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RISK MANAGEMENT IN SMEs – DEVELOPMENT PLAN OF
HASSINEN VELJEKSET OY

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Abstract

The purpose of this thesis is to investigate the existing risk management of the company Hassinen Veljekset Oy (Havel) and to create a system to improve it. Havel is a small family company operating both internationally and domestically in the forest industry. The resources are very limited and require practicality from the risk management system.

The current situation of risk management in the case company was examined by observing the working methods and interviewing the managers of the company. The author has worked for the company for several years. This helped in observing and noticing the faults in risk management.

The study showed that there are not systematic practices to manage risks at Havel but only contextual decisions. Actions are made when a risk is in danger of occurring. In the new risk management system the existing resources are utilized in order to easily attach the system into Havel's daily actions. The system to improve Havel's risk management ties around a risk management portfolio. Havel gathers all possible risks to the portfolio and assesses them according to their likelihood and consequences. After the risks are analyzed and their treatments are stated Havel takes the needed managing actions to avoid the risks or minimize their impact. The risks and treatment of them are regularly reassessed and revised.

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1 INTRODUCTION

Risk management refers to operations to manage the risky situations a company is facing or might face in the future. It includes actions such as identification, analyzing, assessment and control of risks. Risk management defines how the risks are treated: whether they need to be avoided, monitored, managed or simply accepted. Risk management in SMEs is many times different from that of big corporations, as with limited time resources many actions might be prioritized over systematic risk management.

The aim of this development plan is, after examining the condition of the current risk management at the case company, to create a workable system and tools to develop it. As the company is operating both domestically and internationally it needs to be prepared and able to flexibly react to different kinds of risks from different kinds of sources. The risk management system needs to be practical and easy to perform in order to ensure that it is not neglected. The goal is also to provide the company with the knowledge and means to improve its risk management and overall performance.

The case company of the development plan is a small family company, Hassinen Veljekset Oy (Havel), located in Iломantsi, Eastern Finland. Havel produces different kinds of products related to the forest industry both for domestic sale and export. The most long-standing product of the company is a plastic hose protection spiral, which is used by many leading forest machine and crane manufacturers. Track tensioners, soil cultivators and boat docks are examples of Havel's other products.

This thesis can be roughly divided into three parts. First, risk management and tools for risk management are addressed. Why and how effective risk management should be conducted and which kinds of risk types exist are explained. After the theoretical part comes the development plan of the case company Havel. The current situation in the company and the system the author has created for Havel to improve its risk management and thus performance is presented.

2 RISK MANAGEMENT

Business managers as well as private persons choose to take risks every day. So risks are an integral part of life and business. In order to realize its potential and maximize the positive outcome and minimize the negative outcome a business needs to manage the risks. (Global Risk Alliance 2005, 9.)

Risk management consists of activities to identify, analyse, assess and control risks. The purpose is to protect the business from possible negative incidents and as well to recognize possible opportunities to success and gain profit. (Global Risk Alliance 2005, 9.) Risk management includes policies to deal with daily operational risks as well as greater strategic risks. Operational risks are handled by business units according to the guidelines of risk management, and strategic risks are the responsibility of managers, boards and specialists. As a risk possibly affects negatively the whole organization when occurring, the risk management policies need to be communicated and followed throughout the company. When employees and managers of all levels are aware of possible risks, foreseeing future challenging situations is easier, and balancing decisions can be made at earlier stage. (Managing Business Risk 2008, 8.)

2.1 Classification of risk

There are multiple definitions to risk. A common description is that risk is a negative deviation from the plan (Investopedia 2008). The word “risk” is also perceived as possible danger, loss or injury, which can be somehow be foreseen and its impact estimated. This means that risk is not equal to uncertainty, but moreover a measurable uncertainty. (Waters 2007, 213.) Risk also needs to be separated from the term “problem”, as risk is a possible event in the future and a problem is an already existing trouble. Well-managed risks can help to maximize a positive outcome, and therefore risks cannot be seen only negatively but also as opportunities. (Öhman 2007, 25.)

2.2 Risk types and categories

Risks can be generated from different kinds of sources always from natural disasters to market fluctuations. In risk management all these possible risks need to be noticed and measured by their possible occurrence and impact. The possible risks can vary between branches as all industries have their own little differences. The risks mentioned later on are examples of typical risks companies of all sizes are facing. The list is not exhaustive as many other risks exist as well.

Global Risk Alliance's Risk (2005, 10) management guide presents a figure of three different risk types (Figure 1): uncertainty-based risks, opportunity-based risks and hazard-based risks. Risks can be also categorized for example into financial risk, strategic risk, operational risk and market risk.



Figure 1. Risk types (Modified from Global Risk Alliance 2005).

Uncertainty-based risk

Uncertainty-based risks are events which are unexpected or unknown, such as natural disasters or a loss of market share. These risks are catastrophic or disastrous and have negative outcomes. One common feature in uncertainty-based risks is that they are not possible to be controlled or influenced. For example no one can affect an earthquake even though everyone knows its possibility to occur, or no company can affect the exchange rates of currencies. With this kind of risk the option for a business manager is

only to prepare for the possible outcome and minimize the negative impact of the risk. (Global Risk Alliance 2005, 10; CPA Australia 2009, 5.)

Opportunity-based risk

Opportunity-based risks have two main aspects: taking an opportunity and not taking an opportunity. Taking an opportunity refers to understanding and accepting the possible impact of a risk and then taking actions to minimize losses and maximize gains. Not taking the opportunity means that risk is avoided, but then also the possible gains are refrained from. As well as uncertainty-based risks also opportunity-based risks can be financial. For example the decision about expanding the business or moving to another locations are opportunity-based risks, as they offer a possibility to make more profit but also risk loss exists. (Global Risk Alliance 2005, 10.)

Hazard-based risk

Hazard-based risks are the most common types of risks associated with risk management. These risks are potential sources and situations to cause harm, for example physical, ergonomic or psychological injures. Poor work ergonomics or noise at the workplace are both examples of hazards which risk management needs to assess and control. (Global Risk Alliance 2005, 12.)

Financial risk

As mentioned earlier financial risk can be uncertainty-based or opportunity-based in nature. The term financial risk broadly covers many risks in finance, for example liquidity risk, credit risk, foreign exchange risk and interest rate risk. These risks affect the company finances either negatively or positively, as for example changes in exchange rates can increase a foreign company's buying power and decrease that of the domestic company, and vice versa. (CPA Australia 2009, 7-8.) Financial management

plays a main role in managing financial risks, as with effective management the financial risks and opportunities can be determined (Global Risk Alliance 2005, 18).

Strategic risk

Strategic risks are risks arising from a poor business plan or a poor implementation of the plan. Strategic decisions are made to sustain or grow the business, and any risk threatening these decisions is a strategic risk. For example if the objective of the company is to increase sales by 10% during next 12 months and the demand collapses simultaneously, a strategic risk exists. (Global Risk Alliance 2005, 16; Business Dictionary 2015.)

Operational risk

Operational risks are risks of daily operations that arise from delivering the product or service of the company. These risks are internal and many times deal with people. Therefore, operational risk management and human resource management are closely linked. (Global Risk Alliance 2005, 16-17.)

Market risk

When comparing to strategic risk and operational risk, market risk has fairly different source. Market risks are emerging from external origins such as competitors, economies, and demand. For example new legislation or decreasing demand affect a company's operations and business, and are hard or impossible to be affected by the company. Thereby, market risk can be stated to belong to the uncertainty-based risk type. (CPA Australia 2009, 8; Global Risk Alliance 2005, 10.)

2.3 Benefits of risk management

Effective risk management helps the business to maximize its gains, minimize the possible losses and optimize the performance. Risks are inevitable, so no company can simply avoid them. This indicates that every company *should* and *should want* to effectively manage their risks.

The greatest benefit of risk management is that the chance of a possible unwanted event occurring can be reduced. If it does take place, the impact of it can be controlled or at least be prepared for. This helps the company to plan and manage all its operations in the long-term and be aware of possible issues affecting the performance. Efficient risk management enhances profitability and competitiveness, which are key factors in a sufficient and sustainable business. (CPA Australia 2009, 4.) Foreseeing the risks and their impact and by that increasing efficiency and productivity affects the quality of the service or product positively, which in turn helps to achieve competitive advantage. Effective risk management enables the company to improve its performance in many aspects. (Global Risk Alliance 2005, 12.)

