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EFFECTIVE PROJECT RISK MANAGEMENT IN MICRO COMPANIES

Case Study for Persona Optima Iceland ehf.

Thesis

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ABSTRACT

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This study is meant to be a guide for micro companies regarding effective project risk management. The main purpose of this thesis is to introduce project risk management and build a user-friendly managerial model toward effective project risk management in micro companies. The research is based on a case company Persona Optima Iceland ehf. analysis.

The study investigates risk management, uncertainties and risks in projects, project risk management, its models and particularities in order to give the main manner about project risk management and its adaptation in micro companies. Due to the need of improvements, recommendations and advices are drawn for the case or any other micro companies.

A qualitative research based on interview techniques was conducted to show how project risk management is implemented in the case company.

Key words

Risk management, project management, project risk management, uncertainties, risks, effective project risk management

ABSTRACT

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1 INTRODUCTION

This thesis will focus on risk management, specifically project risk management in micro companies. The research is also a case study for a company Persona Optima Iceland ehf. which has a few years experience of EU funded projects. The introduction of this study will contain a short review of the thesis, in order to give a clear picture to the reader. The aim of the thesis, research method and limitations will be shortly presented as well.

The background of the thesis investigates the main risk management terms, theoretical risk management models, uncertainties and risks in projects, and particularities in project risk management. First the writer will examine risk management and its models. Later one the author will continue with uncertainties and risks in projects, followed by project risk management particularities. In the third part of the thesis, the research method will be presented, including the research design and the process. The practical part of the thesis will contain a company presentation and the practical research on a case company based on interview techniques. Therefore, the exploratory part will be divided into four parts regarding the interview themes. The research will continue with the results, including recommendations and advices on effective project risk management in micro companies. Finally, the author will conclude the research and once more mention the milestones of the study.

The aim of the thesis is to create a user-friendly hypothetical model how to ensure effective project risk management in micro companies. In other words, to create a user-friendly, managerial risk management matrix for micro companies that does not require any complicated techniques or specific knowledge. This study also might work as a guidebook for a case company in order to give the main manner on risk management, its concepts, definitions, and models, including different approaches, and finally providing the recommendations for further project risk management. Therefore, the writing style will be kept reader friendly and understandable through the whole study.

The research is based on a case study for a business consultancy company Persona Optima Iceland ehf. The case company mainly focuses on personnel and project management. Most of the carried projects are EU funded, for example Grundtvig, etc. Other limitations are the market and the size of the company. Thus the research will examine Iceland market rather than other countries particularities, and only the case of

micro companies. Due to the need and requirement of the case company, the study will not cover any quantitative risk management methods; however they will be mentioned as an approach. Furthermore, no specific tools for risk management will be insight due to the research limitations. On the other hand, user-friendly model and advices in problematic areas will be provided.

Due to the nature of the company practice, and lack of quantitative data, the qualitative research method will be used to explore the case company and provide recommendations and guidance for further project risk management procedure. Exploratory research will cover multiple approaches while analyzing qualitative data from different perspectives. The study will be based on the author's observations while working in the company and collecting information and data from the administration and staff. The empirical data will be collected using interview technique. On the other hand, the secondary data will be used as well while drawing the background of the study and comparing different risk management models.

2 PROJECT RISK MANAGEMENT

According to Business Dictionary, projects are unique because of the short run actions followed by limitations such as special working conditions, a budget, personnel, fixed starting and ending dates in order to reach specific goals (Business Dictionary 2011). As a result of the special conditions, and limited resources, the nature of the project assumes risks (Perminova 2011, 214). In this sense, risk management today is becoming a critical point in the project management.

Thus, in this chapter the author will shortly define risk management, why it is a vital awareness of the managers in the respect of the projects. As the following chapters will draw the picture and the interrelation between the risk management and the project risk management, first the researcher will outline the guidelines on the risk management itself.

2.1 Risk management

In most of Business management manuals and articles risk, in one or another way, is described as a negative deviation from the plan (Maylor 2010; Köster 2010; Wideman 1992; Murphy 2005). While in Oxford dictionary and International Project Management manuals it is defined more specifically as a possibility to meet danger, harm, or loss (Oxford 2011; Murphy 2005, 113). On the other hand, it is not only about negative risks. Risk management is also about catching opportunities (Köster 2011, 100). In other words, risk management is a key of success in business and projects as well (Dinsmore 2006).

In the respect of the following negative consequences, Perminova suggests to pay more attention to planning and providing preventive measures such as regularly analyzing information and taking relevant actions, i.e. responding. The author outlines that success of risk management counts on how and when the identified actions will be taken to concur the negative impact. (Perminova 2011) In other words, risk management is all about identifying risk and controlling the outcomes. Risk management focuses on minimizing, monitoring and controlling the probability and/or impact of the adverse factors.

In practice, risk management is a proactive process. It is necessary to observe and take relevant actions during overall project process. (Benta, Podean & Mircean 2011; Köster 2010, 100)

Concerning the nature of risk management, Wideman simplifies it and explains it familiarizing with kids self-security education in a family, where first you take a look around and then cross the street. The author, likewise the other sources, talks about risk identification, assessment, planning, and strategies such as avoidance, shift of responsibility, etc. Otherwise, he also investigates the information feedback and corrective actions as a part of risk management studies. (Wideman 1992, I – 4)

While Köster quite clearly defines a risk management process as the planning of the anticipated risk, with the purpose to reduce negative impact of risk, and even benefit from uncertainties. The author also designates it as a process that investigates "the impact and probability of the event that might occur". (Köster 2010, 100) Project management Institute outlines planning, identification, analysis, responses, monitoring and control as the structure of risk management (PMI 2004, 237; Köster 2010; Maylor 2010).

In the literature, risk management planning is often highlighted separately as an essential part of risk management (Köster 2010, 103; Murphy 2005, 114). Professor Inga Minelgaitė (in the International project management course) describes risk management planning as the process of continuing actions: identifying, analyzing, and implementing actions in order to overcome negative impact and increase positive outcomes (Minelgaitė 2006). Despite the fact that this stage increases the workload for all company/project employees by creating extra duties, defining responsibilities, meeting stakeholders or project partners, finally the team is rewarded by the outcome of this risk management stage – Risk management plan. According to Minelgaitė, in practice, it means better documentation and programming what allows meeting commitments on time, while more relevant information assists in decision making process, communication and provides higher confidence (Minelgaitė 2006).

When the risk is already identified and measured, it is the time to take relevant actions. Here manager has a chance to choose from the numerous of the risk management

solutions: transfer risk, postpone risk, reduce risk, assume risk, or avoid risk (Köster 2010, 100; Minelgaitė 2006).

Avoidance of the risk means refusing the measures (or even the project) related with risk. This radical solution is taken in the case when obvious inadequacies are anticipated in the previously determined principles (for example additional costs) or the loss exceeds expected gain. It is a very radical and simple solution in risk management which enables fully avoidance of the possible loss or uncertainties. However, risk avoidance, as a rule, means deprivation of the profit. What is more, the avoidance of one kind of risk might cause another risk. (Köster 2010, 101; Biasi 2011)

According to the following consequences, managers rarely choose strategies such as move or postpone as it is always means to meet risk later with possible higher negative impact. While assuming risk and taking actions to reduce it, usually sounds as a logical solution. This decision might reduce the likelihood and the amount of the loss. Depending on the particular kind of risk and the nature of the management practice there are a variety of methods to reduce risk such as risk distribution, insurance, stocks of recourses, financial measures might be taken to reduce the level of the risk. (Kwan & Leung 2011)

Transmission of risk is a separate case regarding the reduction of risk. It is unique by transferring responsibility (partly or fully) for the third part, for example the insurance company (Biasi 2011).

While assuming the risk (partly or fully) on his/her own responsibility signifies the compliance of an entrepreneur to reimburse feasible loss on his/her own (Biasi 2011).

Concluding, Risk Management is all about identifying risk and taking relevant actions, i.e. establishing preventive measures. What is more, it is a vital process toward successful projects, which is necessary to be considered in overall project lifecycle. As there are numerous methods to identify risk and manage outcomes, the following chapter will study those models.

2.2 Risk management models

As in the previous chapter risk management was identified as a continuous process of identifying risk and managing outcomes, in this section previously outlined risk management phases: identifying risk, analyzing and prioritizing risk, performing risk planning, monitoring and controlling risk – will be studied.

2.2.1 Introduction to theoretical models of risk management

In general case, in charge of risk management practice, a foremost step is to identify, characterize and evaluate uncertainties (how many of them are potential risks in the case). The second one is to estimate the Achilles heel, i.e. weaknesses and vulnerability of critical points, followed by defining risk and the manners, as well as the strategy to mitigate, avoid or transfer those risks. (Benta, Podean & Mircean 2011; Murphy 2005; Perminova 2011.) On the other hand, even every author outlines analogous management methods, tough they mark different phases to assess and deal with risk, as they are by nature subjective. In this sense, several approaches regarding risk management process will be provided and later on the author will enlarge with one of them.

For example, Perminova outlines investigation, communication and adaptation as three main methods in the process of uncertainty management. This study provides an amount of information regarding the topic (as risk is considered as a part of uncertainty). However, Perminova's research is based on uncertainties, a much wider aspect than only risk management. (Perminova 2011, 217) As a result, it is the main reason why this model was not chosen concerning the studies of Effective project risk management.

ISO 31 000 "Risk management - Principles and guidelines on implementation" divides risk management process into six steps: (1) identification, (2) planning, (3) mapping out the social scope of the risk management, identifies objectives of the stakeholders, and the background of the risk will be assessed, (4) defining the model for the following action due to risk identification, (5) analyzing the risk in an overall process, (6) reducing or taking any other solution to deal with the risk regarding the situation and available resources. (ISO 2009)

Concerning risk management models, Murphy differently distinguishes planning and execution as a core of risk management process. However, the author supports the main idea defining the planning step as the procedure consisting of training, documenting and development; and execution phase as risk identification, evaluation, investigation, and mitigation. (Murphy 2005, 114, 129-130)

Though, regarding the nature of the research, awareness and experience in this field, and limitations of this study as well, the authors chose Kathrin Köster's model, as it is clear, precise and involves the essentials of risk management itself.

