LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

LUT School of Industrial Engineering and Management

Department of Innovation Management

PROFITABILITY PLANNING OF THE SKI RESORT PROJECT

Master's thesis

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ABSTRACT

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Objective of this master's thesis is to create an investment calculation model, which makes it possible to determine if the ski resort business can be profitable. The ultimate goal is to create a description with the help of theoretical knowledge, interviews and investment calculation model, how the operation of ski resort is possible to be profitable and what are the critical success factors for achieving this goal. Thesis is carried out as qualitative research, which is supported by the necessary constructive information utilizing calculations. The client company has provided valuable insights and material for this thesis.

Theoretical report examines the steps of developing a business plan, investment components and methods as well as sensitivity analysis. The theoretical part is based on the articles, textbooks, interviews and researches. The empirical part of the thesis is assembled by benchmarking other same size Finnish ski resorts, conducting interviews and using investment calculation model. The empirical part provides comprehensive information about ski resort industry, the future of the project, the business plan and the profitability calculations.

As the result of this thesis the investment calculation model, which makes it possible to simulate different scenarios for ski resort project, was formed. The model was used to create a picture in which kind of scenario the ski resort business would be profitable and what are the critical success factors in achieving this aim.

TIIVISTELMÄ

Tekijä: Matti Hakalisto
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Diplomityö, Lappeenrannan teknillinen yliopisto, tuotantotalous.
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Hakusanat: liiketoimintasuunnitelma, investointilaskenta, hiihtokeskus

Diplomityön tavoitteena on luoda investointilaskentamalli, jonka avulla on mahdollista selvittää, onko hiihtokeskusliiketoiminnalla edellytykset olla kannattavaa. Lopullisena tavoitteena on teoreettisen tietämyksen, haastatteluiden ja investointimallin laadinnan avulla luoda kuvaus siitä, kuinka hiihtokeskustoiminta on mahdollista saada kannattavaksi ja mitkä ovat kriittiset menestystekijät tämän tavoitteen saavuttamiseksi. Tutkimus suoritetaan kvalitatiivisella tutkimuksella, jota tuetaan tarvittavilla konstruktiivista tietoa hyödyntävillä laskelmilla. Työn toimeksiantajayrityksen kautta tutkimukseen on saatu arvokasta asiantuntemusta ja materiaalia.

Työn teoreettisessa katsauksessa tarkastellaan yleisesti liiketoimintasuunnitelman vaiheita, investoinnin komponentteja ja menetelmiä sekä herkkyysanalyysiä. Teoriaosa pohjautuu artikkeleihin, oppikirjoihin, haastatteluihin sekä tutkimuksiin. Työn empiirinen osuus on koottu benchmarkkaamalla muita saman suuruisia suomalaisia hiihtokeskuksia, toteutettujen haastatteluiden sekä investointilaskentamallin avulla. Työn empiirinen osuus tarjoaa kattavaa tietoa hiihtokeskustoimialasta, projektin tulevaisuudesta, liiketoimintasuunnitelmasta sekä kannattavuuslaskelmista.

Työn tuloksena syntyi investointilaskentamalli, jonka avulla on mahdollista simuloida erilaisia skenaarioita hiihtokeskushankkeelle. Mallin avulla luotiin kuva siitä, millaisella skenaariolla hiihtokeskusliiketoiminta olisi kannattavaa ja mitkä ovat kriittiset menestystekijät tähän päämäärään pyrittäessä.

FOREWORD

Finally here. Writing the foreword of my master's thesis. I can honestly say that sometimes I thought this day won't come but here it is. Journey to this point have been tough but instructive. I have learned many new things about industrial management, gotten concrete experience about this line of jobs and most of all, had the opportunity to be part of interesting project. It's quite funny that when I started downhill skiing when I was four years old, I went to the same ski resort and same slopes, whose profitability calculations and business plan I have been working on for past months.

I would like to thank my supervisors Professor Timo Kärri and University Lecturer Tiina Sinkkonen who have supported and helped me to develop my master's thesis. I would also like to thank my supervisor Ismo Pöllänen from Imatran Seudun Kehitysyhtiö for giving me this opportunity to do the thesis and for supporting and advising me during the long process. Special thanks belong to Jarkko Rahkonen from Intersport Imatra without whom I probably wouldn't have had this awesome opportunity.

Finally I want to thank my family, my girlfriend Lena and my friends from whom I have received endless encouragement and advices during this process.

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Matti Hakalisto

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1 INTRODUCTION

1.1 Background

There are around 100 ski resorts in Finland. The largest ski resorts have over 320 000 visitors during the winter season which can lead to a turnover up to 9 million euro. That makes ski resort business, a big business. Despite this, new ski resorts haven't been built as many as in the 1990's. In fact, during last 20 years only one new ski resort have been built in Finland. The biggest reason for this is that all the potential places are already used for ski resorts or for other operations. (Suomen Hiihtokeskusydistys ry 2013, p. 13; Suomen Hiihtokeskusydistys ry 2014, p. 6; Köngäs 2013)

Downhill skiing and snowboarding are popular activities in Finland. Last national physical activity survey shows that downhill skiing and snowboarding have 67 000 under 18 year old and 171 000 between 19 and 65 year old active enthusiasts. Amount is more than combined enthusiast for badminton and golf. Reason for high downhill skiing and snowboarding enthusiast can considered to be the amount and the location of the ski resorts. Finnish ski resorts can be divided into three categories. Major ski resorts are already all year-round tourist centers. Some of them are competing for international tourist with Europeans biggest ski resorts. The middle class includes regional ski resorts that cater weekend tourists and surrounding areas skiers. The smallest ski resorts are local centers that are for evening or day visits. All types of ski resorts are needed in ski resort business. Without local centers skiing activity wouldn't be so widely spread. (Suomen Liikunta ja Urheilu SLU ry 2010a, p. 16; Suomen Liikunta ja Urheilu SLU ry 2010b, p. 8)

According to the survey ordered by The Finnish Ski Area Association, over 1,2 million Finns classifies themselves as downhill skiing or snowboarding enthusiast. Over 82 % of them were active enthusiasts who visited ski resorts at

least once during the last winter season. (Suomen Hiihtokeskusydistys ry 2011, p. 6)

Ski resort investments have been minor for past few years in Finland. In 2013 ski resort investment grade was second lowest since 2004 and the lowest was 2012 with 6,3 million euro. Low investment amounts are explained with high seasonal variation. One year ski resort can have 60 000 visitors during 150 days of winter season and next season 20 000 visitors during 80 days. This forces ski resort companies to keep their investments low because nobody knows how long season next year is going to be. Season 2014-2015 shows some positive growth in ski resort business with estimated investments of 14,2 million euro. (Suomen Hiihtokeskusydistys ry 2014, p. 6)

1.2 Objectives and limitations of the thesis

Local newspaper did an article about Mellonmäki area at Imatra and after it got published, Imatra Region Development Copmany (Kehy Oy) got many contacts from different sources about areas redevelopment. Based on these contacts, Kehy Oy planed to externalize survey about the redevelopment. Beginning event for this master's thesis can be considered to be meeting with Kehy Oy representative in January. Kehy Oy's representative introduced the project of which the master's thesis would be done. Following themes could be filtered after the first meeting:

- Business plan for the ski resort
- Needed ski resort investments
- Critical succession factors of ski resort business

The objective of this master's thesis is to find out is ski resort business investment profitable and possible to be done in Finland and to be more precise, in Imatra. The possibility of investing in ski resort business in Finland has been considered both theoretically and empirically. The ultimate objective is to make calculation model that can be used to demonstrate different scenarios of ski resort business

and be also generalized to other similar projects. The ski resort company can then utilize the results in the future and present the project for potential investors for funding and other companies to operate as partners. After finding the potential investors, the ski resort company can demonstrate possible scenarios to the investors and for the city of Imatra.

The research questions for the thesis are determined based on the objectives of the thesis. Main research questions of the thesis:

- *Is it possible to make ski resort company business profitable in general?*
- *What are the critical successful factors for profitable ski resort business?*

The theoretical part of the thesis is limited to cover the basic business plan model, investment calculations as well as definition and characteristics of ski resort industry. The financial planning phase is left outside of the thesis's business plan process and the emphasis is on the rest of the business process phases. These phases are found to be more important for the project because first needs to be clarified if the ski resort project can be profitable before projects financial can be designed.

1.3 Methodology and material

Subject area of the research is carried out as case study where individual situation is studied. Information in the theoretical part of the thesis is collected from academic studies, articles and textbooks about business plan and investments. Down hill skiing related researches have been used as additional information.

This thesis is carried out as case study, which has constructive research features. Case study belongs in to the qualitative research methods. Qualitative research doesn't attempt to statistical overview but rather to describe an event, understand particular activity or provide a theoretically meaningful interpretation for some phenomenon. (Eskola & Suoranta 1998, p. 61) Starting point for case study is

wide description of real life and the area of the study (Hirsijärvi et al. 2009, p. 161). Case study aims to connect research problem to previous theoretical basis. Analysis and interpretations are made in conclusions based on these theories. The aim in case study is versatile and detailed examination of the investment project on investigation. (Aaltio-Marjosola 2001) Case studies normally combine such data collection methods as interviews, observations and archives. (Eisenhardt 1989, p. 538)

Constructive research approach means problem solving with for example model (Kasanen et al. 1991, p. 302) According to Lukka (2001 p. 23), constructive research is based on real life problems, which needs to be solved in practice. The research will provide an innovative construction for original real life problem solving. Constructive research requires close co-operation between researcher and practical representatives. The default value for this co-operation is experiential learning. In addition, research is connected carefully with existing theoretical knowledge and empirical findings are reflected back to the existing theories.

The research material in this thesis is based on different sources. Biggest source for benchmarking the same size ski resorts in Finland was Voitto+ program where different companies' financial statements can be found. This study contains 26 years of financial statement data from seven different ski resorts in Finland. Important material was gathered also from interviewing current and former ski resort entrepreneurs, workers and specialists. Another important part of used material is the costs of the investments, which have been obtained from many different sources. Ski resort equipment and lift prices have been asked from Multi Snowtech Ltd and Vintertec Offshore Ltd, which are Finnish ski industry companies related to products and snowmaking services. Ski resort service prices have been benchmarked from other Finnish ski resorts. Building investment estimation has been asked from local building constructor Imatran YH-Rakennuttaja. Energy related cost have been requested from Imatran Seudun Sähkö. Rest of the main data was collected from market research done by Owal

Group company and from research data and key figures provided by the Finnish Ski Area Association.

1.4 Structure of the thesis

The structure of the thesis is described to explain what each chapter brings to the thesis and how these chapters are linked to each other. The thesis contains of six chapters of which two are concentrated on the theoretical study of the research problem and the methodology and rest of the chapters are focused on analyzing and dealing with the empirical material and conclusions of the research. Figure 1 explains how each part of the thesis supports and connects to each other and what is the purpose of each part of the thesis for making the final conclusions.

