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Efficient Project Management Tools for a Small Consulting Company

Case MT Xport Consultants Oy

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Thesis abstract

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The aim of the thesis study was to find tools and models the case company can utilize in their project management. The case company, MT Xport Consultants Oy, is a small start-up consulting company. The aim of the study was to find concrete tools and models the case company could utilize and tailor for their needs. The theoretical part of the study focuses on project management and, more precisely, documentation and project life cycle.

Most of the data collected is qualitative. The research methods used were observation, interviews, and a short survey. The survey provides numerical data to support the qualitative data collected. The observation and the interviews took place in June 2017, and the survey was conducted in the spring of 2018.

The tools and models were selected for the case company based on its criteria. There are various tools and models that can be useful for a small company. However, many tools and methods would be too complicated and time-consuming for the needs of the case company. The interviews and the survey revealed that the members of the team were looking for improvements in different areas of project management. For that reason, the study considers various methods of project management and related tools.

Keywords: project management, documentation, project management tools

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Opinnäytetyön tiivistelmä

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Tutkimuksen tavoitteena oli sellaisten työkalujen ja mallien löytäminen, joita kohdeyritys voisi käyttää projektinhallintansa tukena. Kohdeyritys MT Xport Consultants Oy on pieni konsultointialan startup-yritys. Tutkimuksen tavoitteena oli konkreettisten työkalujen ja mallien löytäminen, joita kohdeyritys voi hyödyntää ja mukauttaa tarpeisiinsa. Työn teoriaosuudessa käsitellään projektihallintaa, erityisesti projektien dokumentointia ja projektien elinkaarta.

Suurin osa kerätystä tiedosta on kvalitatiivista. Käytetyt tutkimusmenetelmät olivat havainnointi, haastattelut ja lyhyt kysely. Kyselyn tuottama numeerinen data tukee saatuja kvalitatiivisia tuloksia. Havainnointi ja haastattelut suoritettiin kesäkuussa 2017 ja kysely keväällä 2018.

Kohdeyritykselle valittiin sen kriteerien mukaiset työkalut ja mallit. Useat menetelmät ja teoriat soveltuvat pienelle yritykselle, mutta monet ovat yrityksen tarpeisiin liian monimutkaisia ja aikaa vieviä. Haastattelut ja kysely toivat esille yrityksen tiimin eriävät mielipiteet muutostarpeista. Tästä syystä tutkimuksessa käsitellään useita projektihallinnan menetelmiä eri osa-alueisiin liittyen.

Asiasanat: projektinhallinta, projektityö, dokumentointi, projektinhallinnan työkalut

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Terms and Abbreviations

SME Small and medium sized enterprises

WBS Work Breakdown Structure

CPM Critical Path Method

Tables, Figures and Pictures

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1 INTRODUCTION

1.1 Case Company MT Xport Consultants Oy

MT Xport Consultants Oy is a start-up company located in Seinäjoki, Finland. The company can be categorized as a consulting firm, however, according to the founders of Xport, their goal is to rather work with the company than to advise them. Xport works with various types of companies to start their exporting operations or to improve existing ones.

Xport was founded in 2014 by Marko Luoma and Mark Wiltshear. Their goal from the start has been to work tightly with the customer to find a customized solution for each customer's situation. According to Wiltshear (2017), every cooperation starts with a meeting where both parties openly discuss the client's business, their operations and other important aspects for international trade. From there they move on to creating a plan for the actions to be taken.

Each customer is treated as an individual and there is no typical pattern of action. Each customer has their own specific needs as every company's market is different, their size varies and their readiness for export is at different levels. That is why Xport offers custom solutions for each challenge that the client may be facing.

Moreover, Xport has been carrying out projects or in Finnish called "hanke" which are funded by the Maaseutuvirasto. These projects are carried out in project groups of four or more companies. The goal is to develop the internationalization processes in the customer companies through trainings and market research or other personalized work executed by Xport (Wiltshear 2017).

1.2 Reasons for Research

The research was conducted for the case company MT Xport Consultants Oy. The topic was provided by the organization. The company works on multiple projects simultaneously and parts of the project information can be used for future projects. That is why they are looking for tools that could be helpful and efficient for their

documentation needs as well as tools to improve their scheduling, risk management and budgeting.

