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Risk Management for IT Project in micro companies

Case study for Sibesonke Oy

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Abstract

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Abstract:
Risk management has become more and more important, as many IT projects around the world fail to achieve their goal due to the lack of risk management knowledge. The aim of this thesis is to bring solution and guidance for micro companies regarding risk management in IT projects. The objective of this thesis is provide formalized risk management methods for organization to ensure the project's success and understand the risks more related to the case company Sibesonke. With the help of well-defined risk management strategies it is possible to ensure that all resources – money, time, and people – in the company are made the best use of. That is the reason, why attention to risk management processes should be paid and formalized steps should be formed.

The theoretical fragment of the thesis is divided into three parts; 1) a brief introduction of the project management in general, 2) common project risk and 3) risk management process. The practical fragment of the thesis compasses first an introduction of the case study company Sibesonke. Sibesonke is a start-up company which is providing social and business networking in emerging country like Tanzania. The qualitative method which based on an interview was conducted to bring different knowledge and understanding on risk management in practice.

As it was founded in the SWOT analysis, the start-up company Sibesonke is aware of the risks, but the risk management processes not yet unmistakeably formalized. Identifying risks is one of the most important aspects of a project. After that step is taken, the next phases are quantifying the risk, risk response and at last the phase of monitoring and controlling. In view of the importance to combine the theoretical knowledge and the practical understanding, this thesis brings those parts together. That is presented by explaining risk management as four steps process and also revising the process through two example risks: user involvement and risk register documentation. For a start-up company like Sibesonke, it is advised to follow the formalized risk management procedure to reach the scope of the IT project. In the future, the suitable process for micro company could be refined even further.

Keywords
Project risk management, Risk solution, Risk management process, Micro company

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1 Introduction

Risk management is an interesting topic and very large area of study. Risk management has become progressively important, as many projects around the world involve with massive investments and the risks are very much visible – and some cases also invisible – in the organization. In this case risks need to be managed. In this particular research, the focus will be risk on management specifically project management in micro companies. The primary objective of this research is to comprehend the concept of risk management in general and outline risk management models. These models includes risk management framework based on five main areas, which are identification, quantification, risk response, monitoring and controlling and at last analysing and prioritizing.

The introduction of this thesis will contain a short review of project management in general just to get an idea of what is project and why are we doing project management. The introduction is followed by project risk; here author will outline what kind risks are involved in a project and what are the common project risks (Chapter 2).

This thesis include also a case study of a small company called Sibesonke with less than ten employees, and this company is involved with IT project. The third part of the thesis which is practical part of the research, company case study is going to be introduced including company background in general by combining theoretical and qualitative information. More info about the company case study will be introduced later in the practical part of the thesis (Chapter 3). The practical of the case study will be covered with interview from the company and analysing the interview with SWOT analysis.

The fourth part is the last part of this thesis and there conclusions of the risk management process can be made. That provides the recommendation and guidance for project risk management procedure of a micro company.

The aim or a reason of this particular research is to provide better risk management methods for organization to ensure the project's success. The point is to be able to handle all the potential risks so they can be identified, mitigated, and problems can be avoided. For that reason, this thesis can be supportive and work as a guidebook for case company in order to provide key concepts on risk management, its definition, and models.

1.1 Methodology

The first and second part of this thesis research was conducted by collecting and studying existing body of literature works using principled and systematic approach: Searches were made on accessible databases such as HAAGA-HELIA Haltia online catalogue, HAAGA-HELIA ammattikorkeakoulu library, Business dictionary, Project Management Institute, Google search engine for the following keywords: risk management, risk definition, project management.

The third part of this thesis research was conducted by interview as a qualitative method. The structure of the interview stems from the information gathered in the theoretical part of the thesis. The interview took place at Sibesonke office start-up sauna in Espoo, interview happened on November 21, 2013 at 12:30am, lasted for 30 minutes. Interview based on a prepared questioner and presented questions orally and records the answer.

1.2 Scope

This thesis will cover some basics literature in Project Risk Management. It will introduce project history including common project risk and it is not going into details in those areas. The thesis will also show how that risk can be managed in the project by introducing risk management, here the thesis will describe risk management into more precise details. The objective of this thesis is provide better risk management methods for organization to ensure the project's success and understand the risks more related to the case company Sibesonke.

2 Project risk management

Risk management is all about understanding the risks that can affect something. If there would not be any risks, we would not worry how to manage them, in this case, this chapter will start with discussion of risk management basics, include definition of risk, the purpose, principle, and the process involve with risk management.

2.1 An introduction of project

According to Surhone, Tennoe and Henssonow (2010), project starts in early civilization. Until 1900, civil engineering projects were generally managed by creative architects and engineers themselves, among those for example Vitruvius (1st century BC), Christopher Wren (1632-1723). It was in the 1950s that organizations started to systematically apply project management tools and techniques to complex engineering projects.

Modern day U.S Navy was one of the first organizations to use project management with its introducing Polaris missile project, to prevent potential soviet nuclear aggression in early 1950. Even though the Polaris project was complicated and risk, but U.S navy used a project management and the project was taken as a great success. From there other organization starts to adopt project management as a way to define, manage and execute work to archive a specific goal. (Marchewka, 2006, 3)

Project Management Institute has published a PMBOK Guide (2008) that describes project as a; "temporary endeavour undertaken to accomplish a unique purpose and Project management is the application of knowledge, skills, tools and technique to project activities in order to meet project requirement". The size of the project can be big or small and may involve one person or many. To complete the project can be done in one day or many years. (Schwalbe, 2006)

According to PMBOK Guide (2008), British Standard Institute defines project in the British Standard 6079 (2000) as follow:

"A unique set of coordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific performance objectives within defined schedule, cost and performance parameters."

If we compare projects and production work, they are two different things; project has a beginning and an end. Production work does not have definite starting and stopping point, it is generally on going for longer period. Even though they both consume resource and produce service or product and they both cost money and required planning to be done successfully. (Newell & Grashina, 2004)

According to PMBOK Guide (2008) project management is the "application of knowledge, skills, tools, and techniques to project activities to meet the project requirements". In other words project management is principle or method that people are using to control their project work

Projects are controlled in different ways by the scope, schedule, and budget. These limitations are sometimes referred to in project management as the **triple constraint.** Project management is mostly defined in a triangle. The three important factors are usually called the triple constraint. Figure 1 below illustrates project triple constraint.

Figure 1. The Scope, Schedule, and Budget relationship-the triple constraint (Marchewka, 2013)

Scope is the primarily concern in the project. It ensures the process of work that required accomplishing the project goal. It is also concerned with defining and controlling what is in project and what is not in the project.

Schedule refers to the timely completion of the project. It defines different procedure that is needed to identify specific actions to be achieved to produce the project deliverables. Schedule is also referring to estimation amount of material, people, equipment that needs to perform from each activity of the project.

Budget refers to the process of estimating, budgeting, and controlling the cost of the project, has the project need to be completed within approved budget. There are several ways to manage project cost. PMBOK Guide describes three ways of managing the cost on the project. One of the ways is, estimating, calculating cost, and controlling cost.

Control budget procedure is aggregating the estimated costs of individual activities. Control costs is the process of monitoring the project status and making changing if needed in order to update the project budget. (PMBOK Guide, 2008)

2.2 Project manager

A project manager is the person who is responsible for achieving the specified project objectives. One of the key project manager's responsibilities is to ensure project produces a clear and tangible product within the specific tolerances of time, cost quality, scope, risk and benefits. The project manager also responsible of the result that been produced for archiving the benefits in business case. A project manager is often the one who is representing client to project team and has to control and implement the exact needs of the client, based on the information of the firm they are representing. (Great Britain: Office of Government Commerce, 2009, 273)

2.3 Process Group

Project management is accomplished through the appropriate application and integration of the 5 project management process.