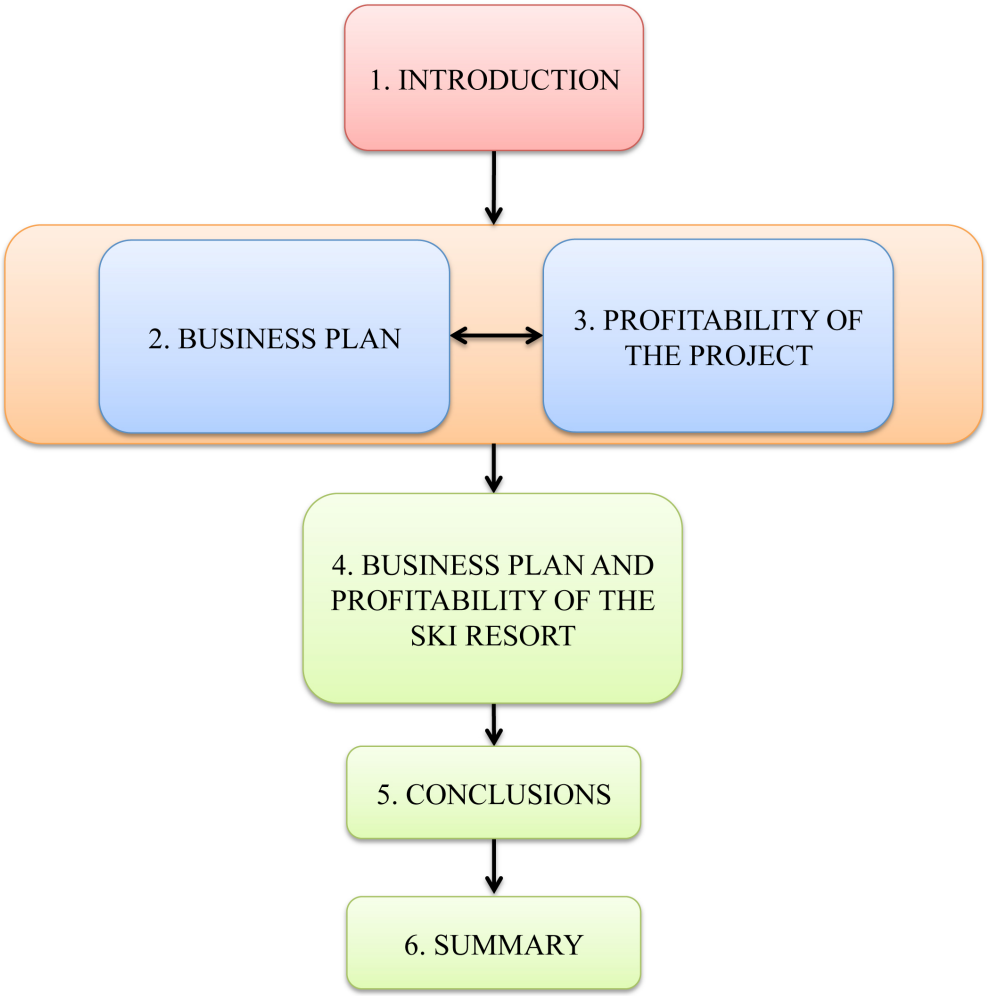

Figure 1. Structure of the thesis

The first chapter of the thesis is the introduction. In this part the background of the study is explained and the reasons for carrying out the research are presented. In addition, the main research question, objectives, and limitations of the thesis are explained.

Chapter two starts by defining business plan and later on introduces the process of creating business plan. Chapter three brings a lot of essential knowledge about investment calculation by explaining the components, defining the investment calculation methods. Lastly this chapter introduces the sensitivity analysis and its usefulness for investment calculations.

Chapter four contains the empirical part of the thesis. In this chapter the findings are used for answering to the research questions and for making the final conclusions based on the knowledge and experience gathered though theoretical and empirical part. In this chapter Mellonmäki ski resort project and its business are explained in more detail. This chapter gives the vital information about the industry where the company is operating, company's objectives and strategies as well as the critical success factors. This chapter also describes the investments, incomes and expenses for the company. Rest of the chapter is explaining profitability indicators for the project. In the chapter five the main results of the thesis are submitted and finally the thesis ends up with the summary in chapter six.

2 BUSINESS PLAN

2.1 Background of the business plan

Every company makes the decision for the content of business plan according to the nature of their business. The plan must however contain descriptions of the company, product or service, strategies, markets, competitors, management and staff as well as the economy. (Koski & Virtanen 2005, p. 22)

In a good business plan, the company and its environment are viewed as a whole. The company aims to highlight often one aspect of the business because of the nature of the industry. In industrial companies it can be production, in technology companies it can be product and R&D, in service providers it can be corporate image and advertising. It's not bad thing if the company seeks to highlight some aspects of its territory but development of important areas must not be at the expense of the other areas. Each individual segment of operation has quite big amount of important issues, which form their own polices. In order for them to influence parallel, solutions must be assembled into a logical wholeness. (Ruuska et al. 2001, p. 7)

A good business plan requires systematic reflection and confirmation of enough large market potential for the business. The plan can also assist to detect knowledge gaps and help to correct them. When business plan works, it also serves as a means of communication between the different parties. It also ensures effective decision-making and focus on the essential aspects. (Koski & Virtanen 2005, p. 23)

When doing business plans, directing ideas forward may seem difficult. However in the practice, business plans one repeating shortage is the failure to stay as current operations representations. In this case, running the business is like steering the ship in treacherous waters without a map and a clear goal. In the plan is outlined not just where we are, but also where are we going and in particular,

how to get there. (Ruuska et al. 2001, p. 7) Company needs the business plan for managing the whole operations (Pitkämäki 2000, p. 10).

Structure of the business plan is almost always different. Every company makes the business plan based on their own needs. The most important thing in the plan is that it proceeds logically and consists all the needed aspects of business. Business plan as a process is laborious and requires good management of the business.

In the figure 2 is shown business plan process for this study. First phase is analyzing the environment where the ski resort company is operating and also its main competitors. Second stage is overall perception of the project, its SWOT-analysis and risks. Third stage is to form objectives and strategy for the project by listing critical success factors. Final phase is to change objectives and strategy to concrete actions by listing needed investments, incomes and expenses for the project. Needed profitability calculations are made based on them.

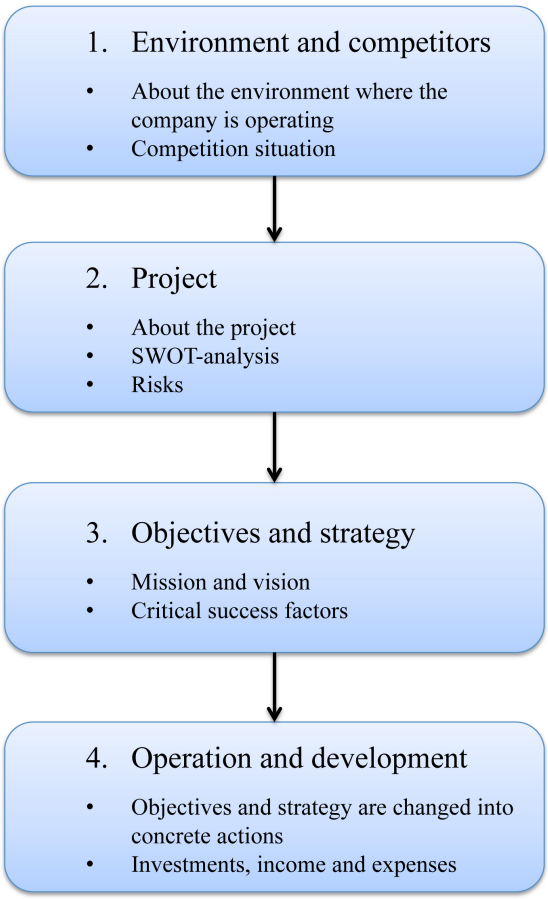

Figure 2. Business plan content

2.2 Operational environment analysis

Several different researches underline the importance of proper environment analysis. It is especially important when companies are planning their strategies. (Caillouet & Lapeyre 1992, p. 22; Hinterhuber 1997, p. 1) According to Pitkämäki (2000, pp. 24-25) to create working strategy, company must describe the area in which the business happens and where the changes affect the company's operations. It is possible to evaluate company's position in the field among other companies, nature of the industry, total demand, possibilities and effects of new entrants, complementary services and the future of the industry.

Industry, its nature and conditions for success are constantly chancing. Company must be able to estimate the operational events in order to do successful choices.

Nobody can know the future events but by observing the changes taking place in own industry of business, development of the global sector can be predicted. Changes are likely to indicate the direction in company's own market area. It is particularly important to identify the factors, which are known likely to happen. (Pitkämäki 2000, pp. 37–38)

Demand analysis of products or services is not easy especially when development is trying to be estimated several years ahead. Demand is formed by number of customers and quantities they buy or amount of services they use. Those are affected by numerous different factors such as needs, buying habits and income. (Ruuska et al. 2001, p. 66)

Determination of competition and competitors are another important step in the company's environment analysis. A good starting point for knowing the competitors is to get to know customers' opinions and appreciations. Defining the competitors who are marketing to same customers is crucial in environment analysis. The aim is to find the factors associated with poor and good success in the field of business. (Ruuska et al. 2001, p. 68)

2.3 Company analysis and risks

The business plan making process has to start with business analysis where company's current situation is outlined. The company analysis is used to identify company's product or service development, personnel and organization, as well as the economic situation. (Ruuska et al. 2001, p. 26)

Products or services are usually the most important means of competition for the company. Analysis identifies whether the product or service is competitive enough or whether the service needs supplement with some additional features. Customers and customer groups needs should be the starting point for the characteristics of the product or service. Due to this, the analysis identifies also

what features customers require and whether the current service meets the requirements. (Ruuska et al. 2001, p. 28)

The price will affect for profitability and demand of the product or service. Pricing can also affect the corporate image. The company analysis will also consider how the current sale channel is working and whether it makes sense to use other sales channels in the future. The most important thing regarding the business is to identify the own marketing resources and consider how marketing could be developed. (Ruuska et al. 2001, p. 30)

SWOT-analysis is one of the oldest and the most widely used tools of strategic analysis. Organizations have made strategic planning for decades based on SWOT-analysis. It offers viewpoint for internal strengths and weaknesses and the external environment opportunities and threats for the organization. (Mintzberg et al. 2008, p. 214; Helms & Nixon 2010, p. 223)

According to Bolander et al. (2014, p. 32) company can have many types of risks. In project business risks can be categorized for example into operation risks, supply risks, demand risks, security risks and environmental risks. Risks can also be on different levels: macro-level risks include political and government, macroeconomic, legal, social and natural risks, meso-level risks e.g. project selection, finance, design and operation risks, and micro-level risks concern business relationships and third party risks. According to Suominen (2003, p. 15) business includes a wide range of uncertainty factors and risks that could affect the company's operations. A sensible entrepreneur is also preparing for failures. Many problems can be avoided or at least mitigate their consequences with contingency plan. It is important to take into account the risks that may cause harm to the business in order to know how to prepare for the risks. Risks can be divided to different categories. The company has economical, social and political functions where potential risks are caused. Damage risk is causing pure damage. Person, property and responsibility risks are nature of damage risks. Person risk is subjected to the company's employees. The employee's illness and resignation are

the risks that cost a lot to the company. The property risk refers to the company's tangible property in which the target of the risk is damaged. Responsibility risk means compensation obligation or loss of income when realized.

Business risk is the return expectations not being achieved. Whenever business is being conducted there is a risk that the operation is not profitable. That is why in a good business plan business risks have been analyzed. The following list of business risks need to take into account:

- Risks related to profitability and financing
- Risks related to service
- Competition and changes in the market
- Personnel related risks
- Risks associated with the business relations such as contracts and social changes (Suominen 2003, p. 14)

The company must have a risk management method, risk analysis, which allows the risks to be avoided and the damages can be minimized. The analysis also aims to determine the risk items, risk probability, severity and resulting effects. The risk analysis allows the company to collect knowledge about risk for sensible package and make better solutions basis of analysis. However it is very important to focus on risks that are critical to the business. (Suominen 2003, pp. 55-56) Risk management is also essential for projects because project, cost and performance attributes are often unknown until late in project (Royer 2000, p. 13)

2.4 Objectives and strategy

Company's goals and strategy constitute the core of the business plan. (Ruuska et al. 2001, p. 73) Already presented in previous chapter, SWOT-analysis play big role in strategy making. This is because the strategy is build with the most important strengths and opportunities the company has.

