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## Growth challenges for small general contractors in the construction industry

A case study of the Norwegian building company To Tommer AS

*Master of Science Thesis  
in the Management and Economics of Innovation Programme*

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# Abstract

Growth is important to businesses for many reasons and most business leaders around the globe want their businesses to grow larger and stronger. However, growth is not always easy, nor risks free, a fact that has resulted in severe situations for many companies. One company that has encountered the challenges related to growth is the small Norwegian building company To Tommer. To Tommer has since its start in 2010 grown rapidly, a development that has led to that the company today has a challenging financial situation.

This research is based on a case study of To Tommer and the purpose is to explore the growth related challenges that the company experience, in order to see if there are suitable existing growth theories that can be applied to analyze and resolve the challenges of the company.

For four months, the researchers worked with To Tommer on a daily basis, trying to help the company to improve its situation. During this time, the researchers worked closely with the management team of To Tommer and thereby developed a better understanding of the company's current situation and the challenges it is facing.

Two categories of growth challenges were identified at To Tommer. The first one was related to liquidity while the second one was related to the organization of the company. The liquidity related challenges was analyzed with help from cash management theory and a project management tool (the critical path method), while the organizational challenges was analyzed with help of Greiner's growth model.

In order to resolve the liquidity challenges, To Tommer needs to improve and establish better routines for cash planning and monitoring of cash flows in and out of the company. Furthermore, by implementing a project management tool, for example the critical path method, To Tommer can decrease the risk of being delayed in projects and thereby to exacerbate its financial situation further.

In the case of To Tommer's organizational situation, it was proposed that the company should invest in support and monitoring tools as well as establish formal documentation that describes roles and responsibilities throughout the organization. This should be done in order to facilitate a decentralization of To Tommer's organization.

# Sammanfattning (Abstract in Swedish)

Tillväxt är viktigt för företag av många anledningar och de flesta företagsledare runtom i världen har en önskan att deras bolag skall växa sig större och starkare. Tillväxt är dock varken enkelt eller riskfritt, ett faktum som för många företag inneburit svåra situationer till följd av snabb tillväxt. Ett företag som har stött på utmaningar till följd av tillväxt är det lilla norska byggbolaget To Tommer. To Tommer startade 2010 och har sedan dess växt mycket snabbt, en utveckling som medfört att företaget i dagsläget befinner sig i en tuff ekonomisk situation.

Denna undersökning bygger på en case-studie av To Tommer och syftet är att undersöka de tillväxtrelaterade utmaningar som bolaget upplever sig ha. Detta för att se om det finns någon passande existerande teori som skulle kunna användas för att analysera och lösa företagets utmaningar.

Under fyra månader arbetade rapportförfattarna dagligen hos To Tommer där de försökte hjälpa företaget med att analysera och förbättra dess nuvarande situation. Författarna arbetade under den här perioden nära To Tommer's företagsledning, något som gav författarna möjlighet att snabbt få god insyn i företagets situation och dess utmaningar.

Det identifierades två kategorier av utmaningar. Den första kategorin handlade om problem med likviditet, medan den andra handlade om problem i företagets organisation. Problemen med likviditet analyserades med hjälp av cash management teori samt med hjälp av ett projekthanteringsverktyg (the critical path method), medan de organisatoriska problemen analyserades utifrån Greiner's tillväxtmodell.

Det fastslogs att To Tommer, för att lösa sina likviditetsproblem, måste införa bättre rutiner för likviditetsplanering samt övervakning av kassaflöden in och ut ur bolaget. Dessutom, genom att använda sig av ett projekthanteringsverktyg, till exempel the critical path method, kan To Tommer minska risken att företagets projekt blir försenade, något som annars kan leda till en ytterligare förvärrad finansiell situation för bolaget.

Då det gäller bolagets organisatoriska situation, föreslås att bolaget investerar i support och övervakningssystem samt att man från bolagets sida inför mer formell dokumentation, i vilken roller och ansvarsområden tydligare framgår för samtliga medarbetare i organisationen. Detta för att underlätta en decentralisering av bolagets organisation.

## **Preface**

This Master thesis has been written by two students at the M.Sc., Management and Economics of Innovation, at Chalmers University of Technology, Gothenburg, Sweden. The work is based on a case study conducted on the Norwegian building company To Tommer AS. All conclusions and recommendations presented, are the authors' own. Views and opinions expressed herein are not necessarily shared or endorsed by To Tommer AS.

The researchers want to take the opportunity to thank the company of study, To Tommer, for having dedicated time and energy as well as providing data and support during the working process. Without this involvement, the research would not have been possible to conduct.

Furthermore, the researchers would like to express their deepest appreciation toward their supervisor at Chalmers, Anne Elerud-Tryde, for her commitment and dedication during this study.

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## Definitions of central concepts

**Small companies:** Companies with less than 50 employees (European Commission, 2003).

**General contractor:** A general contractor is responsible for management of trades, management of vendors, the communication of information to involved parties during a building project, as well as the day-to-day oversight of a construction site (Hendrickson & Au, 2000).

**Subcontractor:** Subcontractor is hired by a general contractor to perform part or all of the obligations of another's contract. A subcontractor can be either an individual or a business (Hendrickson & Au, 2000).

**Lifestyle firm:** “Applies to firms that provide a reasonable living for their founders, rather than incurring the risks associated with high growth. These types of firms usually have modest revenue and annual growth rate projections. A characteristic of this type of firm is that are funded internally and seldom have outside equity” (19).

**Growth firm:** “A company that is growing at a rapid pace compared to its peers or to the broad economy. Although there is no hard-and-fast rule for defining growth, a growth firm generally has the capability to increase annual revenues by more than industry average” (6). Furthermore, in this report the term growth firm also is characterized by the fact that the owner of the firm has a clear focus on growth in terms of revenue.

**Generic growth theory:** This definition aims at well-known recognized theories, which has all been published and used by academics as well as professionals for many years.



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# 1 Introduction

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In this chapter, an introduction to the research will be presented. In the first part of the chapter, the background of the chosen research topic is presented together with a short discussion regarding the need for a research of this nature. Next, since the research is based on a case study of the Norwegian building company To Tommer AS (hereafter To Tommer), an introduction of the company will follow. Thereafter, the purpose of the study is presented.

## 1.1 Background

In this section, the background of the report will be presented. Since the topic of the research is related to company growth (and growth challenges) in the construction industry, the first part of the chapter will present the background and previous research related to company growth and growth challenges; in general, and in the construction industry more specific. As mentioned, the research is based on a case study of the Norwegian building company To Tommer designed to help the company improve its operations while simultaneously continue to grow its business. Therefore, the second part of the background will be a presentation of the company as well as an introduction to its current situation.

### 1.1.1 Background and previous research in relation to growth of firms in construction industry

Almost all of the large<sup>1</sup> companies today have once been small companies, and conversably many of the large companies in the future are small companies today (Antonsson, 2002). A necessity for this development is company growth and development. The term growth, in relation to the evolvement of companies, can have two different meanings (Penrose & Pitelis, 1959). Most common is to refer to growth as change in volume or size. Growth can however in some cases also refer to a quality improvement as a result of process developments. In this paper we are focusing on and referring to growth, in relation to the size of the firm, where size is the result of one of the two factors; number of employees and/or the financial output (i.e. turnover and profit). Despite the type of growth that is referred to, growth itself implies change in some sense. Furthermore, it is argued that without growth the society will experience inertia, and consequently there will be no company- and economic development and progress (Lewis, 1995).

Companies can have different incentives to seek growth. These incentives can be divided in two different categories: Rational & Objective reasoning, and Psychology & Expectations (Spaeth, 2011). The Rational & Objective reasoning incentives refers to reasons such as network effects, economies of scale and/or scope and risk management. Psychology and Expectations refers to more underlying and less concrete reasons, for example stakeholders expectation of growth (market valuation is correlated to future expectations), that companies generally focus on maximizing sales rather than profit and also that many

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<sup>1</sup> Company with more than 250 employees and turnover over € 50 M (4).

companies tries to enable attractive career paths for the employees (Spaeth, 2011). The reasoning, and different incentives for growth will be further discussed in chapter 3.

Despite the obvious importance of company growth, it is important to keep in mind that growth is not always good, and that growth can and will impose a series of challenges for the company which experiencing it (Spaeth, 2011). First of all, growth of firms often results in more complex organizations that are less flexible than before and that requires new knowledge and competence to handle and steer. Furthermore, the cost per unit of a product to produce might increase in a growing firm. The unit costs have been found to be not only related to economies of scale, but also to the growth of the firm, where an increasing market share becomes super linear more expensive (Spaeth, 2011) (Penrose & Pitelis, 1959). Another effect that is related to the growth of firms is the level of innovation and innovation performance, where small firms tend to show a better performance (both firm size and firm age tend to be inversely related to innovative output) compared to the large firms (Erden, et al. 2009). A lot of research has been done and consequently there exists a lot of literature about growth challenges that companies face in many different industries, such as e-commerce businesses, car manufacturers and high-tech companies. (Chan, 2004) (Kamis, 2010) (Igarashi & Taji, 2010) (Li & Tan, 2004) However, when it comes to the construction industry, a lack of relevant theory and literature regarding these challenges can be observed (Bygballe, 2013).

There might be many reasons to why growth theories and literature rarely treats the construction industry. One reason might be the fact that “construction industry” is a very wide definition and that the characteristics of the companies within the industry differ to large extent. Furthermore, since many of the companies within the industry works in project form, often in complex, temporary constellations, it is hard to point out what factors that causes the challenges, a fact that further complicates the process of investigate and examine companies in this industry. Lastly, the role of networks, reputation and connections among subcontractors and customers in the construction industry, might make it harder to investigate and find generic solutions and theories, than in other more “straight forward” industries (Bygballe, Samarbeid og læring i byggenæringen, 2010) (Ofori, 1990).

The result, however, is that it often is hard for companies in the construction industry to find and apply “of the shelf” developed growth theories and frameworks in order to investigate and solve their growth challenges. This fact is particularly noticeable for smaller growing companies in the construction industry that often do neither have the time, nor the competency for doing throughout analysis of its challenges. These companies many times need help in order to grow successfully, and would greatly benefit from existing theories and frameworks in order to understand and solve the challenges (Ofori, 1990).

### **1.1.2 Case of study: To Tommer AS**

One example of a company that is experiencing the growth related issues and the lack of appropriate and relevant theory in the construction industry is the Norwegian building

company To Tommer. To Tommer is a Norwegian building company founded in 2010 by the carpenter Fredrik Finsnes. Fredrik, who previously had worked as a carpenter for other building companies, had become tired of the many unserious actors in the industry and decided to start his own firm. After having worked with sub-contractors for one year, in 2011, Fredrik decided to merge with two other carpenters, Zigmas and Antanas, in order to be able to share the administrative work and costs between all three of them.

Since the establishment of To Tommer in 2010, the company has been through a face of rapid growth both with regards to the size of organization and the turnover. Today the company has approximately forty employees and the turnover in 2012 exceeded NOK 35 Million. The overall industry growth (in terms of total industry order backlog, and number of square meters), in combination with To Tommer's very satisfied customers has resulted in a situation where To Tommer is experiencing a higher demand than they are able to supply. Hence, a sufficient demand is today not an obstacle for continuous expansion at To Tommer. On the other hand, during the rapid growth in terms of organization and turnover, To Tommer's profitability did not grow at the same rate. In fact, the moderate but at least positive net earnings of approximately NOK 0.5 Millions in 2011, was followed by net earnings of NOK -3.5 Millions in 2012. The CEO of To Tommer is of the opinion that the negative development in profitability partly is a result of the aggressive growth and the obvious investments that such a development requires, but he also recon that the company ran into some unforeseen problems in 2012, which affected the profitability of a couple of projects. In other words, while most projects went flawless and met financial expectations, certain projects were delayed due to different reasons, something that resulted in that the cost for these projects greatly exceeded expectations.

As a result of being a relatively young company, To Tommer has not had the time to work up a strong balance sheet, and the negative development of the company's profitability has greatly affected its liquidity. Today, the company does not have access to internal funding, and as the balance sheet is not very strong (in combination with a negative profitability trend) it is difficult to get access to external funding. Hence, a continuous negative development in profitability would most likely force the company into bankruptcy in the near future due to absence of liquidity.

The rapid growth of To Tommer, in terms of both employees and turnover, have according to Fredrik Finsnes (CEO), and Tobias Finsnes (CFO) imposed a series of challenges and obstacles that in turn has reinforced the negative development in the company's profitability further. The CEO, Fredrik Finsnes, also explains that the drive towards increasing the size of the company has resulted in confusion throughout the organization, something that he means has affected the recent negative development of the company's profitability further. This is a view that is shared by both Tobias Finsnes and the project leaders at To Tommer. Fredrik Finsnes further states that the negative trend has to change in order for the company to survive, but lack of time, knowledge and experience makes the management team of To Tommer highly uncertain of how to do so.

## 1.2 Purpose

The purpose of this study is to explore the growth related challenges experienced by the building company To Tommer, and to see if generic growth theories can be applied in order to better understand and resolve the challenges.

Research Questions:

1. Which are the growth related challenges that To Tommer face?
2. What are the root-causes of the growth related challenges that To Tommer experience?

The intention with the two research questions above is to first identify and understand the growth related challenges that To Tommer face. To Tommer is convinced that the company's bad performance recently is a result of their rapid growth. Identifying the growth related challenges is thereby a suitable strategy to improve the overall performance of the company. In order to understand the identified challenges better, and potentially be able to solve them, it is important to understand the root cause of each of the challenges. This will be investigated as the second research question.

## 1.3 Scope

In this chapter the scope of the report will be presented. Since the primary purpose of the study is: *"to explore the growth related challenges experienced by To Tommer"*, the company itself will be the focus of investigation. The scope of the study will include exploring, discussing and analyzing the growth related challenges in order to understand them and how they might be solved. Furthermore, in chapter 7 (discussion) the researchers will, based on the analysis, discuss and present potential solutions to the company's challenges.

Companies in the construction industry are highly diversified in terms of sizes and specializations. As described in the background, the lack of theory and frameworks related to growth challenges specific for the construction industry, are of greatest concern for small, growing companies in the construction industry such as To Tommer. This is because these companies seldom have the competencies or resources to do thorough analysis of its growth challenges and hence would be most helped from "of the shelf" frameworks. (Ofori, 1990) However, "company in the construction industry" is a wide definition, and truth is that operations and structures differ a lot between different types of companies in the industry. The first part of this chapter will therefore focus on describing the company of investigation, To Tommer, and its place in the construction industry and what characteristics it have. This is important since the characteristics of the company and its place in the overall industry, highly influence the challenges that the company faces, something that will be seen later on in the report.

### 1.3.1 To Tommer's place in the construction industry

As indicated in the introduction of the chapter, the construction industry is a broad concept and includes a number of different types of actors and companies. In this report the focus will be on **small general building contractors** that **wants to grow** of which To Tommer is a case.