1.3 The Goals of Research

The goal of research was to find tools that Xport could easily use in their project management. The tools and techniques they are looking for are to be easy-to-use and using them should not take too much time. The team is looking for tools that can improve different aspects of their project management process.

1.4 The Research Question

The research question of the thesis is what kind of tools are suitable for a small company such as MT Xport Consultants for project management? The research topic was provided by the case company MT Xport Consultants Oy. They are seeking for project management tools and theories that would make their project management more efficient and the data gathered clearer and easier to find.

2 THE RESEARCH METHOD

Research methods are the techniques used in the research to gather data. All the techniques that the person conducting the research uses to perform research are considered research methods (Kothari 2004, 7-8). Dudovskiy ([ref. 21 May 2018]) explains that there are two types of data: primary and secondary data. Primary data is information that has not existed or published before. Secondary data on the contrary has been published previously, for instance, in a form of a book, an article or a blog post.

Both primary and secondary data are used in this research. Secondary data has been gathered from various sources, such as books, journals and websites. Primary data has been gathered using observation, interviews and a questionnaire. The methods used are mainly qualitative methods. The main tools used are observation and interviewing, but a small questionnaire was conducted to support the qualitative data gathered.

Qualitative methods provide data in the form of words (Dudovskiy [ref. 21 May 2018]). The goal of qualitative research is to gain a better understanding of the topic and its characteristics. In turn, quantitative research aims to describe a topic through figures. These methods can used together to conduct a "multi-method research" (Jyväskylän Yliopisto 2010).

Observation is a qualitative method where information is gathered by observing subjects of the research. The advantages of this method are the minimal amount of bias and the lesser need for cooperation compared to questionnaires, for example. There are disadvantaged to the method as well. There are factors that may affect the results of the observation and some people can be hard to reach, which complicates data gathering (Kothari 2004, 96).

Interviews aim to provide information to understand the meaning of the respondents answers. Interviewing is a qualitative research method. Interviews are a more personal method compared to questionnaires. Generally, interviews are more time consuming than questionnaires. There are various types of interviews, such as, informal, open-ended and closed-ended among others (Valenzuela & Shrivastava, [ref.

20 May 2018]). The method used in this research is informal or conversational interview.

Questionnaires can be either quantitative or qualitative depending on the type of questions. Typically, close-ended questions are quantitative where open-ended questions are more likely to be qualitative. Questionnaires are usually low-cost, and they make data collection faster. A possible issue comes when the answerer does not understand correctly or does not read it carefully (Dudovskiy [ref. 21 May 2018]).

These methods are useful for the study as they all provide a different viewpoint of the company's work. The observations provide an unbiased view of the operations without the opinions of the team affecting the results. The interview provides a critical understanding of the team and the way they view the company and the current project management. The questionnaire provides numeric data to complement the qualitative data collected using observation and interviews.

2.1 Data collection and analysis

The data was collected by observing the company and the team, interviewing the team and by conducting a small questionnaire. The data was collected from the company only as the research is very tailormade for them. To answer the research question, secondary data was gathered from various sources.

The observations were made during the spring of 2017 as the researcher worked at the company as an intern. The team and the company were observed for five months as they worked on various projects, with multiple clients and with different team structures. These observations provided an essential look into the company and the way they operate. The researcher has been in close contact with the company after the observations to be familiar with the company's current situation.

The interviews were conducted in June of 2017. The people interviewed were the members of Xport team. It is a team of four people. Two of the team members are co-founders and two are employees of the company. The interview was conducted in person and the answers were recorded in Word on the computer.

The questionnaire was conducted in March of 2018. The questionnaire was drafted using Google Forms and the link to the questionnaire was sent to the team using email. The answers were submitted online and analyzed using the Google Forms results tab.

2.2 Validity and Reliability

According to Shuttleworth ([ref. 21 May 2018]) reliability refers to the repeatability of the research. If another researcher were to conduct the same research in the same circumstances, the results ought to be the same. Some research is harder to replicate and thus it is less reliable.

Reliability is a part of validity. Additionally, validity can be divided into various types of validity. These types are evidence of validity (Shuttleworth [ref. 21 May 2018]). Validity indicates how true the results of the study are (Price, P.C.; Jhangiani,R.; Chiang, I.A. [ref. 21 May 2018]).