The company's strategy is easy to describe with the business idea. It acts as a base for every company's operating acts. The business idea is a brief description of how the company is acquiring income. Business idea has a decisive impact on the company's success. It is used to define how the company can be profitable and it is also good to use as design tool for company's operations. When business idea is well build, it guides the company's operation. (Meretniemi & Ylönen 2008, p. 19)

Business plan is answering for three questions:

- What is the benefit the customer gets and what need the idea fulfills?
- What are the markets?
- How to earn money with the business idea? (McKinsey & Company 2001, p. 32)

The basic starting point for the development of the company's operations is directional vision. The vision is the image of desired future, which is used mainly in connection with the development of the company. Good vision is realistic but goal-oriented. It describes the development from the current situation to the desired state. Vision can be about opportunities in the market and the company's future in a few years. (Rissanen 2007, pp. 166–168)

In order for vision to be taken advantage for strategy, it must be changed to goals. The company's goals might be increasing sales, market share or amount of new customers. (Ruuska et al. 2001, p. 80)

The company's strategy is seeking to answer to the following questions:

- How are company's vision and key objects achieved?
- How is the company going to success in competition?
- How are actives and resources allocated?
- How proceed is handled in different areas? (Ruuska et al. 2001, p. 82)

Strategy can be considered as long range planning (Lord 1996, p. 348). This allows company to build unique capabilities and skills, to clarify the goals of the

company and allocate resources tailored to its strategy (Porter 1996, p. 63) According to Larsen's et al. (1998, p. 54) research, the time perspective of strategic planning has been one to three years in the rapidly growing companies although the perspective can also be up to ten years.

Another important part of identifying company's strategy is the definition of critical success factors. Critical success factors are features that are particularly valued by customers in product or service. Features enable the customer to make the difference between companies. (Johnson & Scholes 2002, p. 148) The vision of the company must use as guide how to achieve these critical success factors. For vision point view it is important that the amount of critical success factors pursued is between five and ten. (Hardaker & Ward 1987, pp. 13-14) Critical success factors have a number of different definitions. Generally speaking, the term refers to those factors over which the company to achieve extra profits compared to its competitors. (Vasconcellos & Hambrick 1989, p. 368)

Chawla et al (1997, pp. 48-49) studied perceptions of small business owner of critical success factors from the perspective of organizational life cycle. The study was carried out by means of descriptive research. According to the results owner experience and knowledge as well as industry trend are very important in early stages of companies' life cycle than at a later stage. Also location was found as important success factor businesses at early and late stage of the life cycle.

Gomezelj & Kušce (2013, pp. 907-908) carried out research about the influence of personal and environmental factors on entrepreneurs' performance during the first years of their operation. They found that both personal and environmental factors have noteworthy influence on the entrepreneur's performance. Among the personality factors, the risk propensity need for independence and personal reasons have shown a notable impact on the business performance. They did not find any environmental factor being more important than the personal performance of the entrepreneur.

2.5 Operation and development plans

The final step in the designing of business plan is to make operation or development plans. At this point, the company's objectives and strategy are changed into concrete actions. These actions are the guideline how the company will be operated in the future.

Product or service is company's most important competitive tool because other competition solutions are built around it. (Bergström & Leppänen 2009, p. 194). Therefore product and service development is such important task. The concept of research and development (R&D) means brining completely new products or services to the market and improving existing products and services. R&D goal is to meet customers' needs. During development, a number of different tasks must take into account: the company must follow the markets, trends and economical development. (Bergström & Leppänen 2009, pp. 206–207)

Quality is often considered as one of the key factors in success. Good competitive advantage can also been achieved with quality. Quality is on enough high level when perceived quality will meet the customers expectation. (Grönroos 2001, pp. 103–104) In fact starting point for quality development is usually customer feedbacks (Ruuska et al. 2001, p. 106). Good service usually means that the service is on a high level compared to its competitors and it meets customer's expectations. Satisfaction with the quality of services promotes customer's willingness to continue the relationship or to make new purchases. (Grönroos 2001, p. 179)

Implementation of business plan will depend a lot on staff's expertise and development to the business to meet the challenges involved (Ruuska et al. 2001, p. 110) Skilled personnel is one of the key competitive factors particularly in companies that market services. This is because the people produce the needed services. (Bergström & Leppänen 2009, p. 172) Development of personnel is

important part of company's business plan. The plan is helping to find our where is the chance for improvement. (Viitala 2004, p. 235)

3 PROFITABILITY OF THE PROJECT

3.1 Economic base of investment

Investment basically means business related money spending designed to enable business to operate and to obtain revenue for the long term. Money is typically invested for long term and with significant quantities. General investment decisions are usually made when starting a business, business premises are constructed, obtaining means of production, R&D is extended and creating marketing channels. Broadly, the company's investment decision is a very important factor for the operation point of view. Investment amounts are high and income and costs are expected to arise a lot during several years. (Ekboir 1997, pp. 55-58)

Investments often bring along problems. When making investment decisions, it is hard to assess future and existing uncertainties factors. Future revenues and costs evaluation and measurement is difficult. Times of economic uncertainty, investments tend to be postponed due to the bound resources. (Ekboir 1997, pp. 63-65)

Investment profitability affects measurable and discretionary factors. Decision-making basis for the calculation methods may only be included quantifiable factors even if discretionary decision-making factors are often significant part of the area. (Ekboir 1997, pp. 64-65)

Every company's operations are based on certain operational needs and objectives aiming to help deforming the guidelines for action. They will be changed also relatively infrequently. On the other hand, successful company must plan its operations in such way that the adaption to the environment as well as changes in the market is possible. That's why investment decisions have so large role in the company's operations. They offer opportunities but at the same time form

limitations. This means that investments create opportunity to operate. (Jyrkkiö & Riistama 1995, pp. 296-297)

Before decision-making has to be determined the total financing need and how to get it collected. It is good to remember that money supply and money usage must respond to each other. If initiated to long acting investment project, must it be financed by long acting funding with equity or long-term debt. (Neilimo & Uusi-Rauva 2009, p. 209)

Decision-making situations can be divided into individual investment evaluation, each other mutually exclusive investment evaluation or purchase or do-it-yourself. Key factor in the single investment evaluation is to identify aspects that affect the goodness of the investment. Need to be considered whether the investment is actually meaningful. When evaluation is done between more than one investment, the decision is done by comparing the investments with each other. The key here is to identify the factors that are different in alternative investments. (Ikäheimo et al. 2009, pp. 205-206) When investment planning come to an end in decision-making, it should be based on carefully made investment plan, which includes the best possible estimation of the future and different profitability calculations. (Etälahti et al. 1992, p. 39)

The investment project is usually multistage and long-term project. Especially large investments are also important strategic decisions for the company. The investment project can be classified for example as follows:

1) Finding the investment opportunity
2) Estimation of factors affecting the investment affordability
3) The profitability calculations
4) Financial planning
5) Making investment decision
6) Monitoring the investment project
   (Kinnunen et al. 2000, p. 180)

3.2 Investment calculation components

The investment calculation components are briefly presented in this chapter. Components refer to investments output data, which are non-quantifiable components such as the basic investment, incomes, expenses, cash flow, required rate of return and lifetime.

Basic investment means any scarifies that are required so that the investment project would be ready to generate cash flows. There are two types of basic investments: investments in fixed assets and working capital investments. Working capital investments are the cornerstones of the working and successful business operation. A successful working capital investment is from financing point of view simply such that completed investment produces more than its required costs of financing. Investment in fixed assets refers to the acquisition of long-acting factors of production. These are such as land, buildings, machinery and equipment. (Kinnunen et al. 2000, pp. 177-178; Leppiniemi & Puttonen 2002, p. 79)

The investment's profitability is affected by many factors, one of which is the basic investment. Basic investment usually refers to the related acquisition costs, which are needed for that investment is ready to produce cash flows in the future. Another key factor is future cash income and costs as well as the timing of them for different years. Also the residual value of the investment affects the value of the investment. In addition, must also be taken into account the tied investment cost of the capital when calculating the profitability of the investment. (Kinnunen et al. 2000, pp.177-178)

Companies should concentrate more on cash flow than profit. That is because lack of cash will affect destruction of the company very rapidly. The importance of this grows in recession. Right path to good cash management is to develop the visibility of working capital. Cash flows have a significant role in investment planning and calculations and not just figures straight from the company's income

statement. The company has many different types of cash flows in which investments cash flows can be divided into three main types: the cost of the investment, the annual income and the residual value of the investment. All of the new investment project's cash flows are increasing company's already finished investments cash flows. This way a certain investment cash flows are examined only as cash flows, which are fulfilled, or unfulfilled if investment is implemented. (Niskanen & Niskanen 2007, p. 326; Mullins 2009, p. 5)

Small companies may have only one investment project in which case the cost of capital is the same as the whole company's cost of capital. At the same time when company grows, the amount of carried out projects increase. The company's various investment projects risks are different from each other. For example required rate of return (RRR) is different between investments inside the company. However, this isn't in conflict with the fact that the company has one common cost of capital, which consists various projects as a weighted average cost of capital (WACC). Only if the investment project risk is the same as company's existing business risk, can the whole company's average cost of capital be used. Projects which risks are higher require use of a higher discount rate. The same applies in the reverse situation when risk is lower must the company's RRR also be lower. (Niskanen & Niskanen 2007, p. 328)

RRR can be determined with risk-free return and market-based risk premium. The company's management has usually a view of the risks involved and their impact on the RRR because normally investments are directed to the industry on which the company is already active. RRR may be positioned with various criteria, which must be met in order for investment proposals to be accepted or to be enabled to further study. (Leppiniemi 2009, p. 28)

In general, interest refers to compensation for the usage of money. The creditor will charge certain compensation from the credit they grated to the debtor. RRR indicates to that kind of time value of money, whereby investment related cash flows are transferred to different times. When investments are estimated, all the

cash flows are intended to get comparable to each other. Therefore this temporal transfer is necessary. This is essential for investments because the income and expenses take place over many different years in the calendar. (Neilimo & Uusi-Rauva 2009, p. 216; Ikäheimo et al. 2009, p. 211)

RRR can be considered as the minimum interest, which investments should fulfill. RRR can be used to find out how much more money is worth today than after some time. The comparison is performed by discounting the money in the future to the present day using agreed rate of interest. Discounting is inverse event for calculating interest rate. (Neilimo & Uusi-Rauva 2009, p. 216) RRR can be company's loans interest rate or interest income, which the company will lose by investing their own resources. RRR can also be calculated according to the rate of other interest have had. If there is a risk that the company wont success, RRR must be increased, because the higher the RRR, the lower the present value. (Andersson et al. 2001, p. 152)

Investment lifetime refers to the economic period which investment has in the company. Length of the period depends on the external and the internal factors in the company. (Neilimo & Uusi-Rauva 2009, p. 216) Investment lifetime can refer to the physical age of the machine, therefore the time in which the machine or equipment is useful in its original purpose. However, physical age isn't the best determination of lifetime because the lifetime of machinery or equipment can be prolonged with maintenance and upgrades. A better option is to use the technical age of machine, the time period after which better and more efficient machine is expected to appear on the market. Technical age indicates when business with the new machine would become less costly i.e. more economical compared to the old machine. (Jyrkkiö & Riistama 1995, p. 306)

The investment lifetime generally has the nature of the requirement. When studied affordability it is assumed that on the selected time period in the company's operating environment doesn't occur changes, which couldn't be predicted. The investment project may have different sections, which expectations may however

vary. Lifetime of the building is usually longer than the machinery inside the building. So one possibility to define the lifetime of the investment is to use depreciation period approved by tax authorities. Depreciation periods are usually calculated on the previous year's residual value. (Yritystulkki 2014)

3.3 Investment calculation methods

When evaluating the profitability of the investment, must first make prediction of the investment projects financial consequences. Usually investment's nature is that against sacrificed resources will be obtained positive cash flows in the future. Cash flows can be comparing by discounting to their present value. This is because different time occurring cash flows are obtained by investing. (Kinnunen et al. 2002, p. 226)

According to Arnold and Hatzopoulos (2000, p. 606) the gap between theory and practice methods used has narrowed. Under these circumstances, internal rate of return (IRR) and net present value (NPV) methods, that theory suggests, have increased the popularity in evaluating investments profitability also in practice. Liljeblom and Vaihekoski (2004, pp. 10-11) and Ikäheimo et al. (2009, p. 213) have obtained the same results from their studies. The most common investment calculation method is still the payback time method in which its simplicity is calculated the time when the investment pays itself back. The shorter the payback time is, the cheaper the investment of this method is. The method doesn't take into account the time value of money, which is why it can be considered as a very simple investment calculation method. Despite this, both large and small companies in Finland and abroad are using the payback time method actively when planning their investments. However, it should be noted that, many larger companies also use NPV method and the IRR method alongside simpler methods. (Kinnunen et al. 2002, p. 226)

