



A critical analysis of the building permit process at the Urban Planning Department in Gothenburg

Identification of improvement measures for a smoother internal process

Master's Thesis in the Master's Programme Design and Construction Project Management

HANNA HOLMQVIST SOFIE PAPP

Department of Civil and Environmental Engineering Division of Construction Management CHALMERS UNIVERSITY OF TECHNOLOGY Gothenburg, Sweden 2015 Master's Thesis 2015:71

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ABSTRACT

The general debate about the building permit process being too slow has lasted for several years. The Swedish Government has concluded that there is a need for the building permit process to become more efficient but has not provided any guidelines for how to improve the process in practice. The public sector is typically steadfast and processes are performed in a complex network of different stakeholders and in conjunction with legal security, which are some of the reasons why the process is considered slow. The Urban Planning Department [UPD] in Gothenburg has started to develop their internal ways of working to become more efficient. The purpose of this thesis is to support this development by critically analyse the internal work process of building permits at the UPD in Gothenburg from an outside perspective, in order to identify areas of improvements and propose suitable measures in relation to the problems and challenges expressed by the employees at UPD. Since this is a qualitative study, the method used for this thesis consists of a literature review and an empirical study including interviews with, and observations and shadowing of employees at UPD. A systematic combining approach was used in order to match theory with the empirical findings. The theoretical framework is set around process theories with focus on the tools and measures rather than the origin and general philosophy of the theories. These include process mapping, standardisation and lean thinking, which are considered applicable to the process at UPD. The findings from studying the process resulted in 16 identified problems, divided into the categories complexity, customer orientation, resistance to change and how they are working. Based on these problems, possible improvements are discussed in relation to theory. It was found that the internal process is closely connected to external factors, why the development of the process should involve the whole network of stakeholders and consider several perspectives. Suggested improvement measures for each problem are presented for UPD to use in their improvement work with the building permit process. Examples of these suggestions are that standard formats should be created and information should be better communicated to customers in order to avoid poor quality of applications. Moreover, there are several improvement measures, such as standardisation, that could be applied in the internal process, which in turn would increase the possibility to also improve the building permit process in relation to external factors.

Key words: building permit process, process change, process improvements, public services, standardisation, process mapping, lean

En kritisk analys av bygglovsprocessen på Stadsbyggnadskontoret i Göteborg Identifiering av förbättringsåtgärder för en smidigare intern process

Examensarbete inom masterprogrammet Design and Construction Project Management

HANNA HOLMQVIST SOFIE PAPP Institutionen för bygg- och miljöteknik Avdelningen för Construction Management Chalmers tekniska högskola

SAMMANFATTNING

Den allmänna debatten kring att bygglovsprocessen är för långsam har pågått i flera år. Sveriges riksdag har påvisat att det finns ett behov av att effektivisera bygglovsprocessen men har inte presenterat några riktlinjer för hur den kan förbättras i praktiken. Den offentliga sektorn är karaktärsstark och processer utförs i ett komplext nätverk av olika aktörer i samspel med rättssäkerhet, vilka är några av anledningarna till att processen anses långsam. Stadsbyggnadskontoret i Göteborg har i och med detta börjat utveckla sina interna arbetssätt för att bli mer effektiva. Syftet med detta examensarbete är att bidra till denna utveckling genom att kritiskt analysera den interna arbetsprocessen för bygglov på Stadsbyggnadskontoret i Göteborg från ett utifrånperspektiv, i syfte att identifiera förbättringsområden och föreslå lämpliga åtgärder för de problem och utmaningar som uttryckts av de anställda. Eftersom detta är en kvalitativ studie består metoden för examensarbetet av en litteraturstudie och en empirisk studie innehållande intervjuer med, samt observationer och skuggning av anställda på Stadsbyggnadsbyggnadskontoret. För att matcha teori och empiri tillämpades en systematiskt kombinerad metod som innebär att teori utvärderas i förhållande till den empiriska studien och anpassas därefter. Den teoretiska referensramen baseras på processteorier med fokus på verktyg och metoder snarare än teoriernas ursprung och allmänna filosofi. Dessa inkluderar processkartläggning, standardisering och lean thinking, vilka anses applicerbara på bygglovsprocessen på Stadsbyggnadskontoret. Det studerade interna arbetssättet i bygglovsprocessen resulterade i 16 identifierade problem, indelade i kategorierna komplexitet, kundorientering, motstånd mot förändring och hur de arbetar. Baserat på dessa problem har möjliga förbättringar diskuterats i förhållande till teorin. Det konstaterades att den interna processen har många kopplingar med externa faktorer, varför utveckling av processen bör involvera hela nätverket av intressenter och ta flera perspektiv. För varje problem presenteras föreslagna hänsvn till förbättringsåtgärder som Stadsbyggnadskontoret skulle kunna använda i sitt arbete med att effektivisera bygglovsprocessen. Exempel på några av dessa är att standardformat borde utformas för bygglovsansökan och kommunikationen till kunder borde förbättras för att undvika dålig kvalitet på handlingar. Dessutom finns det flera förbättringsåtgärder, såsom standardisering, som skulle kunna tillämpas i den interna processen, vilket i sin tur skulle öka möjligheten att också förbättra bygglovsprocessen i förhållande till externa faktorer.

Nyckelord: bygglovsprocess, processförändring, processutveckling, offentlig service, standardisering, processkartläggning, lean

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APPENDIX 1

Preface

This thesis has been performed from January to June 2015 at the Urban Planning Department in Gothenburg, Sweden. The study has supported the Building Department in their development work regarding the building permit process. This interesting work has provided us with greater knowledge about the process and about the public sector's role within the building industry.

The master thesis concludes five years at Chalmers Technical University, as the last part of the Design and Construction Project Management Master's Programme.

The thesis would not have been what it is without all the knowledge, experience, thoughts and opinions shared by the employees at the Urban Planning Department. Therefore we would like to express our gratitude and thanks to all who have contributed to the thesis.

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Göteborg June 2015 Hanna Holmquist & Sofie Papp

1 Introduction

The background to this thesis subject springs from a general public debate about the building permit process being too slow (SOU 2013:34, p.101). "The slowness in the municipal processes [...] can sometimes have great significance whether an exploitation can be achieved or not." (SOU 2013:34, p.101). The municipalities in Sweden, in particular Gothenburg, Stockholm and Malmö since they are the three largest municipalities, are often alone blamed for the housing shortage, argued to be due to slow processes (SOU, 2013, p.100). Several investigations appointed by the Swedish government have taken part over the years (e.g. SOU 2005:77; SOU 2008:68), for which the legal aspects in the plan and building permit process are in focus for the suggested improvements. The last investigation finished in 2013 and includes proposals such as to dismiss requirement for building permit where local plans exist and to reform the procedure of asking for neighbours opinions. It should be noted that governmental initiatives usually only involve performance measures and plans, and that there is a lack of guidelines for how to implement and align the initiatives into the organisational processes and their information systems (Gulledge & Sommer, 2002). The 2013 investigation can be seen as one part of the efforts to create conditions for a more efficient building permit process. The public sector is known for being steadfast and processes have typically been performed the same way for a long time (Neumann et al., 2015) strengthening the argument for better municipal organisational processes.

The Urban Planning Department in Gothenburg, henceforth called UPD, have currently developing their internal ways of working in the building permit process. Through process change projects, they are striving to find long-term changes and improvements that will increase efficiency. It is important with an organisational perspective but also an outside-in perspective in order to be able to improve processes (Ljungberg & Larsson, 2012). This thesis aims to support and be part of this development by identifying areas of improvements from an outside perspective, in the sense that the authors of the thesis are not part of the organisation. UPD has identified a need for improvement but the situation is however a bit more complicated. The building permit process is a network with many different elements. First, it is a service process hence it is dependent on people (Johnston & Clark, 2008) and the human factor is an inevitable element which needs to be taken into consideration. Second, it is managed by a public authority generating certain attributes to the process in terms of monopoly, politics, legal security and customer-orientation (Ljungberg & Larsson, 2012; Liff, 2007; SOU 2013:34; Jurisch et al., 2014). Third, it is a dynamic process for which applications are never exactly the same. However, there are common and repetitive aspects which can be found in most building permit applications. The nature of the process makes it complex and it becomes even more complex because of the pressure from all different stakeholders involved, see Figure 1.1. The complexity and the relations between the different stakeholders and their perspectives create tensions that the building permit process needs to handle.



Figure 1.1 Different stakeholders involved in the building permit process.

One important thing to remember is the difference between effectiveness and efficiency as doing the right things and doing things in the right way. This thesis includes both as the process is analysed on basis of what is done and how it is done, however addressed as merely *efficiency*. The efficiency of the building permit process is typically measured in number of building permits processed during a period of time, such as per week, month or year. For example the number of building permits given decision in 2014 in Gothenburg was 3454 according to statistics provided by UPD. This type of measurement could be questioned since the process is arguably qualitative in nature, given that each case is more or less unique. The service provided around a building permit deals with means of law and legal security, meaning cuts in the process need to be determined in relation to quality of the outcome. The quality factor is connected to time, hence it can be suggested there is a limit for how much the process can be shortened without compromising the quality. Therefore it is of great interest to widen the perspective and evaluate how the process can be more efficient and smooth rather than solely focus on how it can be done faster. In fact, there are numerous measures to apply in order to smoothen the process, some of which might also speed it up as an additional effect. This thesis considers the internal building permit process hence it is primarily taking on the perspective of the employees from within the process, meaning any other party's involvement is understood through the employees' perceptions of these. It is not the aim of this thesis to take on the customer perspective. However, the process supports a service including the objective to satisfy customers, why customers are recognised through customer orientation as a part of process orientation. The belief is that measures adopted in the internal process with main consideration to the employees will create added value also for the customers and vice versa.

1.1 Purpose

The purpose of this thesis is to critically analyse the internal work process of building permits at the Urban Planning Department in Gothenburg from an outside perspective, in order to identify areas of improvements and propose suitable measures for development.

1.2 Research questions

The central matter of this thesis brings with it several questions that are of interest when examining the internal work process of building permits at UPD in Gothenburg. In order to identify sustainable, i.e. long-term, improvements the following research questions are set for the thesis.

- What are the main problems prohibiting UPDs internal building permit process to run smoothly?
- How do the problems affect the building permit process?
- What suitable measures for improvements can be used by UPD, considering it is a public service?

1.3 Limitations

The building permit process spans over several departments within UPD although it is the Building Department that perform most of the process activities. Therefore this thesis is limited to only include the Building Department's way of working but refers to UPD as the organisation in which the building permit process takes place. The thesis focus on the internal process and associated activities meaning it is restricted to consider factors and other influence that are within the frames of the UPD. It will not go into further detail on what happens to the application when handled by external parties. Although, it is important to state that these alternative routes can be time consuming hence affecting the building permit process significantly. The thesis also takes on the perspective of the employees, although the customer perspective is recognised. The process has been studied through interviews with employees from the Building Department together with the heads of the divisions.

When the thesis was conducted the UPD had started some improvement work why the restrictions include not taking any digital solutions for the building permit process into consideration. The Building Department already started a project regarding digital building permits. There is also a recently started pilot project with a team trying new ways of working with the objective to improve the work environment and introduce a new way of working in 2016. Discussions were held with the pilot team in order to get a perception of how UPD is working with change projects. The pilot team consists of employees from the different teams at the Building Department why they naturally have an internal perspective, hence the thesis will add to the improvement work from an external perspective.

1.4 Overall objectives

First and foremost the objective is to meet the purpose of the thesis. Additionally, the authors of the thesis aim to get a better understanding of the building permit process in particular and for the work of UPD in general. The building permit process is a recurrent matter of discussion within the building sector and therefore it is interesting to study it more closely in real time. Given this opportunity the authors aim to provide UPD with an outside-perspective on their work and by doing so hope to present concrete suggestions for improvements of the building permit process.

1.5 Thesis outline

This thesis is divided in 6 chapters. The first chapter is an introduction to the thesis putting the subject of the study into context. The method used for this thesis is described in the second chapter. The third chapter is providing the frame of theory which draw upon references from previous research within the subject area and theories regarding process management change and improvements. The results, based on interviews and observations, are presented in the fourth chapter. Thereafter, in the fifth chapter, the discussion/analysis of results and theory combined is presented based on the three research questions. The discussion/analysis is leading to the conclusions and recommendations in the sixth chapter. The sixth chapter also includes proposals for further studies.

2 Method

This thesis was initiated through an exploring interview with Sebastian Stoltz, Helen Thomasson, Johan Hagsgård and Emma Eriksson from the Building Department at UPD in Gothenburg. The exploring interview was structured around discussions regarding the everyday work at the Building Department in order to get a deeper understanding of the building permit process. The description of the current situation at UPD, presented in *Results*, is based on the exploring interview, information consistently gathered during the thesis through dialogues with employees and heads of the divisions together with documents provided by the UPD. Moreover, it aimed to generate an overall knowledge about the different elements included in the process as well as the involved professions and their particular challenges. Thereafter, the thesis was framed based on the material from the discussions and possible methods were evaluated in relation to the thesis purpose.

The decided method used in this thesis includes three different elements: *Literature* review, Interviews and Observations. The literature review was used to create the theoretical framework and the interviews together with the observations generated the empirical material. In order to combine theory and practice a systematic combining *approach* is adopted for the thesis, described further in 2.1. Given the complex nature of the building permit process and the high involvement of people a qualitative study was considered most suitable. A qualitative study should be used when it comes to understanding and/or to find patterns (Trost, 2010), which in this thesis will result in problem identification. Moreover, a qualitative study is characterized by understanding through interpretations by the participants of the studied context (Bryman & Bell, 2011). Service processes rely on human activity and are therefore strongly influenced by the people involved in the processes (Johnston & Clark, 2008). In other words, the way people think, reason and feel about the process and its components have impact on the process operation. Through qualitative interviews these thoughts and feelings have been heard and captured so that they could be used as basis for the suggested improvements. By understanding the world as the interviewee experience it, the results can be interpreted in relation to the theoretical background and the given situation (Trost, 2010). Furthermore, observations of the interviewees work were performed as to investigate whether what was said in the interviews were consistent with the interviewees actual way of working. Moreover, consultation and feedback on the thesis have been consistent through supervision meetings with Professor Christian Koch supported by PhD Veronica Carlsson at Chalmers University of Technology and Building Inspector Sebastian Stoltz at the Building Department at UPD.

2.1 Systematic combining approach

In order to achieve the purpose of the thesis, theory and practice are joint using a systematic combining approach. Research is typically performed either on basis of theory *or* with practice as platform, which is one distinction between quantitative and qualitative research (Bryman & Bell, 2011). For this thesis, the systematic combining approach is used in order to make the most out of theory and practice together. Research is performed in relation to *something*, often an organisational problem (Bryman & Bell, 2011). This *something* is explored simultaneously as the research is

performed and the authors of the thesis believe that through a systematic combining approach both the empirical and theoretical can be done justice. A systematic combining approach is characterized by movement between the theoretical and the empirical world (Dubois & Gadde, 2002). The research process is often argued to be linear with clear stage boundaries (Dubois & Gadde, 2013). However, case studies can be complex and of different characteristics demanding for a nonlinear procedure. In systematic combining, matching is used meaning "going back and forth between framework, data sources and analysis" (Dubois & Gadde, 2002). Moreover, a study located within the social reality that is studied means the researcher collects data in parallel with observations of the context (Bryman & Bell, 2011). In this way, the theoretical framework may change slightly during the research due to unforeseen empirical findings and vice versa (Dubois & Gadde, 2013). The thinking behind the systematic combining approach is illustrated in figure 2.1.



Figure 2.1 Systematic combining, after figure by Dubois and Gadde (2002).

2.2 Literature review

In order to gain an understanding of the studied subject a literature review was conducted. It is important to be familiar with the research area, to get a grasp of what is already known and what theories are connected to the field of research (Bryman, 2012). Before the literature review could begin the focus was to get an understanding of the building permit process, in general as well as performed at the UPD in Gothenburg. The background research for the building permit process was based on communication with employees at UPD and review of documents and other material provided by the UPD or found at other municipalities. The current theory and/or situation should be presented so that it is possible to tell whether the study contribute

to new information and how that information stands relative already known information (Kvale, 2014). Therefore, and in order to create a basis for the thesis, the internal building permit process as performed at the UPD is described to illustrate the current situation and to clarify the discoveries made in the thesis. The description was put together in an early stage and then elaborated during the thesis. The authors of the thesis strongly believe that illustrating the current situation improved the interviews and observations hence they were made with greater knowledge of the process and its context. The literature review was focused on searching theories within the field of process theory, to find out where possible improvement measures could be found, and to obtain an understanding of process development as a subject. The theories Service Operations Management, Process-based Business Development, Business Process Change and Business Process Management were found most relevant for the thesis subject. By using keywords, such as process change, process improvements, process management and public processes, a selection of improvement measures were found and relevant material was selected and studied more closely. These measures include process mapping, standardisation and lean thinking. Also, by using references in found material new material could be found. Moreover, the literature review was performed with the aim to anchor the results of the study to theory and thus present supported conclusions likely to be useful in practice. It is of great interest to the authors of the thesis that theory and practice are connected so that the thesis can contribute to process development in reality.

