However, it was known that the company was considering redoing similar change and converting other floors with private office into open-plan offices. The findings from this research could benefit in that sense and, therefore, the new layout idea was presented to the management as a disconnected supplement to the official recommendations. To give management 'something to think about'.

The corners of the open-plan were seen as an ideal place for individual working areas. Three of these corners were occupied by meeting rooms and one corner was occupied by CEO's private office and management's aquarium. The idea was to demolish the meeting rooms in the corners and rebuild an open-plan office space instead. Meeting rooms could be moved closer to the elevator, where they would also be more accessible to many people. Traffic to the corner meeting rooms, café, toilets, and cloakroom were seen as one negative point in CSA. It created much of undesired disturbances. Moreover, people had a habit of bantering in front of the cloakroom and toilets, increasing the amount of speech. Hence, locating meeting rooms in the middle of the floor would decrease disturbing employees working in the open-plan office. The idea is presented in Figure 42.

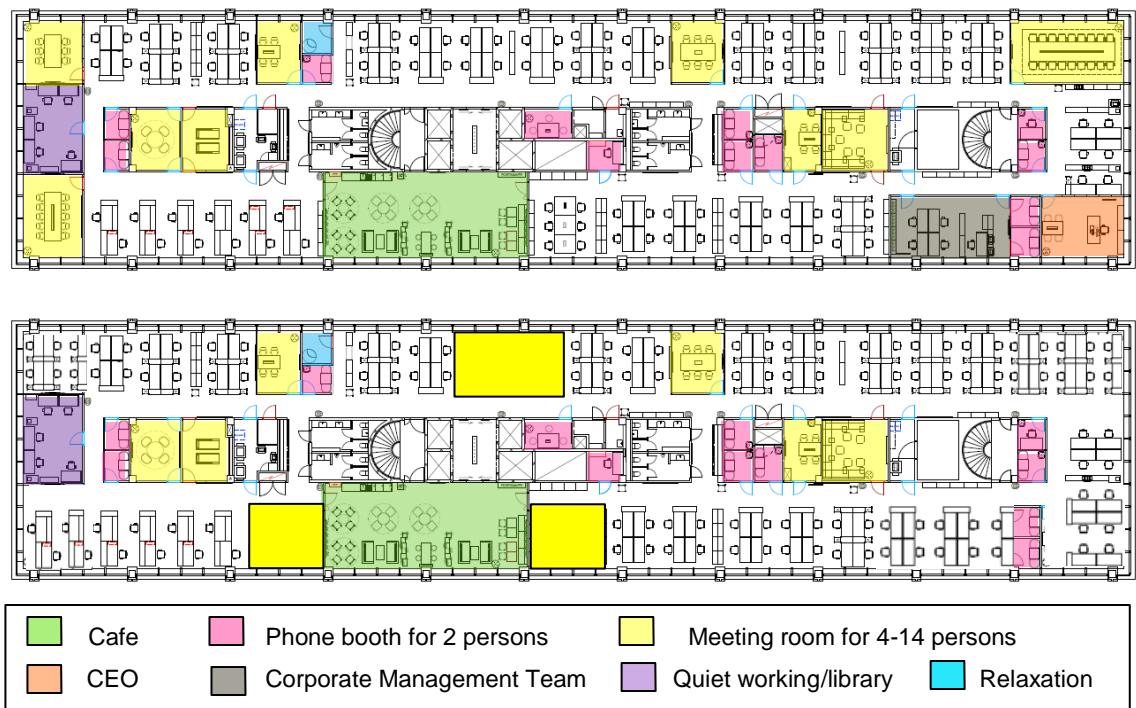


Figure 42. Reconstructed open-plan layout with corners turned into open-plan offices.

Additionally, tearing down both the top management team's glass aquarium and CEO's private office, and locating these high ranking people among other employees within the floor could help breaking down the current isolation. Bringing these people closer to the organization physically could also help in lowering the cultural barriers.

## 7 Conclusions and Discussion

The open-plan office has its benefits. It can support collaboration, but the advantages of private offices are lost. Visual disturbances, noise, and lack of speech privacy inhibit concentration and hinders performance as cognitive tasks require peace and quiet. The findings from this study were similar to the findings of other studies conducted in open-plan environments. The open-plan office seems to have several severe challenges, such as noise and lack of speech privacy, that hinder the productivity and weaken employees' well-being. Continuous disturbances break the concentration and could ultimately have a negative impact on the bottom line. Good acoustics is a necessity in an open-plan office.

Also, thoughtful designing of the office and co-created guidelines can help others than just social extroverts to thrive in the open-plan office. Open design tends to play in the favour of extroverts, nevertheless the personnel pool in many organizations also includes introverts, as almost a half of human population are introverts. Moreover, extroverts can become situational introverts when they must perform cognitive tasks and be creative (Armstrong, 2012). Therefore, as one size does not fit all, open-plan offices need special attention both in the design phase and in daily operation.

In addition, creating a sense of urgency and involving people in the change process could support implementing the change in a better way. Change is always a challenge as people tend to cling to the comfortable status quo. Explaining the necessity of the change and creating a sense of urgency is the first step in implementing any change. It is also crucial to let the employees be part of the change and avoid simple top-down approach.