2.2.2 Köster's model

Köster defines risk management as a process of identifying risk, analyzing and prioritizing risk, performing risk planning, monitoring and controlling risk (Köster 2010, 102).

Identifying risks

The first stage applies to identify all knowable risks regarding the project. Though for this purpose present conditions and environment of the organization must be inspected. Here investigators emphasize the necessity of relevant information, as well as a clear understanding about risk itself is essential in order to be able to distinguish risk from non-risk, i.e. causes and effects. (Benta, et.al. 2011, 6) Besides, Köster suggests to review company's/project's documents, reports and check-list such as scope statement, as very practical step. The author also focuses on risk register where risks must be categorized. (Köster 2010, 102-111) While Benta, Podean and Mircean remind that not all risks can be identified at the first place, as a result regular review and responses are required (Benta, et al. 2011, 6).

Analyzing and Prioritizing risk

This step seeks to investigate "likelihood of occurrence in relation to its impact on the project" (Köster 2010, 103). The main task of this phase is to rank the risk that can be

done using quantitative or qualitative risk analysis (this will be discussed later in chapter 2.4.3.4). The values of the probabilities assist prioritizing risks, and setting the critical ones in overall project process. (Köster 2010, 103)

Performing Risk Planning

In fact, performing risk planning is the continuity from the previous stage. In this sense, a manager has to decide what response will be taken. In other words, it is necessary to choose proper strategy considering actions that encourage opportunities and reduce hazards. Furthermore, the author advises to weigh the costs and time of all unexpected measures and decide whether they are appropriate or not. (Köster 2010, 103)

Monitoring and Controlling Risks

Köster divides this stage into four smaller steps that includes monitoring risk status, warranting the suitability of those measures, periodically observing areas of the emerging risks and finally, guaranteeing an appropriate implementation of the risk management plan. (Köster 2010, 102)

Concluding, Köster's model involves four risk management stages: risk identification, analysis and ranking, planning, and monitoring. A deeper analysis of this model will be provided in chapter 2.4.3.

2.3 Uncertainties and risks in projects

Today's global business and dynamic environment provide numerous risks that cannot be systematically managed. However, general uncertainties such as "appropriate project culture, a flexible project structure, suitable contract, project governance", can be managed. (Köster 2011, 98) In the sense of successful project risk management, uncertainties and risks must be defined. Thus, in this chapter distinction between uncertainty and risk will be drawn, followed by classification and types of risks in charge of projects.

2.3.1 Risk and Uncertainty

First it is necessary to distinguish the terms uncertainty and risk. Uncertainty is a way broader term involving opportunities and risks. Colloquially, risk is just a part of uncertainty. (Perminova 2011; Wideman 1992, III - 2; Köster 2010, 100; Hilson 2009, 4)

In some literature, uncertainty is explained in the concepts of knows, known-unknows, and unknown-unknows. Where knows do not contain any uncertainty, unknows are known to be but we do not know their impact. Known-unknown is noted as uncertainty, and in some manuals is defined as anticipated risk. And finally, unknown-unknown, so called emerging risk, is defined as something totally unknown, we cannot predict. The example of emerging risk could be a bankruptcy of a partner or supplier, or some political matters. (Wideman 1992, III-2; Köster 2010, 99)

While risk is defined as "an uncertain event or condition that, if occurs, has a positive or a negative effect on at least one project objective, such as time, cost, scope, or quality" (PMI 2004, 238).

Concerning project risk as a particular one, it is described as an uncertain event, and in the case if it occurs, it might have positive or negative impact on at least one project objective (Dinsmore 2006).

Eventually, both uncertainty, and risk management are related to the information and project manager experience, and require proper management. (Perminova 2011, 192-193).

2.3.2 Uncertainties cause risks

Anticipated risk might be caused by uncertainties related to management, for example planning, communication, and choosing team members. Those risks sometimes are called internal risks, as they are caused by the organization and/or poor management. Another source for anticipated risks is external project environment, as some collapses

appears because of distance control, political movements, inflation or corruption. (Köster 2010, 99)

Besides, these two above mentioned causes might arouse an emergent risk. In addition, emergent risk can be provoked by unpredictable natural disasters, political revolutions or diseases (Köster 2010, 99). Unfortunately, environment, safety and health risks are unforeseen and uncovered during a project prosecution. In other words, those risks might influence time and finance consumption, i.e. cause other following risks: schedule and cost risks. (Biasi 2011)

Anundson says: "Being aware of the probable issues bad weather can cause, such as emotional stress to the client and the contractor, additional cost and prolonged project duration, is key to risk management " (Anundson, Biasi 2011).

Considering international projects, part of emerging risks might be caused by cultural misunderstandings or comprehended actual needs (Kreiner 1995; Hofstedte 2010). Besides, Murphy adds business competition, legal, labor, currency, administrative issues as difficulties and risks within international projects (Murphy 2005, 27-40, 115-116).

2.3.3 Risk classifications

Wideman also introduces to other risk classifications such as categorizing risks according to their impact, or nature. (Wideman 1992, III-2)

Regarding the impact for the project, risks can be distributed to scope risks, quality risks, schedule risks, and cost risks. However, in practice, schedule and cost risk are usually overlapping. (Wideman 1992, III-2, Köster 2010, 99, Murphy 2005, 115)

Scope risk is defined as necessary deviations (due to changes of the scope) in the project in order to reach announced targets (Wideman 1992, III-2).

Quality risk is described as misfortune to accomplish tasks with appointed level of performance (Wideman 1992, III-2).

Schedule risk is risk to be unable fulfill task regarding time issues and fixed deadlines (Wideman 1992, III-2). Normally it is followed by other risk such as cost and performance risks (Biasi 2011).

Cost risk is a risk to fail in performing task due the finance limits (Wideman 1992, III-2).

Likewise Murphy also divides risks into: technical, schedule, cost, and operational risks (Murphy 2005, 27-40, 115-116). So Murphy distinguishes cost and schedule risk. Besides, Wideman (in the risk classification according to the impact for the project) investigates overlapping between cost and schedule risk. (Murphy 2005; Wideman 1992)

Operational risk is explained as uncertainty to meet project objectives. The author considers safety issues, system specifications and approaches in challenging capability, and inventing new operational requirements as potential risks. (Murphy 2005, 115)

Technical risk will be defined subsequently while comparing Perminova's and Murphy's approaches.

Perminova in her Uncertainty management research points out four types of uncertainties that practically have a high tendency to cause risk. Researcher seconds to Murphy's theory and outlines technical uncertainties as a first factor influencing risk in the project. Both agree that new systems, technological developments impact functional and/or operational project performance. Perminova alike Murphy distinguishes legal risks such as contract risks. (Perminova 2011, 193; Murphy 2005, 27-39, 115) The author (same as Köster) continues with management/organizational uncertainties, where risks are induced by poor management in the company, while Köster names it as internal risks. (Perminova 2011, 193; Köster 2010, 99) And finally, customer (owner) and operator related uncertainties are outlined as risk provocatives. Here author suggests carefully to reconsider internal and external project related relations. (Perminova 2010, 63, 69, 193) As inappropriate communication or project culture can become first a part of the project uncertainty and later a potential risk (Köster 2010, 98). Furthermore, management and leadership risk can be implied in any risk group, i.e. if

there is no constructive and proper management, it is difficult to reach schedule, cost, quality and scope requirements. That is to say inadequate management arouses other risks. (Minelgaitė 2006)

Meanwhile, considering the nature of risk, Wideman separates to discrete one-time risk events (for example fire), and time-scaled such as earthquakes which can actually be counted and ensured. On the other hand, here you can also divide risk to insurable and business risks, where business risk is totally related only to business venture. The author also mentions about deliberately chosen (for example, correctly identifying project goals), and latent risks, such as catastrophes. (Wideman 1992, III-2)

Contrary than other professors, Minelgaitė distinguishes one special group of risk – Quiet risk. This kind of risk does not appear during the projects; however it shows up after the project realization. (Minelgaitė 2006)

2.3.4 Common project risks

There are numerous kinds of risks and uncertainties in business and in daily life around us. It is such an expansive sphere that studies on this matter are never enough because of changeable nature. On the other hand, risks in the projects are also a broad comprehension themselves.

Projects are risky because they are unique and complex by nature; they are reliant on assumptions, people, stakeholders and all kind of changes (Hilson 2009, 14).

The previous chapter talked about all kind of risks and classification. While in this section a short summary will be provided while describing the most common risk areas in projects.

Projects might be of short or long duration. Most of the projects (regarding the scope) are of long run what brings additional uncertainties such as political and governmental changes, currency fluctuations, or even law changes. Long term projects have advantage in the matter of the scope; on the other hand budget uncertainties remain the most threatening. For example, it is difficult to predict airlines' prices changes, and in case of

increasing, the financing will not increase. Köster also suggests do not blindly invest and focus only on one specific region or country with high level costs, as it can be unrecovered. (Köster 2010, 104; Minelgaitė 2011)

Another very specific risk sphere is "local rules" which you are not able to change or do anything to. It might be that the project owner belongs to very typical country, with special attitude and local customs, including a specific organization structure. This area is more vulnerable for international projects. For example, Europeans are doing business with some Asian countries and so forth. Concerning dependencies on local specialties, it is necessary to mention local workers with their own culture, customs, language, religion, law and working conditions. (Köster 2010, 104; Hofstedte 2010)

Another risky area, concerning international projects, is dependency on local authorities. For example, projects might meet difficulties regarding corruption, suspended permissions, and language. (Köster 2010, 104)

What is more, dependencies on climate and unpredictable natural catastrophes are very considerable uncertainties when doing projects with multinational partners. Most of the project risk management handbooks talk about paying more attention to external and unexpected risks because they are usually outside of the project manager's control. (Köster 2010, 104; Murch 2001, 165).