2.3 Interviews

Interviews are the far most common method for collecting empirical data in qualitative studies (Bryman & Bell, 2011). For this thesis, qualitative interviews with employees at the UPD have been performed during the spring of 2015. The employees that participated in the interviews were chosen through conversation with the supervisor at UPD. However, there were some basic criteria for the selection of interviewees. Since the Building Department is divided into six teams in two divisions, it was desirable to interview at least one employee from each team so to cover any divisional or team differences. Another criterion was to interview as many caseworkers as building inspectors and administrators to get a good radiation and to make sure all professions feel they have been equally heard. Additionally, administrators that are not part of any team were also interviewed in order to get an understanding of their involvement in the process. Finally, to include another perspective on the situation and alternative answers to the questions (Kvale, 2014), the head of each of the three divisions were interviewed. In total, 13 interviews were performed, distributed over three weeks. The administrators were interviewed the first week, followed by building inspectors and lastly caseworkers. The heads of the divisions were interviewed in parallel during that time.

Each interview was performed with one interviewee and two interviewers, the authors of the thesis. According to Trost (2010) interviewing more than one person at the time should be avoided unless the actual purpose is dependent on interviews with several persons at the same time. Two interviewers, if well together, are argued to make a better interview than one interviewer can make on his/her own (Trost, 2010). The amount of captured information and understanding is more extensive and the interviewers can support each other. So, both authors of the thesis participated in all

interviews and switched between being the one responsible for asking the questions and being the one responsible for taking notes. The former role included to make sure that all the questions were asked and sufficiently covered. The latter role focused on taking notes but also included to ask explanatory questions if needed. All interviews were held in private, either in meetings rooms or at the interviewee's office. The interviewees got to decide the location for the interview in order for them to feel comfortable with the context in which the interview took place. The interviews lasted between 30 minutes and one hour. All interviews were held in Swedish, simply due to the fact that it is the official language at the UPD. Additionally, it decreased the risk of any misunderstandings due to language difficulties. The interviews were digitally recorded in order to make sure no information got lost. It also functioned as memory notes and ensured that nothing was misinterpreted when later summarised.

According to Trost (2010) interviews can have different levels of structure. In qualitative research the perspectives of interviewees are emphasised (Bryman & Bell, 2011), hence the interviews should be structured accordingly. Therefore, the interviews were structured with consideration to the interviewees being part of the studied process (Holme & Solvang, 1997). The interviews were focused on one topic and all questions asked were connected to that topic. However, the interviews were performed as open interviews meaning that the beforehand stated questions were not always asked in the same order nor were the follow-up questions always the same but rather depended on each specific interview. This type of open interview is also called semi-structured (DiCicco-Bloom & Crabtree, 2006). The semi-structured interview contains a set of thematic questions with room for changes and/or additions during the interview (Kvale, 2014). The flexibility in interviews is what makes it a useful method for gathering qualitative data (Bryman & Bell, 2011) and it allows for better follow up on certain questions and stories told by the interviewee (Kvale, 2014). The interview should be steered by the interviewee hence giving room for what the interviewee finds important which comes through in the way the interviewee explains and show understanding of events, patterns and forms of behaviour (Bryman & Bell, 2011). Some thematic questions were only asked specifically to some interviewees, depending on their profession or position at UPD. Every question was judged both thematically, with respect to the relevance for the topic, and dynamically, with respect to the human relationships to the topic (Kvale, 2014). The quality of the analysis is dependent on the quality of the interviews. Kvale (2014) further presents some quality criteria which have been considered in the preparation of the interviews as well as during the interviews. According to the criteria, the questions were held short in order to open up for longer answers and to encourage spontaneous, specific, rich and relevant answers from the interviewee. Moreover, the interviewers verified interpretations of the answers through for example follow-up questions.

The base for the interviews can be found in Appendix 1, *Interview Guides I-III*, presented in both Swedish and English. The interview guides consists of three slightly different sets of questions, one guide for administrators, one for caseworkers and building inspectors and one for heads of the divisions. An interview guide can be divided into several guides, which do not have to be identical but need to be comparable regarding the content (Trost, 2010). There are several common themes and some similar questions which are customized based on the interviewees and their respective profession, position and role. The interview guides aim to set a framework

for the interview, allowing for it to be as open as possible (Trost, 2010), but keeping the context and using similar wording for all interviews (Bryman & Bell, 2011). The framework is built around themes within the topic, focusing on *What-*, *Why-* and *How-*questions as indicated by Kvale (2014).

2.3.1 Ethical aspects

The ethical aspect is important when the aim, as for this thesis, is to improve the studied human situation and not only to search for scientific valuable knowledge (Kvale, 2014). All interviewees were well informed about the nature of the study and the purpose of the interviews as recommended by DiCicco-Bloom and Crabtree (2006). Also, the employees were asked to take part in the interviews hence the participation was voluntary. Before published, the thesis was sent to all participants for approval of the used material. Any interview material that was not approved by the interviewee to be used in the publication is kept confidential, in line with recommendations by Kvale (2014). The ethical aspect has been further considered why the results of the interviews are presented anonymously. Moreover, this was intended to make the interviews even more open hoping to receive more thoroughly answers.

The authors of the thesis were stationed at the UPD during the whole time for the thesis, which created a personal contact between the employees and the authors. This can further create trust between the employee being interviewed and the interviewer (Holme & Solvang, 1997). Together with the anonymity, a comfortable atmosphere was created for the interviews, almost resembling daily conversations, and resulted in direct and honest answers. Nevertheless, an interviewer should be aware and careful of the intimacy and openness that can sometimes unintentionally deceive the interviewee, who might say something s/he might regret (Kvale, 2014). The personal contact requires that the interviewer is careful in how the questions are asked and to not push the interviewee in his/her answers.

2.4 Observations and shadowing

Two types of observations have been used in this thesis. First, general observations have been performed in informal contexts. These observations were consistently made during the thesis, based on comments and small discussions of relevant topics during morning coffees, lunch breaks and other observed information at the UPD office. This method can be related to ethnography in which the researcher participates in the social life of the people that are studied (Bryman & Bell, 2011). Second, more structured observations, similar to shadowing, have been performed of chosen individuals. The research technique shadowing is a qualitative method and involves an observer following an employee around for a period of time (McDonald, 2005). Simply explained, the observer follows the employee through meetings, coffee breaks and all tasks performed on any role within an organisation, and can last between only a single day up to a whole month. The observer should frequently ask questions, check the employee's body language and write everything down as field notes. Since the only way to understand a process is to see how it works (Bhatia & Drew, 2007)

observations are seen as a vital element for the thesis. Furthermore the aim of the observations and shadowing is to complement the interviews to see if what is said complies with how things are done.

In shadowing research there is always the problem with security, confidentiality and people being uncomfortable (McDonald, 2005). People in general might not be at ease with someone observing their every move and their relationships with colleagues. Therefore the human factor in this sense was paid extra attention when performing the observations. Another known problem with observations is the Hawthorne effect that can emerge during participation in studies (McDonald, 2005; Powers & Knapp, 2011). It is a phenomena where the people being observed tend to alter their behaviour to either perform better or, in some cases, worse (Powers & Knapp, 2011). In order to avoid such behaviour the ones shadowed were chosen based on their appearance of being people who are comfortable in their profession, hence would not have a problem with being studied closely in their work. Three employees were chosen for the observations, one from each category of profession. The selection was mainly done through discussions with the supervisor at UPD and through his personal relationships with his colleagues, the most suitable candidates were chosen. The criteria was to observe one or two employees who have long experience working at UPD and who master the process, and one or two employees with less experience. This was to find differences and clashes in how they are working. Thereafter they were asked for permission and a discussion about how the observations would be performed followed, to ensure that they understood the research method.

2.5 Discussion/Analysis

After all interviews and main observations were completed, the material was compiled. The interviews were, as mentioned, performed in Swedish why the first step was to summarise them in English. The compiled material was analysed and themed which led to an identification of four main categories: *complexity*, *customer* orientation, resistance to change and how they are working. Thereafter, the results together with the theory were laid out to facilitate discussion and identification of certain patterns, similar answers and problems. Arguments and counterarguments for specific findings were carefully analysed, colour-coded and put together. However, during this phase, general observations from the office at UPD were continuously added if new information emerged. Some assumptions had to be made about the findings, and minor conclusions were drawn already after the first interviews. Some of these altered during the thesis, whereas some developed into topics of discussion. Nevertheless, the assumptions and conclusions were carefully kept so that it did not put the next interview at risk, for example by asking leading questions. The authors of the thesis are also aware that the conclusions might have been influenced by the fact that the authors were located at the UPD office during the thesis. Additionally, it is important to note that the thesis is based on interviews hence the results and consequently the discussion and conclusions, are influenced by the interviewees' interpretations of the process and in turn the authors' interpretations of the answers and experience of the situation at UPD.

3 Theoretical Framework

For this thesis, the process is in focus hence the theoretical framework is set around process theories and theories applying process thinking. Parts of the problems with process improvements lie in the nature of the process, which in the case of UPD is characterised by supporting a service delivered by a public authority. The theories have been evaluated back and forth, through systematic combining, as the thesis proceeded to ensure that the chosen theories are relevant for the process improvement work at UPD. Tools have been presented more thoroughly in favour of detailed presentations of the theories as such, to increase the relevance for the UPD in their improvement work. The chapter is divided into three main parts. First, the nature of processes is described, to set the frame for the process thinking that governs this thesis. Thereafter, the theory goes further into detail on service processes and public services trying to capture the typical nature of the building permit process at UPD. The building permit process is a service depending on people hence studying the process includes recognizing the service and the people in it. These two aspects contribute to the complexity which is another aspect characterising the building permit process. Therefore, complex processes are also addressed in the first part of this chapter. Second, processes are managed somehow and process improvements naturally call for change which is covered in the second part of the theoretical framework. Management of processes and further also management of changing processes are presented, based on theories such as Service Operations Management, Process-based Business Development, Business Process Management and Business Process Change. However, as mentioned, the focus is on the tools and approaches of the theories rather than the origin and general philosophy of the theories. Based on these theories, problems and challenges with process improvements are presented to provide a base for the Analysis/Discussion. Last, tools and frameworks of improvement theories, that are considered relevant in this thesis, are summarised with focus on process mapping, standardisation and lean thinking but other minor tools and frameworks are also included.

3.1 Definition of processes

There are several definitions of a process and the concept has different meanings depending on context (Gulledge & Sommer, 2002). Therefore it is relevant to discuss the definition of process as used for this context. According to Harmon (2014) it is "a bounded set of activities that are undertaken, in response to some initiating event, in order to generate a valued result". Similarly, Ljungberg and Larsson (2012) describe a process as collated linked activities which transform input into output. However, adopting a sequential focused definition can be a risk in regard of process improvements since it can generate a constrained linearity. Moreover, a process can be referred to as the way in which a task is implemented why there can be many processes that may be used to accomplish the same task (Sørensen, 2012). Hence, an alternative definition presents a process to consist of numerous event-driven process chains (Gulledge & Sommer, 2002) that needs to be managed from start to end (Johnston & Clark, 2008). Although this approach is less linear, Ljungberg and Larsson (2012) argue it is insufficient to see the process as chains because today's organisations are generally network based. Therefore, a more justified definition would be:

"A process is a repetitively used network of collated linked activities which uses information and resources, based on an identified need, to create the value that satisfies the need".

Considering the building permit process, it could be argued that the process transforms the applications into decisions, using a network of collated linked activities, where the links have a slight linear appearance. There is no single actor working with the building permit from start to end, instead many different actors and stakeholders are involved in different stages within the process, creating the network, see previous *Figure 1.1* in the *Introduction*. Value and satisfaction is more difficult to define since the customer relation in public service is not clear. This definition might appear as complex but as the studied building permit process is considered complex it deserves a definition which justifies its nature. How the process definition and the nature of the building permit process align is further discussed in the *Discussion/Analysis*.

3.1.1 The nature of *service* processes

The building permit process provides a service. The literature often refers to the customer perspective for which a service is defined as the combination of perceived outcomes and experiences delivered to and received by a customer (e.g. Johnston & Clark, 2008). For a successful service, both experience and outcome need to be included (Johnston & Clark, 2008). However, success can appear different depending on the nature of the service and the competitive environment. Service characteristics emerge through its processes (Ljungberg & Larsson, 2012), why service and process can be seen as interconnected. As stated earlier, service processes rely on the people involved in the processes (Johnston & Clark, 2008) and for some processes customer involvement is needed (Ljungberg & Larsson, 2012). Furthermore, service can be defined as to be "value-created processes, i.e. processes that supports and promotes value-generation for customers [...]" (Grönroos, 2008). Value-creation can include anything from external customer care to internal management of personnel (Johnston & Clark, 2008). Based on the findings in the theory reviewed for this thesis, it seems inevitable to address the customer when talking about service processes. However, the employees have a vital role in how they can affect the customer's perceptions of an organisation (Brady & Cronin, 2001). Often, the employees in a service organisation are the only contact between the organisation and its customers (Hartline, Maxham III & McKee, 2000). Moreover, an organisation should not forget that certain employees possess a "know-how" that may be essential for the service process, which cannot be found in any definition of the process (Johnston & Clark, 2008). Only when the certain employees are absent, the importance of the "know-how" becomes apparent. In other words, the human factor plays an important role in the service process.

3.1.2 The nature of *public* service processes

Public services are services provided by government to the general public (Neumann et al., 2015). The building permit process is not only a service process but actually a public service process. Public authorities produce their service to a large and complex

network of stakeholders: companies, citizens, politicians, interest groups, etc (Jurisch et al., 2014). The agenda for an authority typically changes every new mandate period because of new elections (Liff, 2007). There also exist a higher level of bureaucracy and regulations due to them being generally larger than organisations in the private sector. Moreover, public authorities receive more scrutiny, hence being somewhat slow in their development. At the same time, they also have to work in conjunction with legal security, which means that some processes cannot be as fast as desired (SOU 2013:34). As stated in the introduction, public services are criticised for being slow and discussions of efficiency are highly topical in the public sector and frequently mentioned in relation to customer orientation. According to Jurisch et al. (2014), public authorities in general need to develop more efficient and effective services and become a more customer-oriented service provider. Additionally, Ljungberg and Larsson (2012) stress that, for a public authority with any form of monopolistic position, it is of extra importance to be customer-oriented. The lack of competition, generated by monopoly, within the public sector is one of its main challenges (Bhatia & Drew, 2007). Customers of public services are usually not given any choice of provider and public services are thus typically supplier-led rather than customer-led. But without the customer-orientation, the authority risk being improperly responsive and miss chances for development.

3.1.3 Complex processes

A process can vary between being extremely simple or extremely complex (Harmon, 2014). If a process follows a consistent, well-defined set of steps with clear rules, it can be described as simple. This type of process might be called linear (Ljungberg and Larsson, 2012). When the activities within a process are done in different order and also vary in content which depends on an external part and other circumstances, the process becomes more complex and demands for more flexibility (Harmon, 2014). A complex process can contain several steps, many interdependent activities and exceptions, and tends to change and evolve over time. Also, the high complexity is often due to interrelated processes, departments, people, decisions and activities (Johnston & Clark, 2008). The complex process usually requires more involvement and initiatives from people. The more complex a process is, the more initiatives and creativity from people are needed. The people working in these very complex processes, known as knowledge workers, usually have an advanced or high education and posses required creative and analytical skills. Improvement of these processes often requires studying these knowledge workers closely, because a great deal of their "know-how" is kept in their minds. Furthermore, complexity is explained by Johnston and Clark (2008) as having different dimensions, see Figure 3.1.



Figure 3.1 Complexity, after figure by Johnston and Clark (2008).

Interconnectivity is the many possible interrelationships between different variables (Johnston & Clark, 2008). Activities need to connect why interconnectivity to some extent is vital. Size has impact on complexity in the sense that the greater an operation is the more elements it has. Therefore, large organisations most surely have a greater complexity since they have more interconnections. The structure has influence on the level of complexity seeing that different organisations have more or less complex structures. The **nature of the service** is another source of complexity, which differs significantly between different operations. Interdependency is also connected to complexity and the more interdependency there is the harder it gets to manage the operation. Moreover, tasks are often performed against time which demands for speedy actions and makes the complexity increase. The interplay between human actors, which services rely on, creates a dynamic with high **uncertainty** regarding the time needed, costs involved and final outcome. Lastly, political behaviour is an aspect with great impact on the complexity. This aspect includes dynamics of politics as well as group behaviour that have impact on how things are done. There are few decisions that can be made on rational basis and there might not be one right way, why action is delayed and decision making is difficult. It all comes down to what is "on the table", meaning the proper way of working, while what is "under the table" have great influence on how things are actually done, see Figure 3.2.



Figure 3.2 The proper way of working vs. how things are actually done, after figure by Johnston and Clark (2008).

The relation between what is commonly known as affecting the way of working and what might be affecting the work even more but which is not clearly communicated can also be described using another metaphor. Cunningham and Kempling (2009) refer to the well-known organisational iceberg, a model originally coined by Herman in 1970, in their discussion regarding hidden elements that exist in organisations. The top of the iceberg represents the formal way of working in the organisation whereas the much larger part of the iceberg below the water line represents expectations, interpretations, attitudes and so on of the people within the organisation. The interesting point made by Cunningham and Kempling is that the iceberg "illustrates the relative importance and size of the informal part of an organization". Thus, the non visible in an organisation is not to be forgotten if balance is to be found among the many complex dimensions.

3.2 Process management and process change

Good service processes are often due to careful design and close management of the whole process, linking all activities and sub-processes together (Johnston & Clark, 2008). There are several theories regarding process management in general. Overall, the process management concept includes a hybrid, holistic, contingent, IT-enabled and systematic approach (Greasley, 2006). Furthermore, an optimum arrangement of processes and tasks within an organisation is a critical part which determines the efficiency of the results.