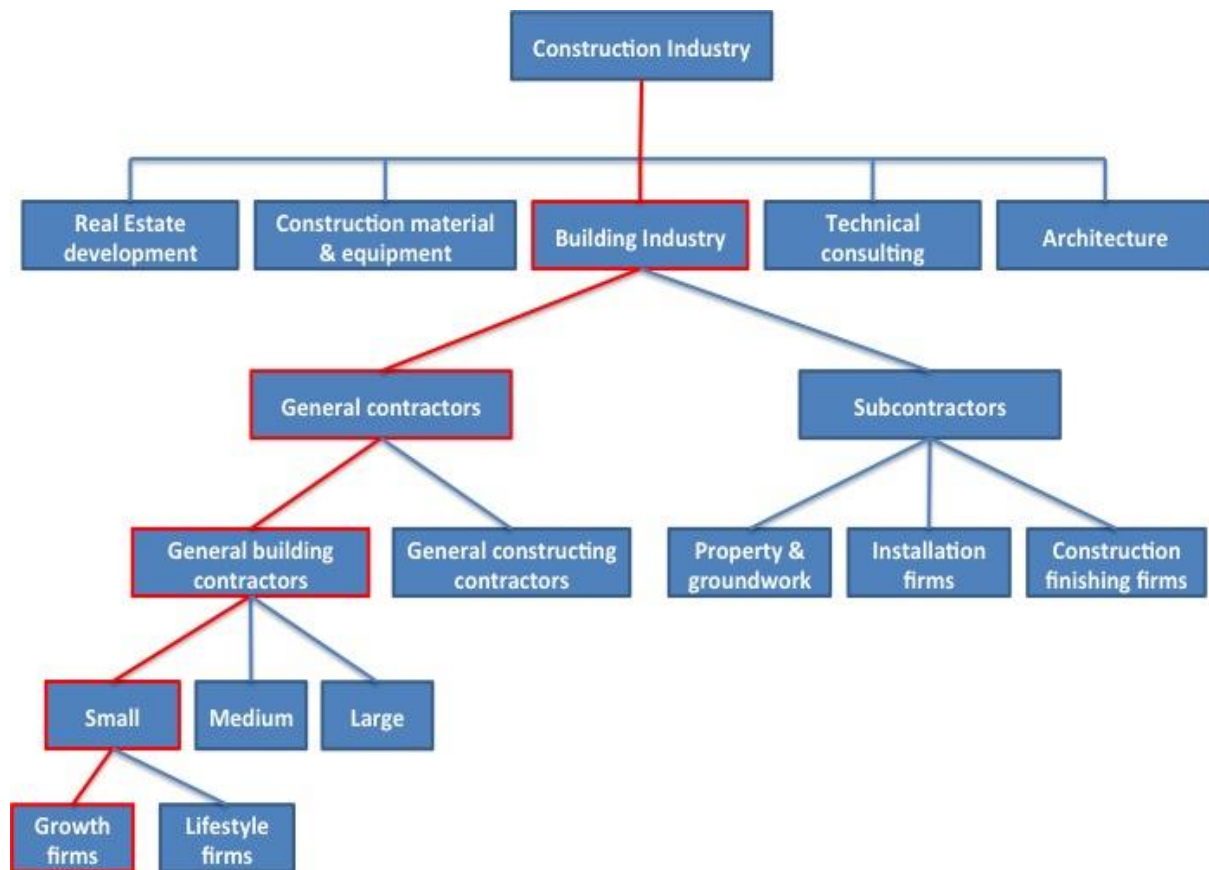


Figure 1: Schematic picture of the construction industry. (Sveriges Byggindustrier, 2011)

Figure 1 above describes how the construction industry is structured and where the company of investigation, To Tommer, is represented within it. The building industry is a subgroup to the wider construction industry, and the easiest way to describe this group is as the part of the construction industry where the “craftsmen actually carry out the building tasks.” The building industry is then divided into two different branches: the *general contractors* and the *subcontractors*. The difference between these two branches is that the general contractors are assigned a whole project (e.g. building a house) while the subcontractors are hired by the general contractors to do specific tasks within the project (e.g. electricians and plumbers in the case of building a house). This means that the general contractors (in opposite to the subcontractors) own the whole project and are responsible towards the customer. General contractors can in turn be divided into two branches, which are *general building-* or *general constructing contractors*. The difference here is that the building contractors are concentrated on residential or non-residential buildings, such as houses, apartments and real estate, while constructing contractors focus on more infrastructure related projects such as roads, bridges and tunnels (Sveriges Byggindustrier, 2011).

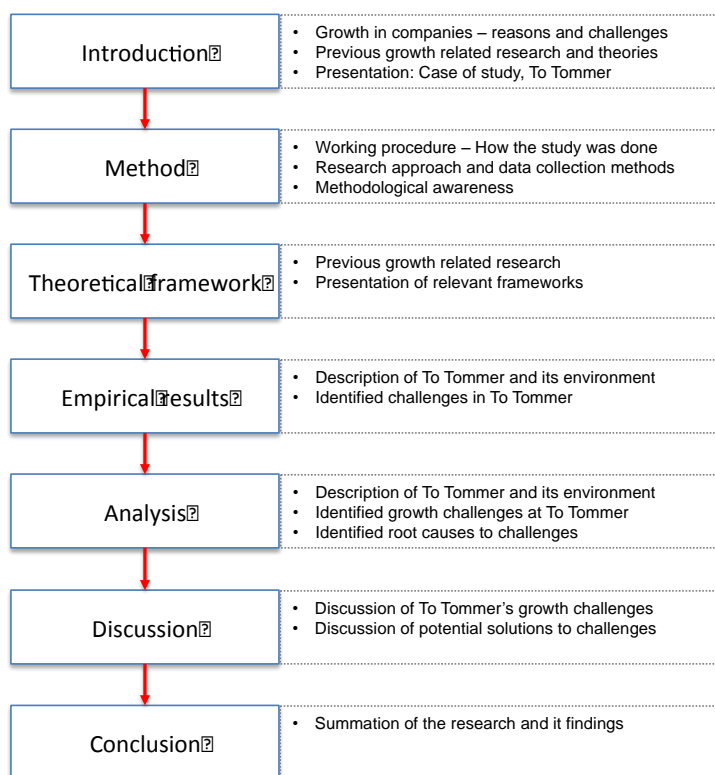


### 1.3.2 Scope of challenges

In the case of To Tommer, most of the problems the company experience have, according to the CEO of the company, arisen as a result of the its rapid growth. For this reason, and since the company has a strong wish to continue its expansion, the focus of this study is the growth related challenges that the company experience. Hence, the scope of this report will only include growth related challenges, i.e. challenges that have arisen due to rapid growth and, furthermore, prevents the company from growing in the future.

## 1.4 Structure of report

Figure 2 below presents the structure and content of the report in order to give the reader a better overview.



**Figure 2: Structure of the report**

In the introduction chapter, the background of growth in businesses is presented, i.e. why a company wants to grow as well as what potential problems and challenges that growth can result in. Furthermore, it has been stated that growth has been the topic of much research in the past, research that has resulted in a number of generic frameworks and theories related to growth. In addition, it has been explained that many of these frameworks have been modified in order to fit specific characteristics of companies or industries better. However, when it comes to the construction industry, a lack of specially designed growth theories and frameworks has been observed, a fact that affects companies in this industry negatively, and especially the small ones. One of these companies, which also is the case of this study, has been presented.

In the second chapter, the emergent of the research problem as well as the method used when implementing the research is presented. The motivation of chosen research method (case study) is also presented together with a discussion regarding the credibility of a study of this nature. In the third chapter, the theoretical frameworks, which the research the analysis partly is based upon, are described. The chapter is divided in two parts, where the first one presents relevant theory regarding growth in general and growth in the construction industry specifically. The second part presents the theoretical frameworks that have been chosen to explore and analyze the identified growth challenges of To Tommer.

Next, the empirical result from the case study of To Tommer is presented. First a description of the company and its operations is presented, followed by a description of the identified growth challenges that the company faces. In the sixth chapter, the identified challenges described in chapter 5 are analyzed, using the analytical frameworks presented in chapter 4. In the seventh chapter, the identified challenges and possible solutions to the challenges are presented and discussed. Lastly, the conclusions drawn by the authors as well as a summation of the findings during the research are presented.

## 2 Method

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In this section, the methods used by the authors in order to answer the research questions and fulfill the purpose of the research, are presented and discussed. In the first part of the chapter the emergent of the final research problem is described. Thereafter, the chosen research approach is presented together with a description of how the data was collected and analyzed. The last part of the chapter deals with the validity and reliability of the research and aims to give the reader an understanding of potential factors that can influence the credibility of the final result.

### 2.1 Emerging of research problem

The emergent of the research problem is closely linked to the project that the researchers have done for To Tommer. The purpose of the project was to help To Tommer developing its strategy, as well as help the company with its financial management. This was done in order for the company to overcome the challenges that it recently had experienced. At the start of the project, the research idea was to investigate if and how the principles of lean<sup>2</sup> could be used and implemented at To Tommer in order to increase the performance of the company. However, early in the project it could be understood, both from data as well as from interviews with key persons at To Tommer, that the major reason for the company's severe situation was the extremely rapid growth that the company had shown over the last years. With this in mind, the researchers directed their effort more towards growth challenges and therefor conducted a preliminary literature review where they tried to find relevant and construction specific growth literature and theory that could be used in order to understand To Tommer's growth related problems and challenges better. However, it was discovered that it was hard to find specific literature and theory that could explain the situation of a company like To Tommer. The research problem was therefor modified to the one presented here, where the purpose was to investigate if existing more generic theories and frameworks could be used in order to understand the growth challenges of To Tommer.

### 2.2 Researchers role at To Tommer

As mentioned briefly, the research was based on the project that the researchers did at To Tommer. In this project the company had expressed a wish to get support with its business management, and especially the strategy development and financial management of the firm. During four months the researchers worked (both on and off site) at To Tommer, analyzing the company's situation and processes. The researchers worked closely with the management of the company, i.e. the CFO, CEO and project managers, with daily contact with either the CEO or CFO. The roles of the researchers during the project emerged from a consulting like role in the beginning (focused on specific tasks) to a more general

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<sup>2</sup> The core idea of lean is to minimize waste in processes and thereby maximize the value for the customer. A research team at MIT coined the term in the late 80's as a term to describe the Japanese car manufacturer Toyota's business. ([lean.org](http://lean.org))

management like role as the project proceeded, with a greater involvement in more of the company's processes. The tasks carried out by the researchers during the project went from being mostly focused on financial analyzing and management in the beginning, to a wider range of tasks such as organizational and HR-related questions and analysis of processes used by the company, at the end of the project.

### 2.3 Research approach

The research was qualitative to its nature. A qualitative research approach was chosen since it aims to give more in depth understanding of the problems than the quantitative methods (Berglund, 2010) or, as described in the book *Qualitative Research: The Essential Guide to Theory and Practice*: “*Qualitative research is by definition exploratory, and it is used when we don't know what to expect, to define the problem or develop an approach to the problem. It's also used to go deeper into issues of interest and explore nuances related to the problem at hand*” (Savin-Baden & Howell Major, 2012). This, in contrast to quantitative researches where the sample usually is large in terms of cases and the objective is to quantify data and try to generalize the results.

Furthermore, the research method used was a case study (of qualitative nature). A case study is descriptive and explanatory and is suitable for studying complex social phenomena, or as defined by Yin, “to explore and investigate contemporary real-life phenomenon through detailed contextual analysis of a limited number of events or conditions, and their relationships.” (Yin, 2003) Since the purpose of this research was to explore and investigate a specific phenomenon (To Tommer's growth challenges) in detail, a case study seemed suitable. Furthermore, when it comes to case studies, the emphasis is more on learning than on proof (Flybierg, 2006), which also made it very suitable for the study of To Tommer, where the purpose was to learn about the company's challenges and if they could be solved with generic growth theories. There are three different types of case studies: descriptive, exploratory and explanatory. The exploratory case study often precedes a more in-depth study than the two others. This, in combination with the fact that the purpose of the research was to explore the growth related challenges that To Tommer experience, motivated an exploratory case study as the choice of research method in this research.

### 2.4 Data collection methods

The data used in the report can be separated into two parts, empirical and theoretical. The theoretical data has been collected from relevant literature as well as through an interview with an expert, presented more in detail below. The empirical data has been collected through participatory observation and through interviews with the CEO and CFO at To Tommer. Semi-structured interviews were chosen due to a number of reasons. First of all semi-structured interviews give the interviewer and interviewee the possibility to freely express their opinions and thoughts and opens for a two-way discussion in opposite to structured interviews. Furthermore, semi-structured interviews have the advantage of being less intrusive to the interviewee than structured interviews and are therefore good to use

when discussing sensitive issues, such as challenges that a company experience (Bernard, 1988), which was the case with To Tommer. Also, In this case, semi-structured interviews were used to give both the researchers and To Tommer the chance to freely discuss and explain their situation and view, while still keeping to the subject of growth related challenges. Below, the choice of data collection methods is motivated and the different methods are described.

#### **2.4.1 Participatory observation**

Participatory observation is a data collection method where the observer participates in the on-going activities, as a part of the activities. It has the advantage that it gives the researcher an insider viewpoint and much more detailed and rich information relatively many other data collection methods (18). In this research, it was naturally to use participatory observation as a data collecting method, since the researchers did a project for the company where they helped it in its day-to-day operations. Furthermore, the method gave the researchers the advantage of experiencing the challenges that the company faced and, in that way, broader their understanding for the challenges and their root-causes.

During a four months period, the researchers were a part of To Tommer's day-to-day operations, helping the management of the company analyzing financial and operational data as well as helping them with various problem solving. During this time, the researchers interacted with many different persons in the company, both formally and informally, on daily basis, especially CEO, CFO and the two project managers, Zigmas Jablonskis and Antanas Zutautas.

#### **2.4.2 Literature studies**

Both in advance of the study, as well as during the work, literature studies was used to broaden the researchers understanding of the constructing industry, growth related challenges, as well as, the generic theories and frameworks related to growth. Especially in step 2 described above, literature studies were used extensively to find growth theories and frameworks that could be suitable to explore and solve the company's growth challenges.

#### **2.4.3 Expert interview**

An interview with the associate professor Lena Bygballe at Norwegian Business School was conducted in order to gain information regarding the construction industry and its characteristics. The interview was made via email. Lena Bygballe was selected due to her expertise within the topic of construction industry, in which she has published a number of research papers, and especially since she has studied the complexity of developing strategies within the industry. The interview were of semi-structured nature. Semi-structured interviews were chosen to give interviewers and interviewee the chance to discuss and share their views and opinions freely.

#### **2.4.4 Interviews with To Tommer**

Since the purpose of the research was to explore the growth related challenges experienced by To Tommer, empirical data was, besides participatory observations, collected through semi-structured interviews with the CFO (Tobias Finsnes) and the CEO (Fredrik Finsnes) of

the company. Fredrik Finsnes was selected to be interviewed, since he has been in To Tommer since the company's start and has the best insight in the company and its operations and therefore could provide valuable information regarding the challenges that the company faced. Tobias Finsnes was selected as interviewee due to his full insight in the financial situation of the company and how this situation has changed over the last years, information that was needed to, from a data view, analyze the company and its challenges.

## 2.5 Data analysis

The data analysis during the research was divided in two parts where the first part was related to the identification of the challenges that To Tommer faced, while the second part handled the analysis and use of the chosen frameworks and theories.

In order to identify the challenges at To Tommer, data from multiple data sources were used. First of all the interviews with the CEO and CFO of the company was coded and used to identify challenges. The coding process focused on identifying and categorizing all of the interviewees experienced challenges. Furthermore, the researchers discussed on daily basis their observations of self-experienced challenges at To Tommer, information that was combined with the data from the interviews in order to decide which growth challenges that was most concerning for the company.

The first identified challenge, the challenge with liquidity, was rather straight forward to discover since both the CFO and CEO frequently mentioned it during their interviews. Furthermore, the researchers could confirm the severe liquidity situation while analyzing the company's financial data during their work with improving the financial management of To Tommer.