While other authors suggest focus on cost risks which are directly or indirectly under the manager's control, as well as schedule, technology and operational risks discussed above. (Murch 2001, 165)

2.4 Project risk management

Project risk management investigates many uncertainties and risk management related issues. As it was outlined in the previous chapters, every project is unique what makes it difficult to draw multifunctional strategy fit for all of them. As a result, so far there is no unanimous strategy or action plan regarding effective project risk management. Even if some writers try to draw them, they are specific for a certain type of projects. The

main idea of this research is to draw friendly use risk management model for micro companies considering as many aspects as possible respecting the limitations of this research.

Previous chapters have investigated risk management itself, and its theoretical models while this section considers project risk management. In other words, this study will focus on projects, not only on risk management in general. Thus, this chapter will provide main aspects that are necessary to be considered in the charge of project risk management process. First the definition of the project risk management will be defined, and then it will be continued by the main factors to be considered during the project risk management process, followed by popular project risk management strategies and processes.

2.4.1 Project Risk Management Definition

The term Project Risk Management might be found misleading as on one side it means 'complete control'. Though it is also 'advanced preparation' containing alternative action plan. In other words, Project risk management is a very flexible process, always providing alternative plans while adapting according to the situation and being able successfully achieve project objectives. (Wideman 1992, I-5)

In other words, project risk management:

> describes the processes concerned with identifying, analyzing, and responding to project risk. It consists of risk identification, risk quantification, risk response development, and risk response control. At first we need to determine which risks are likely to affect the project, then evaluate risks and risk interactions, to assess the range of possible project outcomes, and then define enhancement steps for opportunities and responses to threats. (Tamošiūnienė 2006, 9)

When it comes to the dilemma, what is the difference between Risk management itself and Project risk management, most of the business manuals provide the opinion that Risk management in general investigates profits and turnovers of the business, while Project risk management involves project related risks as every project is unique by its scope, time frame, etc. That is to say, those terms mainly differ on the risk impacts. (Wideman 1992; Murphy 2005; Maylor 2010)

2.4.2 Main factors/aspects to be considered in project risk management

The only thing every single project manager can do is to observe, and find out risk areas, then identify those risks, followed by ranking them and taking relevant actions to response.

For the first project risk management step Wideman suggests to take those into consideration: Project management integration in the consideration of life cycle and environment variables; Information and/or Communication regarding the fact that ideas, directives, data exchange accuracy might be uncertainties, as well as social impacts and industry trends; Human resources while monitoring their availability and productivity, including management team and customers; Contract and Procurement in the sense of services, plant, an material performance; Financial issues, in other words cost objectives and limitations; Time regarding scheduling risk; Quality considering fixed requirements and standards; and Scope meaning the proportion between expectations and capabilities (Wideman 1992, Figure II-2; Harris 2009, 85; Heldman 2005, 172).

Failure in either of them might cause serious consequences. As a result, each of the mentioned aspects must be equally considered as possible uncertainties, regarding project risk management planning process.

2.4.3 Popular project risk management strategies

As it was outlined in the Chapter 2.2, there are numerous models regarding risk management. Project risk management is not an exception. Every author describes the same idea in different way; they distribute project risk management process into particular steps and stages. On the other hand, they all maintain the idea where first environment is observed and researched, then risks are identified and measured, followed by the proper planning to response them, and finally monitoring the process that must be taken while choosing the strategy to mitigate, avoid, transfer, pool or accept. (Harris 2009; Köster 2010; Maylor 2010; Milegaite 2006; Murphy 2005; Perminova 2011; Wideman 1992)

For the following research Köster's risk management model was chosen, as it is clear and reveal the most investigators opinion. Besides, this model mainly focuses on projects. The author distinguishes four main phases in project risk management: identifying, analyzing and prioritizing risks, performing risk planning, and monitoring and controlling risks. However, planning stage might be mentioned twice: in the beginning and in the middle of the proceeding. (Köster 2010, 102)

2.4.3.1 Planning

Properly planed project risk management is firstly based on information in the project description, structure of the task division, list of the project activities and tasks. This is a vital information in order to do a basic observation and risk evaluation in the very early project management stage. Then appropriate project management strategy must be considered where benefit exceeds possible risk. Besides, it is advised to review so called risk tolerance in the company and a typical risk management plan before determining the final action plan for a certain project. The outcome of this risk management stage is risk management plan for X project. (Köster 2010, 100; Harris 2009, 83; Minelgaitė 2006)

2.4.3.2 Identifying risk

When necessary information is provided, the manager understands the essence of the project, and both historical data and experts' interviews are analyzed, then the symptoms about possible risks are determined and warn managers to pay more attention or consider project realization. (Minelgaitė 2006)

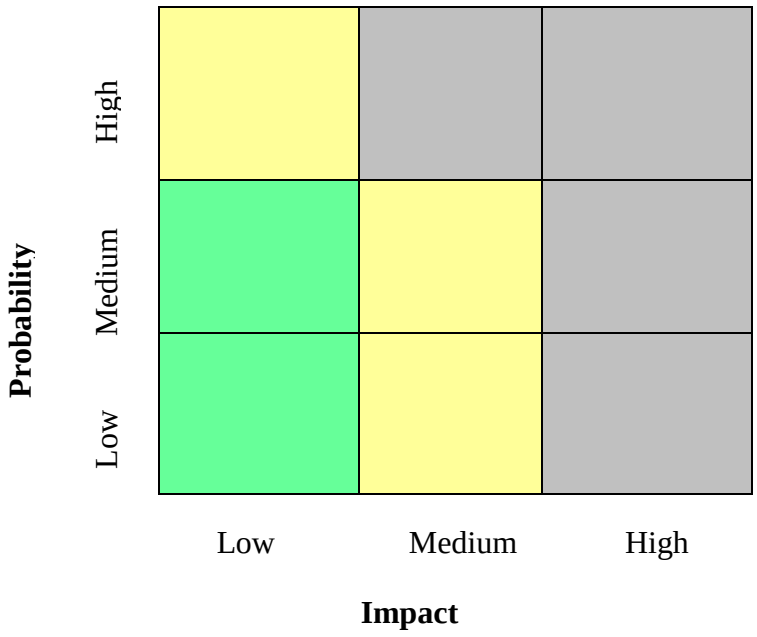
This stage is demanded on reviewing project documents and checklists as well. Köster proposes heterogeneous perspectives while identifying risks. This might be embodied for example, inviting major project partners or stakeholders or even project managers from previous projects, going through all activities from different working statements in order to detect risk. Concerning international projects, host country environment analysis is required. For this purpose documents from previous international projects are

valuable, as well as PESTEL tool, where political, economic, socio-cultural, technological, environmental and legal country environment is explored. Besides authors add risk identification checklists as an option where political, economic, etc. Factors can be assessed using scale from 1 to 5. (Köster 2010, 103-111; Harris 2009, 85)

2.4.3.3 Analyzing and prioritizing risk

When risks are known, a manager together with a team can analyze those risks and rank them according to the intensity. For this stage different risk evaluation models: either quantitative or qualitative might be chosen.

In the case when qualitative methods are adopted, risk impact and likelihood are qualified. Risks are ranked in hierarchical principle according the leverage and impact for a certain project. Knowing the limitations of risk tolerance, risk can be divided into: high, medium, and low, or in the scales ‘1-3‘, ‘1-5‘or ‘1-10‘. Normally data is stated in a table (Graph 1) where risk ranking scale is apparently visible, i.e. risks are prioritized starting from the most intense ones and going down with risks that has less influence for a project. (Maylor 2010, 223; Köster 2010, 111-113; Minelgaitė 2006; Webb 2003, 93)



GRAPH 1. Probability impact chart (adopted from Maylor 2010, 223.)

Qualitative risk analysis is based on estimating the impact of identified risks. In other words, collecting "people's perceptions of the levels of risk involved in a particular activity"(Maylor 2010, 223). Risk can be ranked using Probability method (more precise), Failure mode effect analysis (discussed in the chapter 2.4.3.4), and Risk rating matrix where risk is evaluated in more conceptual terms, such as high, medium or low, regarding collected opinion and risk tolerance boundaries in the organization. This is based on gathering opinions. More complex tools for quantitative risk analysis are outside the scope of this study. (Minelgaitė 2006, Maylor 2010, 223; Köster 2010, 111-113)

While in the case of quantitative analysis, risk impact is quantifiable. In other words, risk leverage is expressed in numerical value. For that purpose managers can chose quantitative methods such as Sensitivity analysis, Scenario analysis, so called Decision tree, or Simulation analysis. (Minelgaitė 2006) However, respecting the limitations of this study the quantitative method analysis will not be provided.

2.4.3.4 Quantitative and qualitative methods

As it has been mentioned, Analyzing and prioritizing risk step requires additional research in order to give a numerical value for every potential risk, i.e. assess the intensity of the risk, and rank them. On the other hand, qualitative methods might be chosen as well. Hence, the author will shortly discuss quantitative and qualitative methods that inconceivable without relevant information and data analyze.

As one can see from the above outlined risk management phases, gathering of data, analyzing and archiving - is one of the most important phases in the risk management process. Besides, this information management is practiced within overall decision making process where accomplished results from a previous stage provide primary information in order to realize the following stage. In addition, information takes a very important role in the process of qualitative and quantitative risk analysis. (Jašina 2006)

In practice, risk is usually measured by taking quantitative techniques and methods such as sensitivity analysis, determination of resistance, Monte Carlo simulation and statistical methods, etc. A quantitative analysis determines the likelihood of risk

realization cases and its sequence. This method enables to accentuate the most probable risks, and risks which could cause vital losses. As a result it can help managers to find a relevant solution. (Jašina 2006)

On the other hand, managers tend to use qualitative methods, as the quantitative ones require additional time, knowledge and education in special fields in order to analyze complicated data. In addition, complicated softwares are used in quantitative risk analysis, what usually brings additional inconveniences while employing extra personnel or learning to use a new program.

However, the qualitative methods might not always be accurate, where probability and impact are not expressed in numerical values. The qualitative risk analysis investigates the sources, reasons, and provocatives of the risk, as well as the stages and tasks which might cause the risk within accomplishing them. It is necessary to estimate potential risk areas, identify all possible risks, and reveal practical benefits and possible negative sequences. Usually, in qualitative risk analysis case, it is based on gathering opinions and perception of the risk level. (Jašina 2006; Maylor 2010, 223)

The qualitative risk analysis methods are based on empirical manager research, and usually it investigates a variety of sources such as company manuals, annual reports, events, environmental objects, including observing inside and outside the company/project, following news, etc. (Cooper & Schindler 2006).