When searching the literature some of the theories that address process management and change are Service Operations Management [SOM], Process-based Business Development [PBD], Business Process Management [BPM] and Business Process Change [BPC]. According to Harmon (2014), there is no one way perfectly suited for improving processes since there are several different types of problems when changing a process. The problems vary depending on industry, the organisation's level of concern and the specific process in question. Therefore, several theories have been used in this thesis. However, as earlier mentioned, it is not the theories themselves that are focused but rather the theories' respective tools for process change and/or improvement that are of interest for this thesis. To facilitate understanding of the tools the theories are first shortly presented.

SOM

Overall, SOM regards the delivery of service to the customer (Johnston & Clark, 2008). This in turn puts pressure on the organisation in terms of understanding the needs of the customers, managing the processes that deliver the service, ensuring that objectives are met and continually improving the process that supports the service. The theory origins from production management but has developed to be applicable for all types of service as well. According to Johnston and Clark (2008), focus is on the activities, decisions and responsibilities of operations managers in service organisations. However, the many challenges and problems identified within SOM affect the whole process and need to be dealt with on all levels in an organisation.

PBD

Regardless type of business, almost every organisation practices some kind of business development. PBD has emerged from current research and experiences from practise since there exist a need for new ways of managing and organising business processes. PBD is considered by Ljungberg and Larsson (2012) to be a promising, necessary and feasible way to develop processes. It is a way to take action and not only talk about change and development.

BPC

The current emphasis of processes in business origins from Porter's value chain, but in the 1990's, a more holistic view of processes was called for (Harmon, 2014). It was realised that there was a need for activities to work together for the process to be successful, and a Business Process Reengineering movement was introduced. Further on, this resulted in BPC which according to Harmon (2014), is a theory implemented on a process level within an organisation. When a business process manager is to change a process within the organisation, the change turn into a project and the BPC theory contains elements for how to go about changing a process in a successful way. BPC can be considered a theory of its own as well as a part of BPM, see Figure 3.3.

BPM

The BPM theory is a somewhat comprehensive approach that stems from industrial engineering research, operations management, Lean, Six Sigma, and a quality control tradition together with business process management systems (Harmon, 2014). At first, it was only focused on the manufacturing process management (Gulledge & Sommer, 2002). It was hard to manage large systems with integrated processes (Gulledge & Sommer, 2002), why business process management developed

throughout the years and therefore contains aspects from several other theories and ideas (Harmon, 2014). The theory advocates the following: documenting what is done in a process in order to understand how work flows through; assigning process ownerships to enable a managerial reliability; managing the process for optimisation in the process's performance; and improving the process to achieve a satisfied quality (Gulledge & Sommer, 2002).



Figure 3.3 Relationships between BPC and BPM, after figure by Harmon (2014).

The figure illustrates the relationship between BPC and BPM, where the management of business processes are performed on a strategic and managerial level, while the actual BPC projects are on a process level. BPMS refers to Business Process Management Systems and is a collective name for the many IT-systems supporting managers in for example performing BPC projects.

3.2.1 Problems and challenges in process management and change

To change a process structure is seen as complex, as there are often many dimensions of an organisation that become affected by changes (Greasley, 2006). These dimensions, including: people, strategies, culture and environment, are interacting and interrelated with each other within the organisation. The complexity of the dimensions creates problems and causes challenges for an organisation to overcome (Johnston & Clark, 2008). When changing part of or an entire organisation, it is important to know about people's natural resistance to change (Sørensen, 2012) since it can be a threat to improvements if not managed correctly (Jurisch et al., 2014). Apart from people's individual resistance to change, in some situations there also exists a resistance to change in the organisation as a whole. If the organisation is more traditionally based and focused on functions its ability to respond and act on external signals and factors is not a natural part of the working structure (Ljungberg & Larsson, 2012). As Sørensen (2012) argues that "it usually rests on a common human and organizational inertia that essentially means that tomorrow should look like yesterday that should look like today." Since people do not change unless they have to, an enough sense of urgency for improvement needs to be created within the organisation (Cunningham &

Kempling, 2009; Sorensen, 2012). It might seem like quite a simple task, although in many cases, it is not (Sørensen, 2012). One reason is that management sometimes seem to rush through decisions and want to move to the next phase faster than what the employees are comfortable with. Also, previous organisational mistakes have impact for how future changes are received by employees (Greasley, 2006). In order to engage employees in the change, a clear picture of the future needs to be provided which communicates the objectives of the change and how it is to be implemented (Cunningham & Kempling, 2009).

There are many types of problems that can occur in a process, such as input problems, output problems, control problems, problems with business rules or policies, problems with documentation and problems with enablers (Harmon, 2014). Regarding the input problems, it typically refers to insufficiency in quality or quantity. For example the inputs might not meet the standards why they need to be returned to the sender or sometimes be rejected altogether. In terms of quantity the inputs might arrive in batches and then have to be stored until the inputs are complete or inputs might not arrive in time. For output problems it is much the same whereas control problems can for example be when an output is incompatible with the process in scope. If the process in question or an individual within the process is ignoring one or more organisational policies and/or rules, then, obviously, a problem exists. Regarding problems with documentation, it can include illogical manuals, incomplete, unavailable or wrong information documents and documents written in a way hard to understand. Lastly, employee problems and IT-problems are two enabler problems and can occur when a responsible employee cannot be reached for questioning or when IT applications disturb the process flow. An organisation that puts effort in aligning their IT-systems with their processes is more likely to be successful (Gulledge & Sommer, 2002; Ljungberg & Larsson, 2012). If gaps exist between the two, the process goals will not be reached. Gulledge and Sommer (2002) stress that closing the gaps can only be done by process modelling, analysis and a thorough software configuration. In order to manage processes, an organisation needs to ensure that the systems allow for management activities, such as monitoring and follow-ups. Furthermore, organisations that fail aligning their process management systems with their IT systems will never realize the full benefits that can be achieved. Investment in management systems is vital for ensuring consistent process delivery (Johnston & Clark, 2008). Alignment of systems is even more important during changes (Gulledge & Sommer, 2002). If organisations keep their old systems, those who possess the most information about the old systems will impede effective process management.

Problems with process change generate challenges, which an organisation that decides to change processes has to take into consideration before starting to plan for implementation (Johnston & Clark, 2008). A number of challenges, such as: manage different customers, understand the customer perspective; coordinating and aligning different parts of the organisation; create a holistic view; time; efficiency; and continuously improving the process, are presented in the following sections. Service organisations manage different customers, meaning the customer plays a part in the process itself (Johnston & Clark, 2008). There is an overlap between the customer and the process hence the customer experience will influence the process. The customers are seldom a homogeneous group (Ljungberg & Larsson, 2012) and therefore the process needs to be dynamic for the organisation to be able to manage different

customers and needs (Johnston & Clark, 2008). Apart from managing customers the processes also handles materials, information, staff and other stakeholders. For example, there are stakeholders and internal customers, represented by the employees, and other departments and authorities involved in the process. In other words, one great challenge is managing multiple customers including both the external various customers that request the service product and the indirect internal customers within the service process.

Even if the internal process is entitled to be viewed inside-out it is important to understand the customer perspective and how the process is viewed outside-in (Johnston & Clark, 2008). Customers have more or less clear expectations of a service and the service provider. From the organisation's point of view it is a matter of being clear of what expectations they are trying to meet. In order to meet both parts interests it is important to discuss improvements among the employees with the customer in mind (Bhatia & Drew, 2007). It can be harder for some organisations than others to spread the customer orientation across the departments' functional borders (Ljungberg & Larsson, 2012). The information risks being altered when moving between functions in the hierarchy. To deal with this challenge, the organisation must have genuine engagement and mutual will to understand the customer, rather than falsely believe that customer orientation equals submission and obedience. When the expectations are defined it is all about ensuring that the service is delivered as to meet those expectations (Johnston & Clark, 2008).

Delivery of a service requires involvement of different parts of the organisation, which needs to be coordinated in order for the organisation to deliver the service (Johnston & Clark, 2008). Coordinating different parts of the organisation includes overseeing the logistics of the process and making sure the process runs as intended. At the same time it means aligning all parts of the organisation to make sure that it is permeated by the same characteristics (Ljungberg & Larsson, 2012). Coordinating the different parts is however complex as the provider is experiencing pressure from many different directions some of which are outside the provider's control (Johnston & Clark, 2008). Therefore, it is arguable that a holistic view of the organisation will enable and facilitate development and improvement (Ljungberg & Larsson, 2012). This can be difficult to achieve since there usually exist internal "territories" and barriers further down in an organisation. Coordinating, aligning and creating a holistic view across hierarchical levels, functions or departments take time. As mentioned, much of the original content risks being altered when information flows through the organisation and also the reaction risks being misunderstood on the way back to the sender. The longer time information has to reach its target, the greater risk of it being altered.

There are many reasons why an organisation sticks to its old ways of working, of which tradition and lack of adequacy are two of them (Ljungberg & Larsson, 2012). Other reasons are: change is always painful and requires hard work; lack of courage, which can be related to ignorance; unclear options; and being captured by past success and waiting for them to re-emerge. Therefore, it is of utter importance to continually improve and develop the process and to make sure that such work results in real improvements (Johnston & Clark, 2008). In order for this to happen the culture

needs to be supportive of both service as process-form and of change. The challenge in continually improving the process is the added complexity resulting from change which often includes both improvement of efficiency and quality. Quite often an organisation state that they have to increase the effectiveness and efficiency, though this does not mean to work harder or faster, but rather work smarter (Ljungberg & Larsson, 2012). Moreover, it has to exist enough resources to be able to change.

3.2.2 Problems and challenges in public services

Management and change in the public sector is by no means necessarily more difficult than for any other sector but it is different (Cunningham & Kempling, 2009). The problems and challenges mentioned above are indeed relevant also for public services. Nevertheless, public services have their own characteristics of difficulties that have to be considered in addition. It is not only about convincing the stakeholders that the implied changes will be for the better but rather to be sure of doing what is "right". This is challenging for a public service acting as an authority and it includes compromising conflicting interests.

To begin with, BPM does not work well when placed in a hierarchical command and control structure, which is typical for public services, hence changes of management is required (Gulledge & Sommer, 2002). Processes in the public sector is often multidimensional, varies in involved functional departments and teams and are far less controllable than the processes in the private sector (Jurisch et al., 2014). The dimension factor is a major problem when managing processes today (Gulledge & Sommer, 2002). Many change-projects have failed throughout the years, both in the public and private sector. One reason for failing could be because public authorities do not have much experience in measuring and managing BPC projects (Jurisch et al., 2014). However, management of change is often much harder for the public than the private sector due to public authorities produce their service to a huge and complex set of stakeholders. Findings from Jurisch et al. (2014) showed that public authorities are less willing to work for changes that stretch over the organisational and departmental boundaries. This is primarily due to that it is difficult to reach agreements between the various involved parties. Jurisch et al. (2014) further conclude that: "Public organizations have the unenviable task of having to meet a multitude of, often inconsistent, interests and aims with a very restricted budget." Much of what is done in a public authority is grounded in laws and regulations, which makes it significantly harder to decide what part of a process to be included in a change. The public authorities operate with a pre-set budget to uphold those laws and regulations. Improvements are strongly connected to financial aspects in terms of profit and for a public sector organisation it is often about reductions in costs (Johnston & Clark, 2008), hence customer satisfaction is not a prioritised concern (Jurisch et al., 2014). This can be seen as contradictory since a service is provided for customers, whose satisfaction should be of priority. As a result, it causes less motivation for cost reductions and incentives for process efficiency. However, to find out who the customer is for a service provided by a public authority is very complex, much because they are in general terms called the citizens (Ljungberg & Larsson, 2012). Who are they? As already mentioned, citizens can hardly be identified as a homogeneous group of customers. Furthermore, the term *customer* is not always clear (Radnor & Osborne, 2013) and employees in public authorities are not always

comfortable with using the term (Ljungberg & Larsson, 2012). Radnor and Osborne (2013) explain it to be due to that the customer term has its roots in the private sector where the commercial relationship is evident. Therefore, to put the customer first in public services can be difficult (Bhatia & Drew, 2007) since there is no clear commercial relationship (Ljungberg & Larsson, 2012). Even so, value for the customer can be created if there is enough will to do so.

To succeed with a BPC project, the essential part is to have both top manager support and involvement from employees (Jurisch et al., 2014). If employees see the manager being active and committing to the change, with both time and effort, the employees are much more likely to support the change. Another success criterion is to carry out the change in a visible, controlled way, with effective communication and with motivational activities. Moreover, training in the new ways of working reduces the resistance to change and offers psychological support. Furthermore, when changing a process in a public authority, Jurisch et al. (2014) argue that all surrounding political conditions have to be considered before beginning to plan for a change. The substantial amount of involved stakeholders together with public opinions generate a vulnerability to changes and affect the expectations and possibility for success. Therefore, it is important to not have too high expectations of a BPC project in the public sector. Both public authorities and their employees tend to have seemingly low faith in their own capacity to change. However, Jurisch et al. (2014) further found that as long as an organisation has the capacity to change, it has the capability. As long as it can maintain the daily operations in parallel to the implementation to new ways of working, and has the appropriate skills for BPC, it is possible to succeed.

Table 3.1 shows a summary of the many problems and challenges found in theory when it comes to organisational changes for improvements, both in general terms and what is typical for the public sector.

Problems in general	Public sector specific problems
Resistance to change	Doing what is "right"
Management rush trough decisions	Compromising conflicting interests
Previous organisational mistakes	Multi-dimensional with many involved departments and divisions
Input problems in terms of quality and quantity, not meeting standards and have to be sent back, not right quantity	Lack of experience
Control problems, output incompatible with process	Complex set of stakeholders
Time, being late	Less willing to work across organisational and department boundaries
Ignoring rules or policies	Processes grounded in laws and regulations

Documentation, illogical manuals, wrong information	Customer satisfaction is not a prioritised concern
IT-systems not process-oriented	Identification of customers
Keep old systems during changes, stick to old ways	Vulnerable for changes
Manage many customers	Low faith in their capability to change
Hard to understand the customer perspective	
Coordinating different parts of an organisation	
Holistic view	

Table 3.1Summary of problems and challenges.

3.3 To improve processes

Improvements are related to change which need to be supported in the organisation for the improvements to be realised (Johnston & Clark, 2008). One way of gaining such support is to involve the employees in the process of change so that they feel like they have kind of an ownership of the plan (Sørensen, 2012). Not only the employees but everyone affected by the change need to be committed to the plan for process improvements to succeed (Cunningham & Kempling, 2009). Typically in the public sector some of the affected parties are found outside the organisation implementing the change. Furthermore, an organisation can become more effective if information is made available to everyone (Johnston & Clark, 2008), why the different stakeholders, once again, should not be forgotten, even though the process in question is internal (Harmon, 2014). Therefore, the improvements should include anyone who might interact with the process; customers, managers, suppliers and other parties. Interviewing these stakeholders should be of interest to ensure an understanding of their view of the process and its problems (Harmon, 2014), thus the approach communicated externally can become more uniformed (Johnston & Clark, 2008). For example, it is fairly common that customers receive different approaches from different employees within the same organisation. Hence, communicating and articulating the service objectives clearly is of highest importance. It will ensure that the service can be delivered to the set specification. In other words, organisational alignment is essential for improving the service process. Moreover, successful improvements are dependent on commitment to the new changed process (Cunningham & Kempling, 2009).

According to Ljungberg and Larsson (2012), there are two typically weak strategies when aiming to improve a process: *do more of the same and work harder* or *meaningless short-term investments*. Usually, the two are combined. The first strategy explains itself and is sometimes also referred to as "run faster". The latter is for example when an organisation puts all effort in a new IT-system which is business-oriented and not process-oriented. Usually this is due to lack of time and understanding of the design of the process. Whether an organisation is process-

oriented or not, the processes are still there. Even more importantly, the processes have a significant meaning for the success of the organisation (Ljungberg & Larsson, 2012), why improvements should have a long-term perspective.

When changing a process, the aim is improvement and efficiency. There are some more specific tools that can be used in order to face the challenges and problems with process changes. One primarily tool to use is process mapping which assists in getting an overview of the process and furthermore identification of where problems might occur (Johnston & Clark, 2008; Greasley, 2006). Another tool is standardisation, used to facilitate the process operations (Harmon, 2014; Ungan, 2006). Likewise, Lean or lean thinking tools can be beneficial for improving processes (Bhatia & Drew, 2007; Neumann et al., 2015). These three tools were found most relevant for the thesis and will be further presented below, together with a few additional minor tools and frameworks to show more improvement options.

3.3.1 Process mapping

Process mapping is meant to assist in the evaluation and development of processes (Johnston & Clark, 2008). It has long been argued to be a vital tool in the way forward for public services (Curry & Herbert, 1998). There are several methods for mapping or charting the process but the most important is to capture all activities, their interrelationships (Johnston & Clark, 2008) and to identify roles and elements involved (Greasley, 2006). The aim is to translate the mission of the organisation to all levels and by that translate the overall all objectives to individual and/or team objectives (Curry & Herbert, 1998). It might be very time consuming but the results can be crucial in the work with process development since it can assist in identification of possible wasted steps and causes for delay (Neumann et al., 2015). Even if there is no clearly identified problem, process mapping is useful (Curry & Herbert, 1998). An organisation may consider to be good at what they do, but they are not really sure how they achieve it, a concept named "causal ambiguity" (Johnston & Clark, 2008). In this case process mapping can assist in identifying what is good in the process or in parts of it. Moreover, process mapping can generate a shared view and understanding of the process and it can also lead to understanding of everyone's role in the process (Greasley, 2006). The process mapping can further assist in the search for a common professional language (Curry & Herbert, 1998).