The second challenge, the challenge related to the organization, was identified during the participatory observations of the researchers at To Tommer. During the time at To Tommer, the researchers experienced that the management of the company, had a hard time monitoring the performance of the different processes and projects. This even though they focused and spent a lot of time on monitoring. Furthermore, it was identified by the researchers, that the responsibilities related to the different roles were rather vague. Both these identifications were confirmed in interviews with the CEO of To Tommer, whom explained both that it is much harder to monitor the larger organization than before, and that it today was harder to keep up with responsibility assignments.

After identifying the two challenges, an in depth literature study were conducted in order to find suitable theory and frameworks that could be used to analyze the challenges. The challenge related to liquidity was analyzed using cash management theory and the project management tool critical path method. The cash management theory was used since it was applicable and in an easy and straightforward way described how a company should handle their cash in order to improve the cash and liquidity situation. After identifying the root causes related to To Tommer's severe liquidity situation, these root causes were analyzed in

relation to the principles of cash management in order to see if and how the causes could be improved or in best case avoided according to the theory. Furthermore, the critical path method was chosen to analyze To Tommer's challenging situation regarding its project management and the risk of delays in the projects due to poor project management.

The challenge with the organization was analyzed with the help from Greiner's growth model, since it during the literature study was revealed that many of the characteristics presented in the model was similar to the one observed at To Tommer. After the company's organizational situation and its potential root causes had been identified, these characteristics were compared to the ones existing in the different phases in Greiner's model. Based on this comparison the organization of To Tommer was analyzed and areas of interest were highlighted and further discussed.

## 2.6 Methodological awareness

In this section, the method used, and its potential impact and influence on the result of the research, will be discussed. This is done in order to give the reader a chance to judge the soundness and credibility of the research. Furthermore, since the result of the report will be of great importance for To Tommer future operations, it is important that the company itself gets the opportunity to understand what potential influences the choice of method can have on the result of the case study in order to assess the credibility of it.

First of all, the fact that a case study was used as a research approach undoubtedly has affected the outcome of the research and especially the possibility to generalize the result to a wider population, for example other building companies with growth challenges.

Furthermore, the chosen data collection methods might have affected the result of the study. Especially, the participatory observation collection method involves a number of factors that potentially can affect the result of the research in different ways. Since participatory observation means that events are observed and interpreted through the observer's eyes, the risk that the data is biased in any way (consciously or unconsciously) is large (18). In this study, however, two researchers have been participating in the operations of To Tommer, a fact that decrease the risk of a researcher's potential influence on the objectivity of the data, as it allows for comparisons. Another problem related to the participatory observation collection method is the fact that a researcher in a group can "going native". This means that the researcher becomes too involved in the activities and feels enough sympathy to the group to lose his or her objectivity (18). During the four months when the researchers worked with To Tommer, they built up relationships with the employees at the company and with the company itself. However, since the primary objective for the researchers were to help the company improve its situation, and since the researchers were aware of the fact that this only can be done by remain objective in decision making and analyzing of the company, the risk of bias due to the "going native"-syndrome should be seen as low.

Furthermore, the fact that data was collected both from participatory observations of two researchers in combination with literature studies and data from interviews with the management of the company, gave the researchers the opportunity to triangulate the collected data in order to support and enhance the validity of the findings.

Another choice that most likely has affected the result of the research is the choice of analytical frameworks used to analyze the observed challenges at To Tommer. The three frameworks (critical path method, Greiner's growth model, cash management theory), presented in the theoretical frameworks sector in chapter 3, were subjectively chosen by the researchers. The choice was based on the researchers experience regarding the relevance of the frameworks in order to explore and analyze the identified challenges. There is a possible risk that other frameworks or theories would have been more suitable for exploring and analyzing the identified challenges.

According to Lincoln and Guba's, there are four criteria that are used for judging the soundness of a research of qualitative nature. These are: credibility, transferability, dependability and conformability ( Lincoln & Guba , 1985) and are treated below.

#### **2.6.1 Credibility**

Credibility is about assuring that the result of a qualitative research is believable or credible from the perspective of the subject or participant in the research itself. Hence, in qualitative research, where the objective is to describe or explain a certain phenomenon of interest for a specific participant or subject, the best situated to judge the credibility of the findings, is the participant or subject of investigation itself. ( Lincoln & Guba , 1985)

To assure the credibility in this study of To Tommer's challenges, it was important that the participants from the company could assure that the result seemed believable. Thus, the result of the study was presented to the relevant people at To Tommer (CEO and CFO) whom thereby got the chance to judge it. The feedback from the company's management of the report was uniform. Both the CEO and CFO agreed that the findings and results of the data presented in the report seemed reasonable.

#### **2.6.2 Transferability**

Transferability refers to the possibility of taking the result from a qualitative research, generalize it, and transfer it to another setting or context. By doing a thorough description of the research and assumptions used in it, the researcher can enhance the transferability of a research. However, according to theory, when it comes to generalize and transfer qualitative research results to another context or setting, it is primarily the responsible of transferring that must judge if it is sensible to transfer the result. (Yin, 2003)

The degree of transferability of the result in the case study of To Tommer, must be seen as low. This, since the result of the case study is direct connected to the characteristics of the company of study and the environment it operates within. The degree of transferability is especially low when it comes to using the result for another company in the construction



industry since these companies, as mentioned earlier, are very different to their characteristics.

### **2.6.3 Dependability**

Dependability emphasizes the stability of data over time. For a research should be seen as dependable, it is important that the researcher always account for any changes in the context, in which the research takes place. This means that a researcher must describe what changes that have occurred during the time of the research and how these changes might have affected the results of the research. ( Lincoln & Guba , 1985)

The study of To Tommer was conducted over a four month period. During this time, the company did not make any particular changes, neither in organization nor in the way they were handling its cash management. Furthermore, the company did not get any external funding during the time that would have affected its financial situation. Since no major changes were conducted and the study was made under a rather short period of time (in relation to for example the average building project which is 12 months), the result can be argued to be dependable.

### **2.6.4 Conformability**

When a qualitative research is conducted, it is assumed or expected that the researcher contribute with his/her unique perspective to the study. Conformability refers to the possibility for external parties to confirm the result of a study. Easily put, conformability is a measure of how well the data collected supports the results of the research presented by the researchers. There are different strategies for enhancing the conformability of a study. Data audit, where the collected data is analyzed and judged in order to present potential biases, is one method. Another method is that the researcher documents the procedures used for checking the collected data throughout the research ( Lincoln & Guba , 1985).

In this study, much of the empirical data have been collected through interviews. In order to assure the accuracy of the data, the interviewees have been given the responsibility to control that the input from him/her is consistent with what he/she have said, in order to decrease the risk for bias in the data input. Furthermore, the data as well as the result will be presented both for a supervisor as well as be exposed to a peer review from another group of master students at Chalmers. The combination of these actions can be used to argue that the research should achieve a high degree of conformability.

### 3 Theoretical frameworks

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In this chapter the theoretical frameworks used to explore and analyze To Tommer's growth challenges, will be presented. The theories, models and frameworks in this chapter have been subjectively chosen by the researchers, based on their relativeness and usefulness, when it comes to exploring and analyzing To Tommer's experienced challenges. Since the topic of the research is related to company growth, the first part of the chapter will give a general introduction regarding previous research related to growth and growth related challenges, both in general and for the construction industry specific. The second part of the chapter presents the chosen theories and frameworks that are used to analyze the identified growth challenges at To Tommer.

#### 3.1 Previous research regarding growth and growth challenges

As stated above, this section will give a general introduction regarding previous research related to growth and growth related challenges, both in general and for the construction industry specific.

##### 3.1.1 Growth in businesses

That "growth is important for businesses in order to survive" is an expression that most business students and leaders have heard. Whether this statement really is true or not will not be examined in this study and is a topic that has been frequently discussed among experts around the globe for a long time (9). However, what is true is that most business leaders want their business to grow and actively work towards expanding their business both in terms of revenue and profit. (Penrose & Pitelis, 1959) In Sweden for example, almost 75 % of the business leaders of all firms state that they have a desire to grow (16).

There are many reasons why companies want to grow. First of all there are a number of rational and objective reasons why growth is important for businesses, such as demands from the stakeholders and investors of the company. Shareholders and other investors want to get an increasing return on the money they have invested in the business, which means that the company must generate more profit each year. Other rational reasons are all the positive effects that companies can receive while they grow larger, such as potential economics of scale and scope, network effects, and the possibility to defend the company towards competitors. However, there are also a number of reasons more related to psychology and expectations, such as the will of founders and management to own or manage a larger company with more employees (Spaeth, 2011).

There are thus many reasons to why companies want to grow. Furthermore, it has been stated that a business actually receives many of these positive effects from growing, such as lower business risk (due to less dependency on a few customers), better negotiate power (since a larger business often buys larger quantities and therefore are more important for its supplier), and a better situation when it comes to attracting new personnel (firms that grow has been shown to easier attract new employees than non-growing peers) (Spaeth, 2011).

However, the growth of a business may also result in many new challenges that the business has not encountered before and that may be dangerous or even fatal for the growing business, especially if the growing rate is high. The skill set and experience of the managers that succeeded to take the business to present state may suddenly be insufficient to continue on the successful path. Furthermore, growth and expansions of businesses often requires more invested capital, something that also can be problematic for the company (1).

A lot of research has been done, and frameworks and theories have been developed over time concerning how firms optimally should handle growth in different stages of the business life cycle. A lot of classical literature has been written with the purpose of presenting frameworks that describe the perfect and right way for a firm to grow its business (Penrose & Pitelis, 1959) (Greiner L. , 1972) (Ragab, 1977).

However, a witnessed problem with these generic growth theories and frameworks is that all firms are different to their characteristics, which means that not one single “growth prescription” fits all types of firms as well. Historically, growth theory has been focused on manufacturing companies that sells physical products. Today, however, it is companies in the service sector that constitutes more than 70 % of GDP in many developed economies. (Gupta, 2012) The result has been that the classical growth theories have been built on and modified, often based on empirical studies and examination, in order to better fit the different types of firms and their characteristics (Magnussen & Bie Sundelius, 2011) (Giertz, 1999).

### **3.1.2 Growth in the construction industry**

One industry that makes up a large part of the service sector is the construction industry<sup>3</sup>. The construction industry is characterized as personnel intensive and the efficiency is directly correlated to the skills and working methods of the individual craftsman. (Giertz, 1999) It can to large extend be differentiated from other industries when it comes to its organization and products, stakeholders, environment of operations, projects and processes (The national academic press, 2009).

The construction industry is, and has always been, an important industry for every economy not least for its essential role in socio-economic development<sup>4</sup>. However, the industry, and the different types of companies within it, has rarely been studied in detail and most of the previous work has devoted its attention towards individual projects. Hence, there is a lack of generic, easy to use, developed theories in the construction industry area, not least when it comes to growth theories (Ofori, 1990).

There might be many reasons to why growth theories and literature rarely treats the construction industry. One reason might be the fact that “construction industry” is a very

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<sup>3</sup>The construction industry constitutes of companies with operations within Real Estate development, Construction material & equipment, Building industry, Technical consulting and Architecting, (Sveriges Byggindeindustrier, 2011)

<sup>4</sup> Socioeconomics is the social science that studies how economic activity affects social processes (Cassel, 1932)

wide definition and that the characteristics of the companies within the concepts differ to large extent. Furthermore, since many of the companies within the industry works in project form, often in complex, temporary constellations, it is hard to point out what factors that causes the challenges, which also makes it hard to investigate and examine them. Lastly, the role of networks, reputation and connections among subcontractors and customers in the construction industry, might make it harder to investigate and find generic solutions and theories, than in other more “straight forward” industries (Bygballe, Samarbeid og læring i byggenæringen, 2010) (Ofori, 1990).

The construction industry has a strong history of growth (closely correlated to the GDP development), and despite the current economic crises in especially the EU, the overall construction industry is expected to grow with a rate of 3.5% worldwide in 2013 (14). With this in mind, the likelihood that many construction companies around the world will experience a higher demand of their services, hence get the chance to grow their businesses, is high. However, as just mentioned, to grow a business of any type is not easy or risk free, a fact that not least applies to the companies in the construction industry. Larger construction firms results in larger organizations, greater need of liquidity, as well as more complex, long term, and investment heavy projects. The larger the construction projects get, the higher the stakes and especially the risks become for the construction firms. Factors that contribute to the high level of risk in construction projects are presented in Figure 3 below (Ofori, 1990).



Figure 3: Factors that contribute to the high level of risk in construction projects (Ofori, 1990)

## 3.2 Analytical frameworks

In this section, the analytical framework later used to explore and analyze the growth challenges identified at To Tommer, are presented. The frameworks and theories have been subjectively selected by the researchers based on their (by the researchers) estimated usefulness when analyzing the observed growth challenges at To Tommer. The objective has been to select frameworks that in a good and practical way describe and deal with these challenges.

After observing growth challenges at To Tommer, the researchers decided to divide them into two main categories: **liquidity related** challenges and **organizational related** challenges. In the first part of this section, the frameworks chosen to exploring and analyzing the liquidity related challenges are presented. The first framework is a project management tool called critical path method, which is used to better plan, and monitoring, the execution of a project. This framework has been chosen for its ability to helping companies understand and plan projects with interconnected activities better. To Tommer has historically had some problems with this; something that has resulted in delays in project and thereby an impaired liquidity situation for the company. The next framework presented regards cash and liquidity management and is chosen in order to analyze and understand the distressed liquidity situation of To Tommer. The last framework is related to the other challenge category i.e. the **organizational challenge** at To Tommer. This framework, the Greiner's growth model, treats growth's impact on organizations and will be used to analyze the company's organizational development and situation.

### 3.2.1 Liquidity related frameworks

In this first section the two frameworks related to To Tommer's challenge with liquidity, will be presented. These are, as mentioned, the critical path method and cash management theory. The frameworks will later on be used to analyze To Tommer's situation.

#### 3.2.1.1 Critical path method

The critical path method is a project modeling technique for scheduling and planning a set of project activities. Mostly, organizations and companies that work with large projects use this method, but the method can basically be used in all types of projects with interdependent activities. The method was developed in the late 1950's by DuPont, and was in the beginning used by the US military in complex missile defense construction projects. Since then, the critical path method has been further developed and refined and today the method is used in many different fields such as hardware and software research and development. Furthermore, numerous different critical path method computer programs have been developed (in order to help project managers), and they are today available on the market (12).

Based on theory, there are a number of steps in the critical path method. These can be summarized as:

- Specify all activities involved in the project. These activities are the input for the method. Here should the level of granularity of the activities not be too high, since it makes the method too complex and hard to work with.
- Order the activities in a sequenced list. Here, each activity should be correctly sequenced with respect to its relation to the other activities (i.e. task dependency). An easy way to investigate this relation is to ask 3 questions.
  1. Which tasks must take place before this activity?
  2. Which tasks must wait for this task to be finished?
  3. Which tasks should be completed simultaneously as this task?
- Drawing flowchart/network diagram. After the activities have been ordered in a list, a diagram can be created in order to visualize where in the project process each activity should be carried out as well as the interdependency between the activities.
- Estimate each activity. The completion time for each activity is estimated.
- Identify the critical path. This means to find the longest duration path of the diagram network. Activities that are included on this path cannot be delayed without delaying the total project time. To identify this path these parameters are needed.

ES: Earliest starting time for an activity, given that all necessary/interdependent activities are completed before.

EF: Earliest time when an activity can be finished.  $EF = ES + \text{duration of activity}$ .

LF: Latest finish: This is the latest time for an activity to be completed if not going to delay the whole project.