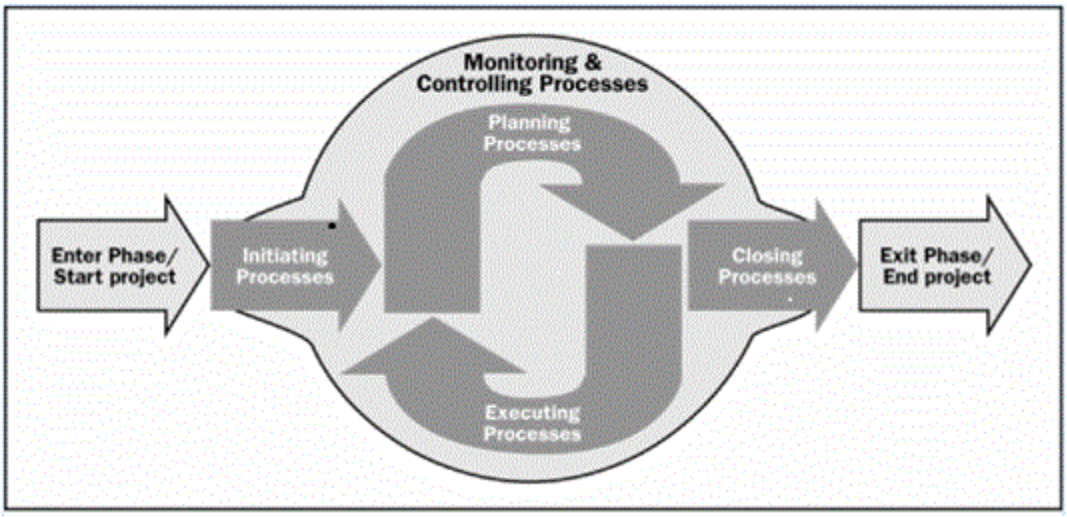

Figure 2. Project management process (Pmbok, 2008)

Project management process groups it is suitable process for managing different kind of work that need to be done like IT project or any other project. The five project management process group (Figure 2) has clear needs on what need to be done before managing any work, and they are all working in the same order on each project. (Pmbok, 2008, 41)

Initiating is the beginning phase of the process group; it starts by defining the first stage of the project and how methodology of the project should be initiated. (Marchewka, 2013) Regularly initiating processes are often done outside the project's scope of control by the organization or by program processes, which may shadow the project limitations for the initial project efforts. (Pmbok) In order to close the initiating phase and start the second phase of the IT project methodology the agreement of the business case need to be provided with authorization.

Planning process group and its basic processes and connections is used by project management teams to plan and manage the entire project and each individual phase to make sure the project is successful for the organization. The planning process group helps to gather and understand information from several sources with each having

different levels of completeness and confidence. Project management plan is develop by planning process.

Planning processes group also includes identifying, defining, and scope planning, cost, schedule and resource planning to the project activities that happen inside the project. Planning process is mostly needed during the second phase of the project when project charter and plan are all developed (Marchewka, 2013)

The executing part is done after the project phase is approved and planned. In the project management plan executing Process Group contains work project processes that are used to complete the work that has been defined and achieve the project's requirements. (Pmbok, 2008)

The monitoring and controlling Process Group contains those processes that allow managing and measuring the performance of project execution so that all possible problems can be recognized in a timely method. Then action can be taken immediately when necessary to be able to control the execution of the project. The project team should control which of the processes are required for the team's specific project.

The key advantage of Monitoring and Controlling Process Group is that project performance is practical and measured frequently to identify changes from the project management plan. This Process Group also includes controlling changes and recommending preventive action in expectation of possible threats. (PMBOK Guide, 2008)

By monitoring the project continuously the project team vision into the fitness of the project progress is provide and those areas that might need additional attention are highlighted. Monitoring and controlling process group is not only monitors and controls the project work which is being done inside a process group, but also monitors the entire project process. In some other different phase of the project, the monitoring and control process group provide feedback among project phases, in order to be helpful or preventing action in the project management plan. (PMBOK Guide, 2008)

The Closing process group is the last part of project management process groups, which includes the processes used to properly complete all activities of a project or a project phase. When the closing process group is completed, it is possible to hand over the accomplished product to others or close a project. After getting the verification that the defined product is completed the project can be closed.

2.4 Project knowledge areas

According to PMBOK Guide (2008), the 44 project management processes from the Project Management process groups are organized into nine knowledge areas. Figure 3 show the project management areas. As you can see there is some overlap with the two models: triple constraint (chapter 2.1), and project knowledge areas. The overlap is especially in the Scope Management part.

Figure 3. Project management knowledge areas (Schwalbe, 2010)

Project integration management is an element of project management that coordinates all aspects of a project, developing, execution, and control changes. In other words is the combination of all other project management knowledge areas join together to accomplish a project goal. (Schwalbe, 2006, 116)

Scope management is making sure that the project contains only the work that is required completing the project successfully by the project team. It is also defining and controlling what is or is not in the project. In this case the project team and stakeholders should have same understanding point on what kind of product the project will produce and which process project team will use to produce the product. In the scope management there are usual five main processes involve. Scope planning, Scope definition, Creating the WBS (Work Breakdown Structure), Scope verification, and Scope control. (Schwalbe, 2006)

Project time management, since project is temporary endeavor that is undertaken to accomplish a unique purpose time management is important in order of processing and describing on how to monitor and control time spent inside a project. Project manager need to know who is doing what and how much time in that particular work is needed in order to manage time in the project.

There are three important processes when defining cost management. Cost estimating is one of the three processes which ensure the approximation or estimate cost of the project needed to complete the product. It also includes the change and update the cost management plan. Cost budgeting is the second process which involves estimation of the project budget in individual work items by measuring the work performance. The last process is cost control. This involves monitoring change to the project budget. With these three processes in cost management project can be finished with approved budget. (Schwalbe, 2006, 251)

Different project have different expected level of quality in terms of project deliverance. Project quality management is the process that ensures the project achieves its responsibilities to satisfy the project needs, which is undertaken by planning, developing, and managing a quality environment. (PMBOK Guide, 2008)

Human resource management is the way of using all the people involved in the project professionally in order to get the best outcome for the project. Project human resource management contains all the stakeholders of the project including the sponsors, customers, individual contributors, and all others. (Marchewka, 2013, 18)

Communications management is based on timely and precise information about the project to the project stakeholders or communication management it could be defined as critical link between people and information that are needed for effective communications. In order to the project to be successful good and effective communication is required to provide the needed information. (PMBOK Guide, 2008)

Project procurement management includes getting work done by people outside the project team it is also includes managing contracts and change control process to manage contracts or purchase orders. (Marchewka, 2013)

Project Risk Management is processes that are concerned with conducting risk management planning, identification, analysis, responses, and monitoring and control on a project. Most of these processes are updated throughout the project. The aim of the project risk management is to help organization to understand and evaluate risks with the understanding to increase the probability of success and reducing the possibility of failure. (PMBOK Guide, 2008) This area is the focus of this thesis and described in more detail in chapter 2.6.

2.5 Common project risk

There are many different kinds of project risks. According to the triple constraint figure (Figure 1) it is very clear that there are risks within the project goal. This chapter will start first by defining what risk is and then looking at the most common risks organizations are facing.

Oxford dictionary defines risk as the possibility that something unpleasant or unwelcome will happen. It is a very common misconception that risk is always negative; however, this is not necessarily the case. Risk can be negative or positive. The

different between uncertainty and risk is that lacking certainty means that you are not able to be precisely known. It's a condition or possibility of not knowing what might happen, while risk is part of uncertainty (David, 2009). For an organization, it is an uncertain future event which could impact the achievement of its strategic, operational and financial objectives. It can be deduced that there are some unplanned future events that will not have an effect on the achievement of an organization's objectives. What this means is that not all uncertainties or unplanned events has an impact on an organization's objectives. Some risks do matter and others don't.

For an example, if there is a heavy rain in Sweden and there is a chance of any danger can happen if you go outside, everybody should stay inside until the rain stops. But if you don't live in Sweden and you live in Finland, this risk of going outside doesn't matter to you because you are not in Sweden at that time. Being able to differentiate and identify risk that matter from those that don't is not always easy. This will bring us to risk management later in this research where you can see how risk can be identified and managed.