The sample of the research is small as the research is specifically made for the case company. However, the secondary data gathered is from reliable sources and upto date. Thus, the theory used in the research is valid and reliable and applies for most projects.

The results gathered from the interviews and the questionnaire are valid, although the results refer only to the case company. The results do not reflect the state of other SMEs or other consulting companies. Both the questions and answers refer to the case company specifically.

3 PROJECT MANAGEMENT

Heerkens (2002, 10) states that there are challenges, opportunities and new demands in all organizations. These issues must be addressed by the management. These situations rise the need for finding solutions. In the case of MT Xport Consultants Oy, their business is developing and growing. For this reason, they need solutions for their project management as the amount of large projects has increased in the last year significantly (Wiltshear 2018).

The main reasons for initiating a project can be divided into four categories. The first category is projects that are initiated to meet requirements such as legal or social rules. Secondly, a reason to initiate a project is to satisfy stakeholders interests. The projects in the third category are created to take business strategies in use or to change them. The last category includes projects that are to create or improve a product or a service (Project Management Institute 2017).

3.1 Project Management Terminology

The key terms related to projects and project management are explained in this section. For instance, the terms project, project management and project life cycle are covered.

3.1.1 Project

The project management institute (2017) defines project as work that is done to create a unique product or service. Deliverables are created to complete objectives of the project. These deliverables may be either tangible or intangible. The results of the project can be a product, a part of other item, an improvement or a service or the ability to provide a service.

A project can be defined as work that has a defined end date and is unique in nature. However, projects vary in size, length and the amount of people involved in the project. The content of the project is mostly unique (Young 2006, 13). There may be

some repeating elements in the project deliverables and activities, but the core characteristic of uniqueness is not changed (Project Management Institute 2017).

3.1.2 Project Management

Project management is defined as the use of various tools, information and techniques to reach the goals set for the project. Project management makes it possible to carry out projects effectively. It helps to meet goals, satisfy stakeholders' needs, increase the chance of success and improve the timeliness of projects among many other advantages (Project Management Institute 2017).

Young (2006, 13) defines project management as a process that uses the resources available for the organization in a structured way to achieve the goals set for the project.

Project management consists of two main elements, which are the coordination of work done in the project and leading people working on it. To efficiently coordinate the work, project management processes are to be used skillfully. These processes are tools for the project manager as well as the team to effectively perform essential stages of the project (Heerkens 2002, 6-7).

3.2 Project Management Knowledge Areas

The Project Management Institute (2017) acknowledges ten knowledge areas in project management. The most relevant areas for this research are Scope, Schedule, and Project Risk management. Other areas include integration, cost, quality, resource, communications, procurement and stakeholder management. Even though these elements are extremely important for most projects, this research is focused on the three areas that the case company considers they could improve.

3.3 Project Life Cycle

A project life cycle consists of phases from the initiation of the project till the completion. The cycle provides a structure for project management. The phases can overlap, follow each other or they can be repetitive. However, all projects fall into the model shown below, where the project life cycle has been divided into four phases (Project Management Institute 2017).

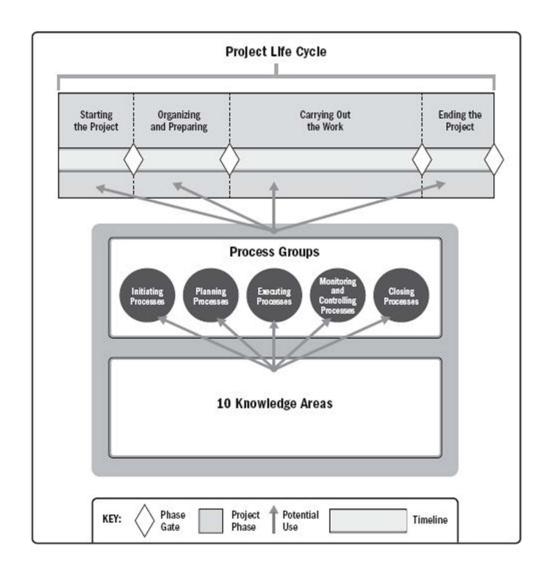


Figure 1. Project Life cycle (Project Management Institute 2017).

Heerkens (2002, 11-13) divides the project life cycle into five phases. The first phase is called the initiation phase. Here the need for the project is identified. The best practice to respond to the need is examined. Additionally, the main deliverables are defined and it is considered whether the project is feasible or not. Singh (2016, 55-56) divides the project life cycle into six phases. According to this model the first stage is called the "conceptual stage" where the need for a solution is identified.