Studies have also shown that not nearly all Finnish companies are defining their return on investment (ROI). Investments decisions are this way made loosely

connected to financing decisions, which is why it can be said that the companies have room for development in the financial planning. (Kinnunen et al. 2002, p. 226; Ikäheimo et al. 2009, p. 213)

Investment decision is rarely based solely on calculations since all the factors can't be measured with money. However calculations can be used to easily compare different investment profitability and choose the cheapest one among several options. The bigger the investment is, more time should be used to collect background data. In this case calculations are more reliable. (Neilimo & Uusi-Rauva 2009, p. 213)

There are four different investment calculation methods, which have been used in this study. These calculation methods are:

- Net present value method
- The internal rate of return method
- The payback time method
- The return on investment method

The first two are called basic calculation methods while the latter two are called simplified calculation methods (Neilimo & Uusi-Rauva 2009, pp. 213-214)

3.3.1 Net present value method

NPV method takes into account the time value of money when evaluating the profitability of the investment (Kinnunen et al. 2000, p. 181). In NPV method, incomes and expenses of the investment are discounted to the preset by using the RRR, in which case they become comparable with each other (Horngren et al. 2009 p. 762). This method is ideally suited for situations in which the upcoming years expenses and incomes are not the same. Investment is profitable if the incomes present value is higher than the expenses present value. When compared the potential investments, the most profitable investment is which NPV is the

highest. NPV is the difference between discounted incomes and expenses. The annual net income is the difference between annual returns and expenses. This is the simplest way to calculate the NPV when discounted factors are less. (Saaranen et al. 2003, p. 248; Stenbacka et al. 2003, p. 223)

When calculating NPV and the result is negative it means that the project fails to deliver the RRR and that the project should be rejected. However if the NPV is zero or more, it means that the investment and future cash flows that are discounted into present time are greater than the determined rate of return and that the project is going to be profitable. (Horngren et al. 2009, p. 762) The NPV method is recommended for use especially in long investment projects (Saaranen et al. 2003, p. 248). Although NPV is considered to be a superior investment calculation method when compared to other methods, some studies have shown that companies do not necessary take advantage from it (Liljeblom & Vaihekoski 2004, p. 10).

3.3.2 Internal rate of return method

IRR tells the profitability as a percentage. Therefore it is widely used in many companies. It is the second most popular investment calculation method after payback time, because percentage is easy to compare to the interest rate of loan or rate of interest. Excel or some other spreadsheet program should be used with IRR method. That is because calculation by hand can be very challenging and time-consuming task. The aim is to determine the rate of interest by which the present values of incomes and expenses are equal. In other words, a rate of return for which this function is zero is an IRR. This method can't be used if the expenses are higher than revenue. (Jormakka et al. 2009, p. 233; Saaranen et al. 2003, p. 251)

IRR method shows the financial cost, by which the investment is still profitable to implement. The method can sort out how large percentage of return the investment generates. The investment is therefore profitable if the IRR percentage

is higher than target rate of return. If comparison is made with number of investments, the most profitable investment is the one with the highest IRR percentage. The method is partly more useful than the payback time method because IRR takes into account all cash flows and not just the accumulation rate like the payback time method does. (Ikäheimo et al. 2005, p. 215)

IRR can also be determined by using periodic payments table of the present value. In this case, the investment cost is divided by annual net income. Result from checking the value from the table isn't as accurate result as calculating with spreadsheet program. (Neilimo & Uusi-Rauva 2009, p. 222)

3.3.3 Payback time method

The simplest way to calculate investment profitability is to use payback time method. The payback time method tells how quickly the investment pays itself off. If the payback time is less than the target set by the company, the investment is profitable. Payback time can't be determined if net income doesn't cover the cost of the investment. This method is best suited to use alongside of another profitability calculation method because it emphasis more on the financial impact of the investment. Some investments can be profitable although the net income would be obtained in the long-term. (Saaranen et al. 2003, p. 243; Jyrkkiö & Riistama 2000, p. 214)

The payback time method can be used either as such or by discounting the cash flows to the present value. Discounting means that the annual interest rates are taken into account and the cash flows are adjusted to correspond to this day market value. The simplest way is to calculate the payback period sot that interest rates aren't taken into account. In this case the cost of the investment is divided with annual net income where the payback time is formed. If the annual net incomes aren't equal, they have to be summed together until the cost of the investment is met. The method is therefore not in favor with investments, which doesn't generate income until later. (Saaranen et al. 2003, p. 243)

If the payback time calculated without RRR, the results may be distorted already in the calculation stage. The payback time calculated without interest is shorter compared to the calculation where time value of money is taken into account. Another problem in this calculation method is that it doesn't take residual value into account. Despite its shortcomings, payback time method is on of the most widely used methods just a matter of its convenience. (Ikäheimo et al. 2005, p. 215) Liljeblom and Vaihekoski (2004, p. 11) find the popularity of payback time surprising because of the problems related to the method.

3.3.4 The return on investment

The return on investment (ROI) method is the simplified model from IRR. It describes the relationship between result and invested capital. In this method the average annual net income is divided by average equity. Methods disadvantage is that it doesn't take into account the time value of money. (Martikainen & Martikainen 2002, p. 32) Because ROI doesn't take into account the time value of the money, it is often replaced with NPV calculations to evaluate the investment (Granlund & Malmi 2004, p. 140).

Average equity is calculated by dividing the sum of residual value and cost of investment with two. Because method doesn't take into account the time difference between the executions, can depreciation of the investment work as a supplementary factor. Depreciation can be calculated when cost of investment is reduced with the residual value and then divided with the lifetime of the investment. The ROI method is easy to use because of its simplicity. Usually the method can calculate accurate results even if the calculation is done with average. This is because approximate results are sufficient enough for the investment project decision maker. (Neilimo & Uusi-Rauva 2009, p. 222)

3.4 Sensitivity analysis

The sensitivity analysis can be made from company's finance utilizing marginal costing principles. It is kind of what-if technique for clarifying of volume, price and cost changes. Sensitivity analysis can be used to get the answer for example for what happens to NPV if RRR decreases 5 % or what is the impact if visitors amount increases 10 %. The sensitivity analysis can be used to prepare for unexpected situations and broaden the knowledge base. (Puolamäki 2007, pp. 80-81)

Four factors affect the formation of the result for the company:

- Selling price increases, profitability will improve
- Sales volume increases, profitability will improve
- Variable unit cost decrease, profitability will improve
- Fixed costs decrease, profitability will improve

Changing these different starting assumptions can be clarified and analyzed their impact on the profitability by using profitability and profit margin charts as well as their indicators. (Neilimo & Uusi-Rauva 2009, p. 72) The sensitivity analysis can be easily implemented with spreadsheet program. The program can be used to determine the requested results in income by changing the output values. (Puolamäki 2007, p. 81)

With existing spreadsheet programs is easy to prepare sensitivity analysis, which take into account many different author's simultaneous effect on the result. Sensitivity analysis can study for example simultaneous changes in amount of invoice, price and variable cost and how it effect on the result. In order to guarantee reliable and useful information, has to understand the factors as well as how the basic assumptions must be set. Usually it is also good to use sensitivity analysis for the values used in the calculations because in most of the cases there is uncertainty involved in the evaluation. (Vilkkumaa 2005, pp. 135-136; Granlund & Malmi 2004, p. 138)

4 BUSINESS PLAN AND PROFITABILITY OF THE SKI RESORT

4.1 Background of the ski resort industry and competitors

Ski resort industry can't be regarded as basic sport industry. There aren't many other industries, that haven't had new competitors in 20 years and which are so depending on the weather. One bad winter season without snow can cut the visitor amounts by 50 %. In the figure 3. is presented the summary of what this chapter of business plan is about.

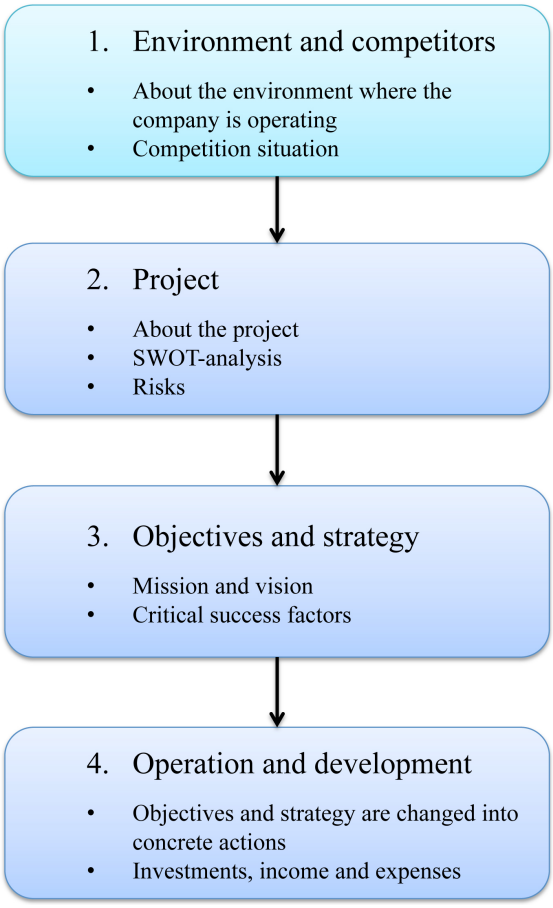

Figure 3. Environment and competitors in business plan

The next chapters are based on interviews made between May and October 2014. Interviewees are current or former ski resort entrepreneurs, workers or specialists. Interviewees' identities are not desired to make public.

There are different structures in the ski resort industry. In the North America mostly used structure is to own the whole mountain. This means that one company operates everything from ticket selling to running the restaurants. This industry structure has many good features but also some bad ones. Strategy in this one is so called "own the skiers and to own the mountain" way of thinking. This means that all the income comes to the same company. No mater what the customer does in the area or which restaurant he goes, same company gets all the income. Ski pass sales can always provide the foundation of income but the resort that offers only skiing is a risky business model. This kind of ski resorts have devised and refined a business that keeps income constant as the weather is variable. Owning the skiers means selling the season passes with lower price. This means that ski resorts prepare against bad snow season by turning skiers into members. This leads to the fact that big percentage of yearly ski pass income is achieved even before first minus degreases. Good feature in this kind of industry structure is that different restaurants and activities don't have to compete with each other. Bad feature in this is that all the services are connected with one company. If one service has bad year, it can affect to all the other services and in the worst kind of scenario, can bring the whole company to the bankruptcy. Another bad feature is that in this structure, main company has to manage all the other companies under its authority. This requires a lot of personnel that raises the work expenses. This structure is one option for Mellonmäki ski resort. (Ski resort entrepreneur I 2014; Ski resort worker I 2014; Ski resort specialist I 2014)

Another ski resort industry structure is more used in the Europe. In this structure, many different companies operate in the same ski resort area. One company can sell the ski passes and another company can operate the restaurant. Good feature for this industry model is that company doesn't have to hire that much workforce, which helps reducing personnel expenses. For example core of the ski resort can

manage ski pass sales at ski service center and ski slope maintenance with minimal number of employees. This way ski resort can focus on the core business of managing the lifts and ski service center. Another good feature in this separated industry structure is that core company can rent space for other companies in the ski service center or at the ski resort area. This expands the variety of incomes. Melonmäki ski resort is planed to work with this kind of industry structure. (Ski resort entrepreneur I 2014; Ski resort worker I 2014; Ski resort specialist I 2014)

Development of the ski resort industry has been going on for a good while. Earlier the ski resorts were mainly about downhill skiing but nowadays they are much more. Ski resorts are starting to be more like all year-round activity parks. Even the smaller ski resorts are investing on different activities and it isn't anymore just for big ski resorts in the north part of Finland. It's not rare to see small ski resorts advertising their summer activities. This is the result of large varying in ski season periods. One season ski resort can be open from November until March and next winter from end of December until February. Ski resorts have to develop different kind of incomes because ski resort which offers just skiing during the winter season period is risky business. Another development in the ski resort industry is rapidly increasing popularity of freeskiing, which is subset of freestyle skiing. Freeskiing popularity combined to snowboarding makes streets and parks very important parts of the ski resort. This means that if ski resort wants to keep customers happy, they need to invest on parks. Overall development of skiing industry has been steady without any major changes in the number of enthusiasts.