Köster differentiate risks in two categories which is anticipated risk and emerge risk. These two risks are also known as "Know-unknown" and "unknown- unknown". The known-unknown risk which is defined also anticipated, these are the risks that are not totally known but they can be recognized. Unknown-unknown, also called emerge risks, these are type of risk that we don't know anything if they will occur or not, and they cannot be predicted. The following could be example of emerging risk; political revolution, natural disasters, high level of corruption. (Köster, 2010, 99)

2.5.1 Risks in the expectations

According to Haney (2009), one of the most common project risks has to do with user involvement. If user is somehow not involved in planning of the project, they may add or change the requirement later while the project is still continuing. This may cause time delays and increasing the cost. It's important to understand what user really wants, and keep them update while at the same time manage their expectation. (see also in Holtsnider & Jaffe, 2012, 264)

2.5.2 Risks in the scope and schedule

There are three elements that are needs to consider when implementing the scope of the project in a very beginning of the project. The elements are goal, deliverance, and requirement. The goal should be realistic, measurable and it should have time element. Deliverance is output of the project completion. Usually deliverance is tangible and measured. Requirement description of deliverance usually describes the characteristic of deliverable. (Heldman, 2005, 95)

The can be risks if the goal and objective is unclear. If project goal is not defined well in a very beginning of the project this could cause the project delay. Time and communication require a lot when defining the project goal and the objective, but sometime lack of experience to describe what they really want from project sponsor, goal and objective might be unclear to the project team.

2.5.3 Risk and culture

People from different nation have different attitude towards risk, as those differences can turn into project essential risks and lead to unidentified external risks. This difference can have big impact on the project if the managers do not include them in their project planning. There are some other aspect like individual‘s personality, organizational culture, or educational background these aspect may cause different attitude towards risks. The proper way of managing risk concern different culture attitude is recognising the presence of the risks, and knowing on possible differences in the attitude towards risks. Figure 4 shows how different culture can have different attitude toward risk. (Köster, 2010, 100)

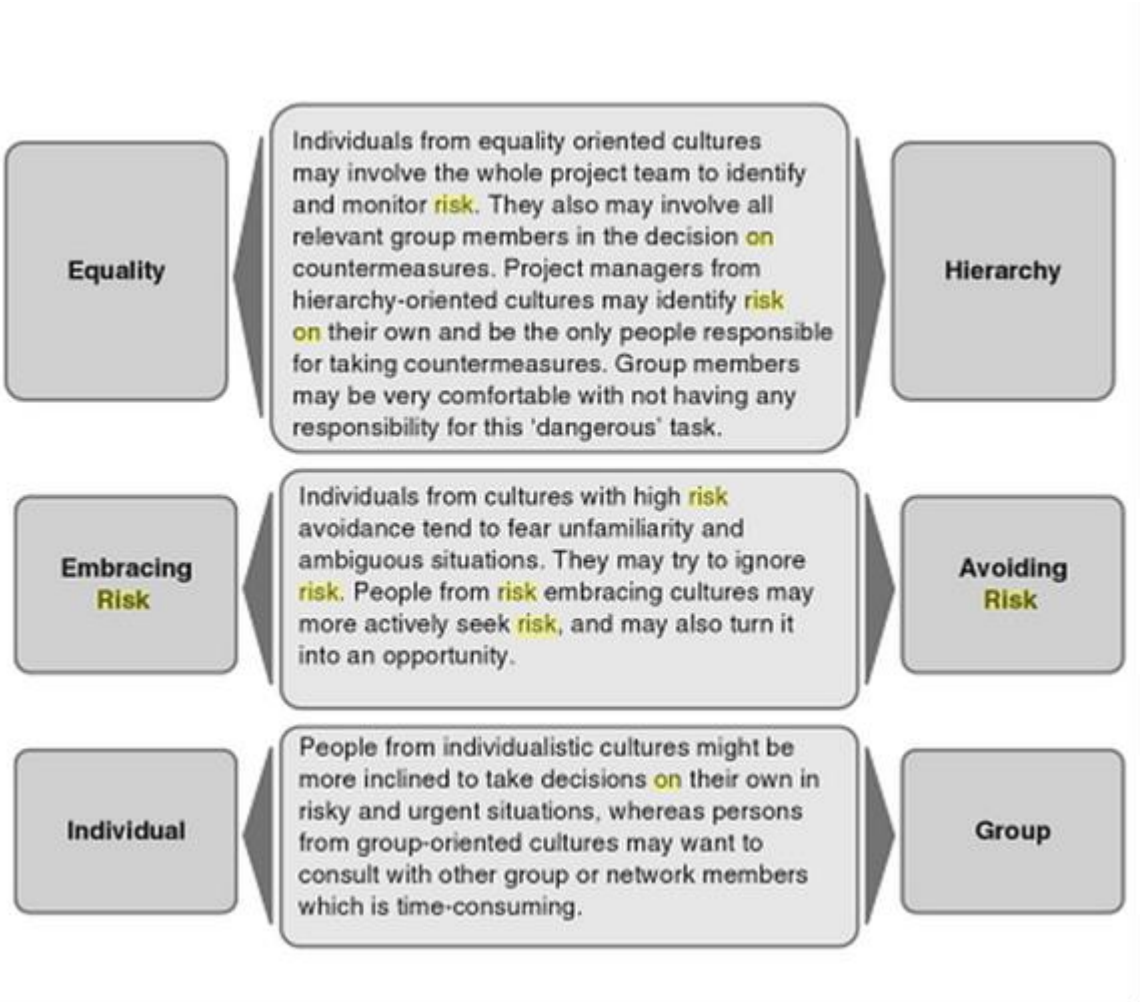

Figure. 4 Cultural impact on risk management (Köster, 2010, 101)

There are other internal risks which are related to international project caused by organizational itself, either on boarding level or project level for instance "lacking or non-existent project planning, inappropriate stakeholder management, poor selection of team members, dysfunctional communication." (Köster, 2010, 100)

Another specific risk concerning international project are local authorities with different issues like delay of permission, language problems and corruption (Köster, 2010, 104). For example if people are corrupted project might need to spend more money than it was planned. After presenting these examples of the risks that could

impact the project process, the next chapter is going to introduce the process of managing these risks.

2.6 Introduction to risk management

Risk management is a significant business process that most technology driven companies use to mitigate or protect the critical business assets from threats. The institute of risk management describes risk management as a process that help organisation to understand and evaluate risks. With the understanding is it possible to increase the probability of success and reducing the possibility of failure. However, risk management is defined also as identification and managing threat that could affect or bring down the organization. (Agrawal, 2009) On the other hand it is a process of identifying, analysing, and quantifying risks, responding to them with a risk strategy, and then controlling them (Newell, & Grashina, 2004). Business Dictionaries (2013) provide clear definition of risk management:

> "The identification, analysis, assessment, control, and avoidance, minimization or elimination of unacceptable risks. An organization may use risk assumption, risk avoidance, risk retention, risk transfer, or any other strategy (or combination of strategies) in proper management of future events"

Risk management is not only about identifying, analysing, and quantifying risks, but it is also about controlling when risks has the greatest chance of occurring and defining plans to mitigate the risk impact. (Heldman, 2005)

According to Snedaker (2005) state the key factor of risk management is to identify the risk that has great impact in the project when they occur, because not all they risk that occur to the project has impact to the project. Some project risk are not particularly likely to occur but if they occur they would be harmful for the project, these are kind of risk that have natural disaster to destroy the project work already accomplished.

Snedaker (2005) continues that the early stage of managing project risk is to identify all possible risks. A good way to manage this is to involve all IT project team member together and discuss all different kind of risk which might occur during the project. The first step in the meeting is that the stakeholder needs to discuss what could go wrong during the project. This should be done in the beginning of the project, different stakeholder might know possible risks that might occur and how will it affect the project.