### 7.1 Objective vs Outcome

This research was conducted in a company where about 100 employees were moved from private offices to an open-plan office. The objective of this thesis was to produce recommendations for the case organization's management on overcoming unidentified challenges in the open-plan office. A return to private offices was not an option and the organization will continue to work in the new open-plan office they built. Therefore, the

objective was not to assess if an open-plan office should be used or not, but to discover how the organization could make the most of it.

The objective of this study was achieved. Challenges were identified and recommendations on overcoming them were created. Moreover, the recommendations were co-created with the members of the organization and were based on the findings from CSA and relevant Existing Knowledge.

The outcome guides the organization towards an improved physical environment that could enable the employees to thrive and achieve even better results. It also gives management an approach for managing changes recommended in this thesis as well as other changes in the future. Thus, this applied study provided a solution to a real business problem, and had practical value and relevance to the case organization.

## 7.2 Limitations and challenges

This cross-sectional Action Research (AR) employed a single case and it was conducted in a specific context. Therefore, the findings are not generalizable as such. However, the findings resemble the results from earlier research related to open-plan environments. It might be that, with some caution, this thesis could be valuable for other organizations that are a) working in open-plan office, b) planning to move to an open-plan office, or c) planning to implement change.

Doing the field study included some challenges related to data collection and analysis. Interviews were conducted by a MBA student, who lacks the expertise in the field of qualitative interviewing and this might have had an impact on the data collection. During the face-to-face interviews, the interviewer studies an interviewee's nonverbal communication, sensitively evaluates how the interview situation may impact on the contents of the interview, as well as senses the nuances in the interaction between interviewer and interviewee (Patton 2002, 27). It is possible that some nuances were left unnoticed during the interviews. Same applies to the semi-structured interview approach as the direction and areas of interest emerged during interviews and more experienced interviewer could have directed conversation differently to gain more relevant and in-depth knowledge. However, discourse analysis was unnecessary in this thesis and, for that reason, 'reading' the interviewees was unimportant. In addition, multiple interviews gave a chance to develop interview and observation skills during the data collection.

Also, the presence of a recording device might have had an impact on the interviewee (Cassell 2011, p.505). Even though all participants gave their permission for recording, to support documentation and avoiding incorrect interpretations during data analysis, it must be acknowledged that answers to sensitive topics could have been different without recording.

One of the challenges was to narrow down the research. The CSA revealed many interesting challenges in the organization and I felt intrigued to dive in to all of them. Management style was one of the focus points of this thesis and it was included in the recommendations made to case organization. However it was excluded from this thesis. In addition, the notions of change agents and organizational behaviour were investigated in a deep level, however, they are also excluded from this thesis text.

Despite the limitations and challenges, I was successful in conducting a rigorous qualitative research. I worked intensively on this study from Autumn 2015 to Spring 2017. The data was collected and analysed objectively and with time. Also Existing Knowledge was examined unbiasedly. All was made in the way that anyone researching the same organization would find the same strong points and challenges as well as create similar recommendations.

### 7.3 Further Research

This was a cross-sectional inquiry and, therefore, providing only a snapshot of the organization. It could be beneficial for the organization to continue Action Research (AR) with proposed changes in a longitudinal study. After evaluating action in the first round, a second round could be constructed and planned, accordingly take action and then evaluate the action. The continuation of AR was included in the recommendations.

In addition, the organization could look into employees' trust in management and how they perceive the management style. Bringing about the change in how people work and behave requires more than just changing the work environment from private offices to open-plan office.

#### 7.4 Reflection and Afterword

This research was an interesting and enlightening journey that gave me a unique opportunity to dive deep into an organization, scratch the surface of how it works and what lies beneath the surface. I was genuinely surprised by how differently same issues were perceived by different individuals. It was a great discovery that multiple truths and realities exist as each individual views the world from their own point of view and that their own backgrounds and experiences have an impact on how they see the world.

This experience increased my research and interviewing skills as well as my understanding about the importance of good change management and office acoustics. The thesis write-up was also a learning process and reflecting on the emerged themes have given me a chance for both personal and professional growth.

If I would do this research again I would keep more narrow focus, choose just one main theme and work on that. Moreover, I would try to be more practical and avoid reading every interesting academic article and book that I came across with. I wanted to do a rigorous qualitative inquiry, use good research methods and high ethics, and co-create the right recommendations. For me it was important that the same themes would emerge for anyone who would engage the same data. Therefore, during CSA a great deal of time was spent on collecting and analysing the data. Almost all the interviews were fully transcribed and I worked back and forth with the material.

Additionally, the participants supported this study and, thus, it is reasonable to assume that their answers in interviews were honest. Employees were fascinated about the research and several participants commented: *“You certainly have an interesting topic”* and *“Your research is important. Good luck with it!”* In addition, employees were happy to be interviewed and also felt that an adequate number of people were interviewed. One participant noted: *“Your study is very interesting. The fact is that each and one of us thinks in our own way and from our own perspective. Interviewing so many people you will surely find out the truth.”* The research subject was also seen as sensitive and people asked if this research would report the true findings or the findings that management wants to hear. One participant commented: *“Are you sure you want to report how things really are?”*

I enjoyed tremendously doing this study and would be happy to conduct an Action Research in the future. It would be also interesting to revisit the subject of open-plan offices – perhaps, within the same organization or look into multiple different organizations.



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## Example email to Participants Prior Skype Interviews

Dear *(name of participant)*,

Thank you once again for taking part to this research! Few things about the interview.