The second phase is the planning phase where the means to satisfy the need is further developed. Intermediate goals are defined with the strategy to reach these goals. The tasks and the schedule for completing them are identified. An estimated budget and a schedule are drafted for the project (Heerkens 2002, 11-13). Before the planning stage, Singh (2016, 56-57) recognizes a phase called the "definition stage", where the purpose of the project is defined, and first estimates and drafts are made. The planning stage comes after this.

According to Heerkens (2002, 11-13) during the execution phase the work is performed in the supervision of the project manager. Progress is measured throughout this phase and adjustments are made to the budget and schedule. The project team is focusing on staying on schedule and budget agreed in the earlier phases.

In the close-out phase it is ensured that the original need has been satisfied and goals are met. Ideally the project is terminated, and the deliverables are taken into use in the post-project life cycle. The stakeholders and specifically the customer accepts the results of the project and takes them to use (Heerkens 2002, 11-13)

The last phase is the evaluation stage, where the success of the project is evaluated. The team reflects on the project to see what could have been done well and what aspects were done successfully. This is also the stage for feedback (Singh 2016, 60).

After each phase a phase gate is held. This stage can also be called a phase review, stage gate, kill point or phase exit. At this stage the progress and quality of the project are evaluated, and comparisons are made to the business documents drafted in the planning stages of the project (Project Management Institute, 2017).

3.4 Project Management Process

The project life cycle is controlled by carrying out various project management processes. These processes are either the type that are used once, at a specific point of the project, performed periodically or processes that are performed continuously. Project management is carried out effectively by using the right application of logically grouped processes (Project Management Institute 2017).

There are multiple ways to group these processes. The Project Management Institute groups them into five categories. The categories used are initiating, planning, executing, monitoring and controlling and closing process groups (Project Management Institute 2017).

3.5 Project Management Tailoring

The appropriate project management processes, techniques, life cycle phases and so on, should be selected to manage a project effectively. This process of selection is called "tailoring project management". Tailoring is needed as each project is different (Project Management Institute 2017).

According to the research conducted by Turner, Rodney and Ledwith (2012), many organizations use project management in different types of projects. However, larger companies use more complicated processes than smaller companies. Small companies tend to use more informal and people centered project management processes.

Micro companies use project planning and control but do not typically use technical support. Smaller companies are typically focusing on requirements definition and resource scheduling. Normally plans are not formal and they might not be written (Turner, Rodney & Kelly 2009).

3.6 Project Success

Heerkens (2002, 26) emphasizes the meaning of definition for project success. There are as many definitions as there are project managers and every company have their own priorities. The success of the project is judged based on the definition of success as the project has been completed.

Although success can be defined in numerous ways, there is a framework that can be used. Four levels of success can be identified. Each of the levels has its own

perspective. The levels are meeting goals set for the project, efficiency, the usefulness of the deliverables and lastly organizational improvement (Heerkens 2002, 26).

According to the research conducted by APM (2015, 6), only 22% of projects are fully successful. However, only 6% of projects were completely unsuccessful. As seen on the figure below, projects are mainly successful. The most "unsuccessful" answers were gathered for time management. However, the amount of wholly successful projects in terms of time management is relatively high compared to the overall results. In Xport's case, most projects are very successful. The company is working to have fully successful projects. The main concerns for them are time, budget and specification.

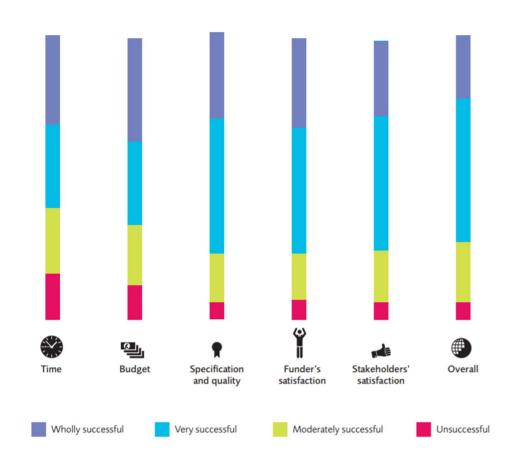


Figure 2. Level of success in recent projects (APM 2015, 7).