LS: Latest start time of an activity to not delay the project.  $LS = LF - \text{activity duration}$ .

The critical path is the way or path through the diagram/flowchart where all activities have been completed on time, i.e. where none of them have been delayed. This means that  $ES=LS$  and  $EF=LF$ . If any activity in the critical path is delayed, so is the whole project.

- Update the critical path flowchart/diagram. The diagram is dynamic and should be updated over time. It may be possible to find a new critical path as tasks are completed and values of completion time recorded into the model. By doing this it might be possible to accelerate the project by finding more efficient path as tasks are completed (17).

There are both advantages and disadvantages with the critical path method. One advantage is that the method offers a visual presentation of the projects and its activities, and that it is rather straightforward to use. Furthermore, it shows dependencies between activities and gives the user the possibility to evaluate which of the tasks that are most important to focus on and which are not. Lastly, the possibility to update the diagram/flowchart over time, as the project runs, makes it a valuable and accurate tool through the whole project, in opposite to some more static planning methods.

However, there are some drawbacks with the method as well. As project grows larger, the critical path method gets more complex and hence more complicated to use. Further, the method does not take any consideration of how resources should be allocated and personnel scheduled. Also, in some cases, the estimation of time may be hard (for example activities that have not been performed before), a fact that can influence the result and its accuracy significantly (12).

#### **3.2.1.2 Cash management**

Cash management is the other framework chosen to analyze To Tommer's liquidity related challenges. Cash management can be described as "the concept, which is concerned with optimizing the amount of cash available, maximizing the interest earned by spare funds not required immediately, and reducing losses caused by delays in the transmission of funds". (Watson & Head, 2007)

"Cash is king when it comes to the financial management of a growing company" (3). Many companies of different sizes have been forced to close down its operations due to shortage of cash, and many business owners of existing companies are expressing worries when it comes to cash and cash flow. In a survey made by Discover Small Business Watch in 2010, more than 50 % of small business owner in the US where claiming that they have had problems related to cash flow (11).

So what is cash flow, and why is cash management needed? "A firm's cash flow is the movement of cash in and out of the firm in the form of payments to suppliers and collections from customers" (10). Cash flow should not be mixed up with terms as income, sales, revenue, cost or profit which all are accounting terms that describes the result of the financial activities of a firm, but does not say anything about how much cash that the business actually has on its bank account. Sales or revenue numbers, for example, are updated at the same time as a bill is sent to the customers. However, that a customer is billed does not mean that the cash is on the account. In most businesses the bill is not paid until 30 days after the customers receives it, which means that even though the sales number show a certain amount of sales one month, this does not match the inflow of cash on the bank account (8).

So why is this important to know? Cash flow is essential to the liquidity of a firm, and liquidity is important for a business to run its day-to-day operations. Every business needs cash to pay for different things; it can be salaries, tools, suppliers and electricity. If these bills are not paid, the result might be devastating. Employees might stop come to work, the electricity provider might shut down the electricity supply and so on. In this case it does not matter how much the sales of the company is on paper, if the cash is not on the account it does not help. Or as stated by Richards and Laughlin (1980): "Inattention to cash and liquidity management process may cause severe difficulties and losses due to adverse short-run developments even for the firm with favorable long-run prospects".

### 3.2.1.3 Cash conversion cycle and growing firms

Cash converting cycle establish the period of time required to turn cash disbursement into free cash on the firm's bank account again. Since cash outflows and inflows are not synchronized for the typical firm, it is important for the financial manager of a firm to take the cash conversion cycle into account when planning and managing the liquidity (Richards & Laughlin, 1980).

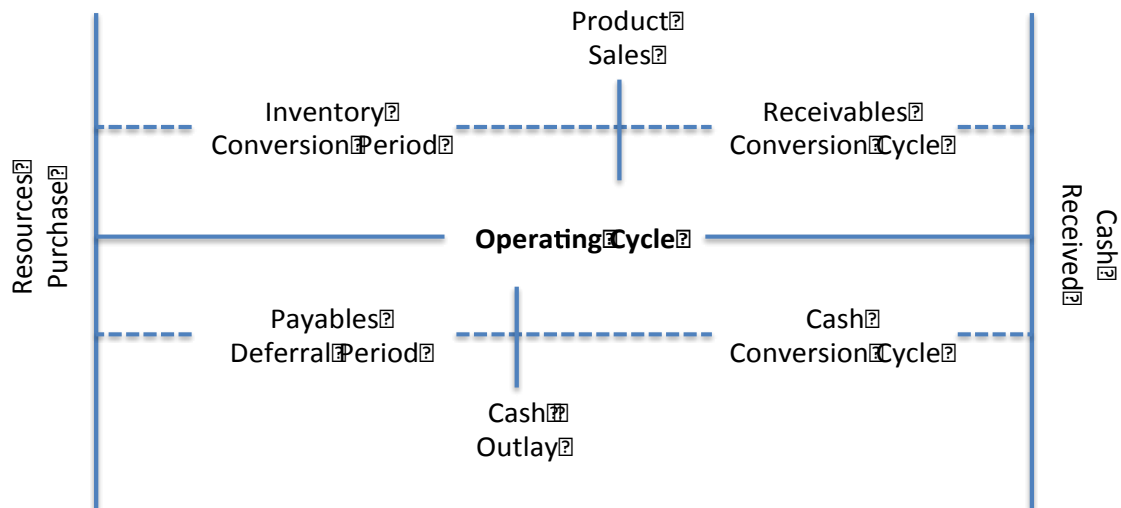


Figure 4: Schematic picture of the Cash Conversion Cycle (Richards & Laughlin, 1980)

A schematic description of the cash conversion cycle is shown in Figure 4 above. It can be seen that the conversion cycle constitutes of the time that elapses between the cash outlay for a product or service and the time when the product or service actually are paid for, i.e. when cash is received by the product or service provider. To make the concept even clearer an example will be presented:

A car manufacture manufactures a car. To do this it has to pay its suppliers for all the components in the car, which means cash is flowing out of the business. However, it is not until the buyer of the car actually has received the car (and often even a certain period after) that he or she pays for it and cash flows in to the manufacturer. During the time between the payment of the components, by the car manufacture, and the payment from the car buyer to the manufacture, the manufacture has to have cash "locked in the components", which means it cannot be used to pay expenses nor to means e.g. expansion. (Kasilo, 1997)

The concept of locked in cash is particularly important for growing businesses. (Davidson & Dean, 1992) The reason is presented, somewhat simplified, in the example below. Imagine a firm produces a certain amount of products in period 1, which means it has to buy and pay for components and material. This results in a cash outflow of the firm (shown as the first red bar in Figure 5 below). In the end of period 1, the customer pays for the product, which results in a cash inflow for the firm (green bar shown at the end of period 1). The firm now has the same amount of cash as before period 1. Since the firm is growing in terms of sales, in the beginning of period 2 it must buy more components and material than in the beginning of period 1 to meet the increased demand. The result is that the cash inflows from



period 1 is not enough for paying all of the components and material needed, hence the company must put in extra cash that now will be locked in until the customers pay for their products in the end of period 2. The faster the firm grows, the more cash it needs to “lock in” in components and material, hence the free amount of cash in the firm decreases. This obviously affects the liquidity of the company, since less money is free and can be used for other obligations, such as paying salaries and electricity, a fact that makes the company extra vulnerable to volatility or unforeseen expenses that have to be paid fast, such as breakdown of machines (Kasilo, 1997).

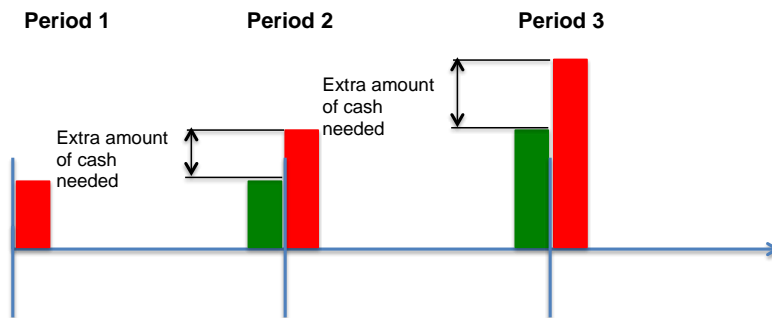


Figure 5: A description of the need for more cash due to the “lock in” effect. (Kasilo, 1997)

As mentioned, the example above is somewhat simplified but it still describes the effect that growths in combination with the cash conversion cycle has on a firm’s liquidity.

#### 3.2.1.4 Cash management’s 4 steps

Cash management has been the subject for many studies and many different frameworks and theories have emerged over time. Cash management basically involves four steps:

1. Determine appropriate target cash balance
2. Cash planning
3. Collecting and disbursing cash efficiently
4. Investing excessive cash in securities

(Pandey, 2008) (Ross, 1995)

**Determining an appropriate target cash balance** includes an assessment of how much liquidity a firm should hold. A large amount provides the firm with more operative freedom but is simultaneously expensive in terms of the alternative cost, i.e. that the money can be better invested somewhere else e.g. other projects or in securities. The larger the fluctuation in liquidity demand is, the higher the fixed costs are, and the bigger the cash investment in each product or service gets, the higher should the target cash balance level be (Davidson & Dean, 1992).

There are different models to decide which cash balance that is optimal for a specific firm. One classic model is the Miller-Orr cash management model. This model was developed in 1966 and the idea of the model is to find a corridor with an upper and lower approved limit as with an optimal cash balance within the corridor around which the balance are allowed to fluctuate. If the upper limit would be reached, the company should buy investment

securities and bringing down the cash balance down to the target again. Opposite, when the lower limit is reached the investment securities should be sold to balance the cash balance to the target. The most important part of the model is to set the minimum cash limit right and the company using the model should carefully analyze its need of liquidity and risk profile before deciding this (Ross, 1995).

**Cash planning** consist of budgeting and closely monitoring the cash inflows and outflows of a business for different time frames in order to earlier detect potential future liquidity problems or risks. (Journal of Accountancy, 2000). There are many ways to do cash planning. One recommended way is that the company prepares monthly cash budgets for the coming 6 – 12 months. The reason is not, as believed by many firms to set cash targets, but instead to be able to anticipate potential need of cash before it is too late. Cash budgets should address different scenarios, such as one expected, best and worst case. In these scenario analyzes, different assumptions can be made, for example that a customer goes into bankruptcy and cannot pay their bills, or a project is delayed and cannot be billed on time. Furthermore, it is important that the cash budgets and different scenarios always are up to date. During times of cash distress (or when liquidity soon might become a problem) the scenarios should be updated or modified on daily basis. All of this might sound obvious, but the truth is that many businesses (especially small ones) do not engage in cash planning (11).

The third part of cash management regards **collecting and disbursing cash efficiently**. Due to the lock in effect of cash, described in the cash conversion cycle above, a firm should always try to manage so the inflows of cash are accelerated and outflows decelerated as far as possible. This, in order to shorten the time when the cash is locked and in that way shorten the time of the cash conversion cycle (2). The cash conversion cycle (CCC) formula is:

$$CCC = \text{Collection period} + \text{Inventory days on hand} - \text{Days payable outstanding}.$$

There are a number of ways to shorten the cash conversion cycle and hence free up the amount of cash on hand. As can be seen on the formula this can be done either by decreasing the collection or inventory on hand period, or by increasing the days for payable outstanding (Ross, 1995).

There are different ways to change the collection period, for example:

- Give small awards (e.g. discounts) to customers that pay their bills early.
- Use down payment.
- Decrease the amount of days that the customer must pay within, while simultaneously increase the fee for late payments.
- Divide the bills in smaller portions and bill the customers more often with shorter intervals. This is especially helpful for large expensive projects, where the amount of cash locked in is large. One effective method is to, before the project is started, decide when (for example at specific milestones) the bills should be paid, and write this down in a contract. Furthermore, different scenarios (e.g. customer change their

minds) should also be regulated in the contract, so both customer and supplier knows when payments will happen under all circumstances.

- Sell the bills to collection agency. This should be seen as a last resort since it is expensive and might be received negative by the customer.

(Ross, 1995)

It is important to understand that some of these methods could affect the relationship to the customer negatively, something that should be investigated and taken into consideration before using any of them (Ross, 1995).

The inventory on hand period should also be kept as short as possible. The period often reflects the firm's ways of operating. It is therefore important to take this into consideration when planning and choosing how to operate and what type of inventory that the company needs. Many times it is helpful to divide the inventory into "absolutely needed" and "nice to have" inventory. Lean theory and Just-In-Time inventory is also two different operation philosophies that can be implemented in order to shorten the inventory on hand period. (Richards & Laughlin, 1980)

The third way to decrease the CCC is to extend the days for payables outstanding. This can be done in different ways, for example:

- Negotiate with the suppliers upfront regarding days of payment. This is a method that many firms are afraid of for different reasons, but that has been proven to be very efficient. Instead of being upfront, many firms just neglect to pay their suppliers on time, something that leads to an impaired relation and lost of trust between the firms and their suppliers. To be upfront and negotiate with the suppliers, on the other hand, have been shown to enhance the trust and relationship between a customer and its supplier (Richards & Laughlin, 1980).
- Offering the supplier interest for extending the period of payment. This might cost a little extra for a firm, but the rates of interest on delayed payments, which might be the other alternative, are often so high that it is a cheaper and better way for the firm to extend the period of payment (Richards & Laughlin, 1980).

The last part of the cash management is to make sure that **excessive liquidity is properly managed**. Instead of having too much cash on a bank account with low or no interest, the firm actively should make short-term investments in securities bought and sold in the money market<sup>5</sup>. In this way the excessive liquidity can give the company interest from the security, but simultaneously work as a backup if more liquidity is needed, since securities in the money market are easy to sell and hence turn into cash (Arnold, 2005).

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<sup>5</sup> Money market is "a segment of the financial market in which financial instruments with high liquidity and very short maturities are traded" (5).

### 3.2.2 Organizational related framework

In this section a model used to analyze To Tommer's other challenge category, i.e. the organizational challenge, will be presented. The model is called Greiner's growth model and describes an organizations characteristics and challenges as it grows.

#### 3.2.2.1 Greiner's growth model

Growth challenges can occur in an organization at different times and at different stages depending on different factors such as size, age and growth rate of the organization (Greiner L. , 1972). As organizations grow larger, workload tends to increase exponentially and overwhelm both employees and managers. The result can be that previously efficient employees and managers, under these stressful conditions, have a hard time prioritizing and therefor take wrong decisions, a fact that can have a fatal impact on a business (12). The Greiner growth model is a theory developed by Larry Greiner in 1998 with the purpose of helping organizations understand and avoid the challenges related to fast growth. Greiner's model describes different phases that a growing organization tends to experience. Each of these phases constitutes of a period characterized by relatively stable growth that is followed by a crisis at the time when an organizational change is needed. This is described as "evolution" and "revolution". During the evolution phase the organization makes small incremental changes, but nothing radical. During the revolution phase, however, the organization encounters new more demanding situations, which challenges the existing structure and operations of the current organization. According to Greiner, it is during these revolutions that it is up to the company to challenge its existing structure and develop itself, in order to not threat the continued growth of the organization (Greiner L. , 1972).

When the model first was published in 1972, it consisted of only 5 phases but in 1998 Greiner developed the model further by adding a 6:th phase (Greiner L. , 1998) The crises, or "revolution phases" that a company encounters are according to Greiner: Leadership, Autonomy, Control, Red Tape and Growth crisis. For a complete visualization of Greiner's Growth Model, see Figure 6 below.