- Participation to the interview is **fully confidential** and I'm the only one who will know the identity of the participants.
- If it is OK for you I would like to **record** the interview. This gives me the chance to return to interviews later on when analyzing the collected data and it will reduce the possibility of misinterpretation on my side.
- Qualitative research thesis usually includes short **direct quotations** from the interview so that readers can draw their own conclusions from presented data. Quotations are done **completely anonymously** so that it is impossible for the reader to guess who was interviewed. It would be nice if I could use short bits from our interview.
- All research material (including interview recordings and transcriptions) are **fully protected** from outsiders and all possible has been done to protect the identity of participants.

See you on *(day)* in *(name of the meeting room)* meeting room. Please bring your laptop (and headset in case needed) and we'll start a video meeting at *(time)* o'clock.

Kind regards,  
Maarit Holma

## Examples of questions asked in qualitative semi-structured interviewing

Open-ended questions, probing questions and closing questions were used in the semi-structured interviews. Each interview was unique as interviewees thoughts and suggestions of topics was followed. Below is a list of example questions that were asked:

- *How did you feel about coming into the office this morning?*
- *Why is that?*
- *What do you think about the new open-plan office?*
- *What do you like the best about it?*
- *How does it help you to work/performance better compared to the private offices?*
- *What do you like the least about the new environment?*
- *That's interesting. Tell me more about it.*
- *Which issues you feel that hinders your performance?*
- *What do you think about the atmosphere in the new floor?*
- *How does it show?*
- *What else do you like about it?*
- *How are you using the spaces in the new open-plan office?*
- *What do you think about the meeting rooms / phone booths / café etc.?*
- *How does the co-operation differ? (private offices versus open-plan office)*
- *How has your approach changed?*
- *Give an example about that.*
- *What kind of wishes do you have regarding that issue?*
- *What would you still like to say?*
- *Is there something else that you would like to say? Something that we haven't yet covered and you feel that would be important to know?*
- *Can I to get back to you later on if I have additional questions?*
- *In case anything else comes into your mind later on, please do not hesitate to call me or send email.*

## **Six Key Principles of Ethical Research**

By the Economic and Social Research Council (ESRC), 2015 (page 4).

1. Research participants should take part voluntarily, free from any coercion or undue influence, and their rights, dignity and (when possible) autonomy should be respected and appropriately protected.
2. Research should be worthwhile and provide value that outweighs any risk or harm. Researchers should aim to maximise the benefit of the research and minimise potential risk of harm to participants and researchers. All potential risk and harm should be mitigated by robust precautions.
3. Research staff and participants should be given appropriate information about the purpose, methods and intended uses of the research, what their participation in the research entails and what risks and benefits, if any, are involved.
4. Individual research participant and group preferences regarding anonymity should be respected and participant requirements concerning the confidential nature of information and personal data should be respected.
5. Research should be designed, reviewed and undertaken to ensure recognised standards of integrity are met, and quality and transparency are assured.
6. The independence of research should be clear, and any conflicts of interest or partiality should be explicit.

**Additional Photographs from the New Open-Plan Office**



Corridor views from the open-plan office.



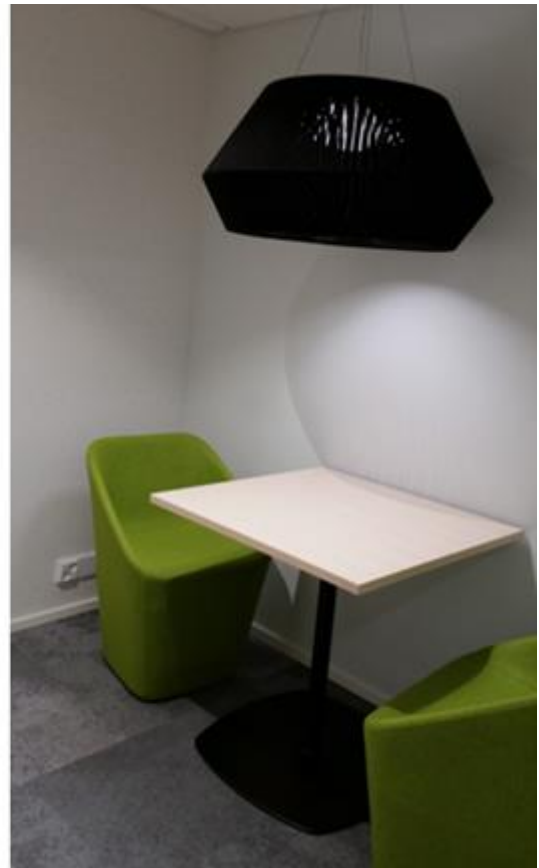
A corridor view from the open-plan office and the *aquarium* in the back.



Aquarium – an open-plan office for the management team.



An example of a phone booth.





An example of another meeting room.



A view to the café from the elevator entrance.



A view to the open-plan office from the elevator entrance.