Risk management is also beneficial in the sense of communication and relationships between staff, customers, suppliers and other partners. Possible risks need to be communicated with all phases of production or service delivery process, which automatically makes the relationships more intimate. Operational risk management also engages staff members other than only managers, which can be a motivational factor and make employees better commit to a company's objectives. This affects favorably on for example delivery times. (Global Risk Alliance 2005, 12-13.)

Many expenses can be reduced with risk management. Keeping the costs within the limits of a budget is easier when all possible risks are considered and the chance of unwanted surprises is reduced. Also compliance costs, such as expenses required by government, are taken care of, and thereby there are no legislative errors in the company's actions. (Global Risk Alliance 2005, 13.)

2.4 Risk management process

The risk management process describes the process of how risks are identified, assessed, documented and controlled. It is a framework presenting methods of how to deal with actual and possible risks. (Waters 2007, 213.)

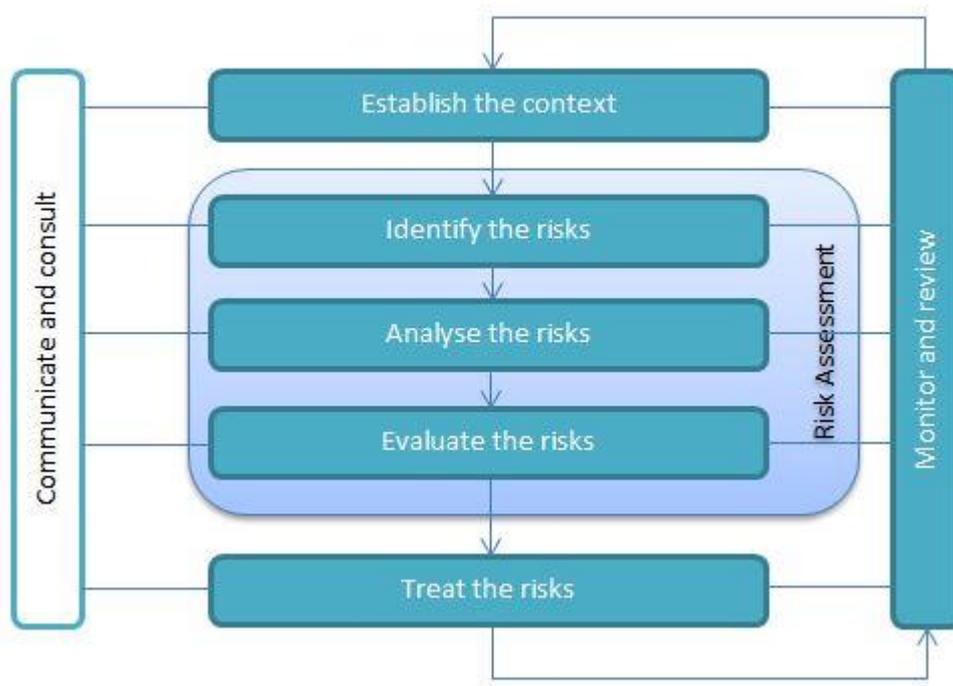


Figure 2. The Risk Management Process (Source: SME Risk Management Guide 2005).

In the risk management process communication and consultation are related to staff and other work force (Figure 2). Communication and consultation's aim is to identify the persons and their roles in risk management process, and promote the communication at each step throughout the entire risk management process. So communication and consultation is an integral part of the risk management process even though it is not directly risk related. (Global Risk Alliance 2005, 22.)

The first move, establishing the context, refers to estimating the situation both internally and externally and setting the objectives, limits and criteria for the risk management. The internal context means the objectives, values and internal culture of the company. In order to make the risk decisions according to the goals and wants of the company, the internal context need to be noticed. External context is the overall business environment

where the company operates. The company can estimate its situation in an external context with the help of for example a PESTEL analysis. According to Global Risk Alliance's Risk Management Guide also the context for risk management needs to be established. This means setting the limits and goals for the operations and tasks in order to ensure that all the significant risks are identified. For example a suitable timeframe for the activity or sharing of responsibilities are part of establishing the risk management context. The last aspect of the context establishing is developing risk criteria. Risk criteria state the unacceptable and acceptable levels of risks and the objectives of each criterion. For example when timing is the risk criterion, completing the task before the acceptable due date could be the objective. If the deadline is not met, the risk is unacceptable and the balancing actions and strategy need to be identified. Managing the risks and the balancing actions is easier when the risks are categorized. (Global Risk Alliance 2005, 24-27; Managing Business Risk 2008, 10.)

The first step of risk assessment, identification, is to recognize the existing and future risk for the company and its activities. The risks cannot be managed unless they are recognized. The aim is to identify risks which may either negatively or positively affect the objectives of the company. These risks can be harmful in terms of for example money, company image or customer relations when occurring. (Global Risk Alliance 2005, 28; Managing Business Risk 2008, 10.) Identifying the risks can be problematic. Finding answers to questions what, how and why something could happen helps in identification of the risks. Global Risk Alliance presents two ways to identify risks: retrospectively and prospectively. Retrospective risks are events and incidents which have already happened in the past and may happen again in the future. Their impact is pretty easy to estimate as there is experience in the outcome of a similar past event. The prospective risks are those which have not happened yet but may happen in the future. Naturally, these kinds of events are more difficult to foresee and their impact is more difficult estimate. Interviewing relevant people, researching the business environment, reviewing the internal working techniques and categorizing the risks are examples of methods to identify prospective risks and learn how to control them. Also a common tool in the identification of prospective risk is a SWOT analysis, as it is excellent in noticing positive (strengths and opportunities) and negative (weaknesses and threats) risks. (Global Risk Alliance 2005, 28-29.)

The second step is analyzing the risks. In this stage the risks are characterized by the probability of occurrence and the potential damage or gain. The risks can be segmented and divided into categories, which generate a risk portfolio. (Waters 2007, 214.) As there might be a wide range of risks, and assessing all of them could be time-consuming and irrelevant, this analyzing part of risk management also determines which risks are taken under closer investigation. The risks requiring more careful examination are the ones which may likely occur or/and which may have great impact if occurring. The level of risk is calculated by the relation of consequence and likelihood:

$$\text{Risk} = \text{Consequence} \times \text{likelihood}$$

The company needs to estimate what could be the possible consequence and likelihood of each risk, and thereby determine how dangerous or profitable it could be for the business. As mentioned above, these risk analyses can be gathered together and categorized into risk portfolio. (Global Risk Alliance 2005, 30.)

Likelihood		Consequence		
		Significant	Moderate	Minor
Frequent	Extensive management essential	Management effort required	Manage and monitor risks	
	Possible	Must manage and monitor risks	Management effort worthwhile	Accept, but monitor risks
		Rare	Considerable management required	Risks may be worth accepting with monitoring

High level of risk
 Medium level of risk
 Low level of risk

Figure 3. Matrix for determining the level of risk (Modified from Enterprise PM – Risk management models and Global Risk Alliance 2005).

The next step, and the last step of risk assessment part, is risk evaluation. At this phase the level of risk is compared with risk criteria and determined if the risk requires treatment. The risks are prioritized and the company needs to decide if these risks are accepted or if they need further actions. Figure 3 shows how the level of risk can be determined. The risks placed on darkest blue areas are risks of high level because of their frequent occurrence, damaging consequences, or a combination of these two. The

medium level of risks do not occur that commonly or their impact is not overly significant as risks at the low level have only little impact or happen seldom. The actions needed to control the risk are determined according to where the risk is placed on this matrix. If the risk is placed on the low risk level, it might be that it is simply accepted and no or only little actions are taken. The risks which are accepted can be low or tolerable, or the treatment exceeds the benefits so it is not reasonable to take any actions. (Global Risk Alliance 2005, 31-33.)