In both public and private sector organisation, whether they are large or small risk management is relevant. There are vital to form part of the culture of the organization in risk management. In addition, good policy sets the program led by top management and lays down clear responsibilities for every manager and employee. This support accountability, performance measurement and reward thus promoting efficiency at all levels.

Risk management has to be done throughout any project: It has to be done from the beginning of the project when you don't know so much about the project, and has to be done at the end of the project and many times while the project is continuing, and risk that has been identified at the beginning of the project must be exercised and not ignored. (Newell, 2004: 175)

Maylor (2003) divided risk management into three areas, identification, quantification, mitigation or response control. The first component of three risk management frame work is risk identification this is basically an indicate of showing what is going wrong in the project

2.6.1 Risk identification

It is very clear that the first step in risk management is to discover all potential risks within the project. Once all the risks have been discovered, they need to be described briefly, so that it is clear exactly what each risk is about. Because these risks are the things that threaten to stop us to deliver what we promised on time. (Newell & Grashina, 2004) Threats and opportunities must be identified, risk must be identified

clearly what kind of impact its carrying and not just a symptom. The impact of each risk should be well defined and understood to everyone so that effective strategies and responses can be made as soon as possible. (Marchewka, 2013)

Beside, Cadle and Yeates (2004) suggest as soon as we have clear defined description of the risk, we are in good position to describe the impacts and what need to be done. The first thing need to be done in risk identification is to identify the area where risk occur. Newell and Grashina (2004) describe different way of identifying risk.

> *"Scope*: Work breakdown structure will be valuable here. Project scope must be well defined in both way, deliverable and work that need to be delivered.
>
> *Time:* Estimates for the duration of the project and the duration of the project task must be done accurately and reliably. The sequence of work must be identified, and the interrelationships between the tasks must clearly define.
>
> *Cost.* Estimate for task must be done accurately and reliably. All associated costs must be considered and reported accurately. Life cyle costs should be considered as well as maintenance, warranty, inflation, and any other cost.
>
> *Customer expectation.* Estimates of project success must be considered items of customer needs and desire. The ability of project to be scaled up or manufactured in different quantities or for different uses and sizes must also be considered.
>
> *Resources.* This involves the quantity, quality, and availability of the resources that will be needed for the project. Skills must be defined in the roles that will be necessary for the project.

Organization. This is the ability to interface with the stakeholder's organization in terms of communications and knowledge."

2.6.2 Risk quantification

Risk quantification is the next procedure coming after the risk identification. It is a process that is used to evaluate the risks that have been identified and it provides a solution of making a decision of what should be done about them. Risk management is done from beginning of the project until the end. For this purpose qualitative analyse need to be used in the project and quantitative techniques can be used at some other time in the process. (Newell & Grashina, 2004)

Most of the projects might not have enough time or money to take action in each risk that has been identified. The aim of risk quantification is to provide a way of arranging a risk in order of position. Basically quantification arrange the risks according to the severity, higher severity level and lower severity level, in this case project team will take action into a risk according to their severity level. Severity it is basically combination of risk probability and risk impact.

2.6.3 Risk response

The process of risk response is done after the risk that have already identified and quantified. Strategy of risk response is based on organization or project risk tolerance. This means the willingness of a person or company to accept or avoid risk. People and company have different risk tolerance. Basically it is up to the company or organization to decide how much their willing to lose if risk occurs. Newell and Grashina (2004) describe risk tolerance as level of severity. All the risks that are below and to the left of locus of the points of equal severity are acceptable risks and those risks that have severity above to the right of the severity line those are unacceptable risks (Figure 5).

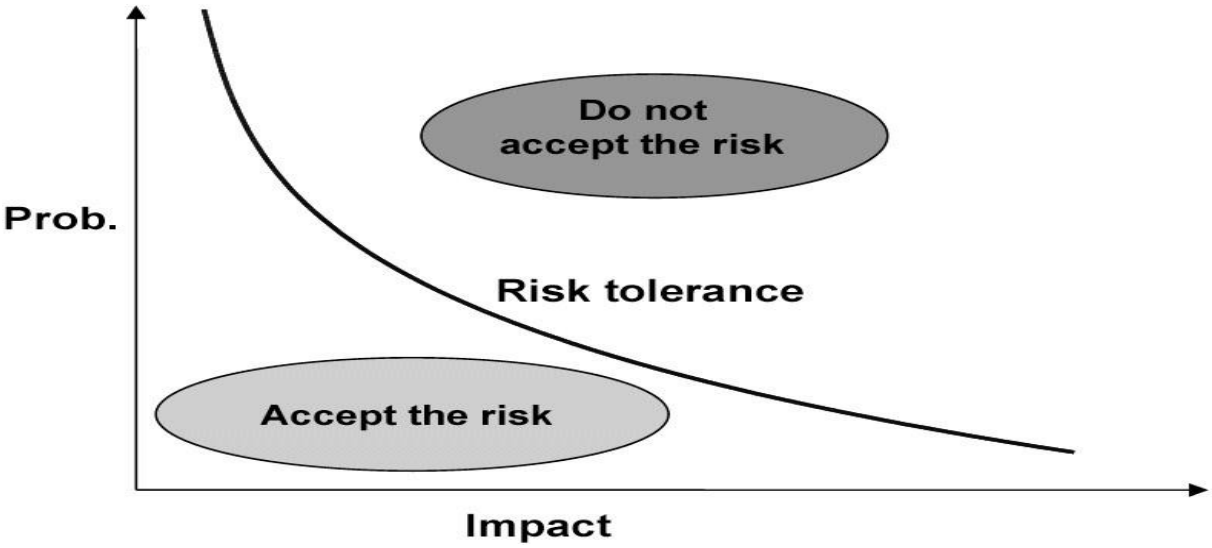

Figure 5. Risk tolerance (Newell and Grashina, 2004)

There are several strategies approaching risks which are: avoidance, acceptance, transfer and mitigation. Acceptance means that the risk has very low severity and you cannot do anything unless they occur. When the risks occur there are two different kinds of acceptance to deal with the risks which are active acceptance and passive acceptance. Active acceptance means that after the risk is been identified and accepted, the decision is made on what should be done when the risk occurs and when. As Newell and Grashina (2004) explained it is much easier and more effective to make plan and place when these types of risks occur rather than trying to deal with the risk immediately when you don't have enough time. This could possibly give a wrong solution. Passive acceptance is a situation when nothing has been planned at all for the risks occurrence. This is probably because the severity of the risk is too small for organization to spend time and money for it, the time and money will be spend can be higher than the risk itself. (Newell & Grashina, 2004, 195)

But if the risk severity level is much higher than the risk tolerance we can use three different possible approaches. The first possible approach could be transferring the risk according to Newell and Grashina (2004). They provide different theory of transferring the risk. Transfer strategy in managing risk is to move the risks that occur in the project to someone outside the project. Even though we know the risk will not go away but we know for sure the responsibility is simply given away to someone else. The most common method to transfer risk is to buy insurance, whether the risk occur

or not it is always better to pay small amount of money to an insurance company which cost less than the risk itself. If the risk occur insurance company pays to have the risk resolved and if the risk will not occur insurance company keep the money. (Newell & Grashina, 2004, 195-196)

Risk avoidance is little bit different than the other strategies. In risk avoidance means a situation when all the possible risk are removed or eliminated. There is two ways to avoid risk. The first faster and simple way is to remove the part including the risk from the project deliverance. The second way is redesign the product deliverance by changing the scope and objective of the project so that the risk cannot occur.

In risk tolerance definition it is said that all the risks that are above the points of equal severity are acceptable risks and something had to be done about them. Mitigation means unacceptable risks that where something need to be done to reduce either their probability or impact of the risks that their severity falls below the maximum risk tolerance level. (Newell & Grashina, 2004, 197)

2.6.4 Monitoring and controlling risks

PMBOK Guide (2008) describes the process of monitor and control risks into four stages. The first stage is tracking identified risks, and the second stage is monitoring residual risks. The third stage is identifying new risks, and the fourth stage is evaluating risk process effectiveness throughout the project. This means once all risks have been identified and appropriate responses been made, the next step will be scanning the entire project environment so that identified and unidentified threats and opportunities can be monitored (Marchewka, 2006, 245).