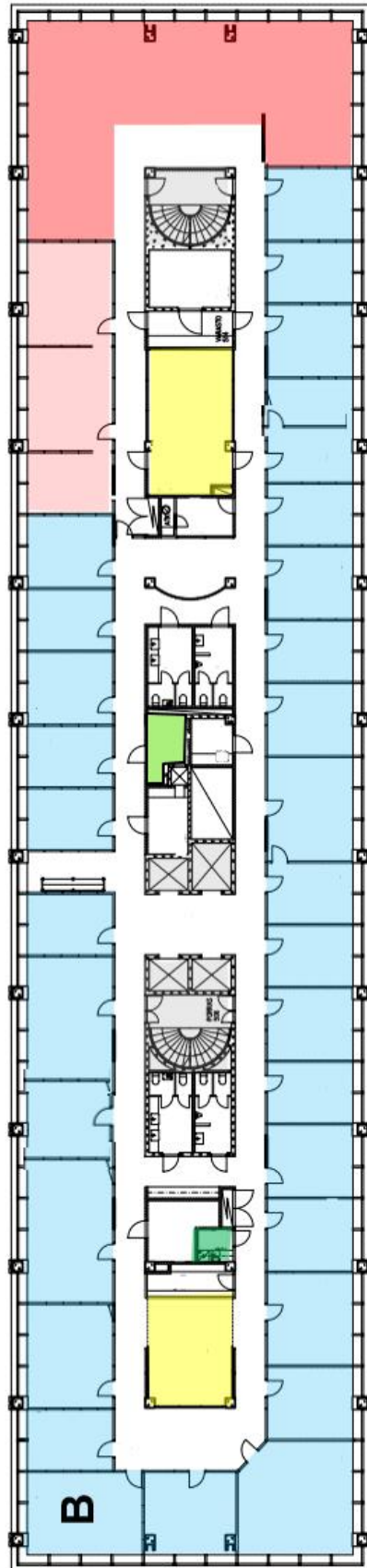
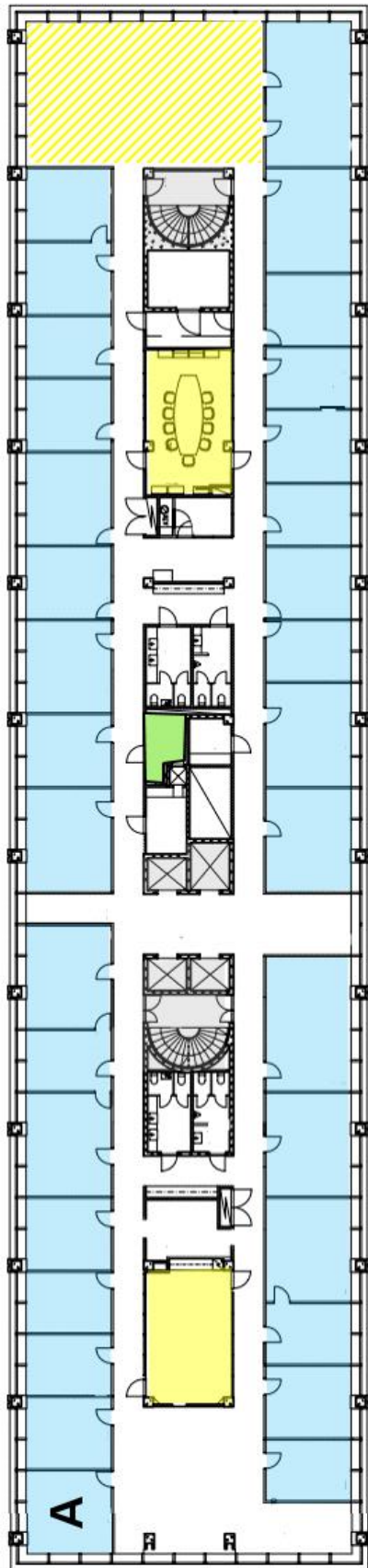
An example of a meeting room.



An example of a meeting room.



Office Layout Before the Renovation (Floors A and B)



Office Layout After the Renovation (One Floor)



## Standard SFS 5907: Acoustic Classification for office environment

The copyright owner of the following tables is Finnish Standards Association FSA. Permission to use these tables in this thesis was granted by FSA. Relevant spaces concerning the thesis as well as the most desired class A are highlighted.

Airborne sound insulation. The lowest permitted value of the apparent weighted sound reduction index  $R^1_w$  (dB). (FSA, 2016, p.13)

Space	Class A	Class B	Class C	Class D
Between single person office rooms	44	40	35	35
— From the above to a corridor	34	30	25	25
Customer room, conference room, management rooms	48	44	40	40
Spaces which require absolute confidentiality	60	55	52	48
Conference room or space with an amplifier	52	48	48	44
— From the above to a corridor	44	40	35	30
From a WC, changing room, shower space				
— To office rooms	44	44	44	40
— To another WC, changing room, shower space	48	40	35	30
— To a corridor	30	25	-	-
From a resting room to an office space	44	44	40	35
To another business which generates noise next to the office <sup>1)</sup>	60	55	52	48

<sup>1)</sup> Always calls for a separate plan.

The maximum permitted apparent weighted normalised impact sound pressure levels  $L^1_{n,w}$  (dB). (FSA, 2016, p.13)

Space	Classes A and B	Class C	Class D
In office rooms, conference rooms, meeting rooms, resting spaces			
— From corridors	58	63	68
— From other spaces	63	63	68

The maximum permitted reverberation time values  $T$  (s) (FSA, 2016, p.14)

Space	Class A	Class B	Class C	Class D
Open plan office, height less than 3 m <sup>1)</sup>	0.35	0.40	0.45	0.55
Open plan office, height over 3 m	0.40	0.45	0.50	0.60
Single person office room, resting room, conference room <sup>2)</sup>	0.50	0.60	0.70	0.90
Corridor	0.60	0.80	1.00	1.00
Lobby <sup>3)</sup>	0.80	1.00	1.30	1.30
Small auditorium, training space, less than 200 m <sup>3</sup> <sup>4)</sup>	0.60	0.70	0.90	0.90
Retreating room, quiet room	0.40	0.50	0.60	0.70
Cafeteria, restaurant	0.70	0.80	0.90	1.00

Furniture in this case relates to built-in furniture.