South-Eastern Finland has three ski resorts from which two are competitors to the Mellonmäki ski resort. First one is Myllymäki ski resort that is located in Joutseno, 15 kilometers from Mellonmäki ski resort and 26 kilometers from Lappeenranta. Myllymäki ski resort has been founded in 1984 and it contains six slopes and four lifts. Altitude difference at Myllymäki ski resort is 70 meters and lengths of the slopes are between 300 to 600 meters. That makes it a little bigger than Mellonmäki ski resort. Last three reported revenues have been from the years 2013, 2011 and 2010 with 498 000 €, 418 000 € and 169 000 €. Results from

these revenues Myllymäki ski resort have had 15 000 € net loss, 19 000 € net profit and 9 000 € net loss. Average visitors amount in Myllymäki ski resort is 40 000 during the winter season. (Suomen Asiakastieto Oy Voitto+ 2014; Owal Group 2013)

Another competitor for Mellonmäki ski resort is FreeSki resort, which is located in Ruokolahti, 25 kilometers from Mellonmäki. FreeSki has six slopes and two lifts. Altitude difference at FreeSki is 70 meters and slope lengths are between 200 to 500 meters. Economic indicators for FreeSki aren't available in Voitto + program. (Owal Group 2013)

4.2 Ski resort project description and participants

Next section of business plan is to describe the main idea of the project and what strengths, weaknesses, opportunities and threats it has. These are forming the foundation for strategies how to the company is directed forward. Figure 4. shows the part of business plan what are we demonstrating.

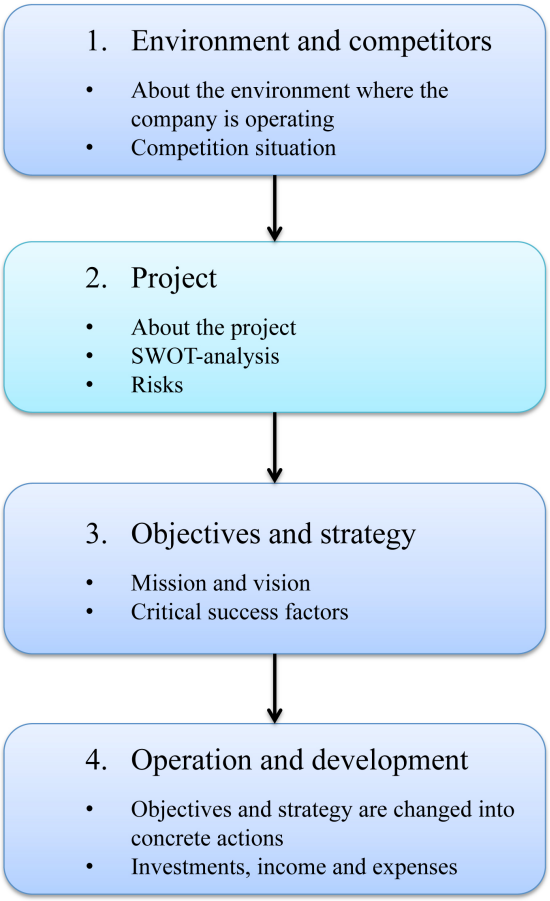

Figure 4. Project description of business plan

The area where ski resort project is located is called Mellonmäki and it is located two kilometers from the city center of Imatra, Finland and eight kilometers from the Russian border. Area has had a ski resort in the 1980's and 1990's but it was closed down in 1990's because ski resort business wasn't profitable. Entrepreneur sold the lifts, snowmaking system and other equipment to other ski resorts in Finland in 1999. Since then, Mellonmäki area has been without business used only by local Imatra people. The area is beautiful and it gives good variety in height for joggers, mountain bikers and cross-country skiers. Mellonmäki still has old ski jump tower in the area, which has been renovated and maintained with the help of volunteers. This is why ski jumping is still active hobby at Mellonmäki area. Ski jump competitions have been held at Mellonmäki almost every year in seven different age categories if the weather conditions have been right.

Mellonmäki has the biggest ski tower in South-Eastern Finland. (Ski resort entrepreneur I 2014; Ski resort worker I 2014)

Basic project description is to build the needed buildings, lifts and infrastructure so that the ski resort can start the business again. Estimation of needed investments is 1,56 million euro. External operator would maintain the slopes and areas.

When examined the SWOT-analysis, couple of conclusions can be made. Mellonmäki ski resort has potential to become successful but not without risks. Because ski resort has huge strength in the fact that it has almost perfect location, local visitors can come visit it easily during the evenings and weekends. Nowadays when local people want to go to ski they have to go by own car to. Mellonmäki ski resort could get city of Imatra to develop bus route so that one route would go by the ski resort. This way local people who don't have car could come to ski. Mellonmäki ski resort has already good reputation as activity place so it doesn't need to be introduced to locals. Even nowadays it is widely used for summer and winter activities although there isn't any business to run the activities. Another strength is Russian tourists. Although recent events in Europe and Russia has reduced amount of Russian tourist in Finland, still the amount of Russian visitors is on the level of 2012. Without the bad economical situation in Russia at the moment, Finland would have had more Russian tourists in 2014 than ever before. Even though amounts of Russian tourist have been reducing in Finland, amount of border crosses to Imatra has increased 1,8 %. In table 1 is shown SWOT-analysis for Mellonmäki ski resort. (Tulli 2014)

Table 1. SWOT-analysis for Mellonmäki ski resort (Owal Group 2013)

Strengths:	**Weaknesses:**
• Location, close to city center of Imatra and Russian border • Local people already knows the place • At the moment 3 000 accommodation places, in six years 10 000 accommodation places • Imatra is a "gate" from Russia to Finland, lots of traffic • Lots of nature around • Different activities than competitors	• Counting too much on Russian tourists • Ticket prices have to be 50 % higher than competitors • Needed daily visitor amount is high
Opportunities:	**Threats:**
• Summer activities • Russian tourist aren't interested from areas winter sport possibilities at the moment • Visio of offering different activities than competitors	• Season length very variable • There isn't enough skiers for three ski resorts inside 20 kilometers radius • Not many Mellonmäki sized ski resorts in Finland that makes profit • Less Russian tourists than year before

There are some main weaknesses for Mellonmäki ski resort, which need to be clarified. Ski resort can't count too much on Russian tourists. If the amount of tourist is overestimated, it can distort the estimated profitability. Mellonmäki ski resort was in the 1990's very popular winter activity center. There was over 40 000 visitors at the best years of ski resort and over 1 000 season tickets were sold. Positive thing in the numbers is that at that time in the 1990's, not many of these visitors were Russians. This means that Mellonmäki ski resort has capacity of handling over 40 000 winter season ski resort visitors. Another weakness for ski

resort is that estimated ticket price would need to be around 50 % more than what competitors have. This is challenging situation but it can be overcome by keeping the level and quality of service higher when compared to the competitors. Level of service needs to match the price of the tickets. (Ski resort entrepreneur I 2014; Ski resort worker I 2014)

Mellonmäki ski resort opportunities are mainly about differ it from its competitors. Other South-Karelian ski resorts doesn't have summer activities, which is already big opportunity for Mellonmäki. Also biathlon track is something new that other ski resorts doesn't have. Third thing is that study shows that tourists aren't interested on current variety of winter activity possibilities around Imatra. (Owal Group 2013) This is why Mellonmäki ski resorts have good opportunity to attract these potential tourists.

Mellonmäki ski resort is also facing some threats, which some of them are more serious than others. For example the length of the winter season can be very variable. On year the season can last two months and the year after that, over five months. Even though season would last four months but season starts late and ski resort remains shut during Christmas holidays, can overall result end up as negative. One threat is the amount of ski enthusiasts in the area of Imatra for three ski resorts. Another threat is the possibility to make profit. When benchmarking other same size ski resorts in Finland, can be quickly noted that many of ski resorts aren't making much profit and many of them are making loss every year.

Investment profitability calculations are almost always based on uncertain data. Project has many different risks and overall national economic situation can't be accurately predicted for the future. When planning investment project concepts of risk and uncertainty are traditionally been separated from each other. The concept of risk is usually a matter or an event that is known to be possible in the future. Usually, the probabilities of these situations are known.

Ski resort project has three main participants Kehy Oy, Russian business partners and city of Imatra. Kehy Oy is owned by regional municipalities and companies and is responsible for business development in the South-Eastern Finland. Kehy Oy offers high-grade management consultancy services for enterprises settling in the area. The basic consultancy services are free and can be tailored according to needs in co-operation with other agents in the region. The services encompass the whole process of settling into the area, from information provision to practical help in establishing a business and making contacts. Kehy Oy turnover was 1,9 million euro during 2013 and the company employs 18 personnel. (Kehy Oy 2014) Russian business partners have work experience in ski resort businesses and projects in Russia. They have worked for North Caucasian Resorts for starting up a ski resort. Third participant is represented by city of Imatra. Mellonmäki area is owned by the city and that's why city of Imatra has a central role in the project. City of Imatra is also needed for help building areas infrastructure.

4.3 Objectives and strategy

Mellonmäki ski resorts mission aims at improving leisure time quality and increasing well-being of people by providing versatile and well-maintained year-round sport activity area. Mellonmäki ski resorts services are based on customers needs. By the year 2020, Mellonmäki ski resorts mission is to develop operating concept, which leads to company-driven and commercially functioning service concept. Mission is to increase tourism at the city of Imatra with success of partner companies and local service providers.

Mellonmäki ski resorts vision is to develop the area so that in year 2020, Mellonmäki ski resort offers comprehensive year-round sport and leisure services for different groups, including families with children, older people and pensioners. In 2020, Mellonmäki ski resort is the most popular ski resort in the South-Eastern Finland with all year-round activities. Mellonmäki is known activity area in all its main market areas as well as attractive destination for tourist

that offers desirable services. In the figure 5 is basic idea what this chapter of business plan is about.

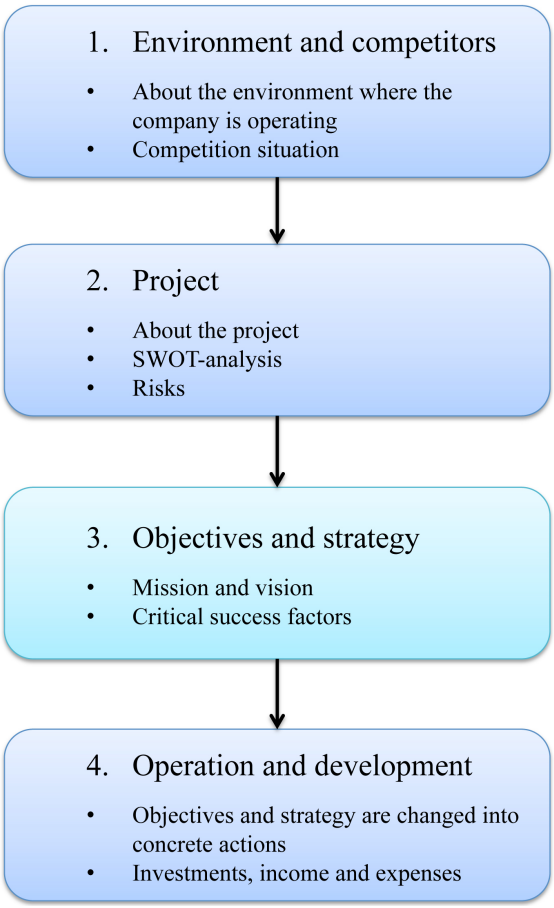

Figure 5. Objectives and strategy of business plan

Main idea for Mellonmäki ski resort is to set up new company based on the project. This company would invest for main infrastructure around Mellonmäki and create "Anchor". This Anchor would include lifts, ski service center, biathlon track and preparation of the ski facilities and development of the core infrastructure. The Anchor would be the heart of the Mellonmäki ski resort that would bring in other investors and activities. Accommodation services are one potential investment possibility. Accommodation services are needed to the area because international tourists are easier to come to ski resort if different accommodation opportunities are available around the ski resort. Mellonmäki ski resort area has many potential places for small hotel or cottages.