3.7 Challenges in Project Management

Balancing the four elements of project management – scope, time, cost and people – poses its own challenges for project management. There are different things to consider with each element. Many issues are related to the knowledge the project manager has of project management. Examples of possible issues are deadlines that are too tight, goals that are not clearly defined, and poor communication (Villanova University, Top 10 Project Management Challenges).

3.8 Documentation

The figure below demonstrates in which phases of the project life cycle the documents are to be drafted. In the pre-project phase, the needs are to be assessed and based on that information, the business case and benefits management plan are drafted. At the start of the project, the project charter is added. It is time to make the project management plan during the preparing stage (Project Management Institute 2017). The documents mentioned in the figure are the type of documents that Xport could utilize. The figure is a guideline for drafting these documents in the right order and in the right stage.

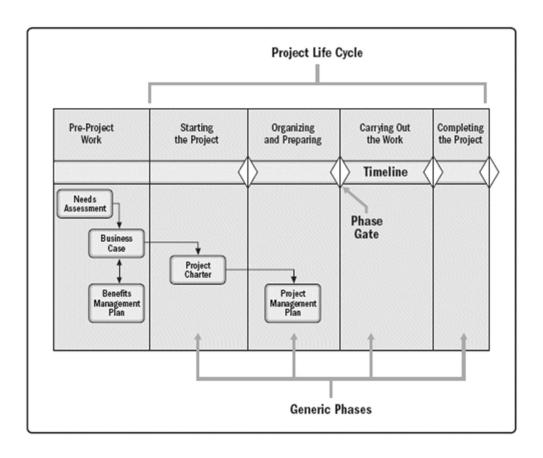


Figure 3. Phases of documentation (Project Management Institute 2017).

3.8.1 Monitoring and Controlling Project Work

Many documents are related to monitoring project work as seen on the picture below. Planning documents help monitor and evaluate work done during the project. Monitoring reports can be change reports, work performance reports or work partnership reports.

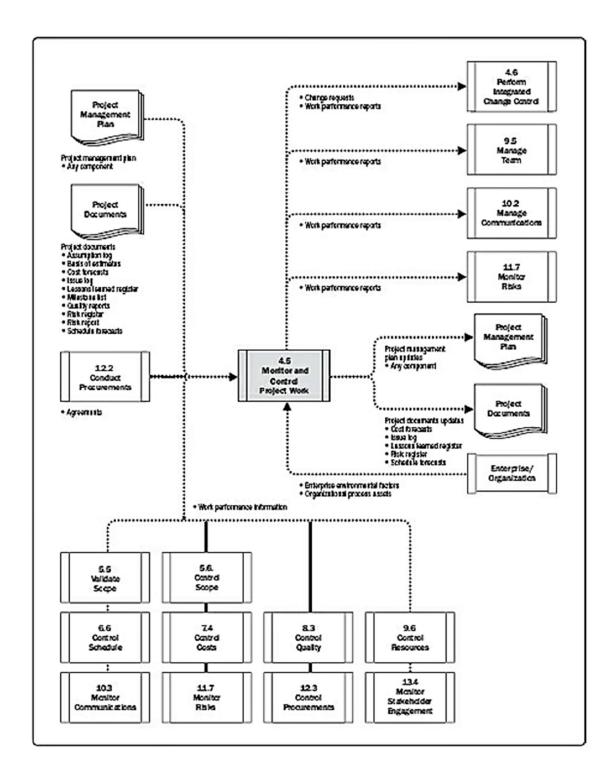


Figure 4. Monitoring project work (Project Management Institute 2017).

4 THE MOST EFFECTIVE TOOLS FOR MT XPORT CONSULTANTS OY

According to Test (2017) there are nine essential project documents. However, every project is different and there are different needs for documentation. Regardless of the number of documents, the documentation has to be clear, significant and timely. Each project manager may choose the documents that are useful and essential for the project.

Elbeik ([Ref. 16 May 2018]) lists three of the most important project documents. The key to project success is understanding a few short documents that can be referred to later on during the project. The project charger, project plan and the progress report are the three most important documents for project management, however, they are the absolute minimum.

Different sources list varying number of essential project documents for small companies (Test 2017; Haus 2011; Elbeik [Ref. 16 May 2018]). The documents recommended for the case company are a result of careful secondary research. The selected documents are in line with the observations and the interview results.