<sup>1)</sup> Reverberation time measurement is performed in a furnished workstation 1.2 m above the floor (not in corridor)

<sup>2)</sup> Reverberation time must be 0.1-0.2 seconds shorter in video conference spaces

<sup>3)</sup> Lobby spaces exceeding 4 m in height, or lobbies that include workstations without a separation wall require a separate plan. Local noise abatement must be used in these.

<sup>4)</sup> Acoustic planning is recommended for larger spaces designed for speech.

The maximum permitted sound levels caused by heating, plumbing, air-conditioning and electric appliances in the building  $L_{Aeq}$  (dB). (FSA, 2016, p.14)

Space	Class A	Class B	Class C	Class D
Open plan office <sup>1)</sup>	40...42	40...42	40...42	40...42
Single person office room	35	35	35	40
Resting room	40	45	45	50
Conference room	30	35	35	40
Corridor, lobby	40	40	40	45
Small auditorium, training space, less than 200 m <sup>3</sup>	30	35	35	40
Retreating room, quiet room	30	35	35	40
Cafeteria, restaurant	40	45	45	50
Outside the window of the same building or of one close by, on the balcony, in the garden, or in another similar space within the residential area and in other areas sensitive to noise	45	45	45	45

<sup>1)</sup> It is recommended that open plan offices have a higher background noise level than single person office rooms, so that unnecessary vocal noises are less heard (see appendix D).

The maximum permitted average sound levels inside the building  $L_{Aeq, 7-22}$  (dB) caused by a sound source outside the building. (FSA, 2016, p.14)

Space	Classes A and B	Class C	Class D
Office room, small meeting room, conference room, resting space, reception	35	40	40
Shops	45	45	45
Corridor, lobby, changing rooms	45	45	50

## Direct Quotations Related to Physical Environment and Off-Site Working

*“It is challenging to work in your place. You cannot tell people to go to hell when you are working with something important.”*

*“It’s difficult to know when you can participate conversations. Even though you try not to listen and really try to focus your work you cannot help yourself overhearing conversations. You feel embarrassed when you comment on a conversation when your colleagues didn’t even realize that they were overheard by others, too.”*

*“Sometimes when you need to concentrate it is challenging and it takes longer time to get things done than earlier.”*

*“It is irritating when people are walking by you to meeting rooms. And sometimes people just walk back and forth. Why the hell they cannot just stay in their desk? Although, it can depend where you sit. Some places can have less traffic.”*

*“People used to come to my office several times a day, close the door behind them and start to discuss about their personal issues and I couldn’t say no to them. Because of the new open environment people cannot do that anymore and I am left in peace.”*

*“Not everyone are extremely social and you cannot demand that people start to change who they are”.*

*“I think that it (open-plan office) has changed the dynamics of people talk. Everyone around listens and comments so the privacy is of course gone, but it is fine. You are in a workplace and should discuss work issues.”*

*“I feel we are more like one company now when we are working in the same floor and open-plan office.”*

*“I definitely like about the sociality that we have in the new environment. I would just like to choose the moments myself when to be social!”*

*“Sometimes I want to yell and swear but I just cannot do that.”*

*“Earlier you didn’t have to think about these things (people discussing this and that). You could just shut your door and be done with it.”*

*“We need some guideline how to work in the open-plan office. People should take other people more in consideration.”*

*“It is annoying to discuss how your weekend went. People come to the office in different times so then the exchange of how everyone’s weekend went takes forever.”*

*“You cannot work as you used to with phone calls. Top management don’t realize this as they have their own private phone booths and their own aquarium where they can talk.”*

*“I would take my old office room back in a heartbeat. For me and the work I do private office works far more better than the open-plan office with constant circus.”*

*“There is a big improvement to the earlier: exchanging information and distributing it is a lot easier.”*

*“During holidays when there aren’t so much people in the office it’s possible to use phone booths more easily for work and hide from others.”*

*“There are days that you are really tired when you come home. It’s the noise and hassle that makes me tired some days. Sometimes I have a feeling that I just have to leave the workstation for an hour because you cannot sit there no longer.”*

*“I do believe that open-plan office enhances active and passive listening of what happens around you and that might also effect to your work efficiency.”*

*“My main discovery of the open office is that you are surrounded by negative discussions more. Earlier people could shut the doors and discuss but now the complaining has become public.”*

*“Some people have a tendency to communicate too much and discuss who’s been where and who just came to look for who. Too much drama for my taste!”*

*“Sometimes I wish that the gossipers would stay in their own place and not disturb others. It is difficult to be impolite in open office, meaning that you need to listen all kind of gossips even though you have a lot of work to do.”*

*“The café I just great! I was a little bit sceptic about it in the beginning and questioned why do we need such a big space. But I have experienced that it has brought us closer together. It is natural to change few words the same time you go and grab a cup of coffee. The coffee machines we had in the earlier floors did not have the same effect.”*

*“It would be nice to have a possibility to use the spaces that are designed for quiet working. But you cannot just disappear.”*