Köster describe four stages of monitoring and controlling risks differently from PMBOK. The first stage described is monitoring the status of the risk as listed in the risk register, the second stage; ensuring that risk response plan is adequate. The third stage is to monitor the project environment in order to detect emerging risks, and the fourth one is to ensure the proper execution of the risk management plan. (Köster, 2010, 102)

Since monitoring and controlling is an important part of risk management process, it must be started early enough and continued until the end of the project. Monitoring project risks can be started as soon as the project manager has clear plan and authorized baseline, and need to be accepted by the project leader and the team. (Kendrick, 2009, 274) In the middle of the project some of the risks will change and some of them will no longer be possible, and some of them can be disposed of, possibly new risks can be identified. (Newell & Grashina, 2004, 199)

2.6.5 Analysing and prioritizing risk

Risk are analysed according of their likelihood of occurrence. In this case managers and the team need to analyse and prioritize the risks by either using two different approaches which are qualitative approach or quantitative approach. According to Maylor (2003, 223) majority risk management is based on qualitative data. That is done by gathering around people awareness and opinion on different level of risk involved in particular project process. Köster (2010, 103) added also that ranking the risk in terms of their impact on the project is also part of qualitative process. Regularly risks are ranked according to their severity; they can rank as low–medium–high, or on a 1–3, 1–58 or 1–109 scale. Figure 6 shows the probability and the impact of the risks rank according to their severity.

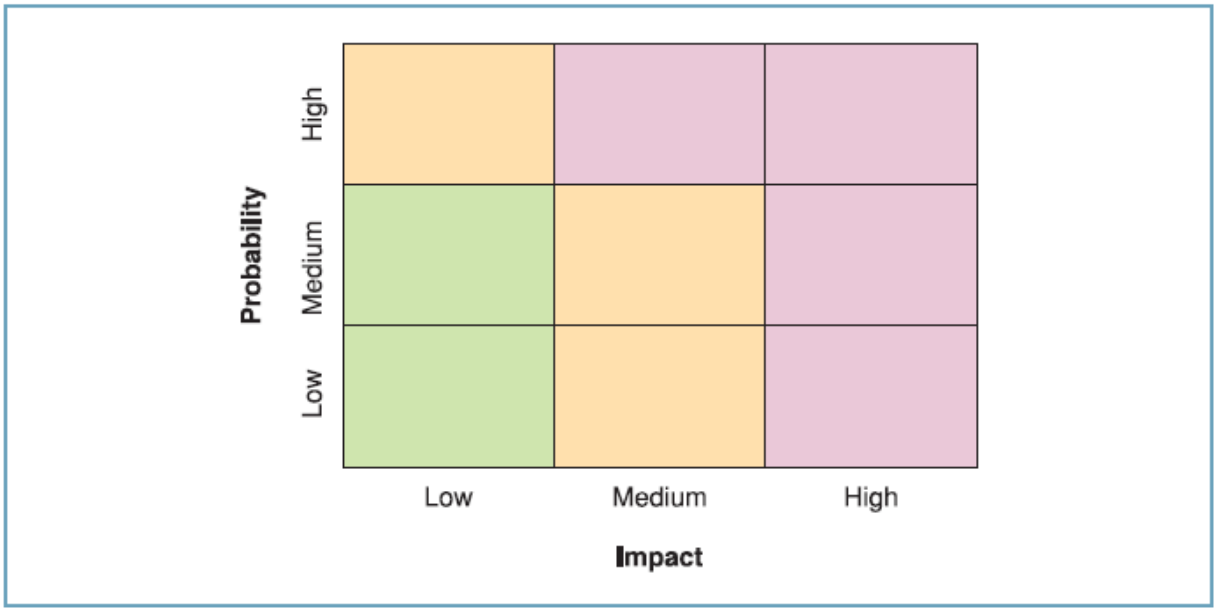

Figure 6. Probability impact chart (Maylor, 2003)

Next chapter is going to present the case study as a practical part of this thesis. First, the overview of the company will be presented and then the findings of the research.

3 Practical part: Case study Sibesonke

The previous chapter has delivered theoretical part of the thesis. This chapter will provide practical part of the company case study.

3.1 Introduction of the company Sibesonke

Sibesonke is the start-up business venture company, which was established in 2009 with license agreement in global telecommunication giant in Finland. The word "Sibesonke" is originally from South Africa and it means bringing people together. Sibesonke is very small company with 6 workers.

Company approach is to provide service as an internet service but making it accessible for even the simplest mobile phone, as far as connection reaches using interactive telecommunication protocol. They also build on deep consumer insight to meet the needs of lower-income people (for more information, see Attachment 3).

Sibesonke provides social and business networking on the simplest of mobile phones. Sibesonke Mobile Communities are a unique, award-winning service addressing the world's 2.5 billion phones users in the developing world who are without Internet. The company consumer pilot was successfully finalized 2009 in South Africa. Direct consumer feedback has been very encouraging and overwhelming. Company reached exponential growth during the trial phase. In 2010, they expand the service geographically and in user experience with partner cooperation's while at the same time building proprietary IPR, a user segmentation model (targeted ads), and rapid user feedback process. (Sibesonke company website, 2013)

Sibesonke mobile service works on every mobile phone using SMS and USSD which are part of the GSM technical standard. USSD is a text based browsing protocol

allowing faster information download than SMS. In Sibesonke mobile service, users can browse content and make own posts whatever phone model they have. The service is live in South Africa today and connected to all mobile networks.

3.2 Sibesonke services in Tanzania

Sibesonke Ltd is one of the first organizations that have cooperation with a major Tanzanian mobile network operator which has already successfully launched a mobile service specifically targeted to farmers (for more information, see Attachment 2). The m-farming service basically provides real-time information on weather forecasts, crop and livestock management including advice on topics such as pests and disease treatment on the mobile. It presents small-scale farmers in Tanzania with a first-time opportunity to increase their farm productivity which is considerably lower compared to other regions in the world. The m-farming service works on even very basic phones to reach users of all income levels. Figure 7 below shows how the services work on the basics phone.

Dial *xxx# on your cell phone and the data call is established giving you a text screen on your cell phone. Follow the instructions and select your "next page" option by pressing "answer" "send".

Figure 7. m-farming example (Sibesonke company website, 2013)

3.3 Presenting the method of the case study

The interview is based on theoretical information and especially one questionnaire from a government project (Sullivan, & Streater, Audit Office of New South Wales Australia). The interview questions are found in attachment 1.

Structured interview	− The interview is based on a pre-prepared questionnaire. − The interviewer presents the questions orally and records the answers. − Date: November 21, 2013, at 12:30 − Venue: Start-up Sauna (Espoo)

The interview is going to be analysed with SWOT analysis. In every business field SWOT analysis is used as the tool to understand the business internal and external factors. SWOT analysis is commonly used as a technique in all business planning in order to view strengths and weaknesses as internal factors to the business and opportunities and threats as external factors. Since SWOT analysis is the tool which is guiding the business, it is used to understand for example the competitors, and the marketplace. For instance after looking at your business strengths and weaknesses (internal), you might also see some opportunities and threats that are internal to your business. Internal opportunities might be those related to the core competencies of the business, internal threats might be significant political changes in top management or change of business environment. (Snedaker, 2005, 46)

After the definition of SWOT, the next chapter will present the SWOT analysis of the case study interview. The core findings are going to obtainable in a SWOT table.