Qualitative risk assessment might be implemented using Probability method, Risk Ranking Matrix, or Failure mode effect analysis (FMEA). In Risk Ranking Matrix method risk is expressed in terms low, medium, and high or in numerical vales in the scales ‘1-3, ‘1-5’ or ‘1-10’. While FMEA method suggests more accurate analysis based on likelihood, severity and hideability evaluation on each activity considering all (three) elements together, where the total risk is the product of those three elements, i.e. multiple all of them. (Maylor 2010, 224; Köster 2010, 108)

Though it is complicated to measure the risk using only qualitative analysis, therefore the quantitative methods are usually gathered for the following risk analysis. (Minelgaitė 2006; Maylor 2010, 223-225)

However the quantitative research is not possible without the qualitative one, as the aforesaid one provides essential information for the following quantitative analysis (Jašina 2006).

2.4.3.5 Performing risk planning

In this stage a manager has to establish response actions for the most influential risks. Here frequently an alternative plan must be taken or even the project implementation is rejected at all, as the risks are critical and exceed possible benefits. In other words, in this phase, it must be found out if the risk can be totally avoided, if not maybe organization can reduce risk impact. Köster and other authors offer five strategies in order to response risk: risk avoidance, mitigation, acceptance, transfer, and risk absorption and pooling. (Köster 2010, 113-116; Murphy 2005, 125; Heldman 2005; Kendrick 2003)

Risk avoidance arranges the project so that you do not meet a risk anymore. In other words, it refers to take relevant actions to avoid meeting those risks again, i.e. refuse or replace a particular action. For example, use another supplier, or variant technology. Another example of risk avoidance could be changing an approach in order to "reduce interdependencies between sub-project teams" what decreases complexity and reduces risk. In the case of fatal risk, Köster advises to suspend the project. (Köster 2010, 113; Cervone 2006, 260; Turbit 2011)

Risk mitigation is all about decreasing the possibility of risk occurrence and/or mitigating the impact of risk damage. That is to say, take actions to reduce impact and chance of risk happening. For example, if project is dependent on some recourses, manager can mitigate risk by signing a contract about resources availability. (Köster 2010, 114; Turbit 2011)

Another possible option is risk acceptance. Sometimes risks might be so small that effort to do something against them is not worthy. It can also be a case when risk impact on the project is minimal or the possibility to affect the project is very low. Köster suggests taking risk in case it is "manageable and unavoidable". This strategy usually is

adopted when risk has a low impact on the project and any actions to response are time and finance consuming. (Köster 2010, 115; Turbit 2011, Jutte 2011)

For risk transfer, Köster recommends to use this approach when the risk can be transferred to another party. In this case, only responsibility is transferred to someone else, however, the risk does not disappear. In practice it is very popular to transfer risks to insurance companies, vendors, warranties, guarantees, outsourcing or off-shoring agreements. An example of this might be service sector projects where new-introduced activities are transferred to third parties. On the other hand, experience shows that risk transferring arouses new risks. (Köster 2010, 115; Webb 2003, 99)

Risk absorption and pooling is taken in a case when high level research is necessary including high development costs, for example product developments or infrastructure projects. The main idea of this strategy is to join venture, consortium or alliance. (Köster 2010, 115)

2.4.3.6 Monitoring and controlling risks

The final stage is all about supervising and monitoring a risk management plan. As well as deviations from the plan must be considered, and relevantly responded. If it is necessary a plan might be adjusted. (Webb 2003, 100; Minelgaitė 2006)

Köster emphasizes that "risk register is a living document" and required to be updated. As well as status of implementation actions must be revised. It is necessary to keep in mind that risk occurrence will always affect four project cornerstones: scope, quality, time and budget. Therefore, communication here plays a very important role concerning status of the risk. Besides, the author suggests do an environment test again, for example, previously mentioned PESTEL tool could be renewed in this phase. And finally, the duty of the manger is to observe overall process and apply it to change management which is related with occurrence of the risk. (Köster 2010, 116-117; Heldman 2005, 171)

Concerning risk management strategy, Minelgaitė outlines that risk management strategy might be more or less formal. In practice micro companies prefer a less formal

communication way in order to improve overall project performance, regarding scope, time, quality and cost. Besides company/organization supposed to choose only those projects that are compatible with expected benefit. That is the reason why more and more international projects are either rejected by sponsors or given up by the supervisors after risk evaluation phase. (Minelgaitė 2006)

To clarify, there are five main stages in project risk management: planning, identifying, analyzing and prioritizing risk, performing risk planning, and monitoring and controlling risk. Every step is important and must be well considered. As well as there are five risk response strategies: avoidance, mitigation, acceptance, transfer, and absorption or pooling. Those are chosen according to the previous projects' experience, risk tolerance boundaries or specific risk occurrence situation.

3 RESEARCH METHODS

Previous chapters provided theoretical background for the study, including risk management, and particularly project risk management. In this section, the research design, methods used for data collection and analysis will be introduced. Case study is based on qualitative methods, mostly thematic interviews. Those main aspects will be discussed further.

3.1 Research design

Research design is a plan or a model for data collection and analysis. It is said that the quality of the research depends on the research design, awareness of its conception and drawing the study followed by it. Thus this section will cover three types of research design: exploratory research, descriptive research, and causal research. Furthermore, this study research method will be investigated. (Ghauri & Grønhaug 2010, 54)

Exploratory research is adopted when problem is not totally understood, or more or less understood. Besides this research requires special techniques and skills such as "ability to observe, collect information, and construct explanation". (Ghaur& Grønhaug 2010, 56)

While other authors say that exploratory research has to provide information, analyzing problems from different perspective and confronting with different opinions, and assumptions. An example of the exploratory research design might be the interviews with administration or company workers. According the interview origins, usually qualitative information is collected, as well as qualitative methods are chosen to analyze. Regarding the research nature, the research process is unstructured and flexible. Often this kind of research is continued by conclusive or further exploratory research. However, sometimes only qualitative research is accomplished. (Malhotra 2004, 75; Cooper 2006, 138-142)

Descriptive research seeks to describe something, as already the name says (descriptive – describe). It needs detailed information in order to answer Who, What, Where and

When and How much. Concerning descriptive research, it is necessary to mention that a problem is structured and clear, contrary to exploratory design. Usually this kind of research is adopted when implementing marketing research. Here the survey is implemented while the researcher collects data by interviewing people. However, descriptive method requires a strict structure, and procedures. (Ghaur& Grønhaug 2010, 56-57; Cooper 2006, 138-141)

Causal research design also contains structured problems; on the other hand, it tends to analyze cause-and-effect problems. When this design method is adopted, first the researcher has to indicate causes and their impact on the results. In other words, causal research design seeks to determine the relationship between the causal variables and the effect to be predicted. (Ghaur& Grønhaug 2010, 56-57; Cooper 2006, 138-141)

3.2 Qualitative research method and interview technique

The basics of qualitative and quantitative analysis were already introduced in previous chapters. In this section the qualitative research method characteristics and techniques used to collect and assess data will be outlined.

The original subject of the qualitative research is to understand and gain insights. Regarding the unstructured problems usually a qualitative research is exploratory and flexible. Furthermore, multiple approaches are used, contrary to quantitative. Therefore, diverse information and data must be collected; as more data are collected the problem is clearer. (Ghaur& Grønhaug 2010, 196-197)

As a result of the research nature, the qualitative interviews were adopted to collect empirical data for the study. Personal interviews face to face, as well as on-line conversations were used in order to collect information. Concerning the background of the study (mostly theoretical background on project risk management matters), the interview questions were prepared. For the project managers online questionnaires were used where they could simply write and answer the questions. The questionnaire contained guided and semi-structured questions according to the topics. The main advantage of this technique is that materials are structured and comprehensive. On the other hand, when interviewing the owner of the company, most of the interviews were

unstructured, informal, open and quite narrative. This was chosen based on the fact that the head of the company is the main project manager who could offer ideas and provide additional information to the study. In this way of interviewing the researcher might come up with new assumptions for the study. As a result, most of the interviews with the head of the company (Minelgaitė) were in informal style and based on discussion, providing additional questions in order to clarify the problem. Besides some Skype conferences and one formal questionnaire with semi-structured questions were implemented. (Eriksson & Kovalainen 2008, 80)

For the semi-structured interview these themes were chosen according to the theoretical background:

1. Introduction (name, education, working position, introduction about the working organization, project name, and relation with case company).
2. Risk management:
    - How much is your organization familiar with the term Risk management?
    - Do organization workers have fully understanding of it?
    - What procedures are used (actions are taken) in your organization concerning risk management?
    - What, in your opinion, could improve risk management in micro companies? Does a micro company have any advantage vs a big one, concerning project risk management?

3. Project risk management:
    - What methods do you choose to evaluate risks in your organization's daily working life? How do those methods differ when it comes to project risk management?
    - What uncertainties could you mention in projects? How many of them are potential risks in micro companies? Which of them did you already meet in your as a project manager experience? How does risk depend on the type of the project? Could you please, tell some examples?
    - What disturbances for an efficient project risk management have you noticed during your working experience as a project manager? (In general, and specific in Persona Optima Iceland ehf.)

- How would you describe an effective project risk management in micro companies? What measures might improve it? Please, share your personal experiences as a project manager.

4. Project risk management in Persona Optima Iceland ehf.:
    - How could you describe Project risk management? How is it encouraged and accomplished/implemented in Persona Optima Iceland ehf. projects' lifecycle? What did you notice during your working experience with this company regarding project risk management issue?
    - What disturbances for an efficient project risk management have you noticed during your working experience as a project manager in Persona Optima Iceland ehf.?
    - What advantages and disadvantages do you see in Persona Optima Iceland ehf., regarding project risk management?