After risk evaluation comes the treatment of the risk. This is considering treating or controlling those risks which are not acceptable or tolerable. The aim is to either reduce the negative impact of the risk or the probability of its occurrence. Also the positive outcome is promoted. The manager's task is to choose the most cost-effective and appropriate combination of risk treatments. (Global Risk Alliance 2005, 34.) These treatments and actions to control the risks are stated in the risk portfolio. Afterward the controlling measures are assessed in order to get feedback of their relevance and functionality. (Waters 2007, 214.) The risk manager need to assess the effectiveness of the risk treatment and monitor their functionality periodically, as the risks may change over time and new risks may arise. Monitoring and reviewing the risks should be an integral part of the entire risk management process in order to ensure effective risk management. (Global Risk Alliance 2005, 39.)

The process seems to be straightforward and simple, but even the identification of the risks can be extremely challenging. Past experiences give some data of possible risks and their impact, but still there are many possible obstacles which can be hard to foresee. When the managers are open-minded and willing to admit the presence of possible risks in their fields of responsibility, the company is able to gather a comprehensive risk portfolio to guide its actions.

2.5 Risk management in SMEs

Risk management of small and medium sized companies differs from that of big enterprises. All actions of the company are tied together, and usually only one person or a small group of people is responsible of decision making. Usually there are no separate

departments for e.g. marketing, human resources and sales, but even only one person is taking care of all these operations. Scarce resources demand setting priorities and, according to Lap Duong's research *Effective Risk Management Strategies for Small – Medium Enterprises and Micro Companies*, entrepreneurs of small companies tend to prioritize many other actions over risk management. (Duong 2009, 23.)

All businesses regardless the size need to assess risks and act to control or avoid them, but in small businesses documentation and systematic control of the risks are many times neglected. The manager may be aware of the possible risks and able to forecast future happenings according to past experience, but communicating these risks at the workplace may be lacking. (Duong 2009, 23.) When there are multiple tasks for one person, documenting everything and for example using a systematic risk management process can be seen as secondary.

The most important risk areas are somehow differing between SMEs and large enterprises. Smaller companies seem to be less sensitive to company image issues than larger ones. Also the market changes are a less important risk area, and SMEs are slightly more adaptable and flexible in their business implementation. (Viridi 2005, 41.)

2.6 Risk management in international operations

Operating internationally creates additional risks when compared to operating only domestically. A company faces risks which do not emerge from domestic business and which can be very different by their nature compared to domestic ones. Especially for companies which are operating both domestically and internationally it is essential to be able to monitor and manage multiple risks from multiple sources simultaneously. There are two most significant risks in international business operations: currency exchange risk and country risk.

Currency exchange rate risk is one main risks when operating in international markets. It is a financial risk posed by the fluctuation between currencies which can cause unexpected gains or losses. When the value of a currency rises or falls it affects the cost

of production and sale price which in turn affects the demand and profit. (Xuemei Hou 2013, 23.)

Another great risk in international operations is country risk, which refers to political risk and economic risk. Political risk means the changes in a target country's politics which mean for example new legislation or regulations. Extreme examples of political risks are trade barriers or war. Economic risk emerges from a country's financial condition. Purchasing power, inflation and GDP are essential indicators of economic risk. (Xuemei Hou 2013, 23.)

3 TOOLS FOR RISK MANAGEMENT

There are multiple tools which help to manage and identify the possible risks of the company and business. The most important practical tool for a company could be said to be a risk portfolio, as it presents all the risks, and the treatment and outcome of the risks. Before the risk portfolio can be gathered, the risks need to be defined and measured. Most of the risks are usually known, but their causes or impact might not be equally clear. Also it is important to find risks which are not so obvious and apparent. There exist many tools and programs for the identification and investigation of all possible risks. In following chapters some of these, especially the ones practical for SMEs, are presented.

3.1 Risk identification tools and techniques

Risk identification is the basis for risk management. The risks which are not known cannot be managed. (PK-RH – Riskien tunnistaminen 2009). Here are presented some risk identification tools and techniques which are suitable especially for SMEs.

Five Forces analysis

The five forces analysis is a good tool for evaluating the external risks and threats for the business. It assesses market potential and determines competitive power, which helps to identify possible risks emerging from external factors and maybe to reduce or control these risks. The company can find their competitive advantage with the help of Five Forces analysis and become more aware of their place in the market, and thus retain the beneficial actions and reduce unnecessary operations (Porter 1980). Thereby the Five Forces analysis can also help to improve internal factors of the company.

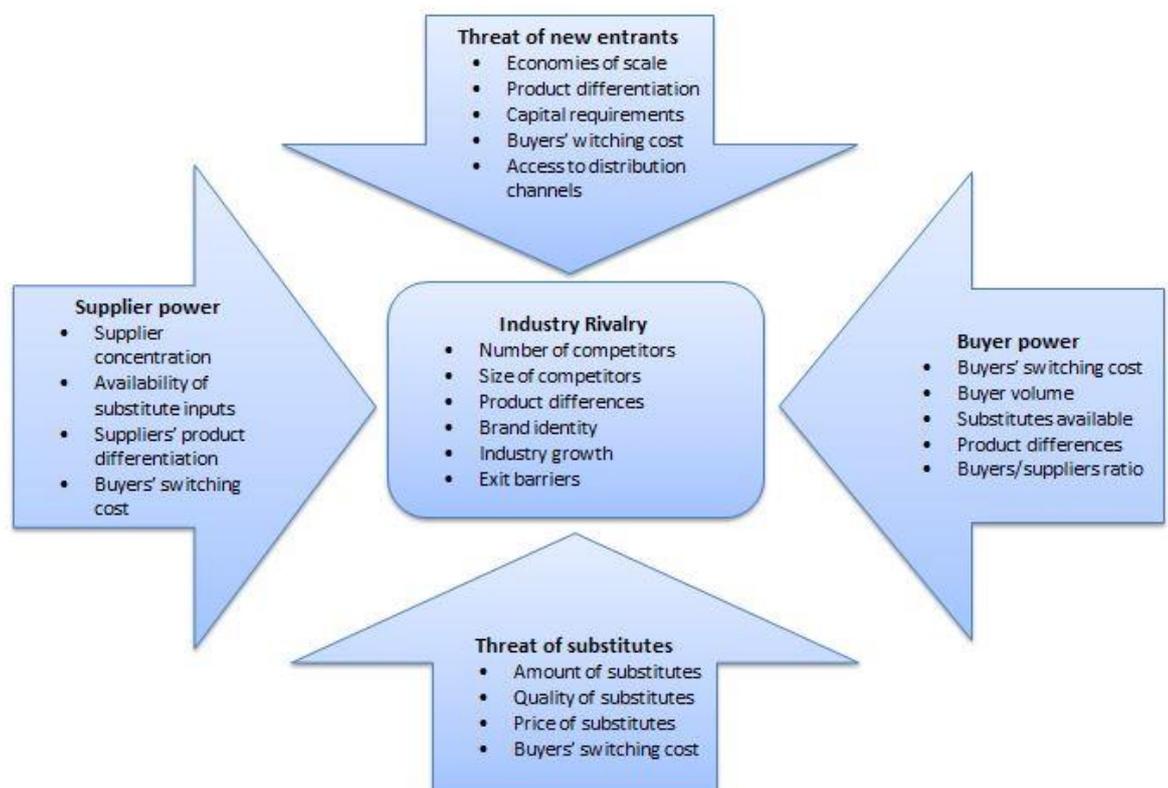


Figure 4. Five Forces Analysis (Adapted from Porter 1980).

Risk Map

A risk map is like a check list which helps to identify possible internal risks of the company (Figure 5). The risk map is part of the Vulnerability analysis, which presents a more detailed view of a company's situation and business environment and how to treat the risks. In a risk map the risky areas can be marked and then the bigger picture and focus points can be seen clearly. Every component in the map can be marked for example to be either a significant, handled or minor risk. (PK-RH – Haavoittuvuusanalyysi työkortti 2009.)



Figure 5. Risk map of Vulnerability analysis (Adapted from PK-RH – Haavoittuvuusanalyysi).