4.1 Business Case

The project business case studies the feasibility of the project. It contains information about the objectives and reasons for the initiation of the project. The document is used in multiple stages of the project. One of the uses of the document is evaluation of project success at the end of the project (Project Management Institute 2017). Gambles (2009, 1-4) explains that the business case is used as a recommendation for the decision makers. It includes information about the costs, deliverables and risks of the project.

There are various reasons for forming a business case, which are represented in the figure below. The primary purpose of the business case is to enable the decision makers to make the right decision. The decisions can be related to funding, evaluation or other project choices.

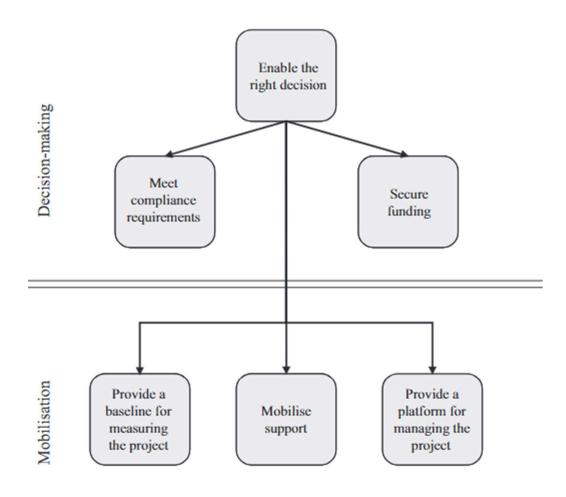


Figure 5. Purposes of the Business Case (Gambles 2009, 4)

4.2 Project Definition Document

Project definition document, also called project objective statement, project scope statement and statement of work document, has many purposes. The primary purpose of it is to describe the work. It identifies the work that is to be done and how. The document helps evaluate the quality of the deliverables as well as success criteria. Additionally, it helps decide on the methods used (Heerkens 2002, 67).

A statement of work can have many layouts and include different information based on the needs of the user. The template below is an example of a simple template that the case company could use. It includes information on the objectives, deadlines and financial information.

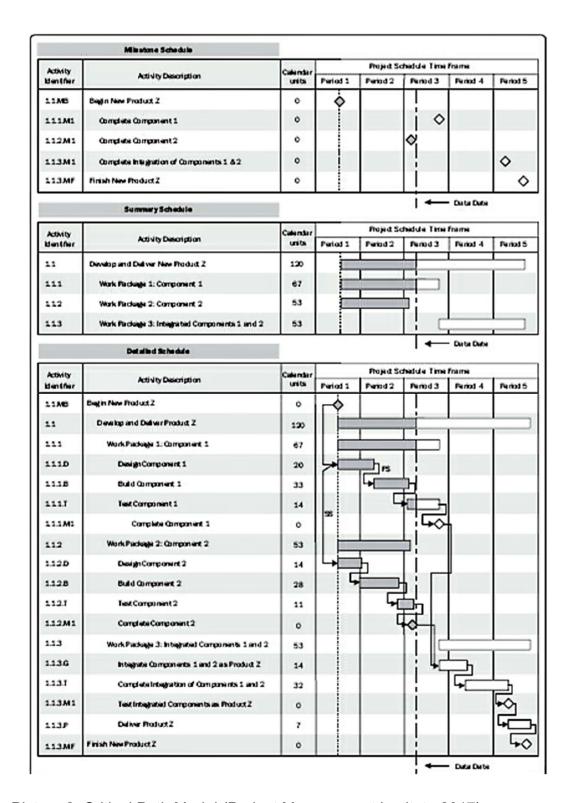
SIMPLE STATE	MENT OF WO	ORK TEM	PLATE	V	smartsheet
PROJECT TITLE					
COMPANY NAME	CL	IENT			
PROJECT MANAGER	DA	DATE SUBMITTED			
AUTHOR PROJECT BEGIN DATE		VERSION END DATE		0.0.0	
DUE DATE COMPLETION CRITERIA			DELIVERAB	LE DESCRI	PTION
		RATE SCHE	DULE		
ESTIMATED COST DELIVERY		SCHEDULE		DESCR	RIPTION
\$500					
\$200 \$75 per hr					
\$500					

Picture 1. Statement of work template (Smartsheet.com [Ref. 15 May 2018]).