5. WISE and IPPA projects:
    - What anticipated and actual risks did you meet in projects WISE/ IPPA? How were they solved? Would you choose a different way to deal with it if looking from this moment's perspective?

    - Why were the projects WISE/ IPPA successful, and what could have been done to improve them?

Concerning unstructured interviews, some guidelines and directions for interviews and discussions were made as well. The main points remained the same as from the semi-structured interview example. Though, additional questions were made during the process in order to clarify or get more ideas for the research. Besides, more technical, organizational, and management details were asked, for example, about the risk management process in the company, etc.

To sum up, secondary and primary data were used in the study in order to provide reliable information, containing different assumptions, and contrary information on the topic.

3.3 Research process

According to the Guide for thesis writers, the research must be systematic. On the other, hand the phases in the research process were overlapping as a result of coherent activities and duplication of information in numerous of sources. Thus, this section will shortly introduce the process of this research. (COU 2011)

Any research requires first to define the problem, this study was not exception. During the working time in the company Persona Optima Iceland ehf. the researcher had an opportunity to observe the working environment, and different working methods, as well as analyze and solute daily problems. During one project discussion the head of the company mentioned the effective project risk management problem in micro companies. Once the writer's interest to do a following research for the company was shown, the idea was supported, necessary data for the study were provided and questions were voluntary answered.

As soon as a problem was detected, careful planning was required, followed by a research design planning, and technique for the data gathering. As it was outlined before, the interview technique was adopted regarding the qualitative research method.

After the detailed planning, empirical data were collected and analyzed together with the secondary ones (mostly business management, and project management manuals, as well as scientific articles and internet sources). For the data analysis the author has chosen the qualitative method, as the research was described as exploratory one. The interviews and notes based on the company observation were analyzed, the data were compared to each other and to the literally models as well.

And finally, the conclusions were drawn, providing the research results and practical advices for the case company, as the initial idea of the research was to provide friendly use model on project risk management in micro companies.

3.4 Research method of this study

For this thesis Case study method was chosen as a research method. The research design is exploratory. The study was based on observations while working in the company, collecting information and data from the administration and stuffs, and interviewing project managers from different countries and different projects. The empirical data were collected using interview technique. On the other hand, the secondary data were used as well while drawing the background of the study and comparing different risk management models.

The problem was understood and explanations were built by comparing and confronting different assumptions, and theoretical models of risk management. As interview technique was chosen for the research, the qualitative analysis was adopted to analyze empirical data. Regarding the research nature, the process of the research was unstructured, i.e. it has required to overview and periodically comeback and add information to the relevant section in order to provided well structured and clear research. However, the following exploratory research will not be provided, though the conclusions and recommendations will be draw regarding the case.

4 CASE STUDY PERSONA - OPTIMA ICELAND EHF.

Previous chapters have provided the background based on theoretical part. While in this section the researcher will introduce a company, and project management models and techniques applied in it. Furthermore, the comparison of two big projects will be provided, including risk management stage in overall project process.

4.1 Company presentation

This chapter will investigate the main company characteristics. First the company in general matters will be described, including the structure, management methods, main activities, and legal issues, followed by mission and vision. Later on the company's partners will be introduced, and finally the SWOT analysis will be presented. The information in this section is based on the researcher's personal observations, official company website, and brochure of the company presentation, and interview with the head of the company, as well as information provided by projects supervisors.

4.1.1 Introduction to the company

Persona Optima Iceland ehf. is the only specialized business consultancy and project management company in Iceland. This company mainly focuses on personnel and project management. Furthermore, the company provides consultancies, advice, reporting, audit, recruitment services. (Persona Optima Iceland 2011)

Persona Optima Iceland ehf. is still a quite young company, it was established in 2008. Furthermore, it is very small company, under 9 workers, i.e. it belongs to micro companies. As a result of that the management structure is linear. Regarding that there is a clear hierarchical principle in the company where the orders come from the managers. It is necessary to mention that this linear structure in a small company has a big advantage, as it is much easier to control, manage, ensure efficient work, and feedback inside of the company. (Minelgaitė 2011)

Persona Optima Iceland ehf. is a formal organization, what means that the proceeding of this company is coordinated consciously regarding the law and human rights. Furthermore, this company has hierarchical principles.

Concerning the finance, as Persona Optima Iceland ehf. is a micro company, finance management is also simple, i.e. it is based the lowest cost model. Furthermore, company's and projects' finance are separated in order to ensure clarity and transparency. As every project has different rules and usually require opening a new bank account for a certain project. (Minelgaitė 2011)

Talking about management model, the administration of the company tries to give favorable working conditions and environment both for employees and customers. Communication in the company is based on a friendly environment, respect to each other and law. (Minelgaitė 2011)

Concerning the main activities of the company, Persona Optima Iceland ehf. provides business consultancy, projects, and finance management services. The main idea of this enterprise is to give business consultations, help to choose qualified personnel, organize projects, write reports and prepare for audits. Besides, the company is working on EU-funded projects. However, the company mainly focuses on business consultations, personnel and project management. More detailed description on company activities is attached in the Appendix 1. (Persona Optima Iceland 2011)

The company has an advantage because so far it is the only this character company. Furthermore, the owner of the company has experience in this field and collaborates with the Lithuanian company Persona Optima. On the other hand, there are some weak points, such as the head of the company has very little experience in this geographical market. As recently was decided to narrow the company's activities and mainly focus on the projects, there is a threat to ensure finance. It is because of the lack of investors in the recovering Iceland market. (Minelgaitė 2011)

Summarizing, one could tell that the company Persona Optima Iceland ehf. is working efficiently. Furthermore, the company is developing, learning, observing opportunities and acting regarding the market. For example, last year it was decided to focus on projects as it is financially more beneficial, more popular and provide more experience.

4.1.2 Mission, vision, values and strategy

Every legal enterprise has its mission, vision and values to state for the public. Persona Optima Iceland ehf. is not an exception. Hence, this chapter will tell about the main company targets and focuses. The information is collected from the company's official website

The mission of Persona Optima Iceland ehf. is to be partners, collaborate, represent, and consult customers regarding their business ideas and finding new opportunities. (Persona Optima Iceland, 2011)

The vision of Persona Optima Iceland ehf. is to help clients to reach positive changes in business. (Persona Optima Iceland, 2011)

- The values of Persona Optima Iceland ehf. are:
- Respect for employees, partners, society and law
- Permanent improvements and growth. The main goals of the company are to develop comprehensively, learn, observe environment and opportunities, seek maximum.
- Focus on results. The company seeks the best result for customers, partners and employees.

(Persona Optima Iceland, 2011)

4.1.3 Partners of the company

Persona Optima Iceland ehf. collaborates with other business consultancy companies in Lithuania, Iceland and other European countries that represent a variety of interests in educational institutions, training centers and different type organizations. (Minelgaitė 2011)

This wide network of partners gives favorable conditions for customers and allows the company to offer competitive service. What is more, the versatility of the company allows evaluating and satisfying customers' needs. (Persona Optima Iceland 2011)

As it was mentioned before, at the moment the company mainly focuses on project management, as a result, the main current partners are participant of the projects:

- „Persona Optima“, Lithuania
- SDCC – Social Development & Consultancy Centre, Lithuania
- Education and Culture
- Life long Learning Programme
- GRUNDTVIG
- E.Ri.Fo, Italy
- AhEvran University, Turkey
- RC– Research and consultancy institute Ltd, Cyprus
- AIZRP, Latvia
- FIRMA ED, Latvia
- AD IT Training Centre, Latvia
- VoPro, Norway
- VIFIN, Denmark
- STPKC, Sweden

(Persona Optima Iceland 2011; WISE 2011; IPPA 2011)

4.1.4 SWOT analyze

In this section the strengths and weaknesses of the company will be discussed, and opportunities and threats will be described as well. The information in this chapter is based on the discussion interview with the head of the company. Besides, the researcher’s observations are included, while assessing the strengths, weaknesses, opportunities and threats.

Strengths

1. The company is small and mainly focuses on projects. According to the owner of the company, it ensures better development, experience and wider network of contacts.

2. Another strength of this company is the owner's of experience in this field. The owner of the company has many years experience in working with international projects. Furthermore, she has been working as a lecturer and has other related experience what gives advantage for all company management.

3. Wide network of partners in all Europe.

4. Ability to contact a variety of specialists in this field. For example, Persona Optima Iceland ehf. collaborates with the Lithuanian company Persona Optima.

Weaknesses

1. The owner of the company is foreigner. While the main activities and customers are Islanders.

2. Supervisor's experience in this geographical market. The owner of the company is not very close with Icelandic culture, law and political restrictions.

3. Lack of investments for the company's development.

4. The conservative market.

5. Narrow field. The company focuses on the projects that financially cannot ensure cash flow.

Opportunities

1. Development can be arranged not only in projects but also in other business consultancy fields. Furthermore, finding new partners would also mean expansion, and would open more perspectives and opportunities for the company both in Iceland and in other countries.

2. Entrenchment opportunities. To gain a stable position and the main share of a market could strenghten the company itself and make it more competitive. Persona Optima Iceland ehf. has opportunities to have stronger position not only in Iceland but also in other countries. Even this would mean additional finance; on the other hand it would ensure the position in the market and reduce the number of competitors.

Threats

1. This company does not do risk analyze.

2. Economic situation in Iceland is still not stable. After financial crash companies hardly recover and barely are looking for consultants' services because of financial issues. Furthermore, during the past two years just very few new enterprises appeared in Iceland. As a result of this economic situation, there is a threat for companies such as Persona Optima Iceland ehf. to lack customers.

3. Aggressive competitors. Even at the moment Persona Optima Iceland ehf. is the only company in Iceland that provides this kind of services and has a very strong position in the market, there is still a threat that aggressive rivals could appear and they will have better finance position to ensure better advertisement and invest to services improvements which would mean the bankrupt of the Persona Optima Iceland ehf.
(Minelgaitė 2011)

4.2 Project risk management in Persona Optima Iceland ehf.

As it has been outlined in the research method, the qualitative research is based on interviews. As most of them were semi-structured, the research results on project risk management in the case company will be represented according to the themes. The first theme introduces the term of risk management and its practices in the company, the second one focuses on project risk management, and the third theme is project risk management in a case company. And the final one is the comparison of two big projects regarding the risk management issue.