Analyses and surveys

Different kinds of analyses and surveys help the company to get a closer view of what is happening and which factors are affecting the business and its operations. When researching the outcome of an analysis or study, new possible risks which were not noticed earlier can be revealed. (Clear Risk Manager 2015.)

An example of an analysis helping to define risks is the vulnerability analysis mentioned above together with the risk map. A vulnerability analysis is a systematic tool for the identification and assessment of risks threatening the business and planning of the correcting actions. When categorizing and examining the business actions systematically, many unknown or simply ignored risks can be noticed and handled. A vulnerability analysis of PK-RH is created for SMEs and offers practical tools for risk management to a company with very limited resources. (PK-RH – Haavoittuvuusanalyysi työkirjanen 2009.)

Another example is surveys about the usage of working time. When examining how the time is used at the work place it can be discovered that a big share of time is spent on unnecessary actions, for example on Facebook, chatting with work mates or conducting minor subsidiary work chores when more important operations are neglected. Also specific working methods and cycles can be surveyed. When carefully observing production phases some pointless functions can be noticed and removed. With surveys on time usage at the work place, productivity can be improved. (Salary 2012.)

Brainstorming

Brainstorming is a technique to identify possible risks just by considering and discussing threats and their causes and effects. Brainstorming is not a systematic or scientific method for risk management, but it can still be very effective and help to notice risks which are not covered by other risk management techniques. (Clear Risk Manager 2015.)

3.2 Risk management software and programs

There exist many different kinds of platforms and programs for risk management. The most essential thing is to choose the right tool to serve the needs and goals of the company and its risk management process. (Mitre 2015.) Systematic software and

programs are many times used by bigger companies and corporations and not so much by SMEs. The following chapters present a couple of examples of software.

Analytica

Analytica is Lumina-Decision Systems' spreadsheet for business managing which among other features help to evaluate risks and uncertainties. It is a computer spreadsheet with which different kinds of diagrams, models, analyses and arrays can be created. Analytica also helps with decision making by showing how different factors affect the outcome, for example how an increase of 10% in raw material affects the price for the end user of a product or service. (Lumina 2015.) Using Analytica requires time to study the program and its features, but after familiarizing with its functions it is a useful tool for a company with decision making.

RiskNav

RiskNav is the non-profit organization Mitre's web application to collect, analyze, prioritize, monitor and visualize risk information. Mitre's software was originally designed for the US Government, but now there are other users as well. In RiskNav the risk areas are presented in tabular and graphical forms. In tabular form risks are weighed by their probability of occurrence and impact, and in the graphical form the risks are visualized by priority, probability and management status. (Mitre 2015.) Even if RiskNav was produced for governmental use it has many features which are useful and easily adapted for SMEs.

4 DESIGN OF DEVELOPMENT PLAN

4.1 Aim of the development plan

The aim of the study is to examine the current situation of the risk management at the company Havel and improve it by developing a practical risk management system which can be easily integrated to company's daily operations. The challenge is the quite high risk of neglect of risk management system if it is too complicated or troublesome to conduct. The goal of this thesis is to provide the company with knowledge and tools to improve its risk management and by that optimize its performance.

Investigating the current situation of risk management at Havel includes exploring how it is handled, which phases of risk management process are conducted, and how the risk management actions are communicated through the company. By observing and investigating the condition of risk management at Havel the weak points and development areas can be noticed and thus a suitable correcting system generated.

The desired benefit of this thesis for Havel is better knowledge of its current risk management system, and the means and tools to improve it. The risk portfolio gathered during this project for Havel works as a basis which the company can later on supply with new emerging risks. The company is provided with skills and a toolkit how to identify and analyze risks, and a practical way to document them and keep track of their handling. The ideal outcome of the risk management system is that Havel can more efficiently and flexibly handle both domestic and international risks.

4.2 Study methods

The study for the development plan is implemented by interviewing and discussing with the managers and observing the working methods. The four managers and owners of Havel have been interviewed in order to find out their perception of the situation in the company in terms of risk management.

As the author has been working at the company since 2007 both at the production site and the management it could be said that she has pretty comprehensive view how the company is operating and implementing its actions. This helps with the observation of the company and possible risky situations. The author also believes this helps to find workable and practical methods to improve the risk management and to take it as an integrated part of business functions. It is beneficial that the author is familiar with the habits and practices at the work place, so she can quite easily estimate the workability of risk management methods and select the most suitable ones.

5 CASE STUDY

5.1 The company

Hassinen Veljekset Oy (Havel) started its operations 40 years ago as a timber carrier company. Since 1989, Havel has developed innovative products in its own metal workshop in Ilomantsi, Finland. Currently there are ten permanent employees working in the company. The company provides different kinds of products and tools for the domestic and international forest and construction industries. Most of the customers are machinery manufactures both in Finland and abroad. Havel exports its products to over 20 different countries. (Havel 2015.)

Havel produces many different kinds of products for various branches. The most longstanding products are hose protection spirals, which are the company's main export, creating about 60% of the company's total turnover. Havel has also produced boat tracks and docks for the domestic markets for over 20 years. Other products manufactured and sold by the company are track and chain tools, firewood processors and soil cultivators.

The products are invented by two brothers, the managers and founders of the company, Seppo and Timo Hassinen, with the assistance of Seppo's son Mika and other workers of the company. The basis for all product development is an emerged need for a certain

kind of good which does not yet exist in the market, and which the managers believe to be profitable and in demand.

The company is now in a sort of turning point, as the younger generation is also entering the business. The children of Seppo, the author of this thesis and Mika Hassinen, are joining Havel's management. A generational change has started, so now there are four people in charge of the company. The work tasks of Seppo, Timo and Mika are currently partly overlapping as they all work with production and product development. Seppo and Mika are also working on domestic sales, while the author is responsible for overall sales, marketing and exporting.

5.2 Existing risk management and procedures

The current risk management at the company is rather modest. So far in the company the risk management has mainly referred to noticing the risks and spoken assessing of what would be the outcome if a risk occurs. So everything is unwritten and unsystematic and no specified procedures exist. The treatment of the risk and actions taken if it occurs are based on the knowledge and experiences of past incidents (see Appendix 1).

The managers of Havel feel that so far they have been able to handle the risks and react to their impact quite well. Still they recognize the need for more systematic and documented risk management as there are nowadays four persons in charge instead of the previous two. If a risk has occurred it has been handled in the best way seen in a given situation. (Appendix 1.)

6 PLAN FOR DEVELOPING RISK MANAGEMENT SYSTEM

As the company is small-sized the resources, especially when it comes to time and manpower, are very limited. As mentioned before in chapter 2.5 Risk management in SMEs small business managers tend to and in fact need to prioritize the tasks and put

more effort towards the most essential actions. This many times leads to the neglect of systematic and documented risk management, which might also be the case with Havel. This means that the risk management system for Havel should be easy to conduct and an integrated part of the company's daily and weekly actions. The possibility that the risk management methods are not executed if they are too complicated and time-consuming is actual.

Operating internationally creates additional risks when compared to a purely domestic company. Havel has both international suppliers and customers, so it is sensitive to changes from both sides of the supply chain. This means it needs to be able to preempt and handle risks efficiently and flexibly as they might emerge from multiple sources.

6.1 Available resources

The planning of suitable risk management methods for the company started by determining the resources and possible situations where the methods could be attached easily. The main findings are listed below.

The weekly meeting of the company's four managers

The meeting is a great opportunity to enhance the risk management. In the meeting potential risks can be noticed, discussed and documented. When the risks have so far only been recognized but never talked through as a group, analysis and control of the risks have been lacking. Even the identification of the risks is insufficient, as all managers may not realize all the existing risks of the operations, especially when they are not concerning their own area of responsibility.

The monthly meeting of all workers

At the beginning of each month all members of the work place gather together to have a meeting. The meeting is for information sharing, but it could be better utilized by communicating the goals and by that motivating the employees and building team spirit. With the enhanced usage of the monthly meeting Havel could engage the employees to

be more committed to the company's objectives and by that for example customer service could be improved.

The change of generation

Although the change of generation creates risks and challenges it also creates opportunities. Now when the younger generation is joining the business Havel has more resources in the sense of a skilled work force and decision-makers. With more persons in the lead the responsibilities can be shared and hence everything is conducted with better concentration and competence.