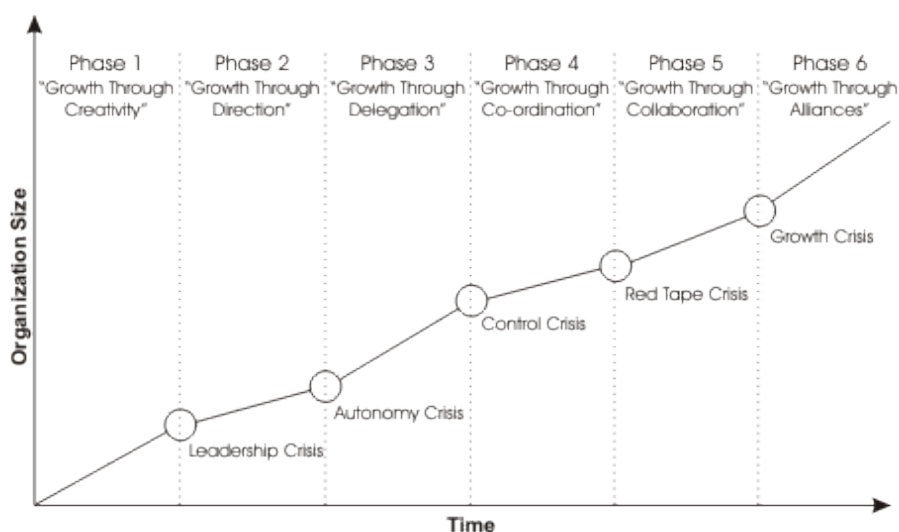


Figure 6: Greiner Growth Model

#### **3.2.2.2 Phase 1. Growth through creativity**

Each organization or company starts in this phase, which is characterized by the entrepreneurism of the founder or idea giver. Usually there are not many people in the staff so communication is mostly informal between the different actors in the organization. The roles are often rather vague, and the feeling of “everyone helps with everything” dominates. In this phase, the motivation of the staff is often closely correlated to the feedback from the market.

As the organization is growing larger, the need for better leadership increases. The crisis emerges many times from the fact that the opinions of the founders start to diverge in this state. The solution is often that a more experienced leader is brought into the company, but many times the entrepreneur or the founder takes on this role and changes his or her style to be more of a formal leader. Since the revolutionary phase is directly related to leadership Greiner calls it “Leadership crisis” (Greiner L. , 1972).

#### **3.2.2.3 Phase 2. Growth through direction**

If the company or organization manages to adapt to the emerging leadership needs, it can continue to grow in an environment of more formal communication and of more focus on separate activities like production, business development and marketing. System and procedures start to be implemented in order to enhance the changed organizational structure, and the new leader uses a more direct leadership style (Greiner L. , 1972).

However, it comes to a point when the responsibility on the leader to micro-manage becomes too overwhelming at a time when products and processes become so numerous that it is too hard for one leader to direct and control everything. The hours of the working day suddenly are not enough and the manager/managers cannot fulfill all their duties and start to feel stressed. The result when this phase occurs is that employees can feel fragmented, since they are used to always having a person controlling and telling them what to do and now suddenly the management has not time for them, which means that they have to take more decisions themselves. This is when the next crisis, the “Autonomous crisis” occurs according to Greiner (Greiner L. , 1972).

The solution according to the Greiner model is that the organization must shift towards a more delegate focused one, where the manager starts to give away more and more of the responsibility throughout the organization and hence creating a more decentralized organization. In order to make this shift smooth, formal documentation such as role description and responsibilities should be established (Greiner L. , 1972).

#### **3.2.2.4 Phase 3. Growth through delegation**

With a more decentralized organization the distance between the management and employees lower down in the organization increases as the company continues to grow. The role of the managers becomes more and more towards monitoring and less towards what

actually happens “down at the shop floor”. In this phase, the need for support and monitoring tools emerge. The tools are used to give management the best prerequisites for easily get an overview over operations and performance of the organization. During this phase it is normal that a layer of middle management emerges, where people that previously been working lower down in the organization take “one step up” and become middle managers (Greiner L. , 1972).

As the distance between top management and the core operations of the company increases and the role of managers are given to people, new to the task, the formal control of the company becomes more and more dispersed and the next crisis occurs. This crisis is known as the “Control crisis”. Top management spend their time on monitoring more than actually influencing the operations and the new middle management are torn between their old role and colleagues and the top management (Greiner L. , 1972).

The situation with control crisis can be solved with more sophisticated coordination between the company’s different functions in combination with more specialized and centralized support functions. It is often after this phase that the company has developed a sophisticated head quarter and the separate part of the businesses are coordinated to work together (Greiner L. , 1972).

#### ***3.2.2.5 Phase 4. Growth through coordination and monitoring***

Growth continues with the new better-coordinated and structured organization. The central support units controls more and more of the functions in the organization such as investment finance (Greiner L. , 1972).

As time goes by, though, the amount of bureaucracy increases and eventually the amount of bureaucracy becomes overwhelming resulting in a organization that is harder and slower to steer, a fact that might affect growth negatively. The end of the phases called “Red-Tape crisis” occurs (Greiner L. , 1972).

To solve this challenge a new culture must be introduced in which focus is on more collaboration within the company. In this new culture different functions and people with different skills manage to work together as a team. The formal control is replaced by more social control and self-discipline in order to increase the flexibility in the steering of the company (Greiner L. , 1972).

#### ***3.2.2.6 Phase 5. Growth through collaboration***

The formal control are replaced by more team oriented open minded personnel which easily can work in different constellations with staff from other functions. This phase ends with the “crisis of internal growth”. In this phase the organization cannot grow further from internal growth but only through partnerships with other organizations (Greiner L. , 1972).

#### ***3.2.2.7 Phase 6. Growth through extra***

The 6:th phase was added by Greiner a couple of years after the first model was presented. In this phase he described how an organization in phase 5 could grow even further through outsourcing, mergers, joint ventures or other types of partnership (Greiner L. , 1998).

## 4 Empirical context

This chapter is divided in two parts. In the first part, the context in which To Tommer operates is presented. The following part describes the company of study in more detail, including its organizational structure, its operations, and the type of projects it focuses on. This presentation is done in order to give the reader an increased understanding of To Tommer's current situation as well as the history behind the development of the company. To be aware of the company's background, as well as its current situation, is of great importance in order to understand the set of challenges that To Tommer currently is facing, challenges that will be further described in the next chapter.

### 4.1 To Tommer's business environment

In Norway today, the economy is strong and the building and construction industry is showing continuous and unabated growth. The rate of new buildings and other construction projects are showing high numbers and positive trends (Veidekke, 2013). After the peak in 2007 the industry has had a couple of tough years with declining activity (15). Since 2009-2010, however, the industry has shown positive development and growth, and statistical projections as well as highly respected actors within the industry believe in a positive development and growth for the industry as a whole also in the future years (Veidekke, 2013). According to Statistics Norway, the number of initiated building projects have since 2009 shown a continuous yearly growth (15). In other words, the total market size for construction companies has increased in recent years, and is expected to do so also in the near future. Figure 7 below shows the development in the total order-reserve value within the Norwegian construction industry from Q1, 2008 to Q4, 2012.

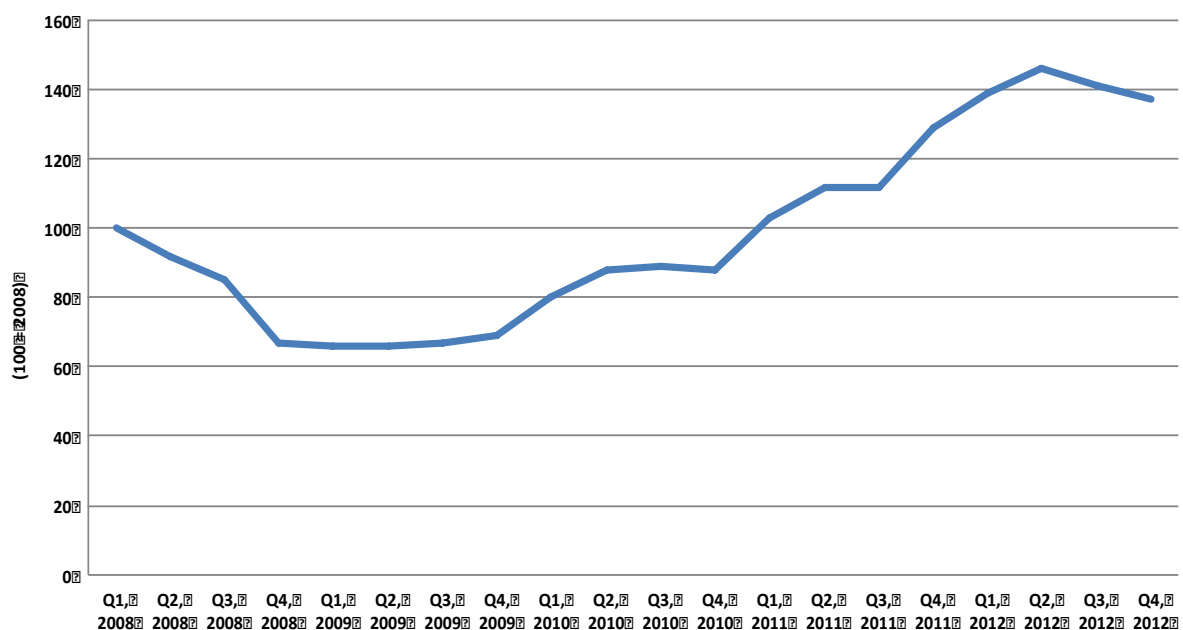


Figure 7: Order statistics, 2008 – 2012 (15).



Regardless of the future economic development, today, the Norwegian building and construction industry is experiencing positive numbers and development. Both Norwegian and foreign companies want to get a piece of the increased investments and demand. Already established companies in Norway are experiencing opportunities to grow, and the though economic situation in the EU region further increase incentives for foreign companies to increase focus and expand their businesses in Norway. The foreign competition is however considered to mainly be for the major construction projects such as transport infrastructure projects. Exposure from foreign competition on smaller projects and in the building segment (e.g. housing projects) appears limited (Veidekke, 2013).

## 4.2 Organizational structure

Figure 8 below gives an overview of how the organization of To Tommer is structured.

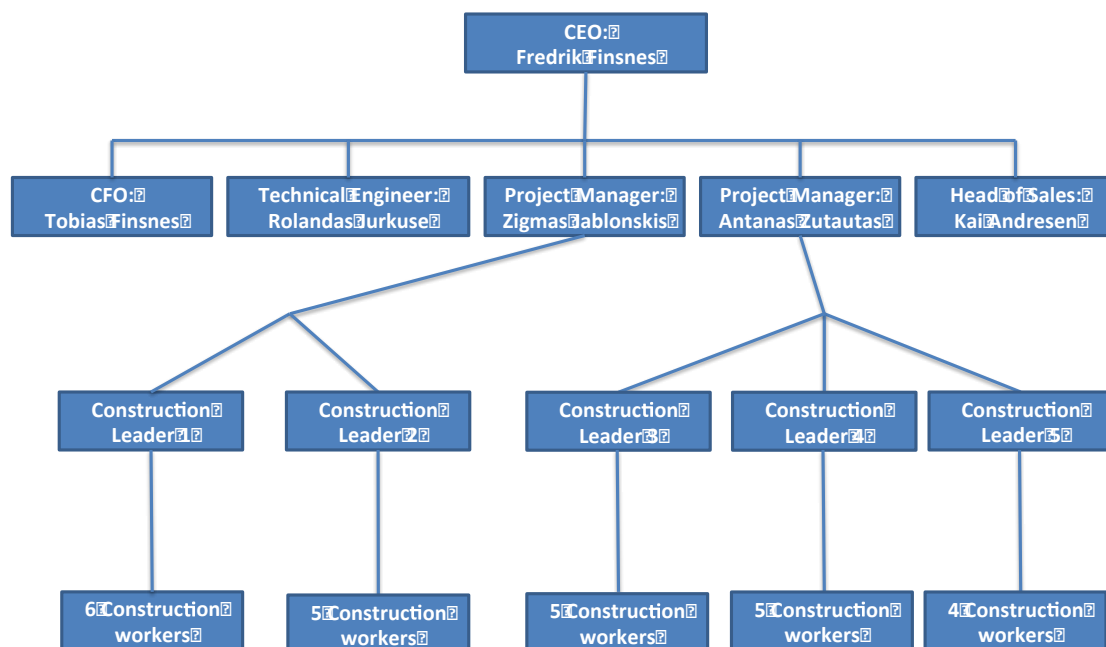


Figure 8: Organizational Chart - To Tommer AS

As can be seen in Figure 8 above, To Tommer has divided their construction workers into five construction teams, where each construction team has its own construction leader. In general, each construction team is allocated to their own projects, which means that To Tommer has the capacity of running 5 projects simultaneously. In certain situations, either when extra resources are needed, or if special competencies are required, the construction workers could, during limited period of time, be assigned to projects outside their own construction team. The construction leaders are responsible on their respective construction site, but are still allocating most of their time to construction work. The construction leaders reports to their respective project managers. The project managers are responsible for invoicing, ensuring the flow of material and handling the communication with the customers. The CFO monitors the different projects on a financial basis, as well as monitors

To Tommer's overall financial situation. The technical engineer and head of sales functions are administrative and supporting functions, with varying tasks in connection to the different projects. The CEO is working more on a strategic level, and supervises and monitors the entire organization and supports wherever needed. The CEO is also responsible for finding new projects, initiate new contacts and in close collaboration with the customers set the boundaries and plan the project in an early stage.

#### 4.3 How To Tommer run their business and what they focus on

Typically, project duration is approximately 12 months. The duration could definitely vary, but To Tommer is aiming at finding projects of approximately this duration as they consider this to be an optimal time frame. Fredrik Finsnes explains that the reason for this is mainly due to a balance between ensuring stable and full order-books, with the difficulties in planning if the project duration becomes to long.

To Tommer is mainly focusing on and aims to, in the future, work solely as a general contractor. A general contractor is the party that has the overall responsibility for all other parties involved. To Tommer is today employing 25 construction workers, plus 5 construction leaders also working on the construction sites. Almost all of To Tommer's construction workers are carpenters. A general contractor is responsible for the entire construction project, including all types of handcrafts, such as ground workers, plumbers and electricians. See Figure 9 below.