Processes can easily become overgrown as an organisation develops, and once logical procedures become adjusted with time without adapting to external changing conditions (Ljungberg & Larsson, 2012). The changes made are often internally function-defined and cannot be considered as logically designed. Many routines and procedures are therefore seen as rational only by a small part of the organisation. Since processes can be divided into core, sub and management processes (Harmon, 2014), the process map can have different degree of detail, depending on the intended use (Johnston & Clark, 2008). When trying to illustrate the relationships between the three, the process map can become too complex to understand (Harmon, 2014). Not all employees posses the ability to see the big picture, but rather have a good idea of how their small part of the process works. The complexity often results in that only a few fully understands how the process is connected, until it is made visible in the

process map (Ljungberg & Larsson, 2012). In other words, a too detailed process map can be detrimental to issues and opportunities for improvement (Johnston & Clark, 2008) and the mapping tool is no longer helping the improvement, but rather ends up doing the opposite (Harmon, 2014).

In order to achieve maximum effect of process mapping the map needs to be analytical rather than just descriptive (Johnston & Clark, 2008). The process map in itself is typically descriptive and the analytical dimension is achieved through questioning it. Such questions include "How many different individuals and/or departments are responsible for parts of the process?", "Who is responsible for overseeing, controlling and improving [the parts of the process]?" and "How efficient is the process?". The process mapping tool involves interviewing employees and observations of the process and its relevant activities (Greasley, 2006). By determining responsibilities as well as times, distances and resources used in the process, unnecessary activities or hindrances can be identified and removed (Johnston & Clark, 2008).

3.3.2 Standardisation

Standardisation can be seen as the next step after process mapping. To identify standard processes or to start standardise them is a trend in process management when organisations seek alignment (Harmon, 2014). Standardisation can be defined as to the extent to which policies, work and operating procedures are followed and formalized (Ungan, 2006). It is said to increase efficiency, enable easier process control and reduce process variations. The power of standardisation is that it provides consistency, even though it can be argued to damage innovations. Employees' different backgrounds, experience and skill levels in an organisation result in that they perform the same task differently, which makes it hard to achieve consistency. It is, however, one crucial element for organisations survival. If an organisation does the same thing in different places within the organisation, it should focus on doing it the same way, otherwise standardisation is a waste of time (Harmon, 2014). Ungan (2006) states in his work that only when processes have identical inputs, operations and outputs, they can be standardised.

An organisation will be able to standardise its procedures if how the best performers in a process are working can be captured and documented (Ungan, 2006). It is also important to validate the standards with people within the process to ensure they are interpreted the same (Harmon, 2014). This is not an easy task, why Ungan (2006) argues that those mapping the process should be employees within the processes and that they together should look for, identify and create the standard documents. This is because they have the familiarity with the processes and will be able to create a meaningful dialogue. If this step to create standards fails, each employee will fill in the gaps and interpret the documents differently, which causes variation in the process output, hence the level of detail is too low. The next step, to make the employees follow these standard documents, is sometimes even harder (Ungan, 2006). It is difficult to identify the best performers or "process masters" and it becomes more complex as the level of detail increase. It is often a matter of a typical "we know more than we can tell" situation where the organisation rely much on tacit knowledge. To
be able to standardise a process, the process master must be identified and the tacit knowledge must be transferred into explicit knowledge in written documents. The more knowledge that is able to be written down, the more likely is it that it is possible to standardise. When knowledge is highly tacit, it is subconsciously understood and usually shared through conversations, interactions and storytelling, which result in poor understanding of the processes it belongs to (Ungan, 2006). Harmon (2014) further stresses that it is of importance to align the standards with the IT-developers to assure that they are up-to-date with the organisational processes.

Ungan (2006) has proposed a framework for standardisation of processes which contains seven steps: Identify process, Identify process masters, Build a team, Define process and break it down, Aquire knowledge for each step, Codify and verify, Combine and place in a standard form. The first four steps are basically done through process mapping. The fifth step, to acquire the knowledge, is in turn a process of communication and observations that have to be dealt with care and with a deep level of detail, in order to obtain the right information. The team should then work together to create a unified, mutual understanding and language used to codify and verify the process master(s) information. To enable that, shared mental models, metaphors and existing artefacts can be used. For the group to capture and define the process master(s)'s knowledge for each step of the process, it is essential that there exist trust between the employee giving the information and the receiving group. If the process mapping is instead done by non-members of the group and postponed until after the step of *acquiring knowledge*, it can cause confusion and lack of agreement among the group members. The standards produced can in such situation be perceived as impossible goals and unrealistic by the rest of the employees, hence they will not follow them (Harmon, 2014). For the standardisation to be successful, it has to be clear to any employee within the organisation (Ungan, 2006).

Once standards are in place, managers must know if the employees know about their existence and what the desired outputs are (Harmon, 2014; Ungan, 2006). It is important to create a sense of responsibility for the work but also to ensure that the standards should be seen as guidelines rather than a control tool used to tell employees exactly how to perform their work (Kondo, 2000). The standards should only represent the minimum requirement of the way of working needed to perform a task. Through communicating standards correctly, the aim is to make employees secure enough to perform beyond the standard. It is the manager's job to ensure that the employees find the standards attainable, otherwise changes need to be made (Harmon, 2014). If so, the standards should be changed in favour of the employees and the systems, not the other way around. A left-handed employee should not be forced to perform a task following a standard for right-handed (Kondo, 2000). Most standards cannot be suitable for all employees if an organisation wants maximum performance. Another important task for a manager is to make sure that employees remember the standards (Harmon, 2014). To move a line of text in a standard document onto a sign posted in a common area in the office is one way to make the standards visible.

3.3.3 Lean thinking

The aim of Lean is to continually improve costs, quality and customer value (Bhatia & Drew, 2007), and is argued to benefit both employees and customers (Neumann et al., 2015). Lean is often referred to as the Toyota Way, to underline the focus on effort put in management of improvements (Harmon, 2014). The key principles are continuous improvement and respect for people which in turn stand on a base of longterm thinking, and interactions between managers, employees and teams. While other manufacturers focused on decreasing costs, Toyota focused on flow and short leadtimes in improving value and reducing waste (Ljungberg & Larsson, 2012). In other words, use of Lean does not intend to cut down but rather to optimise the organisation for which the employees are the key (Bhatia & Drew, 2007). Success is also dependent on organisation-wide training, work in teams, problem solving, cultural alignment and continuous improvements (Neumann et al., 2015). Lean has become a popular approach to use for public service reorganisation (Radnor & Osborne, 2013). However, as Lean was originally implemented in the manufacturing industry it might need to be applied with some modification in the service sector (Neumann et al., 2015). Furthermore, it is argued there are certain challenges in applying lean thinking in the public sector (Bhatia & Drew, 2007; Neumann et al., 2014). For example, customer focus is one of the cornerstones in lean thinking which create some difficulties for the public sector in which the customer is often hard to identify, hence it might be harder to put customers first (Bhatia & Drew, 2007). However, at the same time it is said that the public sector need to take on lean practices in order to meet the demand and keep up with the increasing expectations of customers in a long-term perspective (Neumann et al., 2015). For long term improvements, changing the process or the supporting systems is not enough (Bhatia & Drew, 2007). It also demand for cultural change which is more likely to happen if all involved feel their participation makes a difference and that they are provided the tools needed (Neumann et al., 2015).

There are a number of lean management principles that are needed as a base for development (Ljungberg & Larsson, 2012). First of all, an organisation should focus their resources early on in the development process, in order to be able to deeply study many alternatives while there still is enough space to change directions of the development. Otherwise the organisation risks implementing wrong changes that only affect the processes negatively. Thoroughly developed standardisation should also be of interest for reducing variances and create flexibility for unexpected events. The employees should be organised with process owners with a deep understanding of the work in order to balance functional expertise with cross-functional integration. Process mapping might facilitate the understanding of the network involved in the process (Radnor & Osborne, 2013). The organisation should also try to integrate their external parties in the development process (Ljungberg & Larsson, 2012). Lastly, all systems and tools have to be aligned between people and process. The IT-systems have to be adjusted to the actual work and simple and visual communication is another important aspect to succeed with the implementation.

3.3.4 Additional improvement methods

Similar with Ungan's (2006) framework of creating standards of processes, Harmon (2014) and Ljungberg and Larsson (2012) each presents 5 phases for improving and changing a process. According to Harmon, improving a process starts with putting together a team of managers, employees, IT specialists and others involved in the process which is to be improved. Thereafter, the phases are as follows: *Understanding* the project, Analyse the business process, Redesign it, Implement it, and finally, Roll out the redesigned process. The last means to actually make a stable transition to the new process. Similarly, however in a slightly different order, the phases presented by Ljungberg and Larsson (2012) are: Prepare with staff and information, Understand the situation and the process, Improve by discussing alternatives and "shoulds", Realise the improvements, and lastly Administrate the new process and ensure it is *realised*. Many organisations have failed the last step of maintaining the change. This is said to be due to several reasons of which resistance from employees (Harmon, 2014), lack of evaluation of the solutions' effects before the implementation (Greasley, 2006), or that the last step lies outside of the change project's assignments (Ljungberg & Larsson, 2012) are some. Even the people who recognise the defects in the old process may be unwilling to change because of the extra work it will require to roll out the redesigned process (Harmon, 2014).

Inside the phase Realise the improvements, Ljungberg and Larsson (2012) present three steps of how to actually go about realising the desired changes, called Heat-Bend-Cool. First, heat means to create the earlier mentioned urgency for changes and create a feeling of necessity in the change. This can be done by good communication and make employees aware of the crisis for which the new process will be the saviour. The crisis should be connected with external factors, such as changing demand or exceeding pressure, for it to be accepted as a proactive cause. The organisation has to communicate that the change is needed in order for them to avoid being reactive on the crisis. Also, comparison with other similar organisations is another good example of heating an organisation as is to give many examples of the possibilities and what the strengths are with the new process. Once this is done, the next step is to "strike while the iron is hot", to bend the organisation. It is important to separate the organisation from the past process and create fast results with the new one for all employees to see. It motivates everyone to proceed with the new ways of working. Lastly, to offer training and competence development is vital, as is delegation of assignments to employees for them to feel part of the change. The last third step, *cool*, is to make the change persistent and re-create harmony and balance. This is done through adjustments of structures and roles to the new process, and mostly, on all systems in the organisations, like awards, management and IT. Also Cunningham and Kempling (2009) present a more concrete solution for how to succeed with the change in terms of principles distributed on three stages. The first stage includes the principles needed for the change to begin: forming a guiding coalition; recognising and responding to resistance; establishing a need; and articulating envisioned outcomes. These principles align with the already mentioned importance of involvement in change and improvement work (e.g. Johnston & Clark, 2008; Sørensen, 2012). The next stage presented by Cunningham and Kempling consider the way the implementation of change is performed and facilitated including: establishing a process; focus on continuous improvement; and developing a commitment plan. The last stage is based on principles determining the success of the

change: managing within the informal process; and changing structures and systems. Forming a guiding coalition is argued to be the most important of all principles suggesting the preparation of the change is crucial for its development.

A summary of the three frameworks are presented in Table 3.2, showing where the frameworks correspond in the steps. The frameworks will be further evaluated in the *Analysis/Discussion* in relation to UPD and what might suit their organisation.

Ungan (2006) Standardisation	Harmon (2014) BPC	Ljungberg & Larsson (2012) PBD
		Prepare with staff and information
Identify process		
Identify process masters	Understand project	Understand situation
Build a team		
Define process and break it down	Analyse process	Improve and discuss "shoulds"
Acquire knowledge for each step		
Codify and Verify	Redesign it	
Combine and place in a	Implement it	Realise it (Heat-Bend-Cool)
standard form	Roll it out	Administrate it

Table 3.2	Summary of frameworks.
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3.4 Theories in practice

New examples are constantly presented of how big of a distance it is between the expected rational behaviours in an organisation and what is actually observed (Sørensen, 2012). There also exist a confusion of the many theories and methods to use for improvements, because they are closely related both in name and content (Ljungberg & Larsson, 2012). In many organisations this results in that a method is chosen by fashion and is considered the truth at the moment. An organisation that has succeeded in implementing one of the methods or concepts with great results has tempted other organisations to do the same (Sörqvist, 2013). Since everyone naturally wants to achieve success, the concepts keep spreading. However, there exist a risk when trying to implement a fashionable concept, that an organisation simply copies the methods and tools of another organisation and fails. This insufficient implementation is mostly due to lack of time which result in failure of obtaining a deeper understanding of the concept. It can cause serious consequences considering the organisation's own conditions, business culture, situation and current issues which all might imply that the concept is not suitable for its business. Many theories and frameworks are often highly idealised, and the content depend on the experience of

the theorists and idealists (Sørensen, 2012). If an organisation gets too obsessed with one theory, it can eventually lead to it being more important than the actual business (Sörqvist, 2013) and all other tools that are not a part of that theory are ignored. Therefore, it is important to first analyse the organisational needs, understand the processes, and then choose a direction and possible method based on that. At the same time Sørensen (2012) points out that as long as it is realised that what is read is just "ideal and typically far from practice", many lessons can be learned from theory. It can prevent people from making everything too complicated and hard.

4 **Results**

The Results are divided into two parts. The first part is based upon an analysis of the current situation at UPD and presents broadly how the building permit process is performed today. This is to illustrate the way things are in order to enable discussion regarding changes and improvements. The second part constitutes the results from the interviews and observations including shadowing. The interviews have been performed to identify problems, complexities and changes requested by the employees in order to increase efficiency. This part is focused on questioning the current situation and the findings are the base for the discussed improvements.

4.1 Overview of the current situation at UPD in Gothenburg

The description of the current situation at UPD in Gothenburg creates the base for analysis and discussion in this thesis. The level of detail is quite high in some places, merely to clearly show upon the complexity and time consumption, and to demonstrate the network of resources and information needed in the process. To clarify, this part of the Results is an overview of the building permit process as perceived by the authors of the thesis. The description is based on the exploring interview, information consistently gathered during the thesis through dialogues with employees and heads of the divisions together with documents provided by the UPD.

The organisational structure at UPD

The Urban Planning Department in Gothenburg consists of several sub departments with different orientations. There are five operating departments; Strategic, Plan, Building, Surveying and Geodata. Together with the Department for Performance Management and the City Architect they form the UPD which is governed by the Director of City Planning. All the departments operate in line with the objectives of the UPD as part of the City of Gothenburg. The Building Department is the one focused on the building stock of Gothenburg and its development. They handle applications for building permits, demolition permits, preliminary decisions, notifiable adjustments and notifications of illegal building. They are also responsible to offer advice and assistance for building permit applications to the public. Additionally, the department is part of the overall urban planning in the city, hence it is part of the responsibility to take the public's requirements and needs as well as sustainable and environmental aspects into consideration. The overall organisation structure of UPD with the Building Department marked is shown in Figure 4.1.



Figure 4.1 Organisation structure at UPD.

Further, the Building Department is divided into three divisions named 1, 2 and Administration. The administration division naturally consists of administrators. Within Division 1 and 2 there are two typical employee categories. First, there are caseworkers who commonly are architects, antiquarians or have similar professions. The second category is building inspectors who are specialised on the technical parts of building permits. The two divisions are physically located on two different floors in the office building. Each division is divided into three area-thematic teams, called blue, green and yellow. In other words, there are two blue, two green and two yellow teams, located on two floors. The divisions are responsible for different areas which in turn are divided between the teams. Division 1 is responsible for North Gothenburg and division 2 is responsible for South Gothenburg. Each of the six teams consists of about six members including building inspectors and caseworkers. Until February this year, all administrators were together responsible for the two divisions with no formal specific allocation. Now there are three administrators responsible for the blue teams, three other administrators responsible for the green teams and finally three administrators responsible for the yellow teams. Some administrators are not responsible for any teams but have other responsibilities instead, for example statistics and control. See Figure 4.2 for an illustrative explanation.



Figure 4.2 Division structure and distribution of teams at UPD.

However, the organisational structure visible in the figures above is a formal communicated structure meaning that there are bridging activities between the different divisions and teams where formations are spanning the borders as appeared in the organisational structure. For example there is a group working with routines which members are responsible for updating the operating manual, which contains detailed work descriptions of how to perform certain tasks. This routine group consists of two architects, two building inspectors, two administrators and one lawyer put together to cover the interests of all different professions. There is also a group for building preparation, another group handling rates and a group working closely with the Planning and Building Act. The whole department has meeting once a month and each division has meetings once a week. Furthermore, caseworkers, building inspectors and administrators have frequent meetings in each respective profession, where they discuss certain matters and assist each other in dealing with their cases.

External parties affecting the building permit process

Many external parties as well as non-profit organisations might have a saying in the appliance of building permits. Some of the most common are: the Traffic and Property Management Department, Rescue services, Environment Department, Göteborgs energi (energy provider), the County Administrative Board, the Museum of Gothenburg and the Environment and Public Health Committee. However, all these authorities are not involved in every case but are rather contacted depending on the nature and complexity of the case. In addition, negative neighbours, meaning those who oppose the building permit or those who appeal, represent another external party involved that has a saying in the process. Last but not least, the other four departments, Strategic, Plan, Surveying and Geodata, at UPD are in one way part of

the building permit process as both internal and external parties. They all belong to UPD as one organisation, but can in relation to the Building Department, in some respects, be considered to be outside the process.

Change projects at UPD

The current change projects are presented much due to the fact that the authors of the thesis were assigned the mission at UPD during times of change, why the thesis conclusions aim to be part of the future possible changes at the office. During the autumn of 2014 the Building Department started to plan for a pilot project. The pilot project is based on a pilot team that test new ways of working and try to find ways to work more efficiently. The project started in February 2015 and is planned to finish in August the same year. The main aim is to find measures that contribute to a better work flow. The pilot team was composed by members from the existing teams, so that the knowledge learned in the pilot team will be brought back to the other teams hence facilitating the upcoming transition to the new way of working. One example of what they are testing is that the administrators takes on a coordinator role and use a followup system to keep track of the cases and their progress. A digitalisation project is also started, which has been on the agenda for a few years. The aim is to enable application of building permits via the website and by doing so reduce much of the paperwork. It also includes better IT-systems for the employees to be able to deal with the applications digitally.