3.4 The analysis of the interview

To get the whole picture of the case company there is also further information combined with the SWOT analysis table (Table 1). That information is either from the company website (marked with [1]) or from the author's working experience in the company (marked with [3]). The objective of the thesis will still remain from the risk that founded from the interview (marked with [2])

Table 1. SWOT analysis of the case study

Strengths (S)	Weaknesses (W)
− In a small company with fewer employees it is easy to maintain the people. [1] − The CEO and Chief Technology Officer have lots of experience from Nokia.[1] − Since it is a small company the labour cost it is much lower than in other larger business companies.[3] − A massive market need for the mobile service technology for agriculture.[3] − Technology is cross-network, all phones including.[3] − Contracts with major mobile operators.[3] − Risk management is delegated away to the cloud host. [2]	− Developing something which is not addressing the market need and user need in the mobile service technology for agriculture. [2] − The company risk management processes are not well formalized. [2] − With small budget in Sibesonke, the company is required to contact customers and business partners by email or phone instead of face to face conversation.[3] − Since it is a small company, budget doesn't enable forming a risk dedicated management team to prioritize the important risks. [2] − The lack of risk register. [2]

Opportunities (O)	Threats (T)
− Strong support of the Embassy of Finland in Tanzania.[1] − The small-scale farmers in Tanzania are having an exceptional opportunity to increase their harvest thus closing the productivity gap with other parts of the world.[1] − Cooperation between Sibesonke and Ministry of Agriculture.[1] − Food security is a global market need and of high political interest. Possibly support from UN, FAO, etc.[3]	− The company main customer are international customer (overseas customer) and this might bring legal a regulatory issues in the marketing.[3] − Poor communication between Sibesonke and customers in Tanzania[2] − Customer demand of the schedule: if the deadline is tight and the process is not ready on time it could damage the relationship. [2] − Political changes and corruption can slow-down or hinder business opportunities.[3] − Behaviour change with traditional farmers can be challenging.[3]

[1] Information from the website

[2] Information from the interview

[3] Information coming from author's work experience in the case company

3.5 Findings of the case study interview

The method of this thesis is qualitative, based on a research and an interview. The interview of the company was based on a pre-prepared questionnaire and the questions were asked orally and the answers were recorded. The interview took place at Sibesonke office start-up sauna in Espoo, interview happened on November 21, 2013 at 12:30am, lasted for 30 minutes. The interview covers different area on risk management which are: responsibility of analysing and prioritizing risks, awareness of risks and risk management and user involvement risks.

The result of the case study interview will be discussed according to the topics and questions that were discovered in the interview itself and some of them were summarized in the SWOT analysis table. The main topics are going to be the general awareness of risks and risk management and the present state of the Sibesonke project risk management. After discussing these areas the author will outline the solutions and suggestions for micro companies like Sibesonke to be followed (Chapter 3.6.).

3.5.1 Awareness of risks and risk management

According to the interview the company is aware of risks and risk management. In fact, they are facing different kind of risks. Based on what were discussed on the interview most of the risks that company is facing are purely business risks, and some of them are information technology risks.

When it comes to the IT related risks in the company, the CEO (Chief Executive Officer) of the company described on how those risks are recognized. They have different ways or certain levels of recognizing risks. One of them is coming from their customer which is mobile operator who have requirement on their side about IT related risks. For example the customer has the requirement of security protocol like VPN (Virtual Private Network) and firewall settings and also other aspects like private IP address instead of public IP address. Some of the requirement risks are directly identified through requirements from the customer. Other risks are identified through the services performance, by reviewing the services itself. CEO of the company mentioned that they have to do reviewing on a daily basis by looking at the services

performance so they can immediately recognize if the services are not working as they are supposed.

The question concerning the risk management of the company was asked; how does the company manage risks when they appear. The interviewee pointed out that risk management in is not a critical thing in their company. That is why they don't maintain risk register with priority or write down a schedule and so on. The CEO of the company stated that it is simply by nature of a start-up company that they are still small team. The present team in the company is focusing on the components that are creating growth and success in the company. Those components don't always consist of risk management aspects. Risk management is not a proper formalized critical path; even though they do have risks and they do manage them, they don't do it in a formalized way.

The company has also different kind of business risks. One of the major risks that they are more interested in is customer satisfaction. Referring to the interview, the CEO of the company said that the business risk that company is very aware of is that you develop something which is not addressing the markets' need and users' need. The way to address that risk in the company is to observe user behaviour. Observation also includes calling the users and asking the user that what the company can do today and in the future. The CEO brought up in the interview that they want to have a dedicated person in Tanzania who is able to meet face to face with the users. That communication is essential, first for collecting feedback of the services and then comprehending the core foundation how to improve the services.

3.5.2 Sibesonke project risk management

It ascends from the interview analysis that the company's risk management is not well formalized (Table 1: Weaknesses). Risks can be seen as negative articles and they can be seen positive as well. Based on the interview, Sibesonke have both negative and positive risks. Some of the risks could also be seen as a positive and a negative factor at the same time. For example, that can be said about the cloud hosting.

Risk management is not that critical element in Sibesonke because a large portion of the risk is managed through the cloud hosting. This is an in-build service which includes server capacity and the cloud service provides management of the backup services. For instance, if the machine or gadget breaks down, there are no effects seen by the user because the cloud host just replaces the service with another one. This can be seen as strength and positive risk because company does not have to put much time and efforts on doing risk management consider it is a small company. There is also a downside in the cloud hosting service; when something unexpected happens the company itself doesn't have the control to handle the crash.

But Sibesonke do have many negative risks that can be categorised either as internal weaknesses or external threads. One of the major threads which are seriously considered is the poor communication between Sibesonke and the customer (Mobile operator) in Tanzania. This is one of those risks that the company is aware of but has no power to fix it completely. There are other small negative risks like the fact that the company doesn't have specific group of people to monitor and control risks. Basically the main responsibility of monitoring and analysing the risk belongs to the CTO (Chief Technology Officer) but also other people including CEO himself is looking at the risks.

Sibesonke risk management is not well formalized. Since it is a small company, budget doesn't enable forming a risk management team to prioritize the important risks. The company do have different kind of risks but not specific risks; this is because they don't document systematically the observed project risks.

Risk is possibility of something unpleasant that can happen in a project. It can be managed and unpleasant outcome can be mitigated. The biggest challenge for small company like Sibesonke might be finding a proper way to mitigate the risks. With the low budget from the company it is unrealistic to try to eliminate risks completely, it can be too expensive. Managing risks in a project can be very simple or very hard, but the risk management process doesn't have to be entirely completed at first in the project. It can be started with very easy and simple step by following the plan for managing and mitigating risks and if needed, the process can be expanded later. Following chapter is

presenting risk suggestions for risk management process in micro it-company like Sibesonke.

3.6 Solution on risk management for Sibesonke and other micro companies

It appears to be that Sibesonke and possibly other micro companies are struggling with risk management within their organization. Even if the company does risk management process at some point, but due to the limited resources – money, time, and people – risk management is not the most critical thing. Because of the limited resource the company has to divide the size of the project into a smaller scale in order to reach the scope of the project. However, there are several things that can make micro companies' project failure. For instance in Sibesonke risk management is not proper formalized, even though they do have different risks but they don't manage them in a formalized way.

The leading aim for the company is to seek development in the business, and with the help of well-defined risk management plans it is possible to ensure that all resources in the company available are made the best use of. This chapter, based on the research and interview, will cover the solution of project risk management for Sibesonke and other micro companies.

3.6.1 Risk management process: Four steps in theory and in practice

Risk management is not only about identifying, analysing, and quantifying risks, but it is also about controlling that when risk has greatest chance of occurring and define plans to mitigate the risk impact. (Heldman, 2005) Micro companies need to use risk management in order to control their risks.

These different steps of risk management can be used to manage risks in an organization.

- First step: Identify risks

  Risk identification is early stage in risk management; the purpose of it is to discover all potential risks within the project. The risks can be positive or negative as you can see in case study SWOT analysis (Table 1). There is different kind of risks in a project, some of them are very common, meaning that they appear constantly and some of the risks are very specific and they don't appear often. The best way to approach these risks is following: first they need to be described briefly to get clear picture of what each risk is about. These risks are the things that threaten to stop project team to deliver on time what they have promised. Once you have clear picture of the risks, the next step is to look at the impact of each risk and define. Is it essential to make sure that everyone in the team understands the definitions of the risk impacts so that effective strategies and responses can be made as soon as possible.