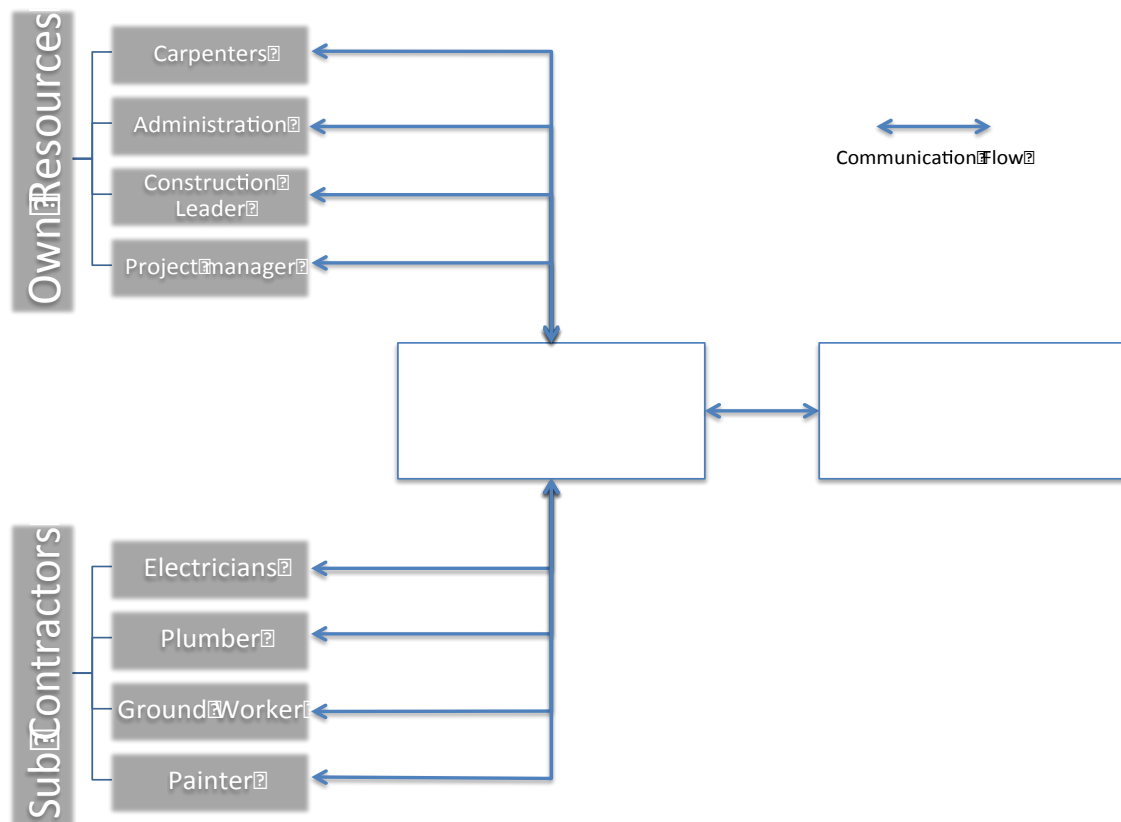


Figure 9: Communication flow

In order for To Tommer to get this type of work done in their projects, they employ sub contractors. In return for the administrative service (i.e. planning and invoicing) To Tommer charge a fixed percentage on top of the sub contractor's price. To Tommer has established tight and good relations to a couple of sub contractors from each construction type. To Tommer today offers three different types of construction:

1. New construction
2. Rehabilitation
3. Element house (e.g. Gripsholms House)

New construction and rehabilitation are the two traditional types of building projects where you either set up a completely new house on a piece of land or you modify an existing house. New construction projects are construction all the way from groundwork to finished and ready to move in house. In renovation projects, the foundation and frame are kept unchanged. Usually these types of projects do not include groundwork and other early stage processes such as foundation and mason work. In mid 2012 To Tommer established collaboration and began to offer the third type of projects, namely element houses, which are houses pre-drawn by the Swedish architectural firm Gripsholm Arkitekter AB. Gripsholms Arkitekter AB are also supplying materials, and in collaboration with To Tommer (and sub contractors) literary assembling the houses. To Tommer has decided to focus more and more on element house projects since they consider these types of projects as highly profitable at the same time as they carry low operational and financial risk. To Tommer is today the only company with experience that offers this type of luxury houses in Norway.

Independent of project type, task dependency is an important concept for To Tommer in all of their projects. According to Fredrik Finsnes, CEO and responsible for planning the projects, almost all tasks or sub processes are dependent on other activities. He further explains and emphasizes the importance of good and accurate planning, as delays and non-value adding allocation of resources are very expensive for the company. If a previous task is not finished, the next one cannot begin and hence, construction workers on site and on pay are prohibited from performing their planned tasks. Further, if the final hand over date is delayed, and To Tommer is responsible for the delay, they might be forced to pay additional fines, in Norway called "dagsmulkter"<sup>6</sup> for each day the project is delayed. Fredrik Finsnes further explains that it has become more and more difficult to plan the projects, as the project size have increased in terms of duration, number of employees involved in the project, as well as the number of sub tasks during the projects. A result of this was shown twice during last year, when two of the company's projects were heavily delayed and the company had to pay "dagsmulkter". Further, the delay in the projects resulted in that the company could not bill their customers as planned, a fact that affected the company's liquidity severely. Today, To Tommer uses no tool or method when planning the projects.

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<sup>6</sup> Dagsmulkter is a legally pre-determined amount that the supplier (in this case the general contractor) has to pay to the customer for each day the project (i.e. the service or good) has been delayed. (University in Oslo, 2011)

Instead, the planning process is very ad-hoc and depends to a high degree on personal experience and gut feeling. Fredrik Finsnes clearly express the need for an improved method or tool to improve the planning of the projects in order to break down the project and visualize and arrange sub tasks, task dependencies and time of completion.

As a result of the long project duration and expensive projects, To Tommer, as most other construction companies send out invoices during the entire project. To Tommer tries to send out invoices directly after each task are finished. In relation to invoicing, delays also play an important role, as the company cannot send an invoice before a task is completed, and hence affect the liquidity situation. As a result of this, To Tommer is required to have enough free capital in cash to bridge this time period. On the other hand, To Tommer has in turn credits at their supplier of construction material. Another aspect, which also affects the overall financial situation of To Tommer, is that general contractors in Norway are required to set aside an insurance, which amounts to 5 percent of the project value on a locked account for five years<sup>7</sup>. This is done as a guarantee to the customer, if it at a later point in time is realized that there is something wrong with the construction that the general contractor could be held responsible for.

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<sup>7</sup> It is required to set aside 5 percent of the total project value, straight line depreciated over a period of 5 years.

## 5 Empirical findings

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In this chapter, the identified growth related challenges at To Tommer, will be presented. The challenges were identified through interviews with To Tommer's CEO and CFO (see appendix for interview template), as well as through first hand experience from attending meetings and informal discussions with the rest of the management team. During the study of To Tommer, several growth related challenges could be observed. It was identified that the growth related challenges at To Tommer could be divided into one of two categories, liquidity related or organizational related, based on the characteristics and nature of the challenges.

### 5.1 Challenge with liquidity

The first category of growth challenges that was identified at To Tommer was related to the company's financial situation, and more specific the liquidity of the company. The effects that the rapid growth have had on To Tommer's cash flow and liquidity level is something that, previously, has not been considered as important for the company to monitor closely. However, today the CFO Tobias Finsnes admits that the rapid growth has affected the liquidity to a much greater extent than he expected and that the lack of cash flow statements, makes the situation hard for him to overview.

As the number of employees has increased, To Tommer has taken on a higher level of fixed cost than before. The increased fixed costs increase To Tommer's risk profile and make the company more vulnerable to fluctuations in demand, as well as to obstacles and delays on the construction sites. Due to the task dependency (mentioned in the previous chapter) in the projects, more employees could in situations of delay risk to end up in a situation not being able to work and create value for To Tommer. Furthermore, larger projects and longer duration makes the projects more difficult to plan. This is something that To Tommer already has experienced, as they now have a higher level of delays than before.

To Tommer also has been going through a phase of increased need of investments as a result of the increased number of projects and employees. The increased need for investments has mainly been in working tools and equipment for the employees. When To Tommer was a smaller company, they did not prioritize to establish and keep formal records and monitor all equipment, as they felt that they were able to remember what and how much equipment they had. At that time, To Tommer also considered the total value of the equipment as relatively low. However, now when To Tommer has grown rapidly in terms of employees and consequently also the amount of and total value of their working tools, they consider keeping track on the company's equipment as important. Tobias Finsnes, however, consider it as very difficult task to establish such a formal record in practice and to establish routines to keep track on the inventory.

Implications of the rapid growth are also an increase in the need for working capital and spare liquidity. As To Tommer today is working on larger and more expensive projects, they

will naturally have to order and buy more building material. Since To Tommer does not get paid before tasks have been completed, the required level of working capital is increased. To Tommer have tried to increase the credit line with their supplier, unfortunately without success. The reason for this is that the supplier requires an additional bank guarantee if the line of credit is going to be increased. Also with regards to working capital, is the increased risk of miss-forecast and deficient planning as projects both have more sub tasks and longer time frames. Therefore, if tasks are delayed and/or not completed for some reason, To Tommer will not be able to send out invoices.

To Tommer's cash flow is also affected by a paragraph in the Norwegian law, called "bustadoppføringsloven"<sup>8</sup>, which requires the general contractor, in this case To Tommer, to set aside 5 percent of the total project value on a locked account for five years from date of completion. Hence, as projects become increasingly expensive, more money are required to be set aside. To Tommer's CFO, Tobias Finsnes, believe that it would be possible to free up some of this capital with a bank guarantee, if the balance sheet would be stronger. He further explains that this is not a unique problem for To Tommer, since all general contractors have to comply with these rules. "Well-established" companies however, are able to get the "bustadoppføringsloven" guaranteed by the bank, and hence not directly affect the cash flow and level of liquidity.

To sum up, the growth related challenges are listed in Table 1 below.

**Table 1: Growth related challenges and potential root causes**

Organizational related challenges	Liquidity related challenges
Responsibility assignment	Higher fixed costs
Performance indicators	Task dependencies
Monitoring	Increased risk with more expensive projects
Measuring	Requires more working capital
Support tools	Requires more investments in tools
Knowledge transfer	Delays affect possibility to send invoice
	Increased insurance cost ("bustadoppføringsloven")

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<sup>8</sup> Bustadoppføringsloven is a law that aims at protecting the customer when signing a contract with a construction company (general contractor) to build a residential building. The law requires the general contractor to amongst other things set aside a bank guarantee (according to Bufl. §12).

## 5.2 Challenge with organization

The organizational related challenges are challenges, which affect To Tommer's ability to organize the company and structure processes, with regards to the construction site, management team as well as in between these two. The rapid increase in number of employees has made it difficult to keep up with e.g. responsibility assignment, performance indicators, monitoring and measuring of employees and their performance. To Tommer's rapidly growing and changing organization requires a restructuring of responsibilities as new roles are defined. In turn, employees have to adapt to their new roles and consequently the new expectations. Performance indicators will also have to be developed, and new routines for monitoring and measuring will have to be established. As a result of the increased number of employees, To Tommer also identifies an increased need for different types of support tools, such as project planning and monitoring software, reporting systems, performance measuring tools etc. The company also experience difficulties with regards to knowledge transfer, when recruiting new employees. Fredrik Finsnes says that the lack of documentation and infrastructure makes it difficult to incorporate and teach new employees how they should work, and what they can expect. He further states that this new type of organization, which requires more monitoring and control mechanisms, also requires new knowledge and capabilities, which the company does not possess today. Especially, Fredrik Finsnes considers leadership capabilities as one of the most scarce resources at To Tommer today. In addition, there has not been easy for Fredrik to find employees that are even willing to go more towards a manager role, as they are satisfied with the role they have today.

The increased number of projects, as well as larger and more expensive projects is also something that To Tommer is having a challenge in monitoring from an administrative point of view. Larger projects refer to projects with a longer duration and/or projects with an increased number of sub-tasks. Both of these characteristics make it more difficult to plan, and the risk of delay as a result of the miss-forecast is increased.

## 6 Analysis

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In this chapter, first an analysis of To Tommer and their environment will be presented. Thereafter, the identified growth challenges that the company faces, as well as the root causes of these challenges will be analyzed, based on relevant theory presented in chapter 3.

### 6.1 To Tommer and its environment

The overall construction industry has shown a strong history of growth, and is expected to continue do so in the future. Especially in Norway, the construction industry, and especially the segment that To Tommer is currently targeting, as well as their local geographical location in Norway has shown and is expected to continue with strong and positive development in the coming years. To Tommer has grown fast over the last years, and the industry environment in combination with To Tommer's strong reputation among customers and its willingness to grow, gives the company great prerequisites to continue to do so.

### 6.2 Growth challenges faced by To Tommer

However, it is not always easy and risk free growing. To Tommer is currently experiencing challenges related to its rapid growth in the past, challenges that also might prevent the company from growing further in the future. As mentioned above, the demand is not the limiting factor for To Tommer in order to grow further. Instead, it was observed during the study that the growth related challenges that To Tommer has could be divided into the two categories liquidity- or organizational related. These two categories represents the answers to the first research question i.e. "Which are the growth related challenges that To Tommer face?" The second research question focused on the root-causes of the identified challenges. The identified root causes are considered to be the underlying reasons for the two growth challenges and are further presented and analyzed below.

#### 6.2.1 Challenge with liquidity

Today, To Tommer has severe liquidity problems. Tobias Finsnes, CFO of the company, says that the rapid growth has affected the liquidity much more than he had expected and that the company at the moment, when all credit limits are reached, having a hard time paying all its bills. This, despite the fact that the company today has a full order book and simultaneously takes much higher prices per hour and m<sup>2</sup> than one year ago.

##### 6.2.1.1 Potential root causes to liquidity challenge

During the study, a number of potential root causes to To Tommer's poor liquidity were identified. These are presented here and described in relation to the theoretical view of cash management. The identified root causes are:



1. Lack of cash planning.
2. Increased amount of locked in cash.
3. The increased fixed costs due to more employees.
4. More complex and longer projects, which increase the risks, especially regarding delays and therefore cash inflow from the projects.

Perhaps the most obvious root cause to To Tommer's severe liquidity situation is the company's **lack of cash planning and monitoring**. Instead of forecasting and analyzing the company's situation from a cash flow point of view, the company today focuses on the profit and loss statements and forecasts of the operations. In relation to To Tommer and their rapid growth recently, the need for cash planning and monitoring is becoming more and more crucial for the company. If the company's level of liquidity is not improved in the near future, To Tommer's CFO, Tobias Finsnes is convinced that the company will not be able to pay their bills, and that they will have to cancel payments and apply for bankruptcy. This is despite his positive forecast and estimations regarding the business' financial result for the upcoming year.

As explained in cash management theory, forecasts and terms such as income, sales, revenue, cost and profit are all accounting terms, which is aimed at giving a true and fair view of the financial result of the activities of the firm, but has nothing to do with how much cash the company actually has on its bank account. Cash planning, on the other side consist of budgeting and closely monitoring the cash inflows and outflows of a business for different time frames, in order to earlier detect potential future liquidity problems or risks. Thus by implementing cash budgeting and monitoring To Tommer can get a better and more fair view of its liquidity and cash status. By, for example establish a monthly cash budget for next 6-12 coming months, and then use the budget for doing scenario analysis, the company increases the chance to detect potential liquidity crisis and come up with solutions, before it is too late.

Another root cause affecting the cash management and level of liquidity is the fact that To Tommer's projects becomes larger and more expensive. That the projects get larger and more expensive means that the **amount of locked in cash increases**. There are a number of reasons to this:

First of all, the larger projects require an increased number of employees and thus more investments in working tools and equipment. Due to the nature of the investments, i.e. many small investments in e.g. hammers, screw drivers and drills. To Tommer has experienced that it is not easy to get loan for this type of equipment using the equipment as collateral. Instead the tools and equipment must be cashed, a fact that heavily affects the company's liquidity.

Furthermore, larger projects means larger cash outlays for material for To Tommer. Since the company pays its supplier for the material before the project is started, and cannot get

paid until the project has reached agreed milestones, or in some cases is finished, these outlays affect the liquidity much more than before, when the projects were smaller and the outlays likewise.

Lastly, as the number of projects increases and the projects are becoming more expensive, To Tommer will have to set aside more capital as insurance, i.e. according to bustadoppføringsloven. In the profit and loss statement, this money will be shown as revenue and affect the result positively. However, in the cash flow statement or cash budget, it should not be included, since the money has to be held in a fund over next 5 years, and are not available for the company for payments.