By better utilization of these three available resources the risk management of Havel can be improved significantly. As the new risk management system should not be too laborious to conduct utilizing already existing situations the best outcome is most likely achieved. By including some additional actions on the side of existing procedures and not creating some completely new customs it is easier for the company to absorb the new risk management system.

6.2 Suggested risk management system

The new risk management system for Havel ties around a risk management portfolio (Appendix 2). The risk management portfolio includes a basis for a risk portfolio with risk identification and assessment sections and tools. Later on with the help of these tools the portfolio is supplied with more possible risks which the company sees as justifiable. In addition to the risk management portfolio the target form helps Havel to clearly identify objectives for operations and performance and also to achieve the goals set together. Figure 6 visualizes the usage and route of the risk management portfolio.

The risk management portfolio is used step by step. First the risks are identified with the help of for example a risk map or five forces analysis. Then the levels of risks are determined with the help of Risk Level Matrix to be low, medium or high level, according to their likelihood and consequences. All the risks scoring at a high or medium level are taken under closer consideration by using a risk management process

form (Appendix 3). The low level risks are noticed and monitored, but in order to optimize the risk management and focus on more severe risks they are not thoroughly investigated. The risks and their levels need to be reassessed at least every time the situation in the company somehow changes or when the markets undergo notable changes. Some more frequent timeframes can be agreed upon for one specific risk if it is seen as sensitive to changes or if its impact would be great.

To the risk portfolio Havel lists all the risks it sees as existing or possible. Currently in the risk portfolio some pretty universal risks are identified and assessed, including damages and accidents, and some risks which the author has over the years noticed to emerge every once in a while. The idea of a risk portfolio is that Havel supplies it with the risks it sees as threatening and thus the risks are noticed and discussed together. This helps to avoid the situation where all the managers are aware of the risks concerning their own area of responsibility but do not recognize the threats of all operations of the company (Appendix 2).

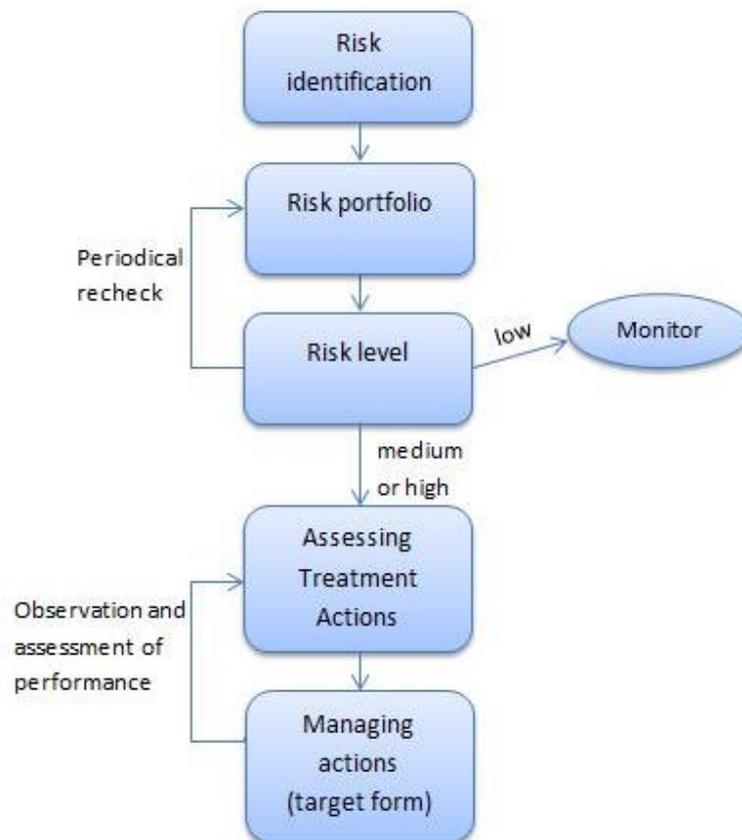


Figure 6. Procedures of the risk management portfolio.

The target form is a paper to help with conducting the needed managing actions stated in the risk management portfolio. For example in order to increase the flexibility of spiral production a working cycle system should be created (Appendix 4). Goals, responsibilities and work phases are stated in the target form, which helps to put things into actions and achieve the wanted changes and reformations. The target form works as an action plan from which the next work phase and timeframe can be checked. After the needed actions are taken and a suitable observation period has passed the operation and its results are assessed, and possible things to preserve and change for the next time are stated.

As the study shows the documentation at Havel is currently lacking and the risk management system must support it by making it as easy and effortless as possible. Documenting decisions and action plans made and not only verbally discussing them needs to be supported. The risk management portfolio offers Havel a basis for documentation with its forms to fill for risk analyses and achieving goals. The forms are convenient to fill and easy to add to the risk management portfolio. When the forms are gathered under one file it is easier for Havel to keep track of issues which need to be addressed, might pose a threat, or need to be improved. The target form can be used in the meetings to write down all the things to be performed and the persons responsible for the matter, which helps to avoid the situation where things are only discussed and planned but never executed. The implementation of the planned actions can be monitored every week in the managers' meeting by reviewing the progress of issues from previous weeks.

The risk management portfolio should be regularly checked as a whole. Specific risks might need more frequent recheck, but the entire portfolio should be looked over always after a certain period of time. The company can set the time to be for example six months if it finds that to be a suitable timeframe. As already mentioned earlier in this chapter the risks in the risk management portfolio need to be reassessed every time the situations in the company or the markets somehow change, even if that happens before the agreed timeframe. If it is discovered that some risk is not managed as planned or some goal is not achieved, the managers of Havel need to assess why this has happened and how to proceed from now on.

The risk management portfolio is a tool for Havel to improve its performance and hence optimize its operations. As Havel is an international company it is facing multiple risks which domestic companies are not, for example currency rate changes, foreign political risks and language barriers. Therefore, it is essential for Havel to be able to see its weaknesses and loopholes in a structured way and take corrective actions, which enable the company to handle both international and domestic risks. The risk management portfolio enhances the communication between the managers when they discuss and identify the risks together. This helps in handling international risks as all the managers, also those who are not working on export or international issues, become familiar with them and can take them into account in decision making.

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Interview

(translation next page)

Haastattelu riskienhallinnasta Hassinen Veljekset Oy:ssä 25.11.2014.

Haastattelija Suvi Hassinen

Haastateltava Seppo Hassinen, Timo Hassinen ja Mika Hassinen

Kuinka riskienhallinta on hoidettu tähän asti?

-Suullisesti keskustelemalla ja pohtien, että mitä tehdään jos asiat eivät mene suunnitelmien mukaan. Tulee myös aina mietittyä, että mikä voisi olla kulloisenkin tilanteen pahin lopputulos ja miten siihen reagoitaisiin. Eli ei mitään virallisia prosesseja yms.

Onko mitään määriteltyjä tapoja/käytäntöjä hallita riskejä?

-Ei ole mitään virallisia määriteltyjä toimintatapoja, ei mitään paperilla. Toki on ns. yhteiset pelisäännöt ja tavat toimia. Jatkossa varmastikin tarve parantaa toimintaa, kun neljä ihmistä johdossa.

Onko riskienhallintakäytännöt sekä strategiset ja operationaaliset toimenpiteet tiedotettu kaikille yrityksen tasoille?

-Työturvallisuusohjeet ovat kaikilla, tavoitteet pyritään välittämään työntekijöille. Kaikki tapahtuu pääsääntöisesti suullisesti työtiloissa olevia työturvallisuushuomautuksia lukuunottamatta.

Kuinka hyvin mielestänne yrityksessänne on tällä hetkellä pystytty varautumaan/reagoimaan mahdollisiin riskeihin?

-Vakuutukset työtaturmiin ja onnettomuuksiin. Pienenä yrityksenä aika helppo reagoida ja toimia joustavasti. Ei ole toistaiseksi tapahtunut mitään sellaista suurempaa tapaturmaa yms. ongelmatilannetta, pienempiin asioihin ollaan pystytty reagoimaan ja keksimään ratkaisut.