  Let's assume you have a group of people or person whose job is to identify risks for Sibesonke Company. This particular group of people will always check if there is new risk occurring and describing them briefly before taking them into next step.

- Second step: Risk quantification

  Once the risks have been identified it is time to quantify the risks. In this stage you put all the risks on the table and start to evaluate the risks that have been identified. That is done in order to later provide a solution and make a decision of what should be done about them.

  It might be a bit challenging for micro companies like Sibesonke to take action on each risk that has been identified in a project. That is due to the natural feature of a start-up company: limited resources of time, money and other issues. But the quantification tools provide a way of arranging risks in order of position, basically quantification arrange the risks according to the severity. Higher severity level and lower severity level can be determined; in this case

project team will take action into a risk according to their severity level. Severity it is basically combination of risk probability and risk impact (see again Figure 5: the x-axis and y-axis). Quantification is a close term with prioritizing. Prioritizing risks is important for the company projects. Risks can be prioritized according their probability and impact, as mentioned above, or according to other factors like cost and demand on working hours. Prioritizing and measurement for that is needed constantly at this point.

- Third step: Risk response

It is very important to remember to follow the steps when you attempt to manage project risks. The first step is always to identity the risk, second to quantify the risk, and third step is now to response to the risk. Risk response is based on risk tolerance; meaning the willingness of a person or company to accept or avoid risk (see again Figure 5: the risk tolerance curve). Small company and large company have different risk tolerance rate. It is vital for a small company to know how much their willing to lose if risk occurs. In the theoretical part of this thesis (Chapter 2.6.3.); risk tolerance has been well explained with the terms high severity and low severity. Risk response has different way that a company could approach risk; acceptance, transfer, avoidance, and mitigation.

According to the theory part of the thesis acceptance of the risks is connected with those risks that have very lower severity. Even if they occur the will not affect greatly the project progress and that's why these risks can be accepted. In a start-up company like Sibesonke this means calculating the cost of either managing the risk or just accepting the risk. For example, cultural differences in attitude can cause these types of acceptable risks, like differences in the negotiation and meeting behaviour (see the Figure 4: Cultural impact on risk management). But if the severity level is too high for the acceptance, in other words when it is exceeding the risk tolerance curve, another risk response approach has to be selected.

Transferring the risk means moving the risk that occurs in the project to someone outside the project, for example to the cloud hosting service. Even though the risk will not go away, the responsibility is simply given away to someone else. Simply for small company like Sibesonke is very important to have insurance for the company in case of an emergence, if there happen vast damage in the company they don't have to pay for it and the insurance company will pay instead.

In a company like Sibesonke, it can happen in the middle on of IT project that is discovered that the product is not going to meet the need of the customer and/or the user. The risks can be too high to be managed so the solution is to either eliminate the dysfunctional part of the project or to change the scope of the project. This type of response is called avoidance.

- Fourth step: Monitoring and controlling

Monitoring and controlling phases are defined in ambiguous way in literature. According to Köster (2010), the first stage is monitor the status of the risk as listed in the risk register, the second stage is to ensure that risk response plan is suitable. The third stage is to monitor the project environment in order to detect emerging risks and the last stage is to ensure the proper execution of the risk management plan in general.

Risk management plan should be done regularly and it should be reviewed and updated in every couple of month. A good way to monitor and control risk management in micro company is to involve all IT project team member together and discuss all different kind of risk which might occur during the project. This process has to be done regularly also, in order to have idea of the risk process it can be done at sequel of the project as well.

3.6.2 Examples of risks: How to manage them?

There came up also other risks in the case study interview (Table 1: Weaknesses). Following, those two of those risks will be pointed out and given suggestions for the risk management process: how to deal with those risks in a formalized way.

- Risk 1: User involvement

  According to the interview, at the moment Sibesonke does not involve user at all in the development of an IT project. In general, if user is somehow not involved in the planning of the project, they may add or change the requirement later while the project is still continuing (→ identifying the risk).

  This may cause time delays and increase the cost of the project. That is not good, especially for small start-up companies like Sibesonke (→ quantifying the risk). In other words, this is a risk that is exceeding the risk tolerance curve. That is because at the same time both likelihood and the impact of the risk are high (again see Figure 5).

  It's important to understand what user really wants, and keep them updated and at the same time manage to meet their expectations. In the interview, CEO of Sibesonke mentioned about their major risk concerning user; that they may develop something that doesn't reach the market need. When thinking about risk response, this risk that cannot be either accepted or avoided. In order to prevent the situation of developing something dysfunctional, you should involve the user in each step of your development side (→ risk response: mitigation of the risk). That way the company may not have to worry about the market so much, because they have gathered the information what user really wants beforehand and during the project.

  It was already mentioned in the interview, that in the future the plan is to have a dedicated person in Tanzania close to the customer to observe customer need and ideas for improvement (→ monitoring and controlling the risk). Thus, the finalized product is successful.

- Risk 2: Risks documentation

Documenting the risk is an essential part of risk management, some company use risk register tool to document their risk. It was asked from the interview if Sibesonke is documenting their risks somewhere and the answer was negative (→ identifying the risk).

The attitude towards the tolerance of this particular risk is depending on the company's general business strategy and plan (→ **quantifying the risk**). The next step in the process is naturally conditional to the severity level given to the lack of risk register in the company.

If the risk is exceeding the tolerance curve, there are few options to be chosen (→ risk response: different options). Keeping a risk register is wise especially for micro companies to document their risk, because it is giving direction to the whole risk management process in the company. At the moment it seems to be, that Sibesonke is using passive acceptance for this risk's response. If the response of mitigation or transfer is selected instead, risk can be documented according their impact. The risks can be ranked as low–medium–high, or on a 1–3, 1–58 or 1–109 scale. When documenting the risks first thing needs to look at is probability and impact of the risk. The probability impact chart (see Figure 6) shows how risks can be prioritized according to their impact of occurrence. The responsibility of the risk register documentation has to be systematized (→ monitoring and controlling the risk).

4 Conclusions

The aim of this research is to clarify ways in which risk can be managed in a project, especially for micro companies. The main goal for any company is to seek development in the business. With the help of well-defined risk management strategies it is possible to ensure that all resources – money, time, and people – in the company are made the best use of. That is the reason, why attention to risk management processes should be paid and formalized steps should be formed.

Many micro companies appear not knowing the full extent of project risk management because of lack of resources, training, as well as in-depth knowledge of what needs to be done in order to reduce or eradicate risk. In every company, a well analysed project with a distinct project goal will go a long way to help manage risk. It can be that project teams are unaware of what the project goal and objective is which causes delay and time lapses which in time increase budget allocated for the project. These can be seen as little details, but it is very important to take into consideration in order to achieve a desired project goal. Conclusively, managing risk in every organisation increases transparency and efficiency.

As it was founded in the SWOT analysis, the start-up company Sibesonke is aware of the risks, but the risk management processes not yet unmistakeably formalized. As the research states, there are a lot of risk in project and different ways in which companies tends to manage them. Identifying risk is one of the most important aspects of a project which will tell us the full extent of the problem the company could be facing or likely face. There should be a more in-house check of every project from time to time in order to detect errors before they go further and becomes unmanageable. Everything starts with the identification of the risks. After that step is taken, the next phases are quantifying the risk, risk response and at last the phase of monitoring and controlling. All these phases are enlightened in the thesis.

The thesis carries out an interview from the case study which was presented for the member of the company CEO, in order to collect different data concerning risk management and provide solution to the company for the future projects. Considering the importance to combine the theoretical knowledge and the practical understanding, this thesis brings those parts together. That is shown by explaining risk management as four steps process and also revising the process through two examples: user involvement and risk register documentation. For a start-up company like Sibesonke, it is advised to follow the formalized risk management procedure to reach the scope of the IT project. In addition, the research question in the future could be establishing the risk management process for micro companies in even further detail.