Before data analysis, a short introduction of the survey will be provided. The head of the company Persona Optima Iceland and two coordinators of the projects WISE and IPPA were interviewed. The limitations on the number of interviewees were made due to very few people working in the company. Underneath a short introduction on the interviewees will be provided.

Inga Minelgaitė is the director of the case company Persona Optima Iceland ehf. and has education in Project management. She has been participating in both of analyzing projects: WISE and IPPA. In the IPPA project Minelgaitė was the main coordinator. The owner of the company has been representing Iceland and the country's particularities in the projects meetings, as well as organizing partners meetings in Iceland.

Eleonora Perotti is a scientific director and president of Italian Permanent Learning Centre (CIAPE). CIAPE is an association of Adult Learners, working in order to remove barriers to continuous learning, promoting international training courses. Furthermore, this organization is widely involved in European projects. The organization had taken partnership with Iceland in the project IPPA a few years ago. (Perotti 2011)

Jurgita Kadagienė – director of Social Development Consultancy Centre (SDCC). SDCC is non-profit and non-governmental organization in Klaipeda (Lithuania). SDCC seeks to develop personal competences and professional qualifications. Most of the employees are voluntary psychologists. They focus on educational and consultancy psychology, including children, youth, and special needs youth consultancies. SDCC

has been participated in three projects together with Persona Optima Iceland: IPPA - International Peace Promotion Action, Nordplus Adult project WISE - Wide incorporation of social-cultural education of adults, and Leonardo da Vinci mobile project POTENCIAL.

4.2.1 First theme: Risk management

The first question in this theme was about the term risk management, and how the company and its employees are familiar with it. To draw a clear picture risk management procedures in three different organizations were compared. All interviewees have answered that they have fully understanding in the term risk management. Minelgaitė pointed out that all employees have education in business or management fields and are aware on the issue. While Perotti explained that risk management in her organization is the core, as most of the projects are developed trough the ICT technologies, i.e. perform distance work. However, in SDCC voluntary psychologists, contrary than the administration, are not very familiar with risk management techniques. (Minelgaitė 2011; Perotti 2011; Kadagienė)

As it was outlined in the background of the study, respondents distinguished primary risk identification and planning as an essential part toward risk management. Besides, interviewees have followed literally models and emphasized on monitoring. However, risk ranking was not implemented neither in a case company, nor in other project managers' organizations.

Concerning the risk management procedures and special actions to respond risks, Minelgaitė clarified that in the company Persona Optima Iceland every project, client or initiative is being discussed and based on: 1) history (past, experience), 2) background check , 3) evaluation of current situation, 4) evaluation of specifics of the question – decisions are made. The company is not using any specific methodology or e-tools to evaluate risk. (Minelgaitė 2011) While Perotti focuses more on precise project risk analysis. The analysis at the beginning of a new project is done in order to foresee possible difficulties and plan how to solve them in the organization CIAPE. (Perotti 2011)

The director of SDCC outlined that constant evaluation of the project is necessary in order to reach the effective results. The organization use risk evaluation measures such as the control of pre-conditions implementation, i.e. some conditions must be completed before starting new project activity. Monitoring the plan of activities is also a part of risk management in SDCC. They observe how the terms and schedule are followed, and in a case of changes, resources must be re-distributed in the way that project would be finished on time with the relevant scope. The organization also implement so called results' control, i.e. achieved results are compared with the designed ones, in case when strong deviations are noticed, the reasons must be found in order to find the manners to compensate it. Furthermore, Kadagienė, shared that a special attention must be paid to a financial control in order to use it effectively, and purposefully. And the last but not the least, project participants do personal subjective evaluations on the projects, and those opinions are considered and estimated as well. (Kadagienė 2011)

When it comes to analysis of micro companies', the head of Persona Optima Iceland ehf. explains that micro companies have less recourses (people, money, time) comparing to the big ones what also affect risk management process. Besides, she expresses the need of handbook or some program that does not require complicated preparation (friendly use) and allows risk estimation. The director also explains that it would improve risk management in other micro companies such Persona Optima Iceland ehf. So far there is no user-friendly handbook on risk assessment, especially for small companies with limited resources. Besides, the agent from SDCC added that additional knowledge, including higher qualification level in a specific field, and educational training might improve the risk management process in micro companies. While the interviewee from Italian organization emphases that micro companies have a big advantage regarding the communication, what allows better monitoring of the risk management process. (Minelgaitė 2011; Kadagienė 2011; Perotti 2011)

4.2.2 Second theme: Project risk management

The second theme in the interviews was more precise to the present topic – project risk management. Here interviewees were asked about the term project risk management, about existing uncertainties in the projects, how many of them are potential risks to micro companies, and which ones have been already met during the working

experience. Furthermore, the interviewees shared experience how risks differ up to the type of the project. Finally, the managers were asked about the disturbances regarding project risk management, and how to improve the effectiveness of the project risk management process.

Summarizing survey data, respondents described project risk management familiar to Köster's definition where project risk management was defined as analysis of internal and external factors that might have an influence on the project; determine how strong the influence might be and foresee the ways to deal with uncertainties in identified fields. Interviewees also defined it as an essential things regarding management, especially in big corporations (in complex projects, big budgets, many people involved). (Köster 2010, Perminova 2011)

Comparing with risk management in micro companies, the difference was defined in procedure. Respondents explained that micro companies usually adopt non-formal process, as the entire project management is implemented by one to three people. (Minelgaitė 2011; Perotti 2011)

All respondents mentioned that there are plenty anticipated and unpredictable uncertainties in the projects which have to be well considered and explored, such as the financial situation of the company, as well as situation in partner's organization, relation and communication with the contact of the project (because, according to Minelgaitė, sometimes a project 'looses' it's actuality until it gets financing), or even geographical situation of ones country and weather condition can be a strong influencer. For example, the director of the company Persona Optima Iceland explained, if project partners' meeting is in Iceland and there is a volcano eruption lots of additional problems can occur as well as new risks do not meet project requirements. (Minelgaitė 2011) While president of CIAPE provided more precise examples concerning project risks such as sometimes partners do not perform their work, they need to be substituted. Besides, Perotti adds that SME's owners tend not to participate in project dissemination events, as a result specific communication activities are required. (Perotti 2011)

Again when it comes to the case of micro companies', partners outlined that all previously mentioned risks might also become potential risks for micro companies. The main difference, according to Minelgaitė, depends on a specific project, and how much

specific uncertainty can influence the overall success of the project. (Minelgaitė 2011; Perotti 2011)

Risk is different up to a type of the project. Usually, risk is divided into strong, medium and light, regarding its influence on overall results or in the sense of possibility of appearance. Minelgaitė told that the kind of risk will occur in which project depends totally on specifics of the project. If for example, we are having partners meeting – usually the scope (the amount of work and meetings that needs to be done) and time will be more risky. While in the long term projects (for example 2 years and more) a budget often is more risky, because it is often hard to forecast the prices of airplane tickets, etc. – due to the fact that the national agencies do not increase financing if the prices for tickets increase. (Minelgaitė 2011)

The interviewees pointed out trustfulness of partners (as the partner was not following agreement and not delivering his input in the project, there for all the project was ”endangered” , cause the sponsor of the project could cancel financing or reduce it), weather conditions (here the example, of the Icelandic company was provided when they had partners meetings where they had to change an agenda because of the weather conditions), lack of time, and information available in order to make the evaluation as the main experienced uncertainties in the projects. (Minelgaitė 2011, Perotti 2011)

Concerning the disturbances for efficient project risk management, Perotti has mentioned lack of time and information in order to ensure proper evaluation. The director suggested dedicating specific additional time for risk management, and preventive plan preparation in advance. Furthermore, she mentioned that risk monitoring in projects is the milestone. While in voluntary organization, according to Kadagienė, it is difficult to distinguish the risk management in daily organization work from project risk management as they overlap each other, and most of the workers are volunteers, i.e. do not have a specific education on risk management issues. (Perotti 2011; Kadagienė 2011)

For effective project risk management more strict bilateral contracts; additional time and human resource for risk management were suggested. Regarding the agreements, Kadagienė emphasized that project realization responsibility should be equally divided and defined in the bilateral agreements between the project partners and the coordinator.

Furthermore, organizational questions should be solved as soon as possible by contacting with partners in all possible ways: telephone, fax, email, etc. (Perotti 2011; Kadagienė 2011)

4.2.3 Third theme: Project risk management in Persona Optima Iceland ehf.

The third theme was structured to investigate project risk management in a concrete company. The respondents were asked about risk evaluation methods in their company, especially in Persona Optima Iceland, as it was the case company, different methods were presented and compared among different organizations. Furthermore, they were inquired how those methods are encouraged and implemented. Thus, this chapter mainly focuses on particular organizations' project risk management analysis.

Minelgaitė explained that project risk management evaluation in company Persona Optima Iceland is based on background and historical check, as it was mentioned in the Theme No. 1. Director shared that no specific methodology or e-tools to assess risk are used in the company due to limited resources. However, when managing projects, they critically evaluate risk zones of each project in regards to: scope of the project, time of the project, money of the project (budget). What if scenarios are often used. Whereas, the head of Italian Permanent Learning Centre, mentioned that Logical framework Analysis of a project is used in the organization. (Minelgaitė 2011, Perotti 2011)

Minelgaitė also shared the experience concerning risk assessment implementation. She said that the risk assessment process varies up to the project and environment characteristics. The manager told that risk assessment usually is being done in a few stages in Persona Optima Iceland:

- Early stage – before even starting to write a project (evaluation of the topic of the project, program, partners, etc.).
- When the application is written – then once more risk evaluation is implemented (usually focusing on the scope of the projects, i.e. will they be able to implement what we defined in an application program)
- Then horizontal risk assessment – during all the projects, most often on milestones.