Kuinka hyvin mielestänne olette pystyneet minimoimaan riskien vaikutukset? Minkälaisin toimenpitein?

-Tähän asti ihan hyvin olemme pystyneet reagoimaan riskien vaikutuksiin ja minimoimaan haitat keksimällä joku ratkaisu käsillä olevaan ongelmaan. Asioihin on reagoitu tilannekohtaisesti parhaaksi katsomallamme tavalla, ei minkään ennaltasuunnitellun ohjeen mukaisesti.

Kuinka olette toimineet kun joku riski on käynyt toteen? Esimerkkejä?

-Esim. pidetty palaveri kuinka toimitaan nyt ja miten estetään ettei ensi kerralla toistu sama

-Esim. pitkäaikainen työntekijä ei enää työkykyinen, koulutettu toinen työntekijä korvaamaan

Translation to English

Interview about risk management in Hassinen Veljekset Oy 25.11.2014.

Interviewer Suvi Hassinen

Interviewees Seppo Hassinen, Timo Hassinen ja Mika Hassinen

How risk management is handled so far?

-Orally discussing and considering what to do if things don't go according to plans. We always think what could be the worst outcome and how would we react to that. So not any formal processes or anything.

Do you have any defined customs/procedures to manage risks?

-Not any official defined procedures, nothing in paper. Of course we have so called mutual rules and habits how to act and work. In the future we most probably need to improve this aspects as nowadays we have four people in lead.

Are risk management practices and strategic and operational actions communicated to all levels of the company?

-Work safety instructions are been informed, objectives of the company are forwarded. All informing happens mainly orally, except the work safety notices in production site.

How well you think you have been able to be prepared/react to possible risks?

-Insurances to accidents. As a small company it is pretty easy to react and act flexibly. So far there haven't been any great accidents or other problematic situation, smaller issues we have been able to solve and find solution.

How well you think you have been able to minimize the effects of the risks? With which kind of operations?

- So far we have been able to react to risks and minimize their effect by finding some solution to an issue at hand. We have reacted with the best way we have seen at the moment, and not according to any before-planned instruction.

How have you acted when some risk has occurred? Examples?

-E.g. we have arranged additional meeting how to find a solution and act from now on and how to prevent the situation to happen again

-E.g. long-term worker is not able-bodied, we have quickly educated another for replacing

Havel - Risk management portfolio

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POTENTIAL RISKS

Tools to help risk identification

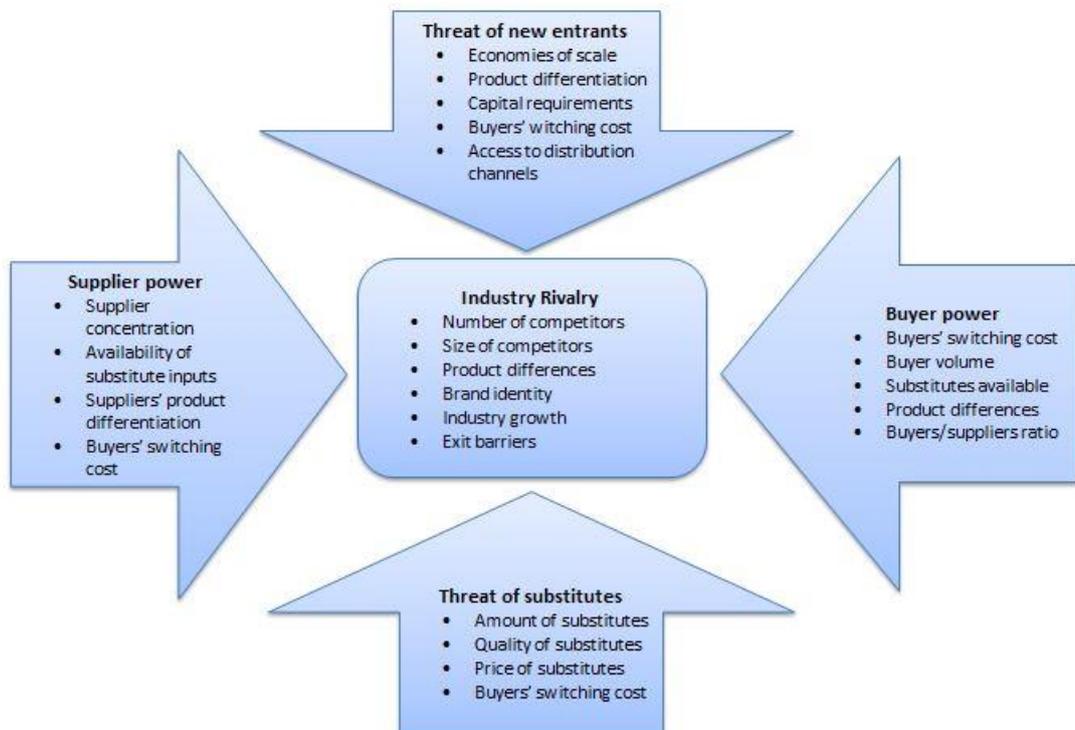
The Risk Map and Five Forces Analysis (next page) are a great help in the identification of possible risks. The business and other factors are divided into smaller categories where the risks are easier to see and identify. Five Forces analysis is recommended especially with the identification of risks related to international operations. The risks that are seen to be valid and justifiable are noted to risk portfolio.

With the help of these tools both the internal and external risks can be identified in a way that suits Havel as it is not too time-consuming or laborious to conduct. The tools give guidelines and categories which help to see where the possible weak points and risky situations lie and also if there is some category which poses most of the threats and thus needs extra concentration.

Also other tools like SWOT or PESTEL analysis can be used when identifying the risks.



Risk map



Five Forces analysis

Risk portfolio

All possible risks are listed below and their level is determined according to their likelihood and consequences with the help of Risk Level Matrix (below). All the risks scoring high or medium level are taken under closer consideration by using risk management process form. The low level risks are noticed, but in order to optimize the risk management they are not thoroughly investigated.

$$\text{Risk} = \text{Likelihood} \times \text{Consequence}$$

Likelihood					
Frequent	Extensive management essential	Management effort required	Manage and monitor risks	High level of risk	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #006699; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: #66b3cc; margin-bottom: 5px;"></div> <div style="width: 15px; height: 15px; background-color: #cce5f6; margin-bottom: 5px;"></div> </div>
Possible	Must manage and monitor risks	Management effort worthwhile	Accept, but monitor risks	Medium level of risk	
Rare	Considerable management required	Risks may be worth accepting with monitoring	Accept risks	Low level of risk	
		Significant	Moderate	Minor	
				Consequence	

The risks in the portfolio need to be reassessed at least every time the situation in the company somehow changes. Some more frequent timeframe can be agreed on one specific risk if it is seen sensitive for changes or if its impact would be great.

The risks are categorized by The Risk Map's Vulnerability factors. The category titles are placed in the portfolio and Havel can supply more possible risks under each category when it sees them threatening.

Low level risks

These risks are not analyzed with the help of Risk management process form in order to optimize the usage of time to focus on more severe risks, but still they are noticed and monitored. If the situation of Havel somehow changes the low level risks might need to be reassessed and changes to be medium level.

Risks posed by staff:

- Other employees being critical for the success of the company

Naturally, other staff members are not as critical for the success as managers, but as Havel is a small company many duties are only one person's responsibility. If something happens to this one person, it would harm the performance as it takes time to compensate the situation.

→ **Unlikely to occur x moderate effect = low level of risk**

- Staff retention/ job changing

Staff at Havel is not short-term oriented. All employees have worked for the company several years and have not told or shown any interest to leave the company in the future.

→ **Unlikely to occur x moderate effect = low level of risk**

Risks posed by property

(Havel fills in if needed)

Risks posed by operation requirements

(Havel fills in if needed)

Risks posed by stakeholders and partners

(Havel fills in if needed)

Risks posed by finances

(Havel fills in if needed)

Risks posed by business actions

(Havel fills in if needed)

Medium level risks

Risks posed by staff:

- Work safety, both short- and long-term

Short-term work safety refers to accidents and sudden injuries, as long-term work-safety means frictions and diseases caused by repetitive and unvaried working positions. At Havel's case, both are possible and needed to be considered when planning the working facilities. Safe and ergonomic work place prevents from sick leaves.