Mellonmäki ski resort will also need operator to maintain the slopes and who has previous knowledge about ski resort business. Ski resort project timetable for implementation is depending on market conditions and funding opportunities. Estimated timetable for implementation is 2-5 years. Result would include ski resort with nine slopes for different level of skiers. Three lifts would carry skiers on top of the slopes and ski service center would be located under the hill. Ski service center would include different services for visitors from restaurant services to ski equipment renting. Developing infrastructure in the Mellonmäki area would serve not only ski resort visitors but also expanding needs of the residents of Imatra. The entire project cost is estimated to be about 1,56 million euro. Idea is to start with more modest provision of services and increase the amount of them in the future. This way the risk of investing and needed cash flow is lower. This positive affects to the profitability and the NPV of the ski resort project. (Ski resort specialist I 2014; Ski resort specialist II 2014)

Overall planed investments includes:

- 200 meter long T-bar lift for the main slopes
- two 80 meter long rope lifts for the kids slopes
- 500 – 1 000 meter feed water system for snowmaking system from Mellonlahti or Vuoksi
- snowmaking system for five hectare ski slope area
- water feeding system
- ski service center with ski shop, cashier, restaurant, ski rental etc.
- snowmobile for transport
- equipment rental gears
- biathlon area work
- slope light system
- street and park equipment
- electricity contract
- electricity work
- soil work
- furniture for the ski service center

- IT equipment

Rebuilding ski resort to Mellonmäki in Imatra has one big advantage for its competitors, its location. Mellonmäki is located just two kilometers from the city center of Imatra. With over 28 000 local inhabitants in Imatra, 72 000 inhabitants in Lappeeranta just 35 kilometers away and 4,88 million inhabitants in Saint Petersburg just 200 kilometers away, Mellonmäki ski resort has potential for locals and international visitors.

Because Mellonmäki area has an excellent location, accommodation options are closer which means that tourist can come to area much more effortless. In the city center, around tow kilometers away are three hotel options and more options further. Business plan is to get entrepreneurs to build accommodations around Mellonmäki area because the area has good places for small hotels and cottages. Compared to competitors, Mellonmäki ski resort has much more accommodation options in the area than Myllymäki and FreeSki. Closest and only hotel near Myllymäki is 6,3 kilometers away and for FreeSki 3,4 kilometers away.

Mellonmäki ski resorts would have nine ski slopes in the area. Slopes would include four main slopes, two slopes for children, one park with jumps, one tubing slope and one ski jump slope. In addition to the slopes, Mellonmäki would have track for cross-country skiers with possibility to rent laser rifles. This means that Mellonmäki area would have more activities and slopes than its competitors. (Ski resort specialist I 2014)

There are many critical success factors that are necessary so that Mellonmäki ski resort can have future in the area. Many of the critical success factors have already come up in previous chapters but now they are presented more precisely. Critical success factors have been divided to five different perspectives, economic, customer, internal, personnel and external perspectives. In the table 2 is presented the critical success factors for the ski resort project.

Table 2. Critical success factors (edition from Hannus 2004, p. 80)

Strategic intent	Strategic themes	Perspective	Critical success factors	Strategic indicators
The most popular ski resort in South-Eastern Finland		Economic perspective	**Profitable growth**	Net sales
			New customers	Percentage of new customers
			Cost-efficiency	Expenses / performance
	Development of customer service operating models	Customer perspective	**Satisfied customers**	Customer satisfaction
			Long-term relationship	Customer retention
			Brand imago	Awareness
	Strengthening by structural changes. Growth with new innovative services	Internal perspective	**Good customer service**	Customer satisfaction
		Personnel perspective	**Committed and enthusiastic personnel**	Personnel satisfaction
			High quality expertise in key areas	Learning levels in key areas
		External perspective	**Weather**	Season length

Profitable growth is what every new company aims to. For Mellonmäki ski resort project, the growth has been estimated to be slight but steady with 2 % annual increase of income and expenses and 1,8 % growth of visitors. This growth can't be achieved every year because of the nature of ski resort industry, but

average growth in long run is expected to be achievable. **New customers** are critical part of the project. Because ski resort is new, it needs to get completely new group of visitors to use its services. As previously has been stated, South-Eastern Finland has skiing enthusiasts, they just need to be attracted to new ski resort area. High amount of ski resort visitors are kids at age between 7-17 years old (Ski resort entrepreneur II 2014). This is why kids segment should be take into account by investing into streets and parks. **Cost-efficiency** is one factor, which need to be solved. It is also linked to other critical success factors very strongly. Two of the most important factors regarding cost-efficiency that needs extra attention are personnel and energy expenses. Ski resort business doesn't have any room for extra personnel expenses. If possible, all the personnel need to be professionals who have know-how in ski resort business. Energy expenses play also big role in ski resort business because estimated energy usage for Mellonmäki ski resort is over 40 MWh. Energy expenses are also linked to the investment costs because for example newer snowmaking system or snowcat is more energy efficient but in other hand more expensive.

Satisfied customers are one of the most difficult success factors to achieve. Ski resort should offer what customers are expecting, which is different variety of winter and summer activities. Challenging part is the price of the tickets. Estimation is that ticket prices have to be 50 % more expensive compared to the competitors so that ski resort business can be profitable. This means that the level of customer service quality has to be on the same level with the ticket prices. If ski resort is able to satisfy the needs of new visitors, it is also likely to increase the amount of **long-term relationships**. Satisfied customers are also increasing the **brand imago** of the ski resort, which leads to even more local and international customers.

Good customer service is directly linked to customer satisfaction. **Committed and enthusiastic personnel** have significant advantages to the company. When the level of commitment among personnel is high, the members of the company are more proud to be part of it. In this case the personnel seek to achieve the

objectives of the company and if needed, they are prepared to go the extra mile. **High quality expertise in key areas** are also linked to the previous critical success factors. These key areas can considered to be the know-how about ski resort business and maintenance. When the personnel have the expertise to maintain, repair and operate the ski resort business, it affects to all the previous critical success factors. When personnel are committed and they have the needed expertise the slopes are maintained and lifts are working, customers are satisfied, which increases the brand imago of well maintained and ski resort, which brings the new customers and makes old customers long-term customers. All this keeps ski resort business going and gives the possibility to do profitable business.

Last critical success factor is the **weather**. Unfortunately, this critical success factors cannot be influenced. If weather stays warm for long periods of times and winter will be short, company can only adapt to the situation the weather causes. But luckily there is at least one way to improve bad weather situation. By investing new technology in snowmaking system, bad weather caused threats can be minimized. This is because newer technology in snowmaking systems allows ski resort operators to start snowmaking closer to the zero degrees, when old systems needs much lower degreases. This can affect positively to the winter season length and make the ski resort business more profitable. (Ski resort entrepreneur II 2014) Overall conclusion can be made that all the critical success factors in ski resort business are linked to each other.

4.4 Description of investment calculation model

One of the goals for the thesis was to make a calculation model, which can be used to calculate the profitability of the project. In this chapter is presented the investment calculation model. Profitability is calculated with different investment calculation methods and executed with Microsoft Excel spread sheet program.

Calculation model is assembled with nine sheets and each contains different information for the observer. In and between the sheets is simple automation to

ease reading and filling of the sheets. Automation has been carried out with basic Excel functions and macros. Actual profitability of the investment analysis is carried out at the profitability analysis sheet.

Profitability analysis sheet is the main sheet where to see the initial data and the final results. In the first chart the main things, which are changeable, are amount of visitors at the ski resort during the winter season, change of ski pass prices, change of other ticket prices and amount of yearly winter days.

Profitability analysis is shown with five different options. In these options the user of the calculation model can change RRR percent, net profit/loss and the amount of total investments. First option is the one that is thought to be executed in the future. This option contains only separately selected activities that are thought to bring the best profit with the least amount of investments. All these activities are related to skiing area so no additional investments around the area of Mellonmäki are needed.

Methods chosen to describe the profitability of the investments were introduced in the theoretical part of the thesis. These methods are NPV, IRR and payback period. Model gives result of each method and tells if the project is profitable with the given numbers or not.

Incomes & Expenses sheet presents income statement for the project. Income statement of the ski resort is the profit plan for Mellonmäki project. Net sales is contains income from skiing passes, tubing passes, equipment rental, skiing lessons, ski maintenance and restaurant & bar. Lower at the sheet is shown how each income has been calculated. Expenses have gotten by first benchmarking four same size ski resorts from Voitto+ program and then by calculated average expenses from their income statements of previous years, mainly years between 2008 and 2012.

Cash flow & NPV sheet shows Mellonmäki projects net cash flow, cumulative net cash flow, the interest-bearing net cash flow and cumulative interest-bearing net cash flow. At this sheet cash flow statement can be viewed either at steady or random change in cash flow. Sheet shows also different project options cash flows and NPV with 15 or 20 years.

Sensitivity analysis sheet displays with numbers and graph how project plans net profit/loss changes if ski pass income, other passes income, total income or total expenses changes from -50 to +50 % with 10 % steps. Second sensitivity table and graph presents how NPV and IRR change when total amount of the investment changes from -30 to +30 % with 5 % steps. Third sensitivity table and graph shows how NPV and IRR change when total net profit/loss changes from -30 to +30 % with 5 % steps.

Investment sheet gathers all the projects investments in to the three different tables. First contains buildings, second ski resort lifts and third other needed investments. Buildings approximate costs of construction have been calculated by multiplying 2000 €/m^2 with gross area of the building. Changing the amount of the investments will change them also in other sheets. Sizes of the buildings have been got from possible investors calculations. Lifts and other investments costs have been gotten from professional ski resort specialist.

Slopes & Lifts sheet presents all the information of them. That information is needed to estimate the capacity of the lifts so that there wouldn't occur long queues around the lifts. These numbers have been gathered from professional ski resort specialist.

Income statement sheet shows the benchmark of other same size ski resorts. Information has been gathered with Voitto+ program. In the end of the chart there is average calculation of each income and expense. These average amounts have been used for estimating some of the expenses for the Mellonmäki project. Numbers have been estimated to be less than the average but consider the

expenses to be more so that there won't be big surprises if something unpredictable happens. Balance sheets and Key Figures sheets gather also benchmarking information from same ski resorts as income statement sheet.

4.5 Operation and development plans for ski resort

This is the final phase of the business plan. In this phase the follow-up measures for objectives and strategies are changed into concrete actions. In the figure 6. is presented the main themes of this chapter.

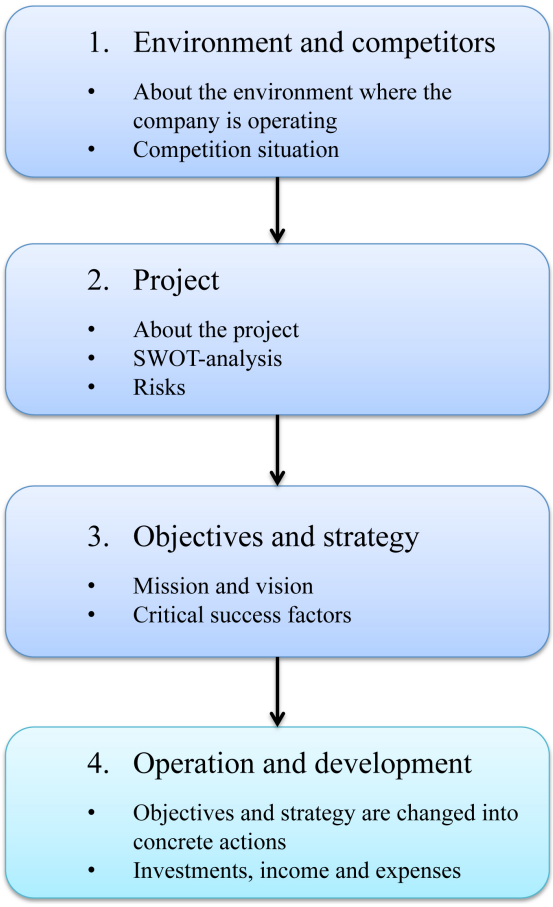

Figure 6. Operation and development of the business plan

4.5.1 Investments, incomes and expenses

Investment process for Mellonmäki ski resort starts from making a survey of potential investment needs. First step of the survey has been done examining other same size ski resorts from Finland. Professional ski resort specialist has gathered final survey. Most important investments are combination of buildings, lifts and other needed investments.