As described by cash management theory, growth of a firm increases the amount of cash locked in and that cannot be used for other operating expenses. This is something that has been experienced by the management at To Tommer. According to cash management theory, by a combination of cash planning and managing the cash conversion cycle, a company decreases the risk of liquidity distress. The cash planning part refers to taking the increased amount of locked in capital into consideration. By doing cash forecasts where projected growth of operations is taken into consideration, it is possible to earlier detect how the liquidity is affected and decide if the projected growth rate is sustainable with current liquidity. Furthermore, by optimizing the cash conversion cycle, the company can decrease the amount of locked in capital. There are many different ways to do this. For To Tommer that operates within the construction industry with large and long projects it can be useful to divide the total amount into smaller portions and bill this often, in order to decrease the collection period and hence the cash conversion cycle. Furthermore, a company working in project form should carefully design the contracts regulating the work and payment dates, in order to avoid unpleasant surprises when it comes to billing and payments, something that To Tommer does partly, but still can do even better. In addition, a proved and efficient way to extend the days for payable outstanding, and hence the amount of time of cash outlay, the company should upfront negotiate with its suppliers regarding time of payment, in order to extend this as much as possible while simultaneously building trust. To Tommer has until today not had a conversation like this with its largest supplier, something that according to cash management theory would be a way to improve the company's liquidity situation.

Another identified root cause to To Tommer's increased need liquidity is the company's **increased fixed costs**. As To Tommer basically is providing a service, employees are their main resource. As the company has grown fast, the number of employees has increased and so has the paycheck for salaries each month. This salary cost is a fixed cost for the company since it is based on time and not on the outcome of the work performed by the employees. With increased fixed cost, they increase their exposure, and become more vulnerable to variations in demand, such as seasonal variations.

An increased amount of fixed cost must be taken into consideration both when deciding the appropriate cash balance as well as in the cash budget. Today, To Tommer has not decided

any appropriate cash balance nor uses cash budgeting. The appropriate and/or optimal cash balance is necessary to adjust depending on the specific firm, their prerequisites and current needs. A classic cash management model is the Miller-Orr cash management model, which is more detailed presented in chapter 3.2.1.4. The idea with this model is to find corridors with an approved upper and lower limit, where the cash balance are allowed to fluctuate. The most important part of the model is to set a minimum cash limit, and the company using the model should carefully analyze its need of liquidity and risk profile before deciding this. An increased amount of fixed costs, which has to be paid on a set date (as in the case with the salaries at To Tommer), should result in an increased minimum cash limit.

The next identified root cause regards the company's possibility to get paid and is closely related to the fact that activities within building projects are highly interconnected. In other words, activities are in general dependent on a previous activity. The dependency is usually finish-to-start dependency<sup>9</sup>. As To Tommer does not get paid before a task is finished, delays obviously affect the possibility to send invoice and get paid. As To Tommer is taking on larger and more expensive projects, delays and consequently the delay of payments will have a greater impact than before when the projects were smaller. Furthermore, larger and more expensive projects tend to have an increased number of activities and as they are more expensive, the customer tends to have higher demands. These factors heavily **increase the risk profile of the projects**. Furthermore as the projects become larger and more complex they become increasingly difficult to plan accurately and monitor. Today, To Tommer uses no tool or method when planning projects. Fredrik Finsnes, CEO of To Tommer, has experienced that as the projects have grown larger and become more complex they have become more and more hard to plan. A result of this was shown twice during last year, when two of the company's projects were heavily delayed and the company had to pay dagsmulkter. Further, the delay in the projects resulted in that the company could not bill their customers as planned, a fact that affected the company's liquidity severely.

According to project management theory, the critical path method is an approach that could reduce delays. By applying this method, it is easier to take on a more structured method in planning and mapping the activities within a project, as well as the activities characteristics and interrelation. To Tommer uses today no tool for planning projects, besides gut feeling, and could potentially be helped from using, for example the critical path method. The critical path method also allows for a better overview of a project, a fact that according to the CEO of To Tommer is needed by the company, since it would improve the possibility to evaluate which of the tasks that are most important to focus on and which are not. Hence, the critical path method enables a more efficient allocation of resources, which in turn reduce delays, something that To Tommer would greatly benefit from.

Furthermore, the increased risk profile should according to cash management theory be considered in the cash-planning step, for example in a scenario analysis, as well as in the

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<sup>9</sup> Finish-to-Start dependency means that Predecessor must finish before Successor can start (7).

determination of an appropriate target cash balance step of the cash management. According to the cash management theory, an increased risk profile should be taken into consideration and more cash should be set aside and be kept available in case of e.g. delayed payments from customer. This effect should be taken into consideration through increasing the appropriate target cash balance.

### 6.2.2 Challenge with organization

As a result of the rapid growth, To Tommer's workload has increased severely and the organization has difficulties in keeping up with the new set of demands that the new and larger company requires. The increased size of the company has clear implications on To Tommer's organizational structure and how they allocate resources. Especially managers at To Tommer have experienced a high level of stress, and several people in the management team express that they have to prioritize between tasks and that they do not have time to complete all their tasks in a satisfying manner.

#### 6.2.2.1 Potential root causes to the organizational challenge

During the study of To Tommer, three potential root causes related to the company's organizational challenges were identified. These are:

1. Larger projects and an increased number of simultaneously ongoing projects
2. Lack of formal documentation and structure
3. The absence of supporting tool for monitoring the performance of the different part of the organization

Perhaps the most obvious root cause to To Tommer's organizational situation is the **larger, and increased number of projects**. Larger projects refer to projects with a longer duration and/or projects with an increased number of activities, while the increased number of projects refers to more simultaneously ongoing projects. Both of these characteristics make it more difficult to plan, and the risk of delay as a result of the miss-forecast is increased. The increased number and size of the projects has also been expressed as one of the main reasons to the experienced stress by the management since they today have to spend much more time on monitoring and controlling projects than before in order to keep the projects on track, while simultaneously managing their other duties.

As mentioned in the Greiner's growth model, as the organization grows, the role of the founder goes from a creative driving force, to a more directional one (phase two, *growth through direction*). However, as the organization continues to grow and the processes becomes more to their number and more complex to their nature, the work of directing and micro-managing becomes too overwhelming for the manager who starts to feel stressed. This effect has been observed among the managers at To Tommer. This is according to the model in the end of phase two and is known as the *Control crisis*. To solve this problem, according to Greiner, the organization must be shifted towards a more decentralized one where decisions are taken lower down in the organization, and not only in top management. If this is successful done, the organization, according to Greiner, goes into next phase the

*growth through delegation* phase. Hence, by trying to go from a top managed to a more decentralized organization could be valuable for To Tommer.

Another cause to the difficulties that the management of To Tommer experience is the **lack of formal documentation and structure at the company**. In interviews, Fredrik Finsnes express concerns over the lack of documentation and infrastructure, a fact that makes the knowledge transfer to new hired employees suffering. This effect has been increasingly detected during the last year as the company has grown rapidly in terms of employees.

In the two first phases of Greiner's growth model, a lack of structure and formalization can be witnessed in the organization. In the first phase, this is solved by frequent communication throughout the small organization, and in the second phase the responsibility of informing and structuring is solely on the manager. However, when the organization goes towards a more decentralized organization with more autonomy in the lower parts of the organization, a greater need for formal documentation and structure occurs. According to Greiner, it is important to establish documentation that describes roles and responsibilities throughout the organization, in order to make the transition from phase two to phase three (*growth through delegation*) smooth. By establish more formal documentation with responsibilities and roles, To Tommer might facilitate the knowledge transfer among new hires and simultaneously ease the transfer to a more decentralized organization.

A third cause to the organizational problem experienced by To Tommer is the **absence of supporting tools for monitoring the performance of the different parts of the organization**. Until today, the company has made use of little, or no, support tools or software. When the company was smaller it was rather easy to manually control the different processes and their performance, but as the number of tasks and processes are increasing, and more of the managers' time are spent on controlling and monitoring the different projects, the task of monitoring and analyzing the performance of employees and the company gets much more difficult.

According to Greiner's growth model, when a company enters the third phase i.e. *Growth through delegation*, the role of the top management goes towards more monitoring and less towards directing. However, since To Tommer's organization now is too large for the management to monitor manually, a need for supporting and monitoring tools emerge.

## 7 Discussion

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In this chapter, a discussion about To Tommer's current situation, their environment, as well as the identified growth related challenges, and the root causes will be presented. Focus however, will be to discuss and answer the purpose; How can To Tommer potentially resolve the different challenges identified? This chapter will follow the same structure as the previous chapters, where the liquidity related root causes and then the organizational related root causes are discussed separately.

### 7.1 To Tommer and its environment

As explained previously in the report, the construction industry in Norway has shown steady growth and great development the last couple of years. To Tommer has an even more fortunate situation, as they are located in, and is primarily targeting one of the most promising geographical areas in Norway, namely the Capital, Oslo, and the surrounding areas. The positive development and the good location have made it possible for To Tommer to grow their business in the pace that it has.

To build a business from scratch, and in two years have approximately NOK 40 million in turnover and 35 employees are undoubtedly very rapid growth, independent of industry and type of company. However, the implications of this rapid growth will definitely differ, and the challenges that To Tommer are facing will have their unique characteristics. Similar companies could definitely experience more or less similar challenges. In many cases, the limited demand is an important and limiting factor. As previously mentioned, this has not been the case for To Tommer. They have rather been forced to say no to projects, something that has made it possible for them to carefully select the most attractive projects. This in turn has enabled them to charge higher prices as well as selecting the customers that To Tommer is considering to be most trustworthy and credible. Trustworthy and credible customers are important both with regards to payment risk (i.e. the risk that customers do not pay in time or that they refuse to pay at all), and with regards to customer portfolio (i.e. creditable customer references works as good marketing). However, even though To Tommer has been able to increase prices and carefully select clients, the profitability have due to several reasons not developed in such a positive direction. The identified challenges that To Tommer is experiencing will be discussed in the following sections.

With regards to future industry development and demand, the growth in the overall construction industry and the positive development will probably not continue forever. As already can be seen in large construction projects, such as roads and other infrastructural projects, the positive development has already attracted foreign competition. An increased competition obviously affects the supply side in the market and in turn affects the overall industry profitability. This development has already been experienced in one sub-segment of the construction industry (i.e. major construction projects such as transport infrastructure projects), and it is not unlikely that sometime in the future, the same trend will be experienced also in the sub-segment in which To Tommer is active within. However, even

though the projections for the future are important, for To Tommer it is more important to focus on the situation today. First and foremost To Tommer will have to identify the challenges they are faced with, and secondly figure out a way to handle these challenges, and in turn change the company's negative trend in profitability.

## **7.2 Growth challenges faced by To Tommer**

During the process of identifying the growth related challenges, it early on became clear that the challenges that To Tommer are currently experiencing can be divided into two main categories; liquidity related and organizational related challenges. The root causes related to the two main categories have been identified and relevant theories have been used to analyze these challenges and their root causes. In this sub-chapter the researchers will discuss the analysis, presented in the previous chapter, in more detail with the objective to find potential solutions to the challenges.

### **7.2.1 Challenge with liquidity**

The rapid growth has clearly affected To Tommer's level of liquidity. Today, the company is experiencing severe difficulties in finding enough available cash to run their daily operation. The increased size of the organization, larger and more expensive projects are posing new requirements of the company. If To Tommer would have been able to maintain a steady profitability during the period of rapid growth, it could have been possible for them to finance the growth internally, i.e. organic growth. However, this has not been the case with To Tommer as the profitability has been shifting, and as the growth has been of such a rapid pace. In other words, To Tommer has been forced to finance the growth in a different way. However, today To Tommer undoubtedly have liquidity problems as they have severe problems in paying their bills, something which will have to be improved in order for the company to survive. One alternative would be for To Tommer to seek external funding, such as a bank loan or increase their trade credit (i.e. credit line from their suppliers). As this type of funding would just be a temporary solution if the internal routines and profitability would continue to be inefficient, the right step and probably more sustainable solution would first be to analyze and focus on improving the internal situation and the company's cash management. Cash management aspects, and related measures, which To Tommer can do in order to improve their liquidity situation, are therefore the focus of this first discussion.

The first identified and perhaps most obvious root cause to To Tommer's severe liquidity situation is the company's lack of cash planning and monitoring. To Tommer's has been focused on profit and loss statements and other accounting measures, and did not consider the company's situation from a cash flow point of view. Despite positive development and the company's positive forecast and estimations regarding the company's financial result for the coming year, it is of vital importance that To Tommer improves their level of liquidity as soon as possible. If the situation does not improve, the company could within short time face severe risk of running into financial distress and even bankruptcy. Cash management theory stresses the importance of closely monitoring of the cash inflows and outflows in order to early on detect potential future liquidity problems. To Tommer should improve

their efforts in financial analysis and planning. This should be done both with an overall business perspective, and with the perspective of the individual projects respectively. As project duration on average is relatively long (approximately 12 months), To Tommer should be able to know which projects will run for at least one year ahead, and therefore it should be possible for the company to plan the future capital requirements given normal conditions. Extraordinary events are obviously not easy to plan for, but To Tommer should definitely consider their risk profile, as well as take precautions against events such as delays and loss on receivables, which immediately affect their level of liquidity.

As projects become larger and more expensive, both the company's cash inflow and cash outflow increase. Further, the risk of delayed payments and hence locked in cash will increase, as payments are becoming more frequent and increasing in value (i.e. total cash inflow increase). This increased amount of locked in cash is another identified root cause that affects To Tommer's cash management and level of liquidity. First of all, larger projects require an increased number of employees and thus more working tools and other equipment. For investments in these tools and equipment it is difficult to take loans using the equipment as collateral. In other words, in the case with To Tommer, the equipment will have to be cashed. However, some of the more valuable equipment and tools could be used as collateral and facilitate a loan, but when To Tommer was a smaller company, they did not prioritize keeping track over all equipment. This because they considered the total value of the equipment as relatively low. However, now when To Tommer has grown rapidly in terms of employees and consequently the total value of their working tools, keeping track on the company's equipment is of increasing importance, as it could be used as collateral. It will therefore be important for To Tommer to establish a record of all their assets in order to increase and improve their balance sheet. Also with regards to future investments in tools and equipment, closely monitoring the current status on the tools and equipment will enable an improved planning of future needs. This will in turn improve the overall cash planning, which as previously discussed and according to cash management theory, is a very important aspect.

Another aspect, which affects the amount of locked in cash, is that the increased size and more expensive projects naturally require larger cash outlays for material purchases. As previously mentioned, To Tommer has not been able to increase the credit lines with their suppliers in the same pace as the growth of the firm. Hence, To Tommer has to provide this increased need for locked in cash themselves. As the credit line is not unlimited in combination with the fact that To Tommer has a low level of liquidity, it is vital for To Tommer to purchase material effectively. The most important measure with regards to material purchases is considered to be focusing on buying material exactly when it is needed. In other words, To Tommer should focus on avoid having too much cash "locked in" a high level of inventory.

Lastly, the bustadoppføringsloven is affecting the amount of locked in cash required to run To Tommer's daily operations. As projects are becoming larger in terms of duration, number of activities as well as cost, a larger amount of cash will have to be locked in as insurance (i.e.



according to bustadoppføringsloven). However, since the amount of cash that should be set aside according to bustadoppføringsloven is fairly easy to plan for, To Tommer should forecast and consider this when performing cash planning. This should thereafter be used to determine the appropriate cash balance. In addition to perform cash planning, To Tommer could initiate discussions with their bank in order to get in place a bank guarantee. A bank guarantee could be used to cover the requirements from bustadoppføringsloven, and thereby free the amount of cash that otherwise would be kept on a locked account. This is something that some of the more established companies benefit from, and to get a guarantee from the bank and thereby free this amount of cash, will directly and immediately have a positive effect on To Tommer's level of liquidity.