4.1.1 The building permit process

This section explains the building permit process and the way an application is dealt with from received application to decision.

First stage - initial review

New applications currently arrive by mail to UPD. The administrators are the ones receiving the applications and they register them in the log program ByggR and each application is given a case number. Initially, the administrators assign a caseworker to each case, based on workload. The cases are then put in folders by the administrators and placed in team-coded boxes inside the two different revision rooms for Division 1 and 2. Every Monday, Wednesday and Friday morning the cases are initially reviewed by the teams respectively in each division. The teams have short discussions about each case regarding its features. The initially assigned caseworker might be changed during this meeting depending on the nature of the case or due to certain knowledge or experience possessed by another caseworker or simply due to someone being unavailable. The caseworker is together with an assigned building inspector responsible for the case and they are the persons the applicant can contact for consultation and questions. Even though one caseworker and one building inspector are assigned the case, the rest of the team or other employees can be part of the review and decision. The administrators hand new completions and other relevant updated documents for ongoing cases directly to each responsible caseworker or put them in their mailbox. The completions are therefore generally not discussed at these meetings. Even though the building permit process is described as linear on their website and the case is suppose to follow a certain route through the process, that is

seldom the case. There are several scenarios for what route a case actually takes through the process network which of the most common are described below. It cannot be stressed enough that the process is a little different for every individual application, meaning that the described scenarios are in no way exhaustive.

• If the application is complete

If the received application is complete, meaning that all necessary documents are provided and of the right quality, the main review can start straight away. After the initial review, the administrator sends a letter to inform the applicant that UPD has received the application and will start the review. UPD provides templates for these kinds of letters that are sent to the applicant. If the case does not need a more thorough investigation, the applicant can receive the building permit immediately and occasionally a start notice in the same letter. However, normally, the application needs to be investigated further before a start notice can be approved and if so, the administrator only sends a letter with notice on receipt of application. The caseworker and/or building inspector then goes through the application and decides if other authorities need to be informed or heard in the matter. Start notice will be sent to the applicant later, when all documents are in order.

• If the application is incomplete and/or needs alterations

Far from all applications are complete when received by the UPD. If the application is incomplete or needs alterations the initial stage is slightly different performed. The administrator sends the letter with a notice on receipt of application but informs that the application needs to be completed before the main review can start. The caseworker encloses a list with the missing information and/or alterations that needs to be made in order for the application to be complete. This line of actions with sending information back and forth between applicants and UPD can take months, sometimes years.

• If the application is hard to interpret or is vague

If the team, after the initial review, agree that they have to investigate the application a bit further to decide if it contains sufficient information or if it needs completions, the administrator only sends a letter with notice on receipt of application.

Second stage - during the 10 weeks

From the moment an application is registered as complete in ByggR the process is allowed to take maximum 10 weeks, according to the Planning and Building Act. So within the frame of 10 weeks the application needs to be investigated and a decision made and communicated to the applicant. This is often misunderstood and applicants assume that the 10 weeks starts immediately when they contact the UPD. Also in the second stage of the building permit process there are several possible scenarios resulting in the case taking different routes, both internally and externally.

• Without any other authorities involved and according to detail plan

The caseworker reviews the application relative to the detail plan and makes a judgement based on the different drawings and other documentation. Together with at least one more person within the team, the caseworker decides whether the application can be approved without any special technical consultation from the building inspector. If the application is approved in this step the case is finished and a building permit decision will be sent to the applicant, see the different types of building permit decisions under section *Decisions for a building permit*. The caseworker prepares the decision document to the applicant following the appropriate routine in ByggR. The decision will be registered in the program, and then the administrators will continue with dispatching.

• With other authorities involved and according to detail plan

The responsible caseworker/building inspector prepares the application to be sent by intern mail to whom it may concern among the different authorities within the Gothenburg municipality. Usually, a two-week deadline is set as custom for the response. When the mail is sent the case is temporarily out of reach for UPD. If some authority believes the application needs to be more closely investigated, they can request time extension. This time extension is commonly approved but it can affect the 10 weeks limitation time for UPD.

• Outside detail plan or if detail plan is missing

If the application is controversial or of significant scale, the application is prepared to be sent to the Gothenburg Building Committee, represented by local politicians, for a review at a board meeting. There are particular board meetings once a month when building permits are addressed. The preparation is performed by the responsible caseworker together with the team at UPD and these documents take about 2 months to prepare. The team have to gather statements from involved authorities and ask for neighbours' opinions. Once this is done, the administrator responsible for building committee cases prints everything and puts it in an envelope and posts it by mail to the Building Committee, together with the initial application. They also enclose a statement from the responsible caseworker, the head of the division and head of the department, saying whether they recommend the Building Committee to approve the application or not, and why. To ensure the Building Committee will process the matter, the documents have to be received by them at least two weeks before the meeting. About 3,7 % of all building permits are sent to the Building Committee.

• Exceptions

If an application includes minor deviations from the detail plan or according to the interpretation of the Building Act, the neighbours of the applicant are usually heard. If no neighbours oppose after a set deadline of about 2 weeks, the application can be dealt with as if it was according to detail plan. If they do complain, the case must be heard by the Building Committee, see procedure in previous paragraph.

The second stage involves many deadlines to be met by several external parties that lie outside of UPD's influence. However, if the request of a building permit application only imply for a minor change outside the detail plan, UPD can approve the application without to run the case by the Gothenburg Building Committee. The Building Committees in the different municipalities in Sweden work very differently and different level of power is given to the local UPD. It all depends on the politicians and what they trust the UPD to decide on their own.

Decisions for a building permit

An application for a building permit can be approved in different steps in different stages in the process. There are 3 different types of decision notifications an applicant can get. The decisions have different meaning and implicate different consequences. An applicant can receive more than one notification. For example, if the decision is a building permit waiting for start notice, a start notice will follow it when the application has been further investigated. However, in practice, an applicant can actually start the excavation and do the groundwork without a start notice. It is not illegal, but in case the building permit application does not get approved, the applicant can be told to restore the ground to its former features.

• Building permit with start notice

When the permit is simple and clear, the UPD can send one letter including two decisions. That is the building permit, which states that it is ok for the applicant to build what was applied for, and the start notice with a date for when the applicant can start the actual building. The date when the letter is posted generally applies as the starting date. This variant of building permit is typically the least time consuming. The application is complete and nothing needs to be investigated in detail hence the applicant will most probably receive the decision long before the 10 weeks limitation runs out.

• Building permit, waiting for start notice

This decision is given to applications that are rather straight forward but include some things that require further investigation. The caseworker sends building permit to the applicant. The building permit only means that the applicant is allowed to build, but not to start building. During the waiting, the applicant can proceed with detailed design and planning of the building. Sometimes the applicant is asked only to complement with some minor details to receive start notice.

• Building permit with need for technical consultation

This decision gives the applicant the right to build but not start building. These cases are estimated to have a certain degree of complexity and therefore needs to be discussed. Before a start notice can be given, there has to be a technical consultation meeting with the building inspector from UPD together with the applicant and an appointed Certified Control Manager. Usually, the applicant is responsible for calling this meeting and is obliged to be accompanied by the Certified Control Manager. The applicant may also be accompanied by an architect and for large projects a representative from the contractor. The start notice is normally given to the applicant after the consultation and discussion at the meeting. • Dismissals

Sometimes after the review of the application, the team can decide to dismiss it. If they want to do so, it has to be discussed with the head of the division and the head of the department. Thereafter they send the dismissal document to the applicant, with the information that the dismissal can be appealed. If so, the application has to be heard by the Gothenburg Building Committee. If the applicant decide choose to proceed in the matter, the application is sent back to the UPD and is prepared for the hearing, see above *Outside detail plan or if detail plan is missing*.

Stage 3 - after decision

When the building permit is finalized, the start notice is valid for two years. Thus, the applicant has the right to build, but is not obligated to do so. If the applicant chose not to build within this time, the permit expires and a new application has to be applied for.

• Caseworkers

The caseworker prepares the decision in ByggR and prints all documents needed for the permit. Thereafter, the permit is put in a folder with all enclosed documents and corresponding mail. The caseworker prints small labels which are to be stuck to all documents in the folder by the administrator. Then, the folder is put in a box in the revision room to be gathered by the administrators. At this stage, the caseworker is finished with the case and only sees it again when the applicant sends in an application for final notice. When it arrives, the caseworker registers it and prints a final notice, signs it and sends it to the applicant.

• Building inspectors

Only for minor cases, a building inspector has a right to grant a permit. During the time an applicant builds, the building inspectors can sometimes do a site visit. Then, the building inspector writes a protocol of the visit and what was agreed is summoned and the protocols are sent to the applicant and the Certified Control Manager. There might be completions that need to be sent in for the customer to obtain a final notice. However, it is the applicant's responsibility to send in an application for a final notice. As long as the building inspector or caseworker has all the documents needed for approval, the final notice is sent and the dispatching starts hence the applicant can start using the building.

• Administrators

As soon as the building permit and the start notice are sent to the applicant, the administrators have to send out postcards with information about the granted permit to the closest neighbours of the applicant. If the neighbours want to appeal, they have a 4 week deadline. If no appeals arrive within this time, it is seen as "a silent acceptance" and the decision gains legal force. Lastly, administrators do the dispatching, starting by making copies of all documents regarding the particular

permit. When the workload is heavy, building inspectors and caseworker can help out too. The documents range from corresponding approval letters from different authorities, to blueprints and other relevant documents. At least three sets of copies are printed, marked with labels and put in different folders. The originals are sent by mail to an archive that stores all documents for UPD.

4.2 Results from interviews, observations and shadowing

For the thesis interviews have been performed with employees from all three professions and the heads of the divisions at UPD. The interviewees did not answer particularly different in regard of their profession. However, a slight difference existed between the administrators on the one hand and the caseworkers and building inspectors on the other hand. There were some minor differences between the questions for the administrators and the questions for caseworkers and building inspectors, see Appendix 1 Interview Guides I-III. The heads of the divisions had different questions and were also asked differently about some aspects, hence they naturally gave some alternate answers compared to the employees. The result is primarily based on the interviews but strengthened with the findings from the shadowing and the general observations. All gathered material is presented together meaning no particular distinction is made between findings from interviews, shadowing and observations. Instead, the chapter is divided according to the four identified categories: complexity, customer orientation, resistance to change and how they are working. Problems have been identified within all these categories. However, the problems expressed as such by the employees themselves are presented under Problems. All problems are summarised in a table.

4.2.1 Complexity

Almost all interviewees spoke about the many parties involved in the process and what consequences it has for the process in practice. The many different people, instances and authorities contribute to the process being problematic, hence the applications has to be dealt with differently. All applications are unique, both in terms of content and who has sent the application. One application can be provided by a professional, from for example an architectural firm, while another can be provided by a non-professional individual who lack knowledge about building all together. This was observed during the shadowing of a building inspector. One moment he spoke with an applicant from a large contractor on the phone, discussing with a high level of detail, the next moment an applicant with very little experience in building called. One interviewee experiences it as hard to decide upon the level of detail that the applicant needs to provide in order for UPD to deal with the application. It is difficult to establish a standard of the applications since it is largely dependent on the applicant. However, several interviewees request better applications both regarding the information included and documents needed such as drawings.

Interpretation is another aspect of complexity which recurred during the interviews. A number of employees mean that the process takes quite long time to learn and laws are constantly updated and changed. Besides that, The Planning and Building Act and the building regulations set by the National Board of Housing and

Planning are sometimes hard to interpret and apply. Some interviewees argue that it prevents the process to run smoothly. Also, many interviewees point out that things occasionally are unconsciously ignored because no one knows exactly how to deal with the case. Sometimes it is due to the complexity of the very case but it might also be connected to difficulties in interpretation of laws and regulations.

It is not just the many parties involved in the process that makes it complex. The process is extensive and difficult to grasp, which have been experienced by the authors of the thesis themselves as well as expressed by the employees. The general perception is that it is unclear who does what and how. In the beginning of 2015, an administrator was appointed leader of a process mapping project. This responsible administrator has put together a group of administrators who have mapped the process from their point of view. The building inspectors were invited, followed by the caseworkers, who are now in the process of adding their perspective to the map. The group meets periodically and in between the meetings the responsible administrator updates the map. During one of these meetings differences in how the teams and the divisions are working were clearly identified. As they spoke they realised that they meant different things and were referring to different stages in the process. Several minutes were spent to discuss the differences and trying to come to terms with what way might be best suitable. Even though this was not the aim with the meeting it confirmed their notions about team differences in the way of working. The level of detail in the process map was consequently hard to decide upon. Each activity in the process includes many sub activities and there are so many exceptions that create alternative routes.

4.2.2 Customer orientation

The majority of the interviewees seem to have some kind of customer focus, most clearly identified through how they spoke of the applicant as a *customer*. However, some of the interviewees sometimes shifted between saying customer and calling applicants for *applicants* or *them*. It has been noted in the observations that not all employees seem comfortable with the customer term. It is not so much referring to the applicant as customer but rather the meaning of customer orientation and how that influence the way of working. Also, during the observations it was common to hear mocking of the attempt of being customer oriented. However, even though all interviewed employees did not refer to the applicant as customer, some still proved to have a customer focus in the way they answered the questions. Two of the employees distinguished themselves, being especially customer-oriented, which are illustrated in the following citations:

"You should never say no to the applicant but instead try to find a way to meet the applicant's request according to current regulations. In other words, take on the perspective of the applicant and try to find a solution. A case that needs to proceed to the Building Committee is a failure and should be avoided as far as possible".

"[...] no matter if it is a multi-dwelling or a porch, you always try to do your best. I believe that's what characterises our job, not to make any difference in cases being

important or less important. All customers are important, everyone should be satisfied."

The first interviewee clearly puts the applicant first and priorities to satisfy the applicant as far as possible. The second interviewee expressed the importance to be fair to all applicants, meaning to always treat every case with respect regardless size and who applies, an individual or a company. The heads of the divisions spoke even more clearly about the *customer* and also about the importance for UPD to become more customer-oriented. Much of their internal process change projects are in fact focused on the *customer*. The outcome of these projects is meant to benefit the *customer* firsthand but the hope is that it will also lead to a better work environment for the employees.

4.2.3 **Resistance to change?**

After both interviews and observations, the general perception is that the employees are positive towards changes in the process, as long as they are carefully developed and implemented. The interviewees were asked about changes in general and specifically about the digitalisation and pilot project in terms of the way of working, see citations:

"I think it is important that you [UPD] investigate and try to move forward in those areas. Then the question is how far you will get, I don't know, you can have a vision and a will of 'this is how we want it', but it's not always technically feasible."

In other words, the general positive attitude connected to a hope that things can get better is combined with a natural fear of change. During the interviews many did however point out that the organisation is open minded and everyone has a saying in many decisions, and that they expect to be involved in the changes. Based on the interview answers from the heads of the divisions, they seem eager to involve their employees in the change projects, hence the employees' expectations seem to be met. There are several indicators of that change is needed. Almost once a day, some employees express something negative about for example the IT-systems, the chase after proper applications or routines. Especially the routines are a recurrent topic of discussion. An ambiguous finding is that many employees request routines for certain tasks while at the same time the existing ones are ignored and talked down. During the observations it was expressed that extra elements are often added to the routines and tasks in order for them to be improved but that it just makes them more dysfunctional. In addition, the mocking regarding the slowness of municipalities is among some employees expressed as oppressive. However, the increase of routines does not seem to be the favoured way to improve the process, according to general observations, since several employees complain loudly about the constant updating of routines. Regardless the way of improvement, two interviewees express that it is good for such a big organisation as the UPD to "urge slowly".

It seems that there exist different meanings regarding the ongoing process change projects at UPD:

"Regarding the pilot team, I think it is very interesting really, [...] I actually do believe that they will come up with a good way of working."

"The digitalisation will lead to that people will hand in their applications digitally. For me as a caseworker, I don't think it will affect me significantly. It's good that the citizens are satisfied [...] I don't know what I believe, I hope that they [pilot team] will come up with a new way of working, applicable for everyone, but I don't have any expectation or faith in that they will come up with something better."

About one half of the interviewees believes in the projects and is hopeful for the outcomes, while the other half is sceptical about what it will result in and if it is done in a correct way. More specifically more or less all employees are merely positive to the digitalisation project whereas the scepticism is mainly directed towards the pilot project. One employee is concerned for how the pilot project is supposed to be evaluated compared to the original way of working. Furthermore, there is a common concern for the tools needed to work with digital building permits not to be provided or not working properly.

4.2.4 How they are working

First of all, most of the interviewees enjoy working at UPD and are generally satisfied with their workplace. The authors of the thesis experience the atmosphere convivial and open, which also is how it has been described by the employees themselves. Anyway, the interviewees were asked about the way of working and both differences between the teams and between the two divisions were identified. Since last autumn there have been some physical changes in the organisational structure. The three professions used to sit mixed in the corridors, meaning caseworkers, building inspectors and administrators being present on both third and fourth floor in which the Building Department is distributed. Last autumn, all administrators moved to one corridor on the third floor. The new head of Administration saw many differences in how they worked and wanted to gather them to find a unified way of working for the division. However, a number of interviewees express a certain discontentment about this physical change. It is not that easy to ask questions and help each other out across professions anymore. Even the caseworkers and building inspectors at third floor expressed that they experience greater distance to the administrators after they moved. Many interviewees said that most of the employees tend to ask a colleague firsthand when not knowing what to do in a matter. With the administrators being somewhat separated from the rest of the Building Department they are not included in the daily communication regarding the ongoing work to the same extent. The operating manual is typically used second-hand when employees do not know what or how to do something. The operating manual is both highly respected among some interviewees, and a target for pure frustration among others. It contains a lot of useful information of how to perform tasks but it takes a lot of time to find what one search for. A few employees find the search engine very difficult and a group of quite newly employed

mean that there exist overconfidence in the manual. One of these interviewees however refers to the operating manual as a good tool to secure legal security.