Planed building investments consists 300 m^2 ski service center that includes restaurant, bar, terrace, ski shop, ski school, equipment rental and administration. Costs for the building have been calculated with price of 2 000 € for one square meter. Planed building costs for 300 m^2 ski service center is 600 000 €.

Professional ski resort specialist has simulated the infrastructure of the ski slopes. Based on his plan, Mellonmäki ski resorts main skiing area should have one T-bar lift, which brings skiers on top of the hill. Investment costs for 200 meter T-bar lift is 300 000 €. Kid's area would have two rope tow lifts and investment cost for these are 30 000 €. Combined cost for all the lifts for the Mellonmäki ski resort is 330 000 €. Costs for all lifts are highly dependent on the length of the lift. Lengths of the lifts and the investment cost have been rather overestimated than underestimated. In the table 3 is shown all the investments of Mellonmäki ski resort.

Table 3. Combined investments of Mellonmäki ski resort

Buildings	Lifts	Other investments	Price
Ski service center			600 000 €
	T-bar		300 000 €
	2 x Rope tow		30 000 €
		Snow mobile / ATV	15 000 €
		Snowmaking system	150 000 €
		Water feeding system	70 000 €
		Equipment rental	40 000 €
		Biathlon area	50 000 €
		Street / park	10 000 €
		Slope lights	100 000 €
		Electricity contract	66 000 €
		Electricity work	75 000 €
		Soil work	25 000 €
		Furniture	25 000 €
		IT equipment	8 000 €
Total			**1 564 000 €**

Mellonmäki ski resorts incomes are combination from customers visiting in different activities. Main income for the ski resort is ski pass sales in five different categories such as one, two, three and four-hour ski passes and 1-day pass. Daily ski pass sales have been estimated to be half adults and half children. Students, pensioners and unemployed can get ski passes with price of children's ski pass. Ski pass sales volume is divided equally among five ski pass categories and two customer groups. With estimated 35 000 seasonal visitors and average of 90 skiing days, daily average amount of visitors is 386. This contains also 24 daily skiers who have bought season passes but don't generate daily ski pass income. Logic of these 386 daily season pass skiers is explained on the next paragraph. Sale volumes between each category and customer group have been divided equally to 10 % of daily ski resort visitors. This means that each category and customer groups have around 38 skiers during a day so 386 daily skiers combined. With estimated 32 600 seasonal regular ski pass visitors, combined income is 619 000 €. More precise calculation about ski pass incomes is presented in appendix 1.

Calculating season pass skier incomes is tricky because they have to be calculated with other daily and seasonally skiers but they don't generate income same way as daily paying skiers. That is why season pass skier incomes and other ski pass incomes have been separated but amount of visitors kept together. Estimation is that season pass skier visits Mellonmäki average eight times a month. This means 24 times during the estimated three month winter season and with estimated 100 sold season passes it means 2 400 season pass visits during winter. This is why calculated regular ski pass income have been calculated with 32 600 skiers because they are the ones who generate the daily income. Estimated amount of season pass sales are 50 adult season passes for 290 € and 50 children season passes for 240 €. Combined income for season passes are 26 500 €. More precise calculation about season pass incomes is shown in appendix 1.

Other activity incomes for Mellonmäki ski resort are biathlon, tubing equipment renting and snow walking equipment renting. Biathlon customers can choose what kind of pass they want from the four possibilities that are biathlon pass and laser rifle for kids and students, pass and laser rifle for adults, pass + equipment rental + laser rifle for kids and students and pass + equipment rental + laser rifle for adults. Customer can also choose do they want to buy half day or full day pass. Biathlon incomes have been calculated by estimating that 10 % of daily ski resort visitors want to practice other ski resort activity. This means that with estimated 386 daily visitors, 36 persons want to practice biathlon. Amount of sold biathlon passes have divided equally with pass possibilities so that 12,5 % of daily visitors will purchase pass from each category. Combined income for biathlon equipment renting is 50 000 €. Because kids skiing area is free to use and passes for tubing aren't needed. Mellonmäki offers tubing equipment renting in two categories and in two durations of time. Tubing incomes have been calculated by estimating that 5 % of daily ski resort visitors want to rent tubing equipment. This means that 18 persons want to rent tubing equipment each day. Combined seasonal income for tubing equipment renting 13 000 €. Another possibility to winter activity is renting snow-walking equipment. Snow walking equipment renting is provided in two time durations and with two categories. Combined income for snow walking

equipment is 2 500 €. More precise calculation of these incomes is presented in appendix 2.

Other incomes for the ski resorts are skiing equipment renting, skiing lessons, ski maintenance and repair and café/restaurant. Ski equipment renting is big business for ski resorts and some articles have shown that even 18 to 24 % (Ski resort worker I 2014) of yearly income. Our calculations have settled for more pessimistic view with 12 % of whole ski resorts annual incomes. Prices for renting skiing equipment have been checked from other same size ski resorts. Skiing equipment renting service provides same length renting times as ski pass sales. This way customer can buy ski pass and rent skiing equipment for the same period of time. Skiing equipment renting is popular for beginners so percentage of daily equipment renting customers is higher that activity visitor percentage. Estimated 25 % of daily ski resort visitors, which means 90 customers, will rent their skiing equipment or snowboard equipment. Daily number of customers is divided equally between five possible renting times. Combined income for skiing equipment renting is 130 000 €. Ski resort provides also ski maintenance and repair. Ski maintenance and repair income is 3 000 €. More precise calculation about these incomes is shown in appendix 3.

Other possible income for Mellonmäki ski resort is renting space at the ski service center and royalties for that**.** Plan is to rent areas from ski service center for ski school and restaurant. Renting income for ski school and restaurant would generate income of 16 000 €. Estimated royalty percentage for two companies operating in ski service center is 5 % from the companies' net sales. This means 9 000 € royalties income for Mellonmäki ski service center.

Another big income for Mellonmäki ski resort is summer activities. Because ski resort can't count on just winter income, resort needs to have also summer activities. For this study we haven't specified what summer activities Mellonmäki ski resort would have but idea is to have average 50 visitors per day during summer season. This means 10 500 annual summer activity visitors when

estimated time of summer season is 7 months. Estimated income from summer activities is 158 000 €. In the table 4 is presented the combined Mellonmäki ski resort incomes and services. For more precise calculations of incomes can be found from the appendices 1, 2 and 3. More precise calculation about summer activity incomes is shown in appendix 2.

Table 4. Incomes and services of Mellonmäki ski resort

Total income / winter season	**Total € / a**
Skiing passes	619 000 €
Season passes	26 500 €
Biathlon	50 000 €
Snow walking equipment	2 500 €
Tubing equipment renting	13 000 €
Skiing equipment renting	130 000 €
Ski maintenance	3 000 €
Rents	16 000 €
Royalties	9 000 €
Summer activities	158 000 €
Total	**1 027 000 €**

Mellonmäki ski resorts expenses are based on many different aspects. Expenses have been gathered by calculating average expenses of same size, or bigger ski resorts in Finland. **Personnel expenses** is the biggest single expense group that includes salaries, wages and bonuses subject to withdrawing tax and comparable expenses, as well as other expenses determined on the basis of the salaries, such as social security payments, compulsory and voluntary personnel insurance premiums and pension expenses. Personnel expenses include full time employers for the Mellonmäki ski resort. Estimated need of full time personnel is one manager and three workmen. Estimated personnel expenses are 176 000 €.

Purchases during the financial year include all value of purchased goods and services that are intended to resale or use in trading activities with the exception of capital goods. The biggest expenses of purchases are water and energy

expenses. Estimated amount of purchases during the financial year is 154 000 €. More precise calculation of energy usage is presented in appendix 4. **Other operating expenses** includes e.g. rents, leasing expenses, marketing, administration, development and IT costs. Also e.g. items previously deducted directly from sales revenue such as sales provisions, royalties, freight costs and credit loss incurred are included here. Other operating expenses are 140 000 €.

Direct taxes include income tax and other direct taxes. Tax on real estate and other similar taxes are other operating expenses by nature. Estimated income tax for Mellonmäki ski resort is 82 000 €. **Depreciation according to plan** is based on the acquisition cost and actual economic life of the fixed assets. Depreciation according to the plan is calculated by dividing investments with life of the asset. Depreciation according to the plan is 78 000 €. **Interest expenses** are expenses paid according to the lapse of time on debt to financial, credit and insurance institutions and to other creditors. Also loss incurred from the translation of currencies is included here. Interest expenses are estimated to be 70 000 €.

Outsourced services refer mainly to compensation or remuneration for work. They can include such services produced by e.g. subcontractors, design and consultation agencies and maintenance companies or expenses incurred from hiring employees that are directly connected to production or sales. These expenses are incurred from cable cars, snowmaking systems, ski service center and slope lights maintenance and also winter holiday personnel who are needed at the busiest business times. Estimated amount of need for winter season employees is five personnel's, three part time employers for three months and two employers for one-month period. Estimated expenses for five winter season personnel are 35 140 €. This leaves 24 860 € for other outsources services during one financial year because estimated total outsourced services expenses are 60 000 €. In table 5 is shown estimated expenses for Mellonmäki ski resort.

Table 5. Total expenses

Total expenses	**Total € / a**
Personnel expenses	176 000 €
Purchases during the financial year	154 000 €
Other operating expenses	140 000 €
Direct taxes	82 000 €
Depreciation according to plan	78 000 €
Interest and other financial expenses	70 000 €
Outsourced services	60 000 €
Total	**760 000 €**

4.5.2 Income statement and cash flow forecast

Income statement for Mellonmäki ski resort project's scenario is estimated to achieve desired amount of visitors of 35 000 on its fourth year, in 2019. First year estimation of visitors is 80 % (28 000), second year 90 % (31 500) and third year 95 % (33 250) of years 2019 amount. Expenses are estimated to remain the same during the first four years. After the year 2019 estimated growth in incomes and expenses are 2 % per year. Estimated increase of visitors amount is 1,8 % per year. In table 6 is presented income statement for Mellonmäki ski resort. Cash flow forecast is shown in appendix 5.

Table 6. Income statement

	2016	2017	2018	2019	2020
	1 000 e	1 000 e	1 000 e	1 000 e	1 000 e
NET SALES	494,6	556,5	587,4	618,3	630,7
Other operating income	327,2	368,0	388,5	408,9	417,1
Total operating income	**821,8**	**924,5**	**975,9**	**1 027,2**	**1 047,8**
Purchases during the year	153,9	153,9	153,9	153,9	156,9
Outsourced services	60,0	60,0	60,0	60,0	61,2
Personnel expenses	176,4	176,4	176,4	176,4	179,9
Other operating expenses	140,2	140,2	140,2	140,2	143,0
Operating margin	**291,4**	**394,1**	**445,4**	**496,8**	**506,7**
Depreciation	78,2	78,2	78,2	78,2	78,2
Operating result	**213,2**	**315,9**	**367,2**	**418,6**	**428,5**
Interest and other expenses	70,0	70,0	70,0	70,0	70,0
Direct taxes	41,6	61,6	71,6	81,6	83,6
NET PROFIT/LOSS	**101,6**	**184,3**	**225,6**	**267,0**	**275,0**

4.5.3 Profitability calculation indicators

Investment calculations are made with excel spreadsheet program. In the table 7 is shown all the indicators, which tell the profitability of the project. Best-suited indicators for this project are the NPV and IRR, because they take the time value of the money into account as well as the fact that incomes and expenses aren't identical every year. In this precise project, NPV gets the value of 42 971 €. Amount is more than zero, therefore this indicator shows that the project is profitable. Next indicator is IRR, which is 15,4 %. When IRR percent is higher than RRR the investment is profitable. In Mellonmäki ski resort project RRR is 15 %, which means that also IRR indicates that project is profitable. Next indicator is return on investment. ROI percent is thought to be good when it is over 10 %. In this case ROI is 11,5 %, which means that project receives a grade of good. Last indicator is the interest-bearing payback time, which is 18,4 years.