*“The sound of people typing can be loud. We have quite type writer’s here in the office and the sound reminds of a machine gun.”*

*“In a way the biggest challenge (in the open-plan office) is that it is easy to reach people and information is shared. So in a way the biggest strength becomes the biggest weakness as you get disturbed so easily.”*

*“I think it is surprisingly calm here. Nothing like in an advertising company where people are throwing papers in the air and pulling their hair.”*

*“I’m not able to use the library because it is in the other end of the building. It is too far away. And the phone booths next to my desk is always in use.”*

*“It (meeting room without windows) is like a bunker. I try to stay away from it. There’s no windows and the space just doesn’t work.”*

*“Nobody else likes that meeting room (without windows) but I use it a lot.”*

*“The most essential thing for open-plan environment it that you have to have soundproof spaces. You have to be able to discuss confidential matters without the whole office overhearing you.”*

*“We should have some kind of a system to inform others that I want to be left alone.”*

*“Phone booths should really be bookable. What happens now is that big meeting rooms are unavailable for meetings because one person is having a Skype call. There is a huge demand for the meeting rooms and my opinion is that they should not be used by one person only.”*

*“The office could be more practical. More meeting rooms and phone booths are needed because of the poor availability. It is so damn often when you are searching for a free phone booths, you have someone on the other end of the phone waiting and you just cannot find a place even though you are galloping around the office. That is not an ideal situation.”*

*“There is one person who’s voice and behaviour distracts my concentration but other vice colleagues chatting and bantering doesn’t disturb me. “*

*“I am work-centred person and I couldn’t care less not to mention take part to gossiping and complaining. In every work place there are always some people who are not content and like to complaint about things.”*

*“You hear people whispering things. It is annoying that others know some things – as they should – but then that they keep whispering about the changes... I think that if you know some secret that others in the floor should not know yet because official announcement haven’t been made, then they should shut up. Sometimes you hear things that you shouldn’t hear.”*

*“I give people a chance to say: Don’t be here (and disturb my work).”*

*“It should be allowed to just do your work, and not be so social. It easily turns out that being social takes a lot of your time without your noticing it.”*

*“In the old office people sat in their offices and kept their doors shut. It was very closeminded place. I dare to say that the new office is completely different. It is like a market place, full of life like. I would not want to change back to private offices. I would definitely like to have more peace and quiet to do my work but I do not long for own office.”*



*"I would not want to return to my empty office."*

*"I do occasionally few hours maybe from home but .... I come to the office every day because I need all my papers, not everything are in my computer. And I also feel I need the people around me. I could sit next to my kitchen table but it is not the same. I'm working in the office, I don't want to work when I'm home. I feel that when you are working you should be in the office."*

*"It is remarkably more efficient to work from home office. It's quiet, peaceful and you can concentrate properly. Other solution would be to book a meeting room from the office so that you could work more privately."*

*"Off-site working is not officially allowed which is really old fashion."*

*"The development in this company has reached only the mid-point. Flexi seat arrangement usually means that people are also working off-site. Perhaps we are going to that direction. I don't know."*

*"I have solved the problem (distractions) by doing challenging work in the evenings from home and by coming to the office around 7 o'clock when it is really quiet."*

*"Today everyone has tremendously work to do and they just need to coup with it. I think that the work morale is also good and off-site working with certain boundaries would be a good solution."*

*"Remote working would probably improve we-spirit and well-being - Being flexible (employer for employees)."*

*"I prefer working in the office but it would be nice to work off-site occasionally when needed and agreed."*

*"I suppose that remote working is not forbidden but I haven't had the need for that."*

*"Because of the constructions work in the ring roads I spend lots of time in the traffic jams and It is nice to work off-site sometimes."*

*“Remote working would highly improve well-being and I currently have permission from my supervisor. But the group policy is against remote working so it makes me feel bad every time.”*

*“I can accomplish more home where there are no distractions. I feel more relaxed and peaceful – and still the work result is at least the same as in the office unless even better.”*

*“I have a lot of ad/hoc tasks which could be difficult to deal with if working off-site. On the other hand, our organization could unlearn the adhoc things. It is taken for granted that we are always here and run and jump when told. I’m not the only one who suffers from this. Perhaps it (remote working) would make people think a bit more and they would plan better work.”*

*“I don’t think that we would NEED to be in the office.”*

*“Other people do that (off-site work) – especially in the evenings – (additionally to full day at the office) but I’m not sure if it could work with my job which requires physical presence. But it could be tried.”*

*“Off-site working would probably increase productivity. In certain tasks you need some peace and quiet and then you could arrange the tasks which require social activity for the days you are in the office. It would be ideal for arranging your own work.”*

*“The pressure for being social is horrible. When you are in open-plan office you just have to be social all the time even when you are in a hurry and have lots of things to do. It feels like ‘Oh crap! I need to say a few words to that and that person’ even when I don’t want to or I don’t really have the time.”*

*“The number of personnel has increased so that we need more desks or then the **real** flexi seats – so that people would use them as they were meant to be used. After the end of the day you should clean up the desk so that someone else could use it the next morning. But it doesn’t work like that. People keep desks to themselves.”*

*“My colleague and I, we tried to switch our flexi seats in the beginning. Went to a different desk each morning but other people didn’t take it so well. They were like ‘what the hell are you coming to our places’ even though they were flexi seats and not assigned to anyone particular.”*