The interviewees were asked about the supporting systems and tools used daily at UPD, of which the operating manual is one. The other IT-systems the employees are provided with are considered good by most interviewees, but it is highly desired among many that they get more customised to the building permit process. According to one of the interviewees, who has previous experience from working with process development, their main IT-system for dealing with cases, ByggR, is not really process-oriented. Several interviewees complain about it being too much "clicking" just for one small operation to run through. One caseworker argues for the system not being suited for what one want to do whereas another caseworker said:

"Maybe people expect too much of it, which is why it is experienced as not working well".

The caseworkers and building inspectors in particular, state that there does not exist an easy way of overlooking all the cases in the programme. There are also shortcomings in the program that makes it difficult to apply a proper follow-up system. The possible future coordinator role is believed by some interviewees to make the follow-up better, nevertheless the systems need to be supportive to the way of working in practice. There are other supporting tools in terms of templates used in communication with the applicant. The opinions on these differ among the interviewed. For example one interviewee believes they have a good function but that they are too often used in a wrong way. The same interviewee argues, in very much the same way, for activities in the process not to be unnecessary but performed in an inefficient way. On the one hand caseworkers and building inspectors express a general frustration over the administrative activities, also evident in the observations. On the other hand some administrators argue for their competence not being utilized to the full extent.

"There are rather many administrative tasks that I think are stupid that we are doing [...]. For example hearing neighbours, it's very administratively. Why haven't the administrators delegation to do that? Why should those cases return to me?"

"We [administrators] should be able to take a whole other responsibility in the cases [...] we do have delegation to decide in simpler cases [...] many of those cases don't require any architectural review. They [architects] say themselves that they haven't even studied the Planning and Building Act."

A caseworker further says that some activities with administrative nature might be hard to identify as clear tasks for administrators but reallocation of some activities might be beneficial. The interviewees arguing for unutilized administrator competence also argue for the administrators being capable of doing much more given their expertise. Moreover some expertise might be missed out on because of the not so recognised role of administrators in the teams. This is also believed to change if the administrators will have a coordinating role in the future.

As earlier mentioned, differences among the teams in the way of working, especially connected to the roles and responsibility of the professions, have been identified in the interviews as well as during meetings. Only a sample of identified differences will be presented. Some teams divide the applications between the team members after a rolling schedule whereas some other teams base the distribution more on experience and depending on workload. Whoever, caseworker or building inspector, that begins the dealing differs between teams. In one team the building inspectors always start the review and when finished the case proceed to the caseworkers. In other teams the first review can be performed by either a caseworker or a building inspector, depending on the nature of the case. During the interviews many also confirmed that an application can be dealt with differently depending on who is assigned it at the morning review. An example from one morning meeting with the building inspectors, is that a case, that earlier had been dismissed, was applied for again and it seemed that this time the applicant will get a building permit. However, a few interviewees believe it is only the dealing with cases that is different and that the final decisions are probably not that varied. Lastly, one observation revealed that applications, when not in the hand of a caseworker or building inspector are stored in different places depending on the team which the administrators expressed as highly confusing.

Alignment

It was expressed by the heads of the divisions that their aim at UPD is to create alignment in their way of working. UPD is quite aware of that there exist different ways of working between the divisions, but have not yet communicated which these differences are on a common level. Many employees speak as if there are differences, but they rarely specify them. An example of aiming for alignment at the UPD is the earlier mentioned movement of the administrators to sit together. There are other existing ways of working that already contribute to alignment, such as the weekly divisional meetings and the building inspector and caseworker meetings. These meetings bring up current problems and other relevant news regarding the work. They are carried out without protocol so if someone miss out on these meetings, they have to consult with a colleague about what was said. Every month, the caseworkers and building inspectors of both divisions meet for discussions, which also, as expressed by the interviewees, is a step towards mutual understanding and interpretations of laws and regulations. Also, working in teams is believed by the interviewees to decrease individual differences.

4.2.5 Problems

One part of the interviews addressed problems in terms of what problems employees experience with their work tasks and in what way they would want these problems in the process to be dealt with. It is sometimes a fine line between what is interpreted as problems and what might be possible to categorise as problems even though it is not expressed as such. Therefore, what is summarised under this headline is first and foremost the response to the specific questions on problems. In other words, this is what the employees regard as problems in relation to their work tasks in the building permit process.

The most common problem among caseworkers and building inspectors, expressed by everyone within these professions in one way or another, is the quality of the application documents received from applicants. The general perception is that the documents are poor regardless if sent in by individuals or experts. Some employees express a need for some kind of standard so to ensure a minimum level of quality of drawings and other documentation needed for the application. The review cannot start unless the documents are complete. Several times during the studied team meetings, applications had to be put aside due to insufficient documents hence the review gets delayed.

"Every time you have to put a case away and bring it out to review it later, takes a lot of extra time."

The application is often supplemented in batches at different times until complete. For every time a new document arrives the case is reviewed and the alterations are registered electronically and physically put in the case folder. The interviewees express frustration due to this problem and argue for it to be a source of wasted time. Regarding the applicant's role in the process it is sometimes expressed as a problem due to the applicant having much responsibility. One interviewed building inspector gives examples of cases for which one single document is missing or the customer has not applied for final notice which means the case cannot be closed. Nevertheless, during shadowing of an administrator, the problem with insufficient applications and poor documents was expressed from another point of view:

"If we receive poor documents, it is because we haven't communicated correctly to the customer."

Most interviewees identify problems but do not speak of the origin of the problems. However, one interviewed administrator refers to the culture as being the origin to some of the problems since there is a "this is how we have always done" attitude among some of the employees. Furthermore the non-existing profession/task description is by several signified as a huge problem given that it is unclear who is doing what and what responsibilities the different professions have. Who is responsible for the task is unspecified also in the operating manual. When asked why, one employee explains that the operating manual used to contain information of the responsible employee for the task, but that it was removed to create flexibility. One building inspector says that there might be tasks that could be better done by someone else, why the tasks should not only be specified but also reviewed. An administrator also believes there are some unnecessary formal things that could be cut or done more efficiently. Similarly, a caseworker argue for there to be some administrative activities which currently are performed by the wrong profession and tasks need to be replaced, such as sticking labels on documents. The interviewee's belief is that this would decrease misunderstandings and double work but that individual interpretation of responsibilities makes it difficult. The involvement of many different parties, mentioned in relation to complexity, is also brought up by many interviewees when talking about problems. One building inspector speaks of extraordinary cases for which the interpretation gets complex given there is nothing to compare with, such as for confidential cases. For these cases it is even more important to know who is responsible for what in order for the case not to be pushed aside due to uncertainty of what to do with it.

Last but not least, it is understood that both employees and the heads of the divisions find the delegation order to be a particularly difficult issue which creates a lot of unnecessary work. The local Building Committee decides the level of authority UPD has in making decisions. If for example neighbours are negative in a hearing of a case for, what can be considered irrelevant, the case sometimes still has to be run by the Building Committee, which in turn creates a lot of work. Many at UPD believe that they would be more efficient if they were able to dismiss these "mischief" matters. Also other problems in the communication with customers, however not always referred to as such, have been identified. The 10 week limit period for a building permit is, stated in the Planning and Building Act, due to start when the application is complete, which according to the interviewees often is misunderstood by the applicant. Another part of the communication between UPD and the applicants regard information before applications are handed in. Based on what is typically asked about at the information desk employees express a need for better information in the first contact with the applicant which in many cases is through the website.

Time

Time is an important factor within the subject of improvements and the employees were asked what was most time-consuming in their work in the building permit process. According to most administrators, what seems to take most time in their daily work is the dispatching and to sort and move documents in general. For caseworkers and building inspectors it is to obtain proper and correct documents from the applicant and looking for cases. To reopen a case after receiving a completion is very ineffective according to caseworkers and inspectors, since it requires that they put aside the current case they are dealing with and have to go back in their minds. It is argued by one caseworker and one building inspector that reviewing takes time due to insufficient tools, especially for plans. Moreover, they both point out that their main work task, reviewing applications, take long time as it is but that there are many outside tasks that require a lot of time on top of that. These tasks could for example be email and telephone correspondence, assist in the information desk and visit negative neighbours. A case that is more difficult to deal with tends to be pushed aside, due to it being harder to review and interpret according to the Planning and Building Act. One of the interviewees also explains that:

"When we are under time pressure and have a high workload, we are not as picky with details as during quieter times."

This can in some cases mean that an application gets a decision faster but in expense of legal security. Regarding this high workload, another interviewee would want to be able to move the cases between teams, to even out the load. It was also overheard that it is not unusual for an employee to have over 100 ongoing cases during these hectic times. Moreover, another time consuming task is to prepare a case to be run by the Building Committee, which is mainly done by the caseworkers together with the heads of division 1 and 2. There are many statements to write, documents to scan and a PowerPoint presentation to be made, which altogether, according to some interviewees, take almost a whole afternoon to do.

Another problem, which is expressed as highly time consuming by some of the administrators, is errors or mistakes in decisions.

"Sometimes things are not done according to the routines in the operating manual and it depends on some things not being practical or a culture demanding for things to be done in a different way than the routine advocates."

It is understood that these errors might be unintended but nevertheless, it takes time to sort them out. Also, some administrators experience that routines are not always followed as they should which in some cases result in errors or mistakes in decisions or other documentation. For example, someone might have filled in a billing address wrong or simply the wrong address or none at all. One interviewee argues for many mistakes to be related to the human factor meaning these problems are unavoidable to some extent but that they are possible to reduce through digitalisation.

4.2.6 Summary

A summary of the problems identified at UPD through interviews, observations and shadowing are presented in Table 4.1. The summary includes both what the employees regard as problems in relation to their work tasks in the building permit process, and what the authors of the thesis have identified as problems, in terms of complexity, customer orientation, resistance to change and how they are working. This means that the problems stated by the interviewees as such, presented in 4.2.5, are categorised after the same principles as the problems identified by the authors.

	Problems at UPD	Category
1	Involvement of many parties with different interests and applicant having too much responsibility	Complexity
2	Poor documents and insufficient applications	Complexity/Customer orientation
3	Interpretation of applications, laws and regulations	How they are working/ Alignment/ Time
4	Differences in the way of working and in the professional language	How they are working /Alignment
5	Partly negative about the customer term	Customer orientation

6	Negative attitude towards the process but unwilling to work for changes and a slight lack of faith	Resistance to change?
7	Physical barriers in terms of location	How they are working/ Alignment
8	Operating manual too extensive and not user-friendly	How they are working
9	IT-systems not process oriented	How they are working /Alignment
10	Competence being poorly utilized and tasks poorly allocated	How they are working
11	Information to and communication with customers	Customer orientation
12	Lack of profession and task descriptions	How they are working
13	Delegation order	Complexity/ Time
14	Dealing with documents	How they are working/ Time
15	High work load	Process/ Time
16	Routines and errors and mistakes in decisions	Process/ Alignment

Table 4.1Summary of the identified problems at UPD.

4.2.7 Improvements

Suggestions for improvements have been captured during observations and more directly through the interviews. The interviewees were asked about desired improvements and if they had any concrete solutions but some improvements were identified in answers in other questions as well. Additionally, some of the findings are supported by the presentation by newly employed at a Department meeting in April, where they got to present their view upon UPD, the introduction and their work situation.

- One interviewee want to implement one day a week where all different local authorities involved in a building permit meet and go through cases together, similar to the meetings they have with the Swedish Transportation Administration for instance. A physical meeting might not be very convenient but some kind of forum for them to meet is highly desired by the interviewee. It would improve the speed in the process compared to the current situation where one send documents and requests by internal mail and then wait for weeks for correspondence.
- Many interviewees, administrators as well as caseworkers and building inspectors, want better morning reviews where everyone is more involved in all cases. One interviewed administrator means that the administrators possess operative knowledge of the process and should be able to help out with the initial review before the cases are brought up at the team meetings, hence an application would not be handed over to caseworkers and building inspectors

until it is complete. A caseworker expresses that it would be beneficial if they got more support from the administrators and administrators express that they would want to be more involved in the actual building permit process.

- As mentioned in the section on problems, the drawings and documents that applicants send in should have standard formats. It would be a lot easier for the employees to deal with cases and be able to make better and faster decisions. There is no Swedish standard for the documents required in the application why the complicated problem is difficult to solve for one single municipality alone. Stockholm municipality has tried to solve it temporary by applying a joint documentation system together with the closest municipalities around Stockholm. One interviewee suggests a checklist that specifies what is needed for the application. There should preferably be some checklists that are adapted to different types of building permit.
- Three employees expressed a desire to do more of what you are good at or find particularly interesting. An example that one of them mentioned is that if someone enjoy helping applicants in the information desk, then this employee should be able to do more of that. As it is now, work tasks and responsibilities are too generally divided. Also, it is argued by one interviewee that to have employees doing what they are hired to do would be more efficient, instead of for example caseworkers dealing with too much administrative work.
- At least two employees expressed their dissatisfaction with the information UPD give to applicants, specifically on the website. They mentioned that the UPD in Stockholm municipality has an easier built website with more options allowing for a better overview of the information. It would be of interest to try to make UPD's website just as user-friendly.
- One interviewee said that UPD should identify employees who perform a certain task in the most efficient way, and that person/s should write the routine of how everyone should perform it.
- All interviewees requested to know who is responsible for what work task. Currently, UPD only have descriptions of how the task should be performed according to standard routines, but they do not know who is supposed to do it.
- The newly employed wanted better routines for introducing new employees. For example it would be supportive to have an outspoken mentor, supervisors and a practical introduction with a clear list of what is included in the introduction. Also, they believe it is better to have more but shorter introductions instead of the current quite extensive ones.

5 Discussion/Analysis

It is important for municipalities to become more efficient in their building permit process, clearly expressed by the Swedish government in their investigations. However, the government does not provide any particular guidelines for *how* to improve (Gulledge & Sommer, 2002). The thesis is therefore, together with UPD's own change projects, a step towards implementation of improvement measures. The findings in the results are discussed in relation to the theory presented in the thesis in order to draw conclusions and present recommendations for UPD to use in their improvement work with the building permit process. The thesis research questions have set the base for the discussion/analysis, which is divided according to the problem categories identified in the results. In addition, there is a section on *Framework for improvements*. Last follows a section on *Reflections over the method*, presenting weaknesses and strengths with the chosen method for the thesis study.

Connections between internal and external parts are clearly identified in the building permit process. Although the thesis aim is to study the process within the Building Department at UPD, the external is constantly intruding. Even as asked about the internal process and way of working many interviewees regarded external matters connected to the process in their answers. It was also visible during the observations in for example the interpretation of laws and regulations. Therefore, the discussion will mainly focus on the internal but also draw upon the many connections to the external to find smoother ways of working that can improve the external to make way for the internal. Much of what they do at UPD can both be considered to be inefficient and ineffective. To be effective means to adequately accomplish a purpose, to produce the intended result. This can be a building permit being dealt with and granted to an applicant, which UPD succeed in delivering. To be efficient means to perform or function in the best way possible, with the least time, effort and waste. Many examples of poor efficiency have been mentioned in the interviews, for example the endless dealing with paperwork. Nevertheless, examples of both that wrong things are done and that things are done in the wrong way were given during the interviews, hence both efficiency and effectiveness must be considered in any improvement for UPD. Furthermore, interest compromises are needed in order for UPD and the stakeholders to meet in the problems. The tensions in the process depend on pressure from different directions and the many stakeholders, why improvements need to include more perspectives than the one of UPD.

Complexity

First and foremost, the building permit process is considered complex. The internal building permit process at UPD is hard to define in clear steps, which according to Harmon (2014) is characterising a complex process. Also the process is dependent on interrelated activities, departments, decisions and people, which is another strong characteristic of process complexity (Johnston & Clark, 2008). The foundation of the complexity lies in the many parties involved in the network, as presented in the introduction and confirmed in the result. It goes without saying that the involvement of different parties with conflicting interests creates tensions. These tensions need to be handled by the employees at UPD on a daily basis and compromises are unavoidable. Even just looking at the internal parties involved in the process, the

complexity is highly visible. The network determining a process (Ljungberg & Larsson, 2012) is particularly visible in the teams at UPD in which the caseworkers, building inspectors and administrators, who are the main operators in the process, work together dealing with applications. These small networks are in turn connected to the larger network, meaning the process in whole. The three professions have slightly different perspectives due to for example different backgrounds and experience. The process requires different perspectives to a certain extent in order for all needed knowledge to be covered. However, a shared view on the process in general including what input is needed to achieve what output is necessary in order to become more efficient. The three professions need to be coordinated towards the same goal and to get there they need to agree on what they want to achieve with the process, meaning they need to take responsibility for the process together. It is thus a question of making the process and every profession's part of the process logical for everyone (Greasley, 2006). This might be achieved through the process mapping, both in terms of the actual work with mapping and the result. If everyone understands each other and are on the same page, the tensions can decrease and it will be easier to work towards the same goal. If also considering the external parties, the complexity becomes even more visible. The internal parties need to be aligned also with the external parties. To work across borders and divisions is considered in theory to be an effective way of soften the "territorial" borders (Ljungberg & Larsson, 2012). The shorter way information has from sender to receiver, the greater will the understanding of the process be. The aspect of many parties involved, although one with great influence, is just one aspect contributing to complexity hence other aspects are increasing the complexity even further.