→ **Possible to occur x moderate effect = medium level of risk**

Risks posed by property

- Accident and damages

Fire accidents, water leaks or other property damages can pose a threat in the sense of monetary problem and invalid production premises. This can harm the business's finances and/or image for example if the quality of the products decreases or delivery times increases significantly

→ **Possible to occur x moderate effect = medium level of risk**

- One of the hose protection spiral machines breaks down

The hose protection spiral is the main product and export of Havel. At the moment there is three production machines each for producing certain sizes of spirals.

- **Possible to occur x moderate effect = medium level of risk**

Risks posed by operation requirements

- Location

Havel is located in Eastern Finland really near Russian border, which can create disadvantages. Customers may see Finland and especially parts far away from Helsinki

distant, which can negatively affect their buying decision. Customers can think that the delivery times are long and shipping costs high.

- **Possible to occur x moderate effect = medium level of risk**

Risks posed by operation requirements

(Havel fills in if needed)

Risks posed by stakeholders and partners

Suppliers

- Only a few suppliers

There are about three suppliers for raw material for hose protection spirals, which can pose a threat as the competition on the field is not great. The biggest threat is that some supplier gains monopoly and can determine the price as it pleases. The price itself varies quite much as it is attached to oil price.

Risks posed by finances

(Havel fills in if needed)

Risks posed by business actions

- Lacking customer contacting – offers, fair visitors

Possible customers who have shown interested towards Havel's products by asking offer or visiting exhibition stand might be neglected after initial contact. This meaning if customer does not response to offer after receiving it, he/she can be easily ignored or forgot by Havel. This makes sales inefficient and possible customers can be lost.

- **Possible to occur x moderate effect = medium level of risk**

High level risks

Risks posed by staff:

- Managers have great influence and responsibility

This poses a big threat if something happens to some of the managers. The impact would be great as every manager has their own responsibilities and knowledge and other managers may not be aware of the one's responsibilities. Managers are critical for the success of the company, so a death or severe injury would have serious effect on the performance of the company.

→ **Possible to occur x significant effect = medium level of risk**

Risks posed by property

(Havel fills in if needed)

Risks posed by operation requirements

- Great share of raw material price in spiral prices

About 30% of the price of hose protection spirals comes from the raw material costs. The raw material is plastic, which price is dependent on the price of oil. Changes in the price of raw material affect highly the costs of the product.

- **Likely to occur x moderate/significant effect = high level of risk**

Risks posed by stakeholders and partners

(Havel fills in if needed)

Risks posed by finances

(Havel fills in if needed)

Risks posed by business actions

- The change of generation

Havel is now having a big change as the younger generation is joining the business. It is a great opportunity but also a great risk as all the actions need to be conducted at least with same competence and expertise than earlier, and in the future even better in order to be competitive internationally.

- **Will occur x significant effect = high level of risk**

Potential risks

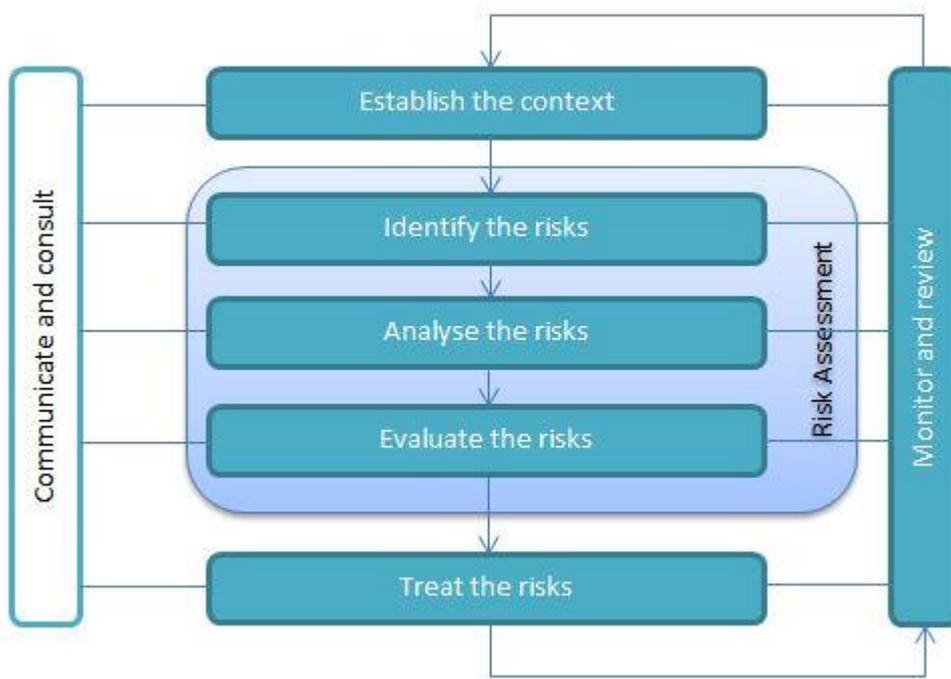
These risks are not current for the company, but they would pose a significant risk if the situation in the company somehow changes and they became current. The company needs to be aware and prepared for them.

- Dependency on only a few customers

For Havel this is not the case, but if there happen some critical changes in the customer base the risk becomes current. It is important to be aware of this risk and its consequences.

Risk management process form

All the risks scoring medium or high level are assessed here by the Risk management process form. The risk management process figure (below) helps to visualize and understand the process.



Medium level risks

1. Work safety
2. Accident and damages
3. One of the hose protection spiral machines breaks down
4. Location

Likelihood

Frequent	Extensive management essential	Management effort required	Manage and monitor risks
Possible	Must manage and monitor risks	Management effort worthwhile	Accept, but monitor risks
Rare	Considerable management required	Risks may be worth accepting with monitoring	Accept risks
	Significant	Moderate	Minor

Consequence

High level of risk
 Medium level of risk
 Low level of risk

1. Work safety, both short- and long-term

Short-term work safety refers to accidents and sudden injuries, as long-term work-safety means frictions and diseases caused by repetitive and unvaried working positions. At Havel's case, both are possible and needed to be considered when planning the working facilities. Safe and ergonomic work place prevents from sick leaves.

Category of the risk

Staff-related hazard risk

Cause of the risk

Possible causes:

- Careless working style
- Invalid working machines or equipment
- Repetitive working positions (frictions)

Consequences of the risk

- Sick leaves
- Loss of employee

These cause: → Loss of skilled worker → Monetary loss

Gravity of the risk

Possible to occur x moderate effect = medium level of risk

Treatment of the risk

The risk should be monitored and managed. The impact of sudden incident should be minimized and the long-term diseases should try to be avoided by managing work tasks. The safety issues should be responsibility and interest of all members of the work place.

Future actions

Actions to minimize the impact:

- Insurance for workers
- Safety instructions
- First aid training
- Working in cycles with different work tasks (enables replacing the workers)

2. Accident and damages

Fire accidents, water leaks or other property damages can pose a threat in the sense of monetary problem and invalid production premises. This can harm the business's finances and/or image for example if the quality of the products decreases or delivery times increases significantly

Category of the risk

Property-related hazard risk

Cause of the risk

Possible causes:

- Broken or inappropriate production machine
- Careless use of machines and tools by staff member

The risk can also occur without any manageable reason, for example electrical fault.

Consequences of the risk

Consequences can be:

- Need for new production machine or tool
- Need for repair
- Monetary loss
- Slowed production → excess work force; increased delivery times

Gravity of the risk

Possible to occur x moderate effect = medium level of risk

Treatment of the risk

The risk must be monitored constantly by managers and all workers.

Future actions

Actions to minimize the impact:

- Insurances for accidents
- Fire safe premises
- Safety instructions
- Safety stock
- Frequent checking and maintenance of production machines

3. One of the hose protection spiral machines breaks down

The hose protection spiral is the main product and export of Havel. At the moment there is three production machines each for producing certain sizes of spirals. If one of the machines broke down it would mean delay in the production of one specific spiral, which could affect negatively the stock and delivery times.