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Attachments

Attachment 1

Interview with Sibesonke CEO

Interviewer (Adam - A): *How is your company recognizing risk in IT project?*

Interviewee (Uwe - U): There is a different or certain level of recognizing risk, one of them is coming from our customer which is mobile operator who have requirement on their side about IT related risk, for example the require security protocol like VPN (Virtual private network) and firewall setting and also other aspect like public IP address instead of private IP address. Some of the requirement risks are direct identify requirement from our customer and then other risk identify through the services performance reviewing the services itself, we do every day on a daily bases by looking at the services performance and you can immediately recognized if the services is not working as it supposed to work with KPI (Key Performance Indicator) They basically show us everything works fine or not and if something is not work it activated you can immediately see.

A: *Who is responsible for analysing and prioritizing the risks facing your organisation*?

U: As you know we are small organization we don't have dedicated team or people who only focusing on the risk, but basically the main responsibility analysing is CTO (Chief Technology Officer) but also other people including myself looking at the risks.

A: *Does your company make use of computer software for risk management?*

U: We do use computer software for risk management; this is actually quite wide question for example we use security software like VPN and also cloud hosting software, we use Amazon cloud and there are security feature in there for managing technology and security risks, so in a sense I think I do answer to your question. Yes we do use some software.

A: *Does your organisation have a risk register/database?*

U: No we don't.

A: *Does your organisation identify risks in terms of?*

- *What can happen?*
- *How and why risks arise?*
- *Area of impact?*

U: For example one of the risks is that technology is not working and basically the end user services will not work because of the technology, then we have to identify that risk through monitoring our services, so do not only report KPI (Key Performance Indicator) that tell us if the end user receive valuable, we also do monitoring of process different process in the system for example on progress we let the system for example risk crush and risk start if the was a serious bug into a system we then get notification by email immediately we tell us there is something went wrong in the system. We have certain level of reporting some are critical which then lead us to a risk start and we have to address immediately and then we also have minor which is less agent thing when we get notification but we don't deal we them immediately.

A: *What is the specific risk that your company facing now?*

U: We do have different risks but not specific.

A: If you look at triple constraint: Scope, Schedule and Budget which one of this method includes more risk in your projects positive or negative way?

U: It's difficult to say sometime the schedule is important some time IT schedule is critical thing that we have to do something in certain time, for example the customer want to lunch services in a certain day then schedule come very important, but then in other case schedule is not at all critical because the customer not requiring that the service will be ready at certain time but we just know there is something need to be done usually its good be done but schedule is not a critical.

A*: Does your project reach the scope?*

U: Reasonable question if you have clear defined IT project in our case or start-up is basically one big project and the scope of it is to make services successful this is all company is focusing on to make virility of the services or conducted people have motivation to brought other user to the services.

A: *Which of your four projects had more risks?*

U: The Tigo project in that sense there was higher risk than other project, because there was deadline for a lunching day, it had to be ready and was must be ready the risks was that if we hadn't reach the deadline our relationship might have been suffer.

A*: How do you register your risk if you don't have risk register?*

U: Risk management is not a critical thing in our company that's why we don't maintain risk register with priority or writing and schedule and so on. This is simply by nature of our start-up company we still small team and the all set up much better to look what is critical to make company successful, risk management is not proper formalized critical path, of course we do have risk and we do manage them but we don't do it in a formalized way

Lots of risks are taken away by server clouds hosting like typical IT risk of server break down, machine break down, hard drive, backups, scalability, services redundancy for example there is a possibility of getting more risk if we suddenly have amount of user and we have capacity on server side to manage the demand and all list of such server technology related manage from cloud services provide. This is in build services which we buy the server capacity and the cloud service provide manage backup services, if the machine breaks break down there is no effects on us because we don't see anything they just replace we another one. That's takes lots of risk on us we don't have to manage our self

The other risk which is actually business risk that we develop something which is not addressing the market need and user need and the way how we address that risk need is we observe user behavior and also call users and asks the user that what we can do today, in future we would want to have a dedicated person in Tanzania who is able to meet face to face with user, first for feedback of the services and also core creation of improving the services.

There is one more risk that we full aware but there's nothing we can do about it, internet break connection to Tanzania, we that there is break in internet connectivity.

Attachment 2.

SIBESONKE PRESS RELEASE **September 3, 2012**

Sibesonke successfully launched m-Farming in Tanzania

Dar es Salaam / Espoo - Finnish company Sibesonke Ltd in cooperation with a major Tanzanian mobile network operator has successfully launched a mobile service specifically targeted to farmers. The m-farming service provides real-time information on weather forecasts, crop and livestock management including advice on topics such as pests and disease treatment. It presents small-scale farmers in Tanzania with an unprecedented opportunity to increase their farm productivity which is significantly lower compared to other regions in the world. The service works on even very basic phones to reach users of all income levels.

In a country almost three times the size of Finland and often poor road infrastructure the provision of essential and individual information to the rural population is a big challenge. Farmers struggle to get access to vital agricultural information, as well as training on proven farming practices. Mobile phone penetration however has dramatically increased in the last years to about 60% now. This represents a historical opportunity to reach the 33 million Tanzanian farmers with relevant up-to-date farming content and thus contribute to food security in the region.
Sibesonke award-winning proprietary technology allows besides efficient content distribution also networking among the farmers. The company plans to connect its cross-network technology platform to other Tanzania mobile operators later.

"We are truly excited about the successful launch of our service and the very encouraging feedback. 80% of the responding farmers say the service is useful for their farming", says Uwe Schwarz, CEO of Sibesonke Ltd. "This has been the vision of our company since the beginning, to serve masses of under-served people in emerging countries in their day-to-day needs".

Sibesonke continuously expands and improves the service reaching users today over text-based telecom protocols and later over Internet when it becomes affordable to them.

Attachment 3.

SIBESONKE PRESS RELEASE **March 12, 2013**

Sibesonke's mobile service to help millions of farmers

Dar es Salaam / Espoo - Finnish company Sibesonke Ltd today announced in Dar Es Salaam a National Technology and Content Cooperation with the Tanzanian Ministry of Agriculture, Food Security and Cooperatives, and the Ministry of Livestock and Fisheries Development. The announced cooperation allows both Ministries to better reach the 33 million Tanzanian farmers with relevant up-to-date farming content on mobile phones. Sibesonke provides both the cross-network technology platform and the business model. Overall target is to substantially increase farming productivity and food security in the region in a financially sustainable way.

The kick-off event on March 12, 2013 in Dar was participated by the Permanent Secretary of the Ministry of Agriculture, Mr. Mohamed S. Muya, and other senior officials from both Ministries. The event was also honored by the Ambassador of Finland in Tanzania, Ms. Sinikka Antila expressing the strong support of the Embassy of Finland in Tanzania for this cooperation.

Poor transport and communications infrastructure mean that farmers in countries like Tanzania struggle to get access to vital agricultural information, as well as training on proven farming practices. Sibesonke's innovative mobile service offers cost-effective and scalable solutions to address these challenges. Farmers get real-time weather forecasts and crop and livestock management tips including advice on topics such as pests and disease treatment. This presents small-scale farmers in Tanzania with an unprecedented opportunity to increase their yield thus closing the productivity gap with other parts of the world.

For Finnish Sibesonke Ltd this cooperation in Tanzania is a major step in expanding its award winning and patented mobile community platform in East Africa. Life-improving content on a social network for basic phones has not been seen earlier in emerging markets.

"In a world where food prices continuously rise we believe services that increase farming productivity for millions of farmers are not only an extremely viable business serving farmers in the region - they also become of global strategic importance.", says Uwe Schwarz, CEO of Sibesonke Ltd. "We are very excited about the cooperation with the Ministries. In cooperation with mobile operators our easily scalable solution presents a healthy business relevant for emerging countries across the Globe".

Sibesonke continuously develops content and functionality of its service further to secure the lead in the Tanzanian innovation landscape. Next life-improving services will address health questions of people across Tanzania.