*“I think it was the biggest mistake when we were told that now when we are in open-plan office everyone should each morning look for a free desk. It doesn’t work. At all.”*

*“Everyone should have been given their own desk in the beginning.”*

*“I can understand what it would mean for someone who is away all the time and comes to the office only once or twice a month. But I’m in the office every day. I rarely go to business trips.”*

*“You need to go there (unbookable meeting room) at least half an hour before. Other vice it can be already taken when you need it and then you have no place to go.”*

*“The size of the meeting rooms is quite OK but they are extremely busy all the time.”*

*“People don’t respect the booking system. Even though you have made a booking, there could be still people having a meeting when you enter the meeting room.”*

*“It takes time when they need to pause their meeting, collect all their things, and find another place to continue the meeting.”*

*“I would take my old office room back in a heartbeat. For me and the work I do private office works far more better than the open-plan office with constant circus.”*

*“I really need my own office back. The trend to use open-plan offices is already gone. Other companies are changing back to private offices and I cannot understand why we are doing the opposite.”*

*“If someone would have asked me earlier if I would like to move to an open-plan office, I would probably have said ‘No thank you!’ if it would have been a choice. But it wasn’t.”*

*Now, to my surprise, in a way I feel OK. Communication within our team has improved and I have learned to know the people in whole company in a different way.”*

*“Many of the younger employees have approached me with questions, seeking advice, and asked my opinion. This would not have happened in the old office. People would not have come knocking my door.”*

*“Since we have the open office I think there is a lot more people that get sick at the same time. I think that in the beginning of the year with the flu season half of the people were ill.”*

*“I wish the floor would be cleaned more often. It doesn’t seem to get vacuumed. But I once heard someone said they really narrowed down the budget for cleaning so... I guess we will get maybe two cleanings per year. You just see the yak gathering.”*

*“This is the first time in my life when I have had a flu. Is it the open environment or am I just getting old?”*

*“The door handles in the café are touched by everyone so many times every day. They must be full of bacteria.”*

*“It certainly feels like there has been influence epidemics but perhaps it is easier to detect if people are away now when we work all in the same floor with open design.”*

*“If I have to concentrate to something then I have to sit. It’s too difficult to concentrate when you are standing, I find. So I have to go sit.”*

## Direct Quotations Related to Change Management

*“The statement from the CEO was that everybody will move to open working environment, whether you want it or not.”*

Reasons for the change:

- *“I have no idea. Could it have been that change was done to have costs savings from office rent and have whole organization in the same floor?”*
- *“I don’t know the reason but I bet that it was for minimizing the use of space.”*
- *“I guess this was our CEO’s modern view.”*
- *“It came without discussion – this is how it will be done.”*
- *“Money.”*
- *“I cannot recall thinking about the reason (for the move) back then.”*
- *“I guess that it was for searching 1) modern office space was so something had to be done, 2) revenue for the construction costs was received from savings – renting one floor instead of 2 floors, and 3) more open climate/atmosphere which the new office enhances.”*

*“I think that the change was communicated and justified well enough and the outcome is mostly successful.”*

*“Reasons for the change was not communicated.”*

*“We were informed only after places were designed already and possibly it had already been decided who sits where. We got a map of the new environment and your own desk.”*

*“After the move (to open working environment) it was pretty much everyone’s own problem to figure out how to make it work around here – how to arrange your work and so forth.”*

*"We live here like this and everyone has adapted in some way."*

*"Info about the moving day came early enough."*

*"There was some announcement in the intranet but we didn't receive other info really."*

*"I would welcome more information about changes in general, too, and whether some things will be done or not. Now people are living in uncertainty. It would be nice to know also if nothing will be done."*

*"This is what top management wanted and this is how we need to live now. It doesn't matter if you disagree. They have decided who people should work."*

*"Change was implemented quite OK and people were involved. I feel that my voice was heard."*

*"The biggest question mark for me is that this open office was promoted as a modern solution but recent research clearly states that it is not the best or most peaceful place to work."*

*"Some things have taken a turn for better, others for worse. You just have to learn to live here. Time will heal."*

## Direct Quotations Related to Management Style

*"People come to their workstation, then they go to eat and then then return to their own seat."*

*"I feel I have less in common now with other departments than I used to. Earlier I could easily go over and chat but now I don't dare to go there! I think I'm disturbing. Everyone are in their own little cells and if you have some business related issue then you go and take care of it but there is no longer small talk or such natural discussion and thinking things together. It has completely ended."*

*"Now all departments just talk about their own things. Boundaries between different departments has been raised up. As an example I don't go to different department unless I have some official reason and even then I go there just briefly."*

*"Those joint coffee sessions means nothing. I just go quickly to grab my pulla and eat it next to my desk."*

*"Our company is very old fashion and line organization led. Information flows in the line but not in the matrix."*

*"People involved in this project (renovation) seems to think that this is all a success and how wonderfully things work now in this floor but I don't see it like that. We have no contact to HR department anymore, for instance, or to any other department for that matter."*

*"...And you have no business there so if you come there they almost wonder what's he doing there."*

*"I haven't seen people to mix at all. Not even once. People have stayed in the same places they once sat. Cross-functional silos have stayed in the seating arrangements."*

*"People go to café in their own groups."*

*"People continue to seek and create an environment that resembles office or room."*

*"This (open office) has not changed the fact that people from different departments are still not integrated better."*