Category of the risk

Property-related operational risk

Cause of the risk

Possible causes:

- Unpredictable damage in the machine component
- Careless use of the machine
- Neglect of maintenance

Consequences of the risk

- Delay in deliveries → harmed company image
- Excess work force

Gravity of the risk

Possible to occur x moderate effect = medium level of risk

Treatment of the risk

The risk should be managed and monitored constantly. It can be treated with daily operations by the employees using the machines.

Future actions

Actions to minimize the impact:

- Frequent checking and maintenance of machines
- Safety stock

4. Location – image to customers

Havel is located in Eastern Finland really near Russian border, which can create disadvantages. Customers may see Finland and especially parts far away from Helsinki distant, which can negatively affect their buying decision. Customers can think that the delivery times are long and shipping costs high.

Category of the risk

Uncertainty-based risk. Can be seen also as a market risk, as it emerges from external source.

Cause of the risk

Customers' assumption can be unrealistic.

Consequences of the risk

- Customers may change supplier/producer
- Decrease in company image

Gravity of the risk

Possible to occur x moderate effect = medium level of risk

Treatment of the risk

The risk should be managed and constantly strive to remove the negative image through marketing actions

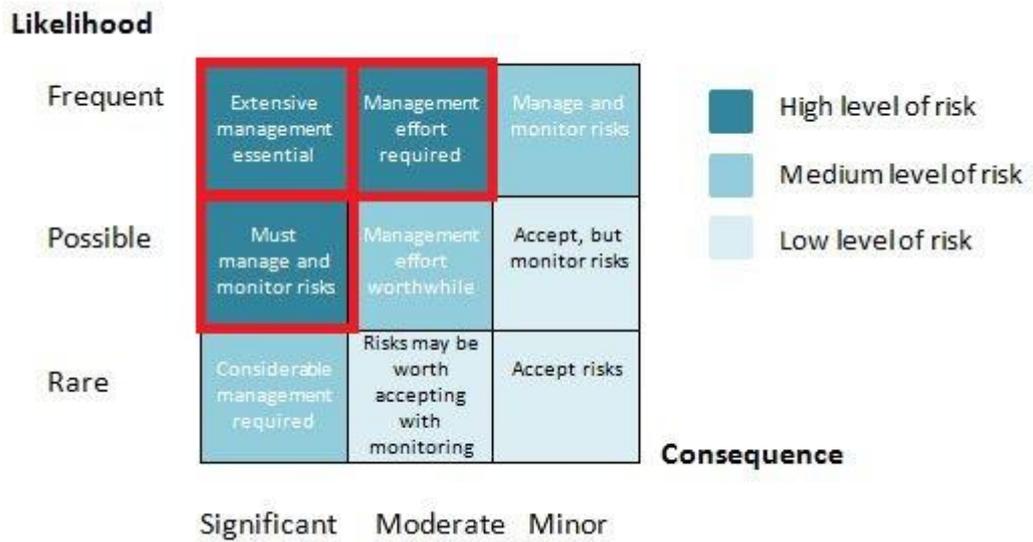
Future actions

Actions to minimize the impact:

- Marketing for better image
- Productivity – no wasted time at premises

High level risks

1. Managers have great influence and responsibility
2. Great share of raw material price in spiral prices
3. The change of generation



1. Managers have great influence and responsibility

– great impact of injuries and accidents

This poses a big threat if something happens to some of the managers. The impact would be great as every manager has their own responsibilities and knowledge and other managers may not be aware of the one's responsibilities. Managers are critical for the success of the company, so a death or severe injury would have serious effect on the performance of the company.

Category of the risk

Staff-related operational risk

Cause of the risk

The responsibilities are divided, all managers are not skilled and qualified for all operations due to e.g. lacking language skills.

Consequences of the risk

If something severe happens to some of the managers

- The performance of the company is harmed
- Difficult or even impossible to achieve the same level than earlier

Gravity of the risk

Possible to occur x significant effect = high level of risk

Treatment of the risk

The risk must be accepted in the sense that accident and other sudden incidents cannot be foreseen, but some managing actions can be taken.

Future actions

Actions to minimize the impact:

- Active communication
- Team working

With these actions other managers are more easily able to compensate one's work if something were to happen.

2. Great share of raw material price in spiral prices – sensitive for changes

About 30% of the price of hose protection spirals comes from the raw material costs. The raw material is plastic, which price is dependent on the price of oil. Changes in the price of raw material affect highly the costs of the product.

Category of the risk

Uncertainty-based financial and market risk

Cause of the risk

Changes in oil price are the main reason for price fluctuation.

Consequences of the risk

If the price of raw material increases:

- Pressure for price increase (for own business)
- Pressure for increasing the productivity (to be competitive)
- Loss of profit
- Loss of customers

Gravity of the risk

Likely to occur x moderate/significant effect = high level of risk

Treatment of the risk

The risk should be monitored and if the price increases enough then managing actions need to be taken. The raw material price needs to be frequently monitored by purchasing manager.

Future actions

Actions to minimize the impact:

- Increase productivity
- Bulk purchases

3. The change of generation

Havel is now having a big change as the younger generation is joining the business. It is a great opportunity but also a great risk as all the actions need to be conducted at least with same competence and expertise than earlier, and in the future even better in order to stay competitive internationally. It can be claimed that this is not an actual risk, but as the situation creates many risks it is good to be assessed.

Category of the risk

Can be seen staff-related or/and opportunity based strategic and operational risk.

Cause of the risk

Younger generation need to be trained and familiarized with the business actions well, and the

Consequences of the risk

If the change of generation is not carried out wisely:

- Loss of image
- Lower quality level of products and service

Gravity of the risk

Will occur x significant effect = high level of risk (this is only the case if the change of generation is handled very poorly)

Treatment of the risk

The worst possible outcome of the risk should try to be avoided with careful handling of all issues and tasks in the company. The responsibilities should be divided in order to be sure that every area is covered by some of the managers. The older generation should provide the younger with all relevant knowledge they have.

Future actions

- Dividing responsibility areas
- Enhancing communication (e.g. meetings)

Potential risks

1. Dependency on only a few customers

For Havel this is not the case as the biggest clients cover only 4-5% of overall revenue, but if there happen some critical changes in the customer base the risk becomes current. It is important to be aware of this risk and its consequences. If the company is dependent on only a few or even only one customer, loss of this customer affects the business tremendously.

Treatment of the risks and future actions

The risk need to be monitored. When one customer exceed X% of overall revenue ways to boost the sales of other customers need to be searched.

Risk management process form

Risk

What the risk is?

Category of the risk

Is the risk financial, operational, hazard, etc.? Is it related to staff, stakeholders, property, etc.?

Cause of the risk

What could be the possible reason for the risk to exist?

Consequences of the risk

What are the consequences if the risk occurs?

Gravity of the risk

How likely and severe the risk is? High, medium or low level of risk? Use the risk level matrix to help.

Treatment of the risk

Should the risk be accepted, monitored or managed? If managed, how extensive management is required? What is the timeframe for managing actions? Who from the work force is responsible for the treatment?

Future actions

What actions are needed to avoid the risk to occur in the future? Is there something to do to minimize the consequences if the risk cannot be avoided in the future?

Target form (example)

Date 30.3.2015

Operation: Cycle system for workers at hose protection spiral machines

Goal: To make sure every worker knows how each of the machines works → avoids problems when sick leaves

Responsibilities: Seppo is responsible for gathering the workers to make a decision about the cycle system (e.g. cycle time) and that the system is put in action.

Schedule/timeframe: The system need to be planned within one week (6.4.2015) and in action from the beginning of May.

Work phases/actions:

1. Seppo calls the meeting
2. System planned in the meeting
3. System in action
4. Gathering feedback and assessment of the system by Suvi and Seppo
5. Possible changes to the system

(After some observation period)

Results:

- All workers know how each of the machines works → flexibility especially during holiday times

To be preserved:

- Taking workers more into decision making

To be changed:

- Better documentation in the meetings

Other:

- After all the feedback was positive and the workers are more motivated to work, even though they experienced the new system to be pretty laborious at the beginning.