The process definition by Ljungberg and Larsson (2012), presented in the theory, is based on keywords as network, value, customer, and need. These keywords are probably much more self-explanatory when used in the private sector but still important in the public sector. As the customer term is trying to win territory in the public sector, the meaning of value becomes more important. For who is the value created? The most logical answer would be the customer, but for a public authority for which the customer is not clearly identified it is harder to answer the question. Public authorities provide services to a complex set of stakeholders (Jurisch et al., 2014), where the customer might be one of many or rather identified as a group of stakeholders, such as the citizens. The authors of the thesis argue that it does not matter if the customers are regarded as the citizens or seen as individual applicants, there is still a value created through the process which aim to satisfy the need of the city or, if one prefer, the need of the applicants. However, as stated in the theory, there must be a will to create value even if there is no clear commercial relation (Ljungberg & Larsson, 2012). Moreover, satisfying the need do not necessarily mean that the customer gets an approval of the building permit applied for but rather that a decision is made and communicated to the customer.

The great deal of responsibility possessed by the customer in terms of providing complete applications and other documents needed during the process was expressed in the interviews as being a problem in some cases. For some service processes customer involvement is needed (Ljungberg & Larsson, 2012), which is also the case for the building permit process. The applicants do have a rather huge role in the building permit process at UPD. However, to decrease the role of the customer is

hardly a solution to the problem, since the general means of service is to provide value for the customer (Grönroos, 2008). Naturally, it is the customer who provides the actual drawings and other documents forming the base for the review. Therefore, the authors of the thesis argue that the complexity lies more in the communication with the customer than the role of the customer in the process. In order to ensure sufficient or preferably complete documents, the information communicating what is needed in an application needs to be improved, discussed further under *Customer orientation*.

The line between the internal and external of the building permit process is difficult to retain. There seem to be several connections between the two. Harmon (2014) argues for a process to be more flexible. Flexibility does not go particularly well with standardisation, which is believed to be a suitable way to go about improvements at UPD. On the one hand flexibility can be argued to be needed in order to meet external needs. On the other hand, standardising the process hence decreasing the flexibility is crucial for improvement in order to get a more efficient internal process. The fine line between the internal and external is a complexity on its own. One example of this complexity, expressed as an irritating problem by the interviewees, is the delegation order as determined by the Gothenburg Building Committee. It is a problem with connection to the external parts of the process but that takes time and resources from the internal process. When neighbours are heard in mischief matters, the authors of the thesis wonder if the flexibility is being misused and the process is depending too much on external parts. After all, the professional knowledge is possessed by the people within the process hence they should be able to determine when the internal resources are used to create value and when not. In other words, UPD should have delegation to dismiss mischief matters, which in turn would save both time and unnecessary frustration. Cases that proceed to the Building Committee take a lot of time from the internal process even though it is really an external matter. However, to change this external problem, effort is needed from UPD to put pressure on the politicians. However, since the amount of cases that proceed to the Building Committee is only about 3-4%, it is arguable to say that there might be other parts of the process that need to be prioritised when improving the process.

Several dimensions of complexity: interconnectivity, size, structure, nature of the service, interdependency, time, uncertainty and political behaviour, described by Johnston and Clark (2008) were presented in the theory. Some of these dimensions are naturally more relevant than others given the process being what it is and existing in a public sector. Interconnectivity, time and uncertainty are the ones most emphasised in the interviews. However, complexity in some way can be identified almost anywhere in the process and therefore it is not elaborated further in detail but instead permeates the whole discussion of the building permit process.

Customer orientation

Even though the customer is not the main focus, neither in this thesis nor in the current process at UPD, it seems impossible to make improvements without considering the customer. The customer, regardless private or professional, is definitely part of the process and the related complexity has already been discussed.

Moreover, the customer orientation or the lack of it can be derived to the much extraordinary non-competitive environment in the public sector. The customers are not really given any alternative of service provider (Bhatia & Drew, 2007), hence the public authority do not depend on its customer to the same extent as the private sector. Nevertheless, it has been stated in theory that even though the organisation has monopoly on its service it is highly important to be customer-oriented (Ljungberg & Larsson, 2012). Not just for the sake of the customer but also in order to be able to be responsive to changes and hence also improvement opportunities. Furthermore, according to Lean thinking, customer orientation is needed also in continuous improvements.

How the employees refer to the customer/applicant has impact on the customerorientation and in what way the customer is recognised in the building permit process. All employees seem to agree that the customer have a role in the process but not all are comfortable using the customer term. The customer term has its roots in the private sector (Radnor & Osborne, 2013) where the commercial relationship is well evident. This is however not the case in the public sector where services are provided to the customers not only based on commercial objectives but also because of political decisions and public responsibility. Some interviewees spoke about UPD as serving the city of Gothenburg and in that perspective the customer is not clearly identified. The authors of the thesis believe that the customer orientation needs to be anchored in the service as form of the process. Even though all interviewees did not refer to the applicant as customer many still proved to have some kind of customer focus in the way they answered the questions. The authors of the thesis believe that to slightly change to be service-minded instead of strictly customer-oriented might solve the complication with the employees feeling uncomfortable with the customer relation. If needed, the customer could be called the service-user. Moreover, the term serviceminded imply to involve much more than just the customer hence there might be other benefits with taking on this approach. For example, a service-minded approach can be used internally between the different professions in the sense of facilitating the work of others. However, to avoid confusion the term customer orientation is used throughout this thesis. Since the heads of the divisions spoke about the customer orientation as something obvious it seems to be established on management level. On the other levels it is not fully established hence the ways of working are not really governed by customer orientation even though it is advocated by the management. After all, it is the managers that are responsible for making sure the organisation is true to its approach indicating that the communication of such to the employees needs to be better. Communication have several important aspects, in the theory of Lean it is clearly stated that interaction between managers, employees and teams is the base for improvement.

The most common problem, stated in the interviews, is the poor quality of the application documents received. The interviewees expressed frustration due to documents not being sufficient to start the review but also frustration due to applicants not providing documents asked for later in the process or not applying for final notice. This in turn, is explained by the interviewees, as to prolong the process unnecessarily. The interviewees said that it is a constant disturbance to look for cases, review them again, put them away or ask for another set of completions due to insufficiency in the first documents. However, the responsibility may not be

predominantly on the customer as one employee argued for the reason behind poor documents to be deficiencies in UPD's communication with the customers. The UPD, as a public authority, has a responsibility to communicate information which the applicants have not even asked for, such as informing the applicant about future development in the area that might affect what is applied for. Furthermore it is stated in the theory that a public authority needs to be responsive in its approach (Ljungberg & Larsson, 2012) meaning listening to its customers is ever so important. The poor documents might indicate that UPD has failed somewhere in the communication with the customer. This was addressed in the interviews by some interviewees who for example discussed deficiencies in the information provided on UPD's website. It might be suggested that it is in the level of detail that the communication do not meet the needs of the customer. This is partly based on the author's own perception of the information available on the website and in documents given to the customer in various respects and partly based on the result of the bachelor thesis performed at UPD in 2014 by Andersson and Stiller. For instance, it is not expressed anywhere in the letters sent to the customer that the 10-week period only starts when the application is complete. One interviewee argued that the ambiguity regarding the 10week limit generates conflicts in the communication with the customer. If details, like that of the 10 week limit, are better communicated it would probably also decrease the many calls the employees receive from customers wondering what is happening with their application when in fact nothing has happened yet since the application is not complete.

To improve the communication, the first step is to make sure the information provided to customers is coherent and consistent. Stockholm municipality uses a joint documentation system including standardised documents for the building permit process and something similar might work for UPD in Gothenburg as well. However, Ungan (2006) states in his work that only when processes have identical inputs, operations and outputs, they can be standardised. Since all applications are unique and consequently also the decisions, it indicates that the process as such might be hard to standardise. However, if there would exist a common standard for the applications, the variances could decrease, and the internal process would consequently be easier to standardise in the long term. The digitalisation is soon to be implemented for which the authors of the thesis argue standardisation to be even more important. If customers are to apply for a permit on the web, the way of doing it and sending in documents must have a uniformed system.

Resistance to change

For change projects to succeed in implementation, it is essential that the employees as well as the managers are involved in the projects. It is of extra importance when seeking alignment through standardisation. At UPD, there exist both a feeling of freedom to express whatever is on their mind and engagement from the heads of divisions. However, the organisation is big, and the bigger, the harder to involve everyone. Although not all employees believe in UPD's change projects, many still hope that the change projects will result in positive new ways of working and increased efficiency. Scepticism against changes is inevitable, but it is important for managers to engage all employees early in the process to reduce the resistance. A positive action taken at UPD is the aim for involving everyone in the pilot project and

digitalisation, in the sense that employees get updates and information along the way. The general perception of the authors of the thesis is that it is not that the employees do not want to change, it is rather an attitude based on a doubt of the change project being performed correctly. It can be argued that UPD have missed out in informing all employees in the visible and controlled way with effective communication that the theory advocates. Since previous organisational mistakes also affect a possible change, it is yet another important aspect to consider before change projects start. If they fail, the resistance to change will increase, the faith in management will decrease and future changes will become even harder to implement. The change needs to be anchored with everyone, which takes time, hence the "urge slowly" might not be a bad thing after all. If managers would rush through decisions, the resistance to change would be much larger and in turn the projects' odds for failure would be greater.

To succeed with a change it is, according to the steps Heat-Bend-Cool, important to see fast results to prove the opposing employees that the change is needed (Ljungberg & Larsson, 2012). Since there has existed doubts about the change projects at UPD throughout the thesis development, the results might not be shown fast enough. However, one of the lean management principles stresses that it is important to put efforts in changing and test out new ways of working before a whole organisation change. So far, the change projects at UPD are performed much according to the lean principle, which might be the reason for results not being visible yet. If UPD is to urge slowly, the initiated lean thinking might be a good start but it creates a dilemma in relation to the doubt about the changes due to results not being showed. In order to get everyone onboard and to realise possible improvements, the urge for fast results in the Heat-Bend-Cool steps, is probably still needed. It is important to prevent the employees possessing the most information about the old processes resist too much and stick to their old ways. The building permit process at UPD is complex given the many external parties and instances involved, which might be affected by the internal process. The substantial amount of involved stakeholders together with public opinions generate a vulnerability to changes and affect the expectations and possibility for success. So, in the case of UPD, it is not only the employees that needs to be included, but also anyone affected by the building permit process.

How they are working

It seems that there are gaps in the knowledge about what others within the process are really doing, why connections between activities might be a little inconvenient. It might have to do with the lack of both profession and specific work task descriptions. Gulledge and Sommer (2002) state that if an information-gap exists in work descriptions, people tend to fill in the gaps themselves which is why differences of how people are working emerge. More or less all employees that were interviewed for the thesis request a description or at least some clarification of *who* is doing what and maybe even more importantly who *should* do what. The many standard documents, called routines at UPD, with descriptions of work tasks are found in the operating manual, but it does not contain the requested information. However, there is a risk with specifying too much because things that fall between responsibilities might be ignored. Also, the managers advocate flexibility which might be hindered if responsibility of tasks is specified in detail. According to Ungan (2006), if employees have different experience, background and education, naturally, they will perform the

same tasks differently which consequently makes it hard to achieve consistency in the way of working. In the case of UPD the authors of the thesis argue that the differences might be a result of not following the set routines. The administrators express this to be a major problem, which leads to many mistakes. Some interviewees expressed frustration related to the operating manual being too extensive and hard to apply in their work, which might be part of the reason for it not being used properly. On the one hand, a standard should be written based on how a process master performs the work task, since it is seen as the optimal way of working (Ungan, 2006). On the other hand, Ljungberg and Larsson (2012) argue that if a change is made logical at only one place within a process, it creates illogical procedures in the long term. At UPD, one of the employees, considered by the authors of the thesis to be a process master, is part of the routine group and is responsible for setting the standards. The set routines are however anchored with the rest of the routine group, with members from all professions, hence UPD seems to be doing it by the book. As already stated, what seems to be missing is the description of who should perform what task. It is clear that the employees find this frustrating, and the managers' aim for flexibility seems to be misunderstood or not fully utilised. Perhaps it would be of interest to add the responsible professions in some routines, or express that it is desired that a certain profession should perform a task. Or simply put "responsible after a mutual understanding in the team". Also, to prevent the many mistakes made because people are not following the routines, due to the operating manual being too extensive, would perhaps be to cut it down, rewrite some parts and make it logical for everyone in the organisation. Moreover, to educate everyone in the use of it, just as Ljungberg and Larsson (2012) describes it in the steps in the way how to roll out the new process, should be of interest.

Another result related to the differences of how they are working, is the difficulties in the professional language that UPD experiences. This was particularly evident in their internal work with process mapping, observed at the meetings between the different professions. The differences in language are confirmed through the customers' perception of UPD analysed in the earlier mentioned bachelor thesis by Andersson and Stiller (2014). The thesis was based upon a customer questionnaire, where the majority of the respondents stated that they got too many different answers, depending on who they talked to. Theory states that in order to standardise a process a uniform process language has to be developed for which the process mapping can be used as a tool. UPD seems to be on the right track, however, it was not the aim with the process mapping meetings to deal with those kinds of questions. The theory does however point out the importance of aligning and mapping the process to be able to standardise it. UPD has provided the employees with many standards, but since no one feels particularly responsible for the tasks, much is ignored or falls between responsibilities anyway. Johnston and Clark (2008) argue that in some processes there might not be one right way to perform a task. Moreover, it is generally difficult to be rational in all decisions and maybe especially difficult for UPD given the uniqueness of cases. As a result of this, it is arguable to say that UPD might need to consider using more than one method for improving their process. The result showed that UPD has started adopting such an approach already, considering the process mapping, pilot team, digitalisation project and the many special groups etc, all working for alignment and higher efficiency in one way or another. Another contributing finding is that the heads of the divisions did not speak of any particular theory or concept that they

wanted to take on. Perhaps UPD should put focus in creating the unified professional language together with their process mapping project, to enable easier dealing with further change projects.

When problems arise, employees tend to ask the closest colleague or whoever they think might have the right answer. Usually, this can be seen as a good thing, it shows upon a comfortable work environment, but it can result in that a small group of employees perceive certain tasks differently from others. Those who ask the closest colleague with the same profession about an administrative work task, the colleague might have an own interpretation of how to perform the task, and this is then transmitted to the employee asking. In terms of alignment, the movement of administrators to sit by themselves can be considered both a good and a bad thing. Good, because the administrators aim to create their unified way of working. Bad, because the rest of the employees at UPD experience the physical movement as a problematic barrier when searching for answers and it could result in even greater variances in how people are working. It also seems that it has increased the running around looking for documents and folders. Another contributor to the inefficient running around could be the operating manual, where the authors of the thesis made an observation that in some routines it is specified to put the document at "an agreed location". Consequently, this also contributes to different teams put documents at different locations, hence, the running around is a conspicuous problem. This is yet another clear example of the earlier mentioned problem expressed by Ljungberg and Larsson (2012), that it creates logic for only a small part of an organisation. Any differences need to be recognised and evened out in order to reach alignment, which is necessary for increasing efficiency. Moreover, the mere fact that there is so much paperwork within the process can be considered to be an inefficient problem itself. If an original document disappears, there is no backup. The copying and sticking physical labels on the applications is another time consuming task, but which is on its way to be improved with the digitalisation project.

Looking at the management principles for lean, UPD has both put resources early on in the development process to aim for one way of working, meaning a more standardised way. They have also tried to organise their employees to facilitate the balance between functional expertise and cross-functional integration by teams stretching across professions and divisions. However, many employees still want better organisation of the administrators, and that they should to take more responsibility in the review of applications, to both decrease the high workload and save time. Some administrators mean that they posses knowledge that would make it possible. Many interviewees have complained about the interpretation as highly time consuming, due to the many laws and regulations that are constantly updated and/or changed. To let administrators deal with a first initial review is therefore desirable. Further, the process mapping project is a way of understanding the network. Considering the lean management principles, UPD seems to have a slight lean thinking without even knowing it. However, the integration with external parties requested by employees, should be of more focus, but can at the same time be seen as highly complex due to the many parties involved. Lastly, the alignment of tools and systems is something they are striving towards, but they are not there yet. It was quite clear that many employees are dissatisfied with the case dealing system, that it is not especially process oriented. According to Gulledge and Sommer (2002), the IT-

systems should be aligned to the process for the organisation to be successful, hence UPD seems to have a problem regarding this. If IT-systems are not process oriented, it becomes difficult to improve the way of working with the process. UPD is constantly working with making the systems more suitable for how they are working, but it seems countless improvement measures need to be made. As a final remark, to become all lean in their management might not be the optimum way, but the already existing lean thinking should be kept. And if the organisation does not agree with doing one process the same way, they should try another way of making the processes efficient.

A summary, put together by the authors of the thesis, of the identified problems and associated suggested improvements is presented below in Table 5.1.