*"Even though some people have flexi seats they still go to the same place every time. People have routines... Old dogs don't learn new tricks!"*

*"Top management could walk around in the office and ask people who work in different departments how is it going... you can first find out from function leaders if there is something special to be able to make good questions and then top management can go and talk with people."*

*"You should walk the talk."*

*"I think that it is obvious that because of this change top management is joined as a group and they have also got closer to the organization."*

*"It does make a difference if someone high from the organization walks around in the office and talks to people. It creates an atmosphere of approachability and sincerity. And be interested about what people daily do. It should be part of top managements job."*

*"You see one member of the top management all the time. You need to be careful of what you say or do."*

*"Think about where they (management) sit, for instance. The visibility of management in this floor is minimal. They walk from the lift to their aquarium. You don't see them unless you get a glimpse next to the coffee machine. I think that management really should be more visible."*

*"People do not dare to break the boundaries. We are in same silos as in the old office."*

*"Now that we have an environment that enables better communication then does people feel that the top management and leaders are visible enough? But I think that we both know the answer to that question."*



*“Perhaps top management is in a bit more visible here (compared to old working environment) and they talk more to people than they used to.”*

*“Top management should be more visible and people from other departments do not walk around in the new office. It is just the same silos as before.”*

*“If you have the table in a standing position then you are in the same level with people when they come and talk to you. But then you disturb others. And you don’t want to stand too long there talking. If you stand while working then you can see further in the office but you haven’t come here to watch the scenery, you have come here to work.”*

*“You have to be on your toes all the time.”*

*“When some particular person (high ranking) enters the space, people start to speculate what that means.”*

*“I have a feeling that if you spend more time in the cafeteria then people start wondering why you are always in the cafeteria. So you should not be in there and I’d rather sit next to my desk and work. Also if you spend time in the phone booths then people wonder about that, too.”*

*“People should be given their own space to breath and liberty to do their work in their own way. You cannot program people to start behaving like robots and act the same way.”*

*“Fairness and flexibility from employer side is important. And that we all trust each other’s ☺ .”*

*“Private phone calls cannot be made here at all! And you have a feeling that you are doing something wrong because there shouldn’t be any privacy here at all. You are just working here.”*

*“It’s not possible to discuss any issues related to boss work in the open office. You need to take those phone calls in the koppero (= a nick name for phone booth) or somewhere*

*else but not in that floor. Things are no longer discussed in the office but in somewhere else.”*

*“Communication feels impossible sometimes because of ears dropping. Colleagues get even more interested if they see you going to a phone booth with someone so that you wouldn’t disturb others.”*

*“People are monitoring your comings and goings even though we do not have time cards. Colleagues say nasty things if you come around 11 to your desk and they don’t even know that you have been in meetings the whole morning. This kind of commenting is really annoying. Very negative thing that we should all work within same time frame.”*

*“I guess there could be more positive things (about the open environment) but there are no teams. Team members don’t sit here next to each other’s and I don’t know it that would even be necessary. I’m sitting here all by myself.”*

*”There is no open and joyful discussion.”*

*“One thing you could focus on (concerning the thesis) is that this (open environment) was sold to people was that it increases and improves communication. But is that the case, did that really happen? I don’t notice the difference. It can be that it depends on each person’s own activity and way of doing things.”*

*“Openness has not improved. You talk with some people and take care of some things but information doesn’t flow any better than earlier. On the contrary... I don’t think that communication is as open as it used to be.”*

*“I feel that everything are now harmonized and done in the same way. Departments have cultural differences, we have lots of diverse people. Some are more open and some are more quiet people but the fact is that we ARE different. And there are about 100 of us. We cannot all fit into the same mould. Not all of us are engineers, not every-one was born in the same mould.”*

*"It should be more social. People still work as if they were in the rooms: they are quiet, they do not discuss and for example in department X they are always super quiet. Our department has a good spirit always (= more conversations)."*

*"You hear lots of confidential discussions. Especially what people say on the phone."*

*"I cannot answer questionnaires truthfully. Earlier I did but I stopped because there were consequences."*

*"I tell white lies in questionnaires as a favour to our team. To make it look better than it actually is."*

*"Getting better numbers each year (in organizational functionality questionnaire) is important. More important than what actually goes around in the organization and how people really feel."*

*" I answer truthfully questions except the intention to stay. I am afraid that he answers can somehow be tracked down to the individual who replied."*

*"I think that I answer all questions truthfully."*

*"It is easy for people to comment about the positive things, but they don't have the courage to talk about the things that don't work and should be improved."*

### **Recommendations for Existing Knowledge Related to Management Style**

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## **Conceptual Framework for Off-Site Work**

**Strong points of off-site work:** Stevenson and Weis McGarth 2004; Grant, Wallace and Spurgeon 2013; Robbins and Judge 2013; Michielsen, Bingham and Clarke 2013; Anderson and Kelliher 2009; Thomson 2008.

**Challenges of off-site work:** Grant, Wallace and Spurgeon 2013; Gongdon, Flynn and Redman 2014; Donnelly 2006.

**Guideline for implementing off-site work:** Anderson and Kelliher 2009, Thomson 2008; Donnelly 2006; Michielsen, Bingham and Clarke 2013.

**Researcher's Access to the Research Site**

*The text was available for the evaluation of this thesis but is removed from published version due to confidentiality reasons.*