4.3 Scheduling Tools

Project schedule provides information about in what time the project will deliver results that have been defined in the project scope document. It will be used as the reference for evaluation of the project success. The project team can choose from various tools of project scheduling, such as, critical path or an agile approach (Project Management Institute 2017, 3342-3345).

Project schedule network diagram shows the dependencies between the project activities. The diagram may represent detailed information about the activities or it may only be a summary of the activities. A narrative can be added to the document to describe the diagram and its approach (Project Management Institute 2017, 3609-3610). An example of this diagram can be seen below, where the first part introduces the missions schedule, second the summary schedule and the last a detailed schedule.



Picture 2. Critical Path Model (Project Management Institute 2017).

The Critical Path Method (CPM) that is demonstrated above, is used to demonstrate the critical path of the project activities. The CPM determines the slack between the activities. If there is no slack after an activity, completing the activity late will lengthen the whole project (Singh 2016, 232-233).

4.4 Risk Management Tools

According to Test (2017), a useful tool for risk management is a risk/issue log, that lists possible issues or risks that may arise during the project. A risk management plan may include elements such as risk strategy, methodology for risk management and risk categories among other things. These tools may be used as a part of the project management plan (Project Management Institute 2017, 6452-6463).

5 CONCLUSION

There are various tools and theories that can be used for project management. The goal of the research was to find tools and theories that would be the most useful for the case company for them to improve the way they manage projects. The tools and theories included in the research are simple and easy-to-use as the company was looking for tools they could easily implement in their work.

Various sources were used for the research. However, project management is a broad topic and this study is a small fraction of the theories, models and methods available for project management. The study is conducted specifically for the needs of the case company and that may impact the validity of the study.

The research introduces a few options of project documents and theories that MT Xport Consultants Oy can incorporate in their project management practices. The research opens up the theory surrounding project management and can act as a handbook for the company as they improve their project management procedures and models.

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APPENDICES

APPENDIX 1. The survey cover letter

APPENDIX 2. The quantitative results of the survey

Survey on Project Management

As you know, I am writing my thesis for your company and I'm interested in your own views concerning your current project management. Theories surrounding the theme are vast and there are various aspects to consider. That is why I would like to know on which aspects I should concentrate on my thesis so that it can best serve Xport.

The purpose of my thesis is to find solutions and tools for project management that you could use in your work. These tools will be supported by theory on project management models. I am looking to concentrate on issues you would like to improve rather than aspects that you are completely happy with.

Please, answer the survey honestly and as accurately as possible. If you have any questions, feel free to contact me through email.

All your answers are anonymous and all the information will be kept safe and private. I hope all of you to answer the questions individually so that I can get an overall understanding of the current state of Xport's project management. You are free to discuss the survey. However, I wish you answer with your own honest opinion!

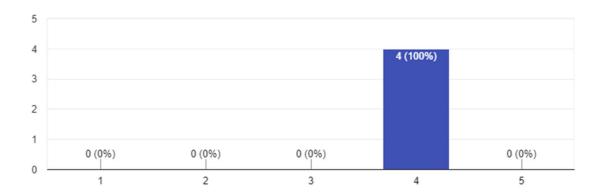
Thank you!

*Required

APPENDIX 2. The quantitative results of the survey

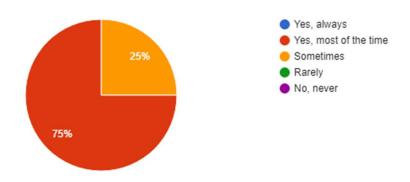
1. In your opinion, how well have your previous projects been carried out?

4 responses



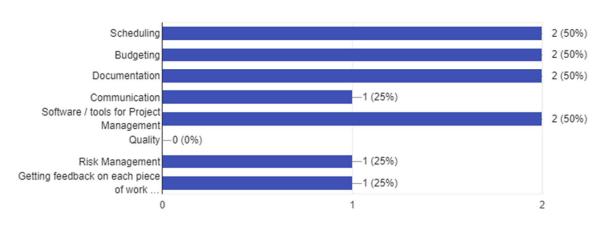
2. Have the projects been completed on time?

4 responses



4. Which aspects should be improved in your opinion?

4 responses



8. How well does the team work together?

4 responses