As To Tommer is growing and their projects are becoming larger and more expensive, it will require more cash as the cash inflow and cash outflow increases in absolute numbers (given the same cash conversion cycle and profit margins). This root cause is according to cash management theory related to the third phase of a company in growth; collecting and disbursing cash efficiently. To Tommer should according to cash management theory try to manage so that the inflow of cash is accelerated and the outflow is decelerated as far as possible. This, in order to shorten the time when the cash is locked and in that way shorten the time of the cash conversion cycle. To Tommer could enable this by establishing increased bargaining power towards their suppliers and buyers (customers). An increased bargaining power towards their supplier could enable an increased line of credit, and towards their customers they could reduce their collection period. Important to consider is that the strive towards increasing bargaining power through e.g. only buy from one supplier in order to increase volume and thereby bargaining power, should be balanced with the risk of creating a lock in effect by not having multiple sourcing.

Another identified root cause related to To Tommer's increased need for liquidity is the company's increased fixed costs. As the company has grown, the number of employees has increased accordingly. The increased number of employees has increased To Tommer's fixed costs, which in turn increased their exposure and made them more vulnerable for variations in demand. Cash management theory describes that the increased fixed cost is important to consider when performing cash planning, and when deciding an appropriate cash balance accordingly. To Tommer should according to the cash management theory decide an approved upper and lower limit for the cash balance, and if one of the limits is reached, it is important to take measures. The process of finding an appropriate cash level is as mentioned closely related to cash planning. As previously discussed, cash planning consists of budgeting and closely monitor cash inflows and outflows, in order to enable and facilitate appropriate cash needs in the future. As many other companies, To Tommer has not been enough engaged in cash planning, and this step is considered to be crucial for the company to improve in order to better their level of liquidity.

The last identified root cause is that the longer and more complex projects are carrying a higher risk exposure. For example, due to the increased complexity in the individual projects, the planning process becomes more difficult and hence increasing the risk of deviations from

the time schedule. Also as projects today typically include more activities, in combination with the high degree of dependency between the activities, deviations from the plan and time schedule will more likely occur and have greater affects. As previously discussed, delays have severe negative implications on the profitability of a project, as the general contractor risk being charged with daily fines from customer. The potential fines affect the financial result of the project, but as delays to a high degree also affect the possibility to send invoices and thereby the time when To Tommer gets paid, it also directly affect the level of liquidity. These aspects have a lot to do with the nature of the construction industry and the way that To Tommer is running their operations. This is for example due to the fact that they run their business on a project basis, their routines for invoicing and their contract terms both towards customers and sub-contractors. As a complement to cash management approaches, by applying more structured projects management approaches such as the critical path method, To Tommer could increase transparency and thereby reduce complexity. The critical path method is a project management approach that enables an easier, and more structured process of planning and mapping of activities, as well as the activity-characteristics and interrelation. In other words, by applying such a method, the planning process and monitoring of the project will improve, subsequently reducing risk and improving cash management. Independent of method, the high degree of task dependency and consequently high risk of delays, make an effective collection of cash highly important for To Tommer to consider with regards to both profitability and level of liquidity. Collection of cash could also be done more efficiently by working close with their customers, in order to improve trust and establish good relations between the parties. In addition to personal relations, To Tommer should work on more formal relations such as improving contract terms. The obvious purpose of this is to legally make the contract more favorable for To Tommer, in order to ensure payments from customers. To Tommer could also with regards to sub contractors make contract terms more favorable for themselves, and force sub-contractors to pay if e.g. the sub contractor could be held responsible for a delay. By using for example scenario analysis, To Tommer can take these potential scenarios into consideration, plan for the likelihood that they will occur, and through contract terms reduce the risk they do not control themselves.

### **7.2.2 Challenge with organization**

The rapid growth of To Tommer has clearly affected the structure, as well as the requirements of the organization. The new organizational structure requires everything from an increased number of employees and definition of their new roles and responsibilities, to an increased need of formalization and support tools. To Tommer's new roles and responsibilities will have to be formally described and the different functions within the company will have to be coordinated in a more sophisticated manner. The new organizational structure should be complemented and supported by more specialized and centralized support functions, with access to appropriate support tools such as monitoring software, reporting tools and information databases. In other words, To Tommer is in need of a well-structured and knowledgeable head quarter that effectively supports the core operations, i.e. construction projects.

As the company is growing, it naturally implies larger and/or an increased number of projects running simultaneously. To Tommer has experienced both larger and an increased number of projects. In turn, this has required an increased number of employees in the organization. Although To Tommer could have chosen to grow by increasing the use of sub contractors, they mainly chose to expand their own organization, in the belief that it would allow for a more effective organization. Independent of To Tommer's strategic decision about how to grow, an issue that is present, is the increased difficulty and complexity of planning larger projects. As previously mentioned, larger projects are projects that either have a longer duration or that the project consist of an increased number of activities. For the particular project, it might require a larger project team that will have to be organized and coordinated. As it becomes more difficult to plan projects as they increase in size and complexity, the risk of delay is increased. Especially as the management team experience a higher workload, and consequently experiencing a higher level of stress, the planning of the project, allocation of resources and coordination of activities suffers. According to Greiner's growth model, this is known as a *control crisis*. The solution to this challenge is to shift towards a more decentralized organization, where decisions are taken further down in the organization. In the case with To Tommer, the management team has felt it difficult to delegate responsibilities and decision making down in the organization. Lack of trust about the knowledge and capabilities of sub-ordinated employees is considered to be the main reason for the limited delegation of responsibilities. However, it will be absolutely necessary for management to delegate responsibility and trust the capabilities of the middle managers in order to reduce workload. Something that could help in this process is to be to very careful when selecting the employees, which will get the increased responsibility. It might be the case that the desired knowledge and capabilities are not present in the current organization, and that it will be necessary to find and recruit the right and competent people from outside To Tommer's organization.

As To Tommer's organization is growing and changing, roles and responsibilities are changed and additional employees are recruited to the company, there has been an increased need for formal documentation and structure. As Greiner's growth model describes it; when the organization is becoming increasingly decentralized with more autonomy in the lower parts of the organization, a greater need for formal documentation and structure occurs. This is exactly the case with To Tommer, and it is of vital importance to establish formal documentation that describes roles and responsibilities throughout the organization. This way, the company is able to make a smooth transition from a very top-managed to a more decentralized organization. As To Tommer experienced, when there are time periods of high stress, one of the last things that are being prioritized is formalization and documentation. However, if this is not handled properly, there is a risk that they at a later point in time will suffer great challenges. For example, if To Tommer assigns new roles to existing employees, or especially if they employ new people to the company, they experience a highly inefficient process of teaching and guiding the new person. This is because knowledge-transfer solely depends on personal guidance and teaching. It is also very difficult to know exactly what to expect from the new person and/or role, as roles and responsibilities are not formally

defined and documented. In other words, a formal definition of roles and responsibilities not only have effect on the person in the respective role, but it also affect other important aspects such as monitoring, follow up and feedback.

The last identified root cause to why To Tommer is experiencing challenges with regards to their organization is the absence of supporting tools for monitoring the performance of the different parts of the organization. Up until today, the management team of To Tommer has considered it as unnecessary to invest in and implement different types of support tools, as they considered it easier to monitor and control the organization in a more manual way. As the company grows, the organization increase in size and projects and processes are becoming more complex. As a consequence, managers are spending an increasingly amount of time on controlling and monitoring the specific projects, and the task of e.g. monitoring and analyzing the performance of employees and the overall company is becoming much more difficult. According to Greiner's growth model, it is common that management develops more towards monitoring and less towards directing as a company grows. However, as in the case with To Tommer, the organization is too large for managers to monitor manually. There is an obvious need to invest in, and acquire support and monitoring tools, which would enable To Tommer to run their business more efficiently. As mentioned previously in the report, the overall construction industry is in general lacking formal routines and structure. Projects always have their own unique characteristics, which constantly pose new and unique challenges. This has clear implications for what type of supporting tools that are suitable to the unique and specific need of the company. When acquiring and implementing new support and monitoring tools it is important to keep in mind that the tools on one hand will have to be very flexible. On the other hand it is important for the company to be able to apply and use the tools in all projects, despite their different characteristics, in order to be able to compare and evaluate each project.

## 8 Conclusions

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This study has addressed the challenges that are likely to arise as a company goes through a face of rapid growth. In this paper growth is referred to change of the size of the firm, where size is the result of the factors; number of employees and/or the financial output (i.e. turnover and profit). Growth is a highly important topic for individual companies, as well as for the overall economic development. It is argued that without growth the society will experience inertia, and consequently there will be no company- and economic development and progress. (Lewis, 1995)

Through a case study of a qualitative nature of the Norwegian building company, To Tommer, this study combines generic growth related theory with empirical findings gathered from the particular case. A witnessed problem with generic growth theories is that all firms are different to their characteristics, which means that not one single growth prescription fits all types of firms as well. This misfit, in combination with the aspect that there does not exist a lot of literature, specifically dealing with growth within the construction industry, motivated this study. Relevant theory have therefore been identified and combined into a theoretical frameworks, which in turn have been applied to the particular case, in order to increase the understanding of the current situation and challenges that To Tommer is facing. To increase the knowledge about To Tommer's current situation and explore the growth related challenges that To Tommer face was in fact the first research question of this study. The second research question was to further analyze and create an understanding about the underlying reasons to why To Tommer is in the situation they are in, and to describe the root causes to the identified challenges. These particular questions were asked in order to answer the overall purpose of the study, namely to explore the growth related challenges, and see whether generic growth theories could be applied in order to better understand and resolve the particular challenges.

To Tommer is a general contracting company within the construction industry in Norway, which after its establishment in late 2010 has grown rapidly. Today the company is employing approximately 35 people, and in 2012 they reached a turnover of almost NOK 40 million. The current business environment, in combination with To Tommer's solid offer and customer base, made it obvious that for the time being, the demand related challenges are not present in this case. However, to grow a business of any type is not easy or risk free, a fact that not least applies to the companies in the construction industry. Larger construction firms results in larger organizations, greater need of liquidity, as well as more complex, long term, and investment heavy projects. During the process of identifying the growth related challenges, it early on became clear that the challenges that To Tommer are currently experiencing can be divided into two main categories; liquidity related and organizational related challenges. These challenges are in fact so crucial that the CFO of To Tommer is convinced that the company within short time will have to cancel payments and apply for bankruptcy if the situation is not solved in the near future.

The rapid growth has clearly affected To Tommer's level of liquidity. Today, the company is experiencing severe difficulties in finding enough available cash to run their daily operation. The increased size of the organization, larger and more expensive projects are posing new requirements of the company. First of all, it will be important for To Tommer to not only focus on profit and loss statements and other accounting measures, but they also need to analyze and consider the company's financial situation from a cash flow point of view as well. To Tommer will have to improve and establish better routines for cash planning and closely monitor cash in flows and out flows in order to see future cash needs, as well as early on potentially detect future liquidity problems.

Locked in cash, as a result of the increased size and more expensive projects, is also identified as a root cause to To Tommer challenge with liquidity. Equipment needs, inefficient material purchases and bustadoppføringsloven are all factors which increase the amount of locked in cash as projects becomes larger and more expensive, and hence affecting the level of liquidity. It is important that To Tommer consider these factors as they analyze the current situation from a cash flow point of view and when estimating future cash needs. Another factor that further stress the importance of good cash planning is the changed cost structure, which is an implication of the growth of the firm, and an increased number of employees. As To Tommer increase their fixed cost (i.e. salaries) due to more employees, they are more vulnerable to variations in demand. It will be important for To Tommer to consider the increased fixed cost when performing cash planning, and decide an appropriate cash balance accordingly.

More complex and longer projects are also carrying a higher risk exposure. Projects today typically include more activities, in combination with the high degree of dependency between the activities, deviations from the plan and time schedule will more likely occur and have greater affects. Deviations in the form of delays will not only affect the financial result, but as delays to a high degree also affect the possibility to send invoices and thereby the time when To Tommer gets paid, it also directly affect the level of liquidity. As a complement to cash management approaches, such as cash planning and cash balance determination, by applying more structured projects management approaches such as the critical path method, To Tommer could increase transparency and thereby reduce complexity. By applying such a method, the planning process and monitoring of the project will improve, subsequently reducing risk and improving cash management.

The rapid growth of To Tommer has clearly affected the structure, as well as the requirements of the organization. As the company is growing, it naturally implies larger and/or an increased number of projects running simultaneously. To Tommer has experienced both larger (i.e. more expensive and/or longer duration) and an increased number of projects, which in turn requires an increased number of employees in the organization. The management team experiences a higher workload, and consequently experiencing a higher level of stress, which affect the planning of the project, allocation of resources and coordination of activities negatively. As described by Greiner (1998), this

control crises can be solved by shifting towards a more decentralized organization where decisions are taken further down in the organization. The increased organization also requires an increased need for formal documentation and structure. In the case with To Tommer, it is of vital importance to establish formal documentation that describes roles and responsibilities throughout the organization. This way, the company is able to make a smooth transition from a very top-managed to a more decentralized organization. Formal definition of roles and responsibilities also affect other important aspects such as monitoring, follow up and feedback, as knowledge transfer not solely depends on personal guidance and teaching. The last identified root cause to why To Tommer is experiencing challenges with regards to their organization is the absence of supporting tools for monitoring the performance of the different parts of the organization. Due to the recent growth, the organization is too large for managers to monitor manually. To Tommer has an obvious need to invest in, and acquire support and monitoring tools, which would enable To Tommer to run their business more efficiently.

As previously mentioned, growth is a highly important topic for individual companies, as well as for the overall economic development. This study has through the qualitative case study applied generic growth theories to the specific case of To Tommer. By first identifying the growth related challenges that the company are experiencing, secondly exploring the root causes to the growth related challenges respectively, and thereafter applying generic theories, the study provides specific recommendations to how To Tommer could deal with the identified challenges and the related root causes. Although firms clearly differ to their characteristics, and that not one single solution fits all types of firms, the recommendations (or parts of it) could be applicable and help other companies, with similar characteristics, to overcome their specific growth related challenges. Ideally, before a company ends up in a tough situation, facing similar growth related challenges as To Tommer, these insights could be beneficial.

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## 10 Appendix

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### 10.1 Interview Template - First interview with CEO & CFO at To Tommer

#### **Get to know the interviewees**

Introduce ourselves, and the purpose of the interview.

1. What are your backgrounds?
2. How come that you started working for To Tommer?

#### **Understand company background and current situation**

3. Can you please tell us the history of To Tommer?
4. How does To Tommer's organization look like?
5. What customer segment is To Tommer focusing on? Which are the company's competitors?
6. How is the Norwegian building industry today and how has it developed?
7. What are your company objectives & how will you reach them (strategy)?

#### **Understand company's strength and weaknesses**

8. What are the greatest strengths/competitive advantages of To Tommer?
9. What are the greatest challenges/problems that the company faces?
10. What opportunities do you see for To Tommer?
11. Are there any business threats to the company?

#### **Focus on understanding the nature of the challenges**

12. If we focus on the challenges of the company, is there any additional to the one mentioned in Q.7 that comes to your mind?
13. From the list of challenges, let's go through each challenge and briefly discuss why it is a challenge/problem for you, where it derives from and what impact it has on the business.

#### **View on future**

14. Where is the company in 3 & 10 years from now?
15. What obstacles could potentially stop you from ending where you want?