	Problems at UPD	Suggested Improvements	Category
1	Involvement of many parties with different interests and applicant having too much responsibility	Inevitable. Can be facilitated through making the process logical for everyone, take responsibility for the process together, and mapping the process. Also, create collaborations or work groups with external parties and creating alignment and a holistic view.	Complexity
2	Poor documents and insufficient applications	Develop standard formats and improve information to applicants, what needs to be part of applications, uniform professional language.	Complexity/ Customer orientation
3	Interpretation of applications, laws and regulations	Inevitable. Can be facilitated through even closer team work. It already exist quite many meetings and measures for this, which is positive.	How they are working/ Alignment/ Time
4	Differences in the way of working and in the professional language	Use process mapping to analyse, codify and verify. Create "the UPD-way".	How they are working /Alignment
5	Partly negative about the <i>customer</i> term	Change attitude towards being service-minded.	Customer orientation
6	Negative attitude towards the process but unwilling to work for changes and a slight lack of faith	Informing all employees in a visible and controlled way using effective communication. Provide employees with sufficient tools, plan the change and put effort in training. Use for example <i>Heat-Bend-Cool</i> .	Resistance to change?
7	Physical barriers in terms of location	Mix all professions, strive to be located on one floor.	How they are working/ Alignment
8	Operating manual too extensive and not user- friendly	Cut it down, rewrite some parts and make it logical for everyone in the organisation. Educate everyone in the use of it.	How they are working
9	IT-systems not process oriented	Keep develop them and integrate them with the digitalisation project.	How they are working /Alignment

10	Competence being poorly utilized and tasks poorly allocated	Use the process mapping to discover process masters, do more of what you're good at and/or are entitled to do.	How they are working
11	Information to and communication with customers	Update the website using an external part, aligning the process through suggested improvement no. 4.	Customer orientation
12	Lack of profession and task descriptions	Enclose them in the routines and where flexibility is needed express "decide in respective team".	How they are working
13	Delegation order	Put pressure on top management and politicians.	Complexity/ Time
14	Dealing with documents	Will partly be facilitated through the future digitalisation, but also strive for alignment, see suggested improvement no. 4.	How they are working/ Time
15	High work load	Be better prepared for busier times. See all other suggested improvements.	Process/ Time
16	Routines and errors and mistakes in decisions	Make everyone aware of everyone else. Strive for alignment. Also, see suggested improvement no. 8.	Process/ Alignment

Table 5.1Summary of problems and associated improvements.

Framework for improvements

Regarding the many frameworks that are summarised in Table 3.2 in the *Theory*, it seems that UPD has done things in a slight different way from what the theory advocates. They started out by deciding to try out the pilot project and consider the digitalisation and process mapping as separate change projects. They informed all employees about the goals of improving their way of working and built a team that immediately were to implement changes by try out new ways of working. The authors of the thesis argue that if UPD instead align all their change projects, the results will probably be better when they are finished, since both Ungan (2006), Harmon (2014) and Ljungberg and Larsson (2012) state the importance of analysing and understanding the project first. Through the process mapping, knowledge can be acquired and it is more suitable to *thereafter* try out new ways of working.

5.1 Reflections over the method

The method used for this thesis was chosen in consideration to the current situation at UPD. The authors of the thesis have been part of the organisation in their daily work and have had access to what was considered needed to be able to study the process. Being part of the office might have affected the result given a possible risk of sympathy. However, the authors' perception is that it rather, together with the openness at the office, created trust hence the interviewees answered the questions more honest. Trying to meet the studied organisation's objectives and academic requirements simultaneously resulted in the systematic combining approach taken on for the thesis. It is stated in the presented theory that in some processes there might not be one right way to perform a task and that all activities cannot be made rational. This was identified in the case of UPD why the authors argue for UPD to consider

using more than one measure for improving their process, which also is one reason for why several different improvement theories have been presented. Parts of the theory is discussed on a general basis with little or no connection to the public sector However, much of the literature content is still considered to be applicable in the case of UPD, given the process is in focus. The theories behind process improvement are assumed to not exclusively being connected to its origin, thus be of interest to UPD.

The selection of employees for interview and shadowing was, as mentioned, done through conversation with the supervisor at UPD. This might have affected the result, since not all employees at the Building Department were heard. Possible personal relationships between the supervisor and his colleagues could have biased the findings from the result. However, the reliability of many answers is strengthened through the general observations and daily conversation at the office, either to agree or disagree in arguments. Larger contradictions in the answers derive from perceptions of individuals. Therefore, the authors of the thesis believe to have captured the essence of the problems and in turn UPD's general perception of their building permit process. The authors chose to only look at the building permit process at the Building Department and not elaborate any further what the other involved parties do in the process. This was simply necessary since the conditions for the thesis did not allow a more comprehensive investigation. Regarding the process being a network, the building permit process involve many parties, hence to fully exclude the external parties is, argued by the authors, to diminish the complexity of the whole process.

6 Conclusions and Recommendations

This thesis aimed to critically analyse the building permit process in order to find improvement measures for a smoother process. This chapter will summarise the main problems found, how they affect the process and suggested improvements discussed based on the problems in relation to theory.

One of the thesis main conclusions is that it is almost impossible to only focus on the internal process, because so many of the internal process activities are interconnected with the external. Therefore, the conclusions have come to slightly include external matters. Problems that are characterised as internal are the ones easiest to do something about within the frames of UPD. Nevertheless, some external problems or problems that are somewhere in between internal and external might be the ones hindering a smooth process the most, why the effort needed in order to impact these problems might be worth it. Also, the problems that are physically outside the frames of UPD are still possible to influence and might need to be addressed in order to achieve long-term improvements. It should be noted that the findings on improvement measures show that it does not differ to such a high extent between private and public sector when focusing on the process. However, there are still specific parameters that need to be considered in public authorities, hence the suggested improvements are presented to suit UPD as can be seen in Table 5.1 presented in the *Discussion/Analysis*.

A holistic view is needed in order to meet all interests provided by the many parties whose involvement is necessary for the building permit process to function. The three professions, caseworkers, building inspectors and administrators, who are working closest to the process, have slightly different interests in terms of caring for different parts of the process. Furthermore, the interests of external parties involved, especially the applicant, add to the complexity in the respect of many parties involved. The process should be logical for everyone so that the parties can take responsibility for the process together. The logic can be achieved through process mapping which should be made by the ones closest to the process but it needs to be anchored with all parties involved. When the process map is done and the process has been described logic for everyone, the map also needs to be analysed. It is not enough to just state the current process, the point of process mapping is also to improve.

Many employees expressed frustration due to the delegation order arguing for example for the hearing of neighbours in mischief matters to make the process unnecessarily inefficient. In order to do something about this problem it needs to be brought outside the frames of UPD, meaning the problem need to be communicated to the management who should put pressure on the politicians. Alignment is also part of the logic as there needs to be a uniformed professional language in order to understand each other. The running of the process is strongly depending on constant communication between the parties involved in the case. One of the main identified problems regards poor documents and insufficient applications. The employees expressed this problem to be due to the applicant as being the responsible for providing complete documents of the right quality. The authors of the thesis, however, believe that it is also a matter of UPD not providing applicants with the right information hence the problem also lies on UPD. Standard formats for applications need to be developed that specifies, in a uniform understandable language, what needs to be part of an application and how it should be presented. Customer communication is vital why standards are needed for the information provided and also a unity in the way customers are met.

To avoid what some employees consider being "stupid" questions, the information with and communication to customers should follow the aligned process language. Also, UPD should strive to update the website to make it more logical for people outside the process. Therefore, the authors of the thesis argue for this to be done by someone outside of UPD, together with process masters. Much can be improved by giving the customers better prerequisites from the start. Moreover, the slight negative attitude towards the term customer at UPD seems to depend much on it has its roots in the private sector. Still, for many at UPD, the customer term is evident, but in order to get everyone on board with customer orientation, a change towards service mindedness might be better suited. This will probably help many employees that struggle to understand the concept of customer orientation.

There is not only lack of knowledge regarding the customer's role in the process, there also seems to be gaps in the knowledge of what others are doing in the process. In order to make the process efficient the activities need to be connected correctly, why the people working in the process need to understand what is needed from them and from others to ease the process flow. It has been noted that competence is perceived by some not to be fully utilised or not utilised in the best way. Frustration due to having to perform tasks that was not interpreted as belonging to one's profession generates a reflection on task and responsibility allocation. The authors of the thesis argue that employees should definitely be able to use their competence in the best way possible why the allocation of tasks and responsibilities might need to be reviewed. People should do more of what they are entitled to do and what they are good at, so that resources are used efficiently. Additionally, process masters, which can be identified in connection to process mapping, should be used to find the best way of working for every individual task. Differences in the way of working, especially between the teams and the divisions, have been identified. These differences hinder alignment which is one important element for successful improvements. Before change can start, the differences need to be identified and this work can be supported by the process mapping. By involving both divisions and all professions it can be used to analyse, codify and verify how UPD shall be working. It is important that they create a way of working that everyone supports, hence creating an "UPD-way" of working in the building permit process. It is important to note that when creating the "UPD way", both efficiency and effectiveness have to be considered. There is no use in improving efficiency of activities if they are not effective. The interpretation of applications in relation to laws and regulations is time consuming and contributes to some differences in the way of working. The decision in a certain case do not necessarily differ depending on who have dealt with it but in order to make the process the same regardless case a more unified way of working in relation to laws and regulations is needed. Interpretation is subjective why it might be inevitable to have some differences in this respect. However, it might be possible to come closer to alignment through even closer teamwork and collective discussions on laws and regulations to find some kind of common platform to stand on.

Regarding the problems with the IT-systems and the operating manual in particular, the systems must be better integrated and aligned with the building permit process. The operating manual should be made more user-friendly, by cutting it down and rewrite some parts. Moreover, everyone should be educated in how they can use it more efficiently. Also, since many employees request it, it should be of interest to add profession descriptions and update the routines to include responsible profession, or express that it is desired that a certain profession *should* perform a task. If it is not possible to assign one profession, it should say something like "responsible appointed after mutual agreement in the team" rather than not specifying at all. To later ensure that employees follow the routines, the authors of the thesis argue that managers must make everyone aware of everyone else, meaning to make everyone aware of the whole process and who is doing what and why. If it is clearer to everyone why they must perform a certain task, mistakes due to lack of knowledge or possible ignorance, are more likely to decrease. The unnecessary running around looking for documents reveals that many teams work differently since it is not always specified where to put documents and folders. Standardising this procedure would be the least they could do. Much of the paperwork will hopefully also decrease when digitalisation is implemented. Lastly, the problem of physical barriers due to that the divisions are located on two floors, would perhaps be improved by mixing all professions in the corridors again, but priority should however be to be located on one floor. In terms of alignment, after the administrators have found a unified way of working, maybe the other two professions should do the same and thereafter work for alignment for the whole department from two ways.

The employees expressed a general concern regarding their change projects. Some hoped that it will result in some change to the better but many did question whether they will actually lead to something that will improve the process. Since previous organisational mistakes also affect a possible change, it is yet another important aspect to consider before change projects start. If they fail, the resistance to change will increase, the faith in management will decrease and future changes will become even harder to implement. Therefore, UPD could prevent this by putting more effort in their change projects and as earlier mentioned, integrate and align them. This should be done through a visible, controlled way by using effective communication. All employees must get proper training if a new way of working is discovered, but there must exist a good plan of how to do it before the implementation, preferably by using the Heat-Bend-Cool tool presented by Ljungberg and Larsson (2014). However, before that, it is recommended that all employees from the different change projects meet and discuss the process. This should be done to find out differences, to create a uniform language, codify and verify and then test according to what everyone agrees upon.

6.1 Concluding remarks

UPD should strive to integrate all change projects in order to be able to successfully improve the building permit process. They must ensure that the work with process mapping continues into further improvement work, meaning critically analysing and questioning the map. Through that, gaps can be identified and it will become visible where UPD should put their efforts of change and where to improve. In the time of change it is important to remember the already well functioning aspects of the process and design the changes so that these are not neglected. Since the input and output varies much in the building permit process it is hard to standardise the process as a whole. However, many of the activities inside the process can be standardised and that would contribute to a smoother process in total. All cases are more or less unique but, if the prerequisites are made clearer from the beginning in terms of information to the customers, the variance in quality of documents can decrease. Moreover, communication needs to be improved on all levels in order to create alignment in the way of working. All this contributes to the creation of the UPD-way which could function as a base for continuous improvements and future changes.

6.2 **Proposals for future studies**

It has been concluded that efficiency of the building permit process is dependent on many aspects. This thesis has not included the social aspects such as work satisfaction, recognition and group dynamics which of all are believed to affect the way of working in the process. Therefore, to study these aspects would add a dimension to what have been presented in this thesis. Moreover, communication has been recognised as related to many of the identified problems, both internal and external. The authors of the thesis believe there is much that could be facilitated through improved communication hence studying communication in the building permit process is a possible future research subject.

7 References

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Appendix 1

Interview guide I – Administrators

- Hur länge har du arbetat här? *How long have you been working at UPD?*
- Vilka är dina huvudsakliga arbetsuppgifter? *What are your main work tasks?*
- Fick du någon särskild introduktion i bygglovsprocessen när du var ny? Did you get any particular introduction to the building permit process when you were first employed?
- På vilket sätt arbetar du med en bygglovsansökan? In what ways are you working with an application for a building permit?
- Vilka moment är mest tidskrävande? Which tasks are most time consuming?
- Stöter du på några problem i dina arbetsuppgifter?
 Om ja, i vilka moment uppstår dessa?
 Are you facing any problems in your work tasks?
 If yes, in which activities do they occur?
- Med hänsyn till föregående fråga, hur skulle du vilja att bygglovsprocessens problematiska moment hanteras? *With regard to the former question, how would you like the problems in the building permit process to be dealt with?*
- Oavsett ärendetyp, finns det någon gemensam nämnare i alla ärenden? Regardless the type of case, are there any common denominators among the cases?
- Vad tycker du om de hjälpsystem (IT-system, mallar, ByggR) som finns? What do you think of the different systems (IT, templates, ByggR) that exist?
- Om du inte vet hur du ska utföra ett arbetsmoment, vad gör du då? If you do not know how to perform a task, what do you do?
- Vad tycker du om de pågående utvecklingsprojekten, digitaliseringen och pilotprojektet? *What do you think of the ongoing change projects, the digitalisation and the pilot project?*
- Vad tror du att digitaliseringen och pilotprojektet kommer att få för effekt? *What effects do you think the digitalisation and pilot project will have?*
- Anmälde du dig till pilotteamet när de sökte deltagare? *Did you sign up for the pilot project?*

Interview guide II – Caseworkers/Building inspectors

- Hur länge har du arbetat här? How long have you been working at UPD?
- Vilka är dina huvudsakliga arbetsuppgifter? *What are your main work tasks?*
- Fick du någon särskild introduktion i bygglovsprocessen när du var ny? Did you get any particular introduction to the building permit process when you were first employed?
- På vilket sätt arbetar du med en bygglovsansökan? In what ways are you working with an application for a building permit?
- Vilka moment är mest tidskrävande? Which tasks are most time consuming?
- Stöter du på några problem i dina arbetsuppgifter?
 Om ja, i vilka moment uppstår dessa?
 Are you facing any problems in your work tasks?
 If yes, in which activity do they occur?
- Med hänsyn till föregående fråga, hur skulle du vilja att bygglovsprocessens problematiska moment hanteras? *With regard to the former question, how would you like the problems in building permit process to be dealt with?*
- På vilket sätt arbetar du med ett Byggnadsnämndsärende? In what ways are you working with cases that are to be heard by the local Building Committee?
- Oavsett ärendetyp, finns det någon gemensam nämnare i alla ärenden? Regardless the type of case, are there any common denominators among the cases?
- Tror du att ett ärende hanteras annorlunda beroende på vem ärendet hamnar hos?

Do you believe that a case is dealt with differently depending on who is assigned the case?

- Vad tycker du om de hjälpsystem (IT-system, mallar, ByggR) som finns? What do you think of the different systems (IT, templates, ByggR) that exist?
- Om du inte vet hur du ska utföra ett arbetsmoment, vad gör du då? *If you do not know how to perform a task, what do you do?*
- Vilka är de vanligaste frågorna som ställs på besökstiden/telefontiden? Which are the most frequently asked questions at the information desk or on the phone?
- Vad tycker du om de pågående utvecklingsprojekten, digitaliseringen och pilotprojektet? What do you think of the ongoing change projects, the digitalisation and the pilot projects?
- Vad tror du att digitaliseringen och pilotprojektet kommer att få för effekt? *What effects do you think the digitalisation and pilot projects will have?*

- Anmälde du dig till pilotteamet när de sökte deltagare? *Did you sign up for the pilot project?*
- Vad anser du om koordinatorrollen på en administratör? What do you think of the possible coordinator role of an administrator?

Interview guide III - Heads of the divisions

- Hur länge har du arbetat här? How long have you been working at UPD?
- Vilka är dina huvudsakliga arbetsuppgifter? *What are your main work tasks?*
- Fick du någon särskild introduktion i bygglovsprocessen när du var ny? Did you get any particular introduction to the building permit process when you were first employed?
- Vid nyanställning, hur "slussas" de nya in i bygglovsprocessen? Regarding newly employed, how do they get introduced to the building permit process?
- Vill ni [SBK] förbättra bygglovsprocessen? Varför? Vilka är de önskade resultaten?
 Do you [UPD] want to improve the building permit process? Why? What are the desired results?
- Vad tror du att digitaliseringen och pilotprojektet kommer att få för effekt? *What effects do you think the digitalisation and pilot project will have?*
- Har det gjorts några större förändringar tidigare i bygglovsprocessen? Om ja, vad innebar dessa och vad blev resultatet? Have there been any greater changes earlier in the building permit process? If yes, what did they include and what was the result?
- Hur bestämdes teamen och varför ser fördelningen ut som den gör idag? How were the teams determined and what were the reasons behind the distribution?
- Vilka är de största utmaningarna för en handläggare/arkitekt? What are the greatest challenges for a caseworker?
- Vilka är de största utmaningarna för en byggnadsinspektör? What are the greatest challenges for a building inspector?
- Vilka är de största utmaningarna för en administratör? What are the greatest challenges for an administrator?