On the other hand, the head of the company stressed that it is just a basic example of risk assessment in EU projects, as every project brings different uncertainties. (Minelgaitė 2011)

As one can see from the survey data, contrary tho most of secondary sources, interviewees did not mention risk analyzing and prioritizing before performing risk planning (Köster 2010). Persona Optima Iceland and other companies were implementing just basics of risk management, where risk zones were defined and scenarios for foreseen risks were made. However, they did not ensure further risk management procedure, including risk ranking, followed by responding strategy.

To get more obvious picture, the partners of the case company (CIAPE, SDCC) were asked to estimate the project risk management procedure in Persona Optima Iceland ehf. The agent from Italy explained that the procedure is well-planned where monitoring is a milestone in the overall management process. The partner from Lithuania added that constant control of the performing plan, results and finance upgraded project risk management is used. Kadagienė has also mentioned that in all three projects they have been participating with the case company an active communication and collaboration ensured the successful project management including the risk management operations. (Perotti 2011; Kadagienė 2011)

In order to get a more particular information, interviewees were also asked about advantages and disadvantages of risk management process in the company. The owner of the company Persona Optima Iceland eagerly shared working experience and critically provided weak points regarding risk management procedure in her own established enterprise. Minelgaitė told that the main disadvantage in project risk management process is the fact that risk management is additional time or other resources (e.g., finance) consuming element. While the advantage of risk assessment procedure is that it might help prevent problems and reduce risks. The director of SDCC said that the main advantage in this company regarding the risk management issue is its size, i.e. Persona Optima Iceland ehf. is a small company which enables easy human, and finance resource control. No disruptions were noticed by Lithuanian partners in Persona Optima Iceland project risk management procedure. Unfortunately, the partners from Italy were not willing to give their opinion (on Persona Optima Iceland ehf. risk assessment procedure's advantages and disadvantages) as they have decided that the

question is not pertinent due to confidential reasons. (Minelgaitė 2011; Kadagienė 2011; Perotti 2011)

4.2.4 Fourth theme: WISE vs IPPA

This theme was chosen in order to get an insight to the project risk management in the company Persona Optima Iceland. The main idea was to explore project risk management techniques while comparing two big international projects in the company: WISE and IPPA. Hence, this chapter will provide short introduction about the projects, risk management characteristics in a particular project.

WISE - Wide incorporation of social-cultural education of adults from Nordic-Baltic peripheral areas. The main goal of the project is to create a network that would identify the most effective ways for educating Lithuanians, Latvians, Icelanders, Swedes, Norwegians, Danes about social environment, culture and labor market, further in the text term socio - cultural education will be used. The official statement of the projects says that "various important problems like tolerance, understanding, integration could be solved much easier in the Nordplus region by creating a socio - cultural education network." (WISE 2011)

Concerning the main idea of the project, the awareness on Northern countries' cultures was identified as a big problem, as more and more people from Lithuania and Latvia are working in Iceland, Sweden, Denmark and Norway without little knowledge about local culture, customs, and otherwise people from Northern countries are not familiar with Baltic culture. Besides, the problem was more dramatic where people are native from small villages. Partners of the project explained that lots of misunderstandings occur every day regarding respect on very special culture particularities. (WISE 2011)
As soon as the clear need for socio – cultural education was identified, partners from Iceland, Sweden, Lithuania, Norway, Latvia, and Denmark have decided: "to create a network of organizations that could identify most effective methods and tools for such an education."(WISE 2011)

More information about the project might be founded in the official project website: http://www.wise-wise.eu/About_project.

IPPA - International Peace Promotion Action - is a Grundtvig Learning Partnership from the Life Long Learning programme. The main subject of this project is to "raise awareness on Global peace promotion actions in the world". IPPA seeks to "share positive attitudes about keeping peace in the world, as well as promote intercultural dialogue between people from different nationalities". (IPPA 2011)

The main procedure of the project was Competition of essays. Participants had to write an essay about Peace and express symbolic support for Peace in the World. International Peace Promotion Action contained partners from five different countries: Cyprus, Iceland, Italy, Lithuania and Turkey. (IPPA 2011)

More information about the project might be founded in the official project website: http://www.ippa-peace.com/About_project.

Persona Optima Iceland ehf. has been participating in both above introduced projects and represented Iceland in partners meetings. Furthermore, in the project WISE the company was the main coordinator.

Coming back to the survey results, interviewees were asked about anticipated and actual risks they did meet in the projects WISE and IPPA, how they were solved, and what would they change in overall management process concerning risk management.

Respondents told that schedule risk was the most problematic. Interviewees seconded to literally opinion, and explained that scope and schedule risks often overlap each other (Murphy 2005; Wideman 1992). The coordinator of the project IPPA mentioned that partners have postponed performing tasks. The supervisor encouraged them a few times what required additional efforts and increased scope and schedule risks. i.e. reach not all targets, or do not perform goals on time. The representative from SDCC said that next time a more detailed plan, including partners' responsibilities, for the whole project duration should be prepared and only minimal changes should be done during the process. (Kadagienė 2011)

Though, the representative from Iceland told that she would change only minor details in the management of those projects. Minelgaitė, likewise Köster and others, also

mentioned that main risks in those projects were scope, time and budget. She seconded to other respondents and explained that there were delays in both projects, but it was expected due to the slack grip. The head of the company also mentioned that they met some unexpected risks. For example, once a partner failed to deliver material as it was agreed. Minelgaitė explained that the partner was very important as he was the most experienced in the field, the organization he was representing was the biggest of all partner and his personal CV was the most impressive of all partners. She explained that this mistake caused additional problems while finding finances for one additional trip to Sweden. Eventually, they got part of the material on the other hand, part of them had to be produced by other project partners what also took time and other resources. This partner's example proves that projects are always unpredictable, and the manager's responsibility is to have an alternative plan if some deviations are met. Those were mentioned as the main factors disturbing effective project risk management. Contrary to Minelgaitė, Perotti said that no problems were met during the project IPPA. (Minelgaitė 2011, Perotti 2011)

All respondents claimed that both projects: IPPA and WISE were successful as the stated goals were met. That is the main success criteria for EU agencies. Both projects were well written, executed and reported. Concerning IPPA case, this project was able to attract known people and join the projects. During both projects partnerships of the partners were continued in production of other projects. Besides good communication among all partners and efficient team working were established. To add, both projects were implemented with less time than planned. On the other hand, according to Minelgaitė "there is no end line for perfection". (Kadagienė 2011; Minelgaitė 2010; Perotti 2011)

Concluding the interviews and the researcher's own observations during the working time in the company, Persona Optima Iceland is following the main risk management principles, based on a precise projects background, partners historical, and past project experience evaluations, as well as finance and critical time evaluation for the project scope. However, the company is not implementing risk ranking. Mainly they strictly evaluate risk zones regarding the scope, time and budget, followed by logical framework strategy. Furthermore, they do proceeded risk evaluation, where risk is assessed in a very early stage, then after the application, followed by continuous horizontal risk monitoring in overall project management process. On the other hand, no

specific methodology or e-tools are used in the company. Due to the need of improvements the next chapter will provide managerial advices for a case or any other micro company regarding effective project risk management.

5 RESULTS – EFFECTIVE PROJECT RISK MANAGEMENT

Poor performance in scope, time and cost objectives is followed by numerous failed projects. Unfortunately those usually are caused by unforeseen events and uncertainties. However, those failures often arise from poor management, and not enough competence in mathematical techniques where risks and uncertainties are not well considered, usually optimistically ignored and plans are not well prepared. Therefore, this chapter will cover the main findings and provide user-friendly managerial matrix and/or advices for micro companies for effective risk management in projects.

The clear problem was outlined in the previous chapter. Micro companies are still struggling with efficient project risk management due to limited resources. The micro companies are particular about the size and other limitations. So, an advice as employ more people or get more money does not work in deed. On the other hand, for every specifically risen problem above, one can find a solution.

First step due to effective project risk management is to clarify the goals of the company. It might be a training session, conference, seminar, or simple stuff meeting, where the company's values, main focuses and targets are identified. Concerning project companies, risk management should be a cornerstone in overall company management. Another thing that could be done is a training session for employees regarding risk management issues, or qualification courses. It is necessary to have a fully understanding on the terms: uncertainty, risk, risk management, project risk management, etc. In addition, the attitude and main approaches in all organization might influence effective project management as well. A manager has to face issues such as unforeseen events, impossible risks, do not ignore and consider every single detail. In other words, managers and other project participants must be prepared for the impossible and unpredicted.

As micro companies contain of one to nine workers, this kind of educational courses would not take lots of financial resources and might be very effective. Furthermore it might result in team encourage, reinforce inside communication and efficient working. (IRM; Kendrick 2009, 252-253) Furthermore, those training sessions could also provide analysis, discussion on the improvements, and learned lessons of the previous projects.

That would be useful for further project management, as systematic information and experience from the previous ones would assist in the future ones. (Dinsmore 2006)

Regarding the weather and nature problems, it is advisable to take into account a weather forecast. Besides, a more favorable season might be chosen for the conference meetings, if possible. Unfortunately, volcano eruptions are barely predicted. Here another so called quiet country might be considered for partner meetings. It is not necessary to meet in the country of volcanic origin.

Due to the problem of staff substitution, the author suggests to take into consideration management support measures in order to increase staff motivation, and interest about the project. Maybe a company could afford some bonus after each successful project. While sometimes simple praise might work, as well as adequate working conditions and pleasant atmosphere in the company, including communication with the boss. Supportive culture is often defined as one of the success factors in projects. Basically it does not cost anything but can bring lots of benefits. (Hilson 2009, 90; Karlsen 2011; Kendrick 2009, 253; Webb 2003, 101-102)

Concerning more radical solutions, maybe some employees should be replaced by more competent ones with higher education, especially in the project management field. Diversity of the projects requires managers to be competent in specific management areas such as status reporting and scheduling. Sometimes this critical decision is the only solution to ensure effective project risk management. (Dinsmore 2006)

However, effective project risk management depends not only on the staff, but also an experienced project leader is necessary. Not necessarily the head of the company and project leader is the same person. Sometimes the person ‘from outside’, or even somebody from staff might manage better and give all efforts for that project, as the head of the company, i.e. the main project manager, might be busy and attracted by other problems and issues that he or she will not pay enough attention to project management, especially for risk management. The character and ability of the project manager might influence on the success of the project. It is said that a project leader is the one who has to encourage team work, monitor that a risk management plan will be prepared well and be responsible for further risk management steps. (Hilson 2009, 90; Harris 2009, 86; Webb 2003, 101-102)

An alternative solution might be dedicating risk management responsibility to a certain person, a so called risk officer would be responsible for a certain project risk management process. This solution would ensure all necessary attention for risk management, as that person would take it as his/her responsibility. The person should be dutiful and provide characters such as healthy skepticism, realistic approach. Due to limited human resources, one of the project participant might be chosen, bearing in mind that he/she will need additional time and will not be able totally participate in other project management issues. (Dinsmore 2006; Webb 2003, 101-102)

With regard to the leadership approach in risk management, communication is very important in a risk management process. Wideman says that an effective project risk management model is based on four phases: input, process, output, and feedback (Wideman 1992, I-5). Efficient communication assists in risk monitoring process, when all notifications and observations are important. Even some authors say that lack of personnel is a disadvantage for micro companies, there are opinions, that limited number of workers and informal communication style might work as a big advantage, ensuring efficient communication were status reports, specification change notice, project review reports, meeting minutes, including learned lessons and feedback are prepared and provided directly in short time while information is still current. (Hilson 2009, 90; Kendrick 2009, 253)

In addition, here is also suggested carefully to reconsider internal and external project related relations. (Perminova 2010, 63, 69, 193) As inappropriate communication or project culture might become first a part of the project uncertainty and later a potential risk (Köster 2010, 98). Furthermore, management and leadership risk can be implied in any risk group, i.e. if there is no constructive and proper management, it is difficult to reach schedule, cost, quality and scope requirements. That is to say inadequate management rises other risks. (Minelgaitė 2006)

As it was outlined in the background of this research, project risk management requires careful planning, as the first milestone. The following steps: identification, analysis, risk performing planning, response and monitoring will not be efficient without detailed planning and foreseeing possible risks at the very early stage. The proper plan has to provide costs, schedules and performance expressed in ranges, and future timing of

activities. In case of sudden changes, different scenarios might help to analyze current situation and take relevant actions. Scenarios have to be formed according to sources and circumstances that have the highest level of risk. When it comes to the performing risk planning phase, mitigations and other strategic plans have to be prepared. Those plans must include information on what risk, when, by whom and how will it be minimized or avoided or transferred. A proper plan must provide alternative actions in case of every possible risk or uncertainty. Furthermore, in order to ensure an effective plan all team input must be considered. (Harris 2009, 86; Minelgaitė 2006)

In the respect of planning process, additional time for risk management should be considered in the very beginning when a project schedule is estimated in order to prevent schedule risk. It is advised to be realistic about scheduled resources and planned execution, as it often takes longer (due to unpredictable reasons) than it was considered at the beginning. What is more, risk management is a proactive process, thus risk has to be managed systematically, as well as periodically monitored. As a result, it is advised to divide the overall management process into stages. This must also be considered when preparing a detailed plan for the further risk management process. It is necessary to add that quality of risk management is not depending on risk management complexity. It is said that risk management can be simple, with a clear recognition, followed by logical thinking what is your target, what uncertainties might affect your project, in which way: opportunity or threat, which are the most influential and how those might be solved. (Dinsmore 2006; Wideman 1992)

Regarding the funding problem, managers might focus more on long term projects, as they are difficult to predict in cost aspect. Here the overall country situation should be observed, for example, if inflation is forecasted, then managers should have in mind that prices will increase, which requires corresponding funding. However, when it comes to short term projects, usually scope and time problem were expressed. More insight and detailed analysis including detailed planning might assist a lot in order to deal with scope and schedule risks.

Another, seems very small mean, but can distinctly increase the efficiency of the project risk management is a clear documentation including clear common objectives and common language. Workplans and project database must be ready all the time for accurate project reporting to avoid unnecessary time wasting during the critical

moments. Furthermore, those might assist when international projects are arranged or new comers join the project. (Kendrick 2009, 252-253)

When implementing a risk identification stage, it is necessary to do a research of environment conditions (including internal and external), and historical background of partners and stakeholders. Besides, reviewing project requirements in the regard of scope, schedule, and cost risks it is useful in overall project management process. Moreover, it is advised to make a list of the most popular and most influential risks that a manager each time would have guideline, i.e. to check the most harmful ones, and the most likely, and then continue with more specific environment analysis. (Kendrick 2009, 253)

Concerning the most common project risk situations, Wideman suggests to consider if the current project is very different from previous ones; or if other similar projects were cancelled or delayed; the case if some uneasiness are noticed; when numerous alternatives are detected; in case of technical data lacking, when technical process and design are not mature; or standards for performance are unrealistic; permits are outstanding as it might warn about coming risks. (Wideman 1992, A-1)

Other sources suggest implementing small innovations in the company due to risk management improvements. For example, Hilson advices to event a lunch break in the workshop. For instance, the risks might be identified in the morning and evaluated in the afternoon. Another example might be an anonymous risk reporting channel. This would give a chance for anybody from the project team to report risk and will not be burdened by responsibility in case when it was an inappropriate notice, while the manager would have more diverse aspect to check and probably avoid potential risks in the future. (Hilson 2009, 86)

Another tip for efficient risk management to do a risk chart where all risks are named, have opening date, short description, probability and importance evaluations, either qualitative or quantitative. In a necessary case a risk might have a person and deadline for its monitoring.

When it comes to risk evaluation and prioritizing stage, micro companies are recommended to use as more detailed numerical information as possible when

quantitative techniques are chosen. Respectively, more opinions, and experts analysis are advised when qualitative risk evaluation method is chosen in order to ensure more precise results. (Maylor 2010)

As it was outlined before risk management is a proactive process, thus a risk has to be systematically reviewed. In sense of the monitoring in risk management process, all authors agree that risks should be under control all the time. It is necessary to observe every deviation from the plan and adopt adequate measures to deal with them. It is suggested to monitor track, document changes, review data, reports and take alternative actions to meet changes. Periodic monitoring assists when reducing possibility to meet unexpected risks. (Dinsmore 2006)

Finally effective project risk management might be described as a lasting and developing process, where the environment of the organizations and projects is analyzed including methodical and systematic risk analysis when implementing risk management strategy.

6 CONCLUSION

The aim of this research was to draw a user-friendly matrix for micro companies regarding project risk management. Working methods, risk evaluation models, SWOT analysis, market and working environment were investigated with the purpose to provide recommendations for the case company Persona Optima Iceland ehf. on effective project risk management issue. In addition, the small survey was implemented to get more opinions for a qualitative research. Semi-structured and informal interview techniques were chosen, corresponding to the interviewee. Besides, discussions and virtual conferences were used to ensure relevant data for the research and get more insight of the topic. On the other hand, the secondary sources were used to provide the background of the thesis. The theoretical background of the study and practical research on the case company has brought a wider picture to the writer and allowed to give the relevant recommendations. Moreover, some ideas for effective project risk management were found in business and international project management manuals.

Persona Optima Iceland ehf. is the only specialized business consultancy and project management company in Iceland. The rough and diverse market brings numerous uncertainties. Some of them might be used as opportunities; however, some of them are potential risks. The case company is implementing the main risk management techniques including historical research on the partners, project, etc.; and systematic monitoring where risk is evaluated in the very beginning stage, then after application, followed by a horizontal controlling. Due to the limited resources the company is not able to implement any quantitative risk management or buy e-tools for risk evaluation. Nonetheless, the qualitative methods might be used with the assistance of managerial advices.

The attitude and approach of the company was defined as the main crucial factor due to effective project risk management in micro companies. This was accomplished by the theoretical chapters explaining the main risk management concepts, models and different approaches. Persona optima Iceland ehf. was familiar with most of them, and the survey showed that the manger of the company managed clearly to define milestones in the project risk management process. However, some user-friendly

managerial advices were provided in order to improve risk management processes in a case or any other micro company.

Therefore, the main advices due to micro companies risk management process include training sessions and qualification courses to ensure fully understanding and suitable attitude to risk management and the company's targets. The second cornerstone in an effective project risk management was drawn as a careful planning and systematic monitoring, followed by clear documentation, supportive culture, and proper management including an appropriate leader, efficient communication and feedback. Analysis of the previous projects, more expert' opinions on the current projects while using qualitative methods, inventing risk charts, and lists of the most possible and the most harmful risks, or small innovations in the evaluation process such as anonymous risk reporting were suggested in order to improve project risk management in micro companies.

As it was proved from the survey results risk management in the company Persona Optima Iceland ehf. is proper and well managed. Due to the need of improvements, recommendations for a case company and other micro companies were provided and concluded in this research.

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APPENDIX 1

The main activities of the company

- Personnel management.

  The main idea of this company was to provide personnel services, meaning that if it offers to find qualified personnel, help to choose among the potential workers. Furthermore, it provides documentation and reporting services. What is more, the legal business advices, evaluation of CVs and recommendations, job interviews, recruitment are a part of Persona Optima Iceland ehf. activities. In addition, it arranges variety of trainings, qualification increase courses. And the last but not the least function of this company is to increase motivation, evaluate effectiveness of the working teams, and looking for a personnel in foreign countries.

- Project management

  Concerning this part it is necessary to mention that a couple of years ago it was decided mainly to focus on projects as it is a new and not fully developed field in Iceland. Another reason of this specialization was the owner's personal interest and willingness to work with projects, as they are all different, and give more experience. At the moment Persona Optima Iceland ehf. provides project management services. Specialists organize trainings; they take care of forming efficient team work, organize and participate international projects. What is more, they help to go through the first step of the project – filling in the documents, and prepare the reports afterwards.

- Agency services

  This company also provides agency services, which means that it acts as an intermediator and represents other foreign companies during their collaboration with Iceland.

- Business expand both in Iceland and Baltic countries

  Persona Optima Iceland ehf. works not only in Iceland. It has a daughter company in Lithuania. It doeas market research and provide other previously mentioned services for foreign partners.