Table 7. Investment calculation indicators of Mellonmäki ski resorts

Mellonmäki ski resort business plan		
Life of the asset	20 years	
Investment proposal	1 560 000 €	
Required Rate of Return (RRR)	15 %	
Net Present Value (NPV)	42 971 €	> 0 €
Internal Rate of Return (IRR)	15,4 %	> RRR
Return on Investment (ROI)	11,5 %	> 10 %, Good
Interest-bearing payback time	18,4 years	

4.5.4 Sensitivity analysis

Mellonmäki ski resort can increase their profitability with many different factors. Some of the factors are reducing expenses, increasing income and increasing ticket prices. Still, the most important is visitor amounts. Sensitivity analysis is made with estimation of 35 000 winter season visitors and presented in table 8 and figure 7.

Sensitivity analysis shows how the company's net sales, profit or loss would change if amount of visitors is going to change. Range was selected from -40 % to +40 % because nature of the ski resort industry is very variable when talking about annual visitor amounts. From sensitivity analysis we can see that with 15 % RRR the NPV stays positive only with over 35 000 visitors. If amount of visitors is less than that, project is unprofitable when using NPV method with 15 % of RRR.

Sensitivity analysis for Mellonmäki ski resort shows in table 8 and in figure 7, that ski resort can make profit even with 28 000 seasonal visitors. In this case, NPV for that is badly negative, which indicates that ski resort can't operate with so low visitor amount for long. Under 30 000 seasonal visitors is temporarily acceptable and in fact even expected because of the nature of the ski industry's variable length of seasons. IRR shows that even 5 % decrease in visitor amounts will make project unprofitable when RRR is set up as high as 15 %. If RRR is

lowered, the profitability of the project increases if the expected visitor amounts remain the same. These kinds of reflection of different scenarios are discussed in later paragraphs.

Table 8. Sensitivity analysis

	Ski resort visitors	Net sales	Profit / loss	NPV	IRR
-40%	21 000	616 345 €	-143 920 €	-1 781 851 €	-15,0 %
-30%	24 500	719 069 €	-41 196 €	-1 325 786 €	-0,8 %
-20%	28 000	821 793 €	61 528 €	-869 769 €	5,8 %
-15%	29 750	873 155 €	112 890 €	-640 835 €	8,5 %
-10%	31 500	924 517 €	164 252 €	-412 827 €	10,9 %
-5%	33 250	975 879 €	215 614 €	-185 037 €	13,2 %
0%	35 000	1 027 241 €	266 976 €	42 971 €	15,4 %
5%	36 750	1 078 603 €	318 338 €	270 980 €	17,5 %
10%	38 500	1 129 965 €	369 700 €	498 110 €	19,6 %
15%	40 250	1 181 327 €	421 062 €	726 118 €	21,6 %
20%	42 000	1 232 690 €	472 424 €	954 126 €	23,5 %
30%	45 500	1 335 414 €	575 148 €	1 414 683 €	27,4 %
40%	49 000	1 438 138 €	677 873 €	1 869 554 €	31,2 %

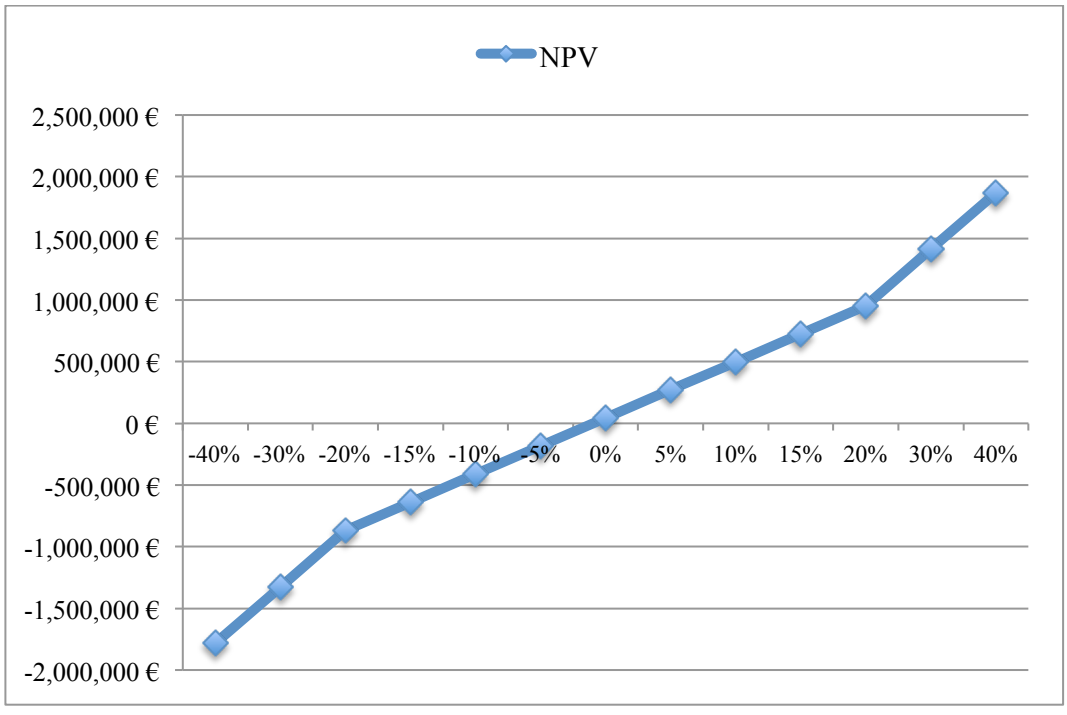

Figure 7. Sensitivity analysis chart of net present value

5 CONCLUSIONS

5.1 The main results

Mellonmäki ski resort project has potential for profitable business, but of course not without any risks. Investment calculations shows that Mellonmäki ski resort would be profitable if winter season visitor amount would be around 35 000 and summer season visitor amount would be around 10 500. Sensitivity analysis of ski resort demonstrated that it can operate temporary with lower than 30 000 annual visitors but overall average visitor amount needs to be higher than that.

Investment proposal for Mellonmäki ski resort project is 1,56 million euro, which would be invested in the beginning of the project. This investment is enough to get the basic infrastructure and the "Anchor", which includes lifts, snowmaking, ski service center and other smaller investments. With this, the ski resort can have working business with needed infrastructure. This can considered to be starting kit, which can be enlarged. Many different services for the ski resort can be operated in the area so there are many different possibilities in the near future how to expand the provision of services.

Indicators for ski resort projects shows that project can be profitable even with 15 % RRR, because NPV would stay positive with the amount of 42 971 €. Also IRR would stay over RRR with the amount of 15,7 %, which also indicates that the project would be profitable when the lifetime of the project is considered to be 20 years. These are the indicators, which should be given the most attention because they take into account the time value of the money. If future investors want to consider making decision with more simple investment calculation method, interest bearing payback time method gave result of 18,4 years. This is the calculated time when the project has paid itself off.

RRR is set to 15 %, which causes high demand of visitors. If RRR would be lower, Mellonmäki ski resort wouldn't need so high seasonal visitor amounts and

high ski pass prices. Still over 15 % of IRR is possible to achieve if the core business is able to get functioning. Lower RRR scenario is studied in the discussion chapter.

Russian business partners have long-term experience for implementation of same sort of projects. Their knowledge about the ski resort industry provides good starting point for the project. They also have good connections to equipment suppliers and they have knowledge of Russian tourists needs at ski resort. After all, Russian tourists are important customer group for Mellonmäki ski resort. Kehy Oy has domestic and local knowledge around Imatra, which helps to attract local businesses and assist of making needed contracts with the city of Imatra. With the help of Russian business partners and Kehy Oy, very large variety of operators can be approached with the ideas of co-operation.

Although Russian tourist amounts are reducing in Finland, Imatra is one of the only cities where the Russian tourist amounts are still growing. Latest border research made buy Finnish Customs is stating that Imatra border is getting closet to become the most used border from Russia to Finland. All the other South-Karelian borders number of passengers has reduced except Imatra's. If this trend continues, this gives good opportunity to attract Russian tourist to visit Mellonmäki ski resort, which is located just eight kilometers from the Russian border.

The most important critical success factor is the personnel of the ski resort. When the personnel operating the ski resort are experienced and enthusiastic, Mellonmäki has all the possibilities to run profitable business. Profitable growth is another factor, which needs to be achieved. Good thing about the made profitability calculations is that the growth has been taken into account but really carefully. There is no point to assume that growth in visitor amounts would be increased during the first years, this is why objective for visitor amount increasing is very subtle.

Another critical success factor is the fact that the new customers are needed to be attracted to the new ski resort. Children are one very important segment for Mellonmäki ski resort. Skiing area must have things what they want and what they need. This is why ski resort needs to be build with the idea of attracting the children at ages between 7-17 to the ski resort. When they enjoy their time in the ski resort, adults will follow. One idea is to gather local children to help designing the slope areas to Mellonmäki. Another important factor is that the ski resort operator needs to have experience of what kind of slopes are the best for Mellonmäki and how to shape them suitable for all levels of skiing enthusiasts. When personnel are committed, enthusiastic and willing to invest in the development of the ski resort, customers are more satisfied, which increases the brand imago, which brings more customers, which improves the sales. Every critical success factor is connected to each other. Weather is also one critical success factor, which has to be considered even if it cannot be influenced. Only by investing to newer technology snowmaking systems, the ski resort has possibility to get snow to the slopes during the higher temperature weathers.

Mellonmäki ski resort project would widen the variety of already existing exercise possibilities around Imatra. Ski resort project has possibilities to develop working tourism package, which can attract potential visitors around the world with its services.

5.2 Discussion

Mellonmäki ski resort project has other possible scenarios about timing of the investments. The main conclusions have been made with the assumption that the needed all the 1,56 million euro investments is done at the same time, in the beginning of the project. In this paragraph, is given other alternative scenario for timing the investments and how it affects the overall profitability of the project.

As stated before, making the whole investment in the beginning of the project is very risky business. Possible investors don’t want to risk their money straight in

the beginning, but rather diversify the risk for longer time period. Making all the planed investments in the beginning is also requiring high cash flows immediately when ski resort starts to operate. This will put pressure to the company to gain high cash flows straight from the first year of operating. This doesn't leave much room for steady growth for the business.

In alternative scenario 1, investments are done in two-stages. At first one million euro would be invested to the project so that company can start operating the ski resort. Hypothetically this means fewer ski lifts and snowmaking systems. Rest of the planed equipment would be bough with 564 000 € after five years. This stage would include more lifts and upgrade for the snowmaking system. As the table 9. shows, two-stage investment would be more profitable than one-stage investment. Compared to the one-stage investment, alternative scenario 1 NPV, IRR and payback time are better than in one-stage investment project. Cash flow forecast for alternative forecast is shown in appendix 6. In the table 10 and figure 8 is shown the sensitivity analysis for alternative scenario 1.

Table 9. Indicators for alternative scenario 1

Mellonmäki ski resort business plan		
Life of the asset	20 years	
Investment proposal in the beginning	1 000 000 €	
Investment proposal in fifth year	564 000 €	
Required Rate of Return (RRR)	15 %	
Net Present Value (NPV)	326 564 €	> 0 €
Internal Rate of Return (IRR)	19,2 %	> RRR
Interest-bearing payback time	11,8 years	

Table 10. Sensitivity analysis of alternative scenario 1

	RRR	NPV
-60%	6,0%	1 887 722 €
-50%	7,5%	1 489 389 €
-40%	9,0%	1 163 104 €
-30%	10,5%	893 987 €
-20%	12,0%	670 515 €
-10%	13,5%	483 717 €
0%	15,0%	326 564 €
10%	16,5%	193 517 €
20%	18,0%	80 188 €
30%	19,5%	-16 920 €
40%	21,0%	-100 609 €
50%	22,5%	-173 138 €
60%	24,0%	-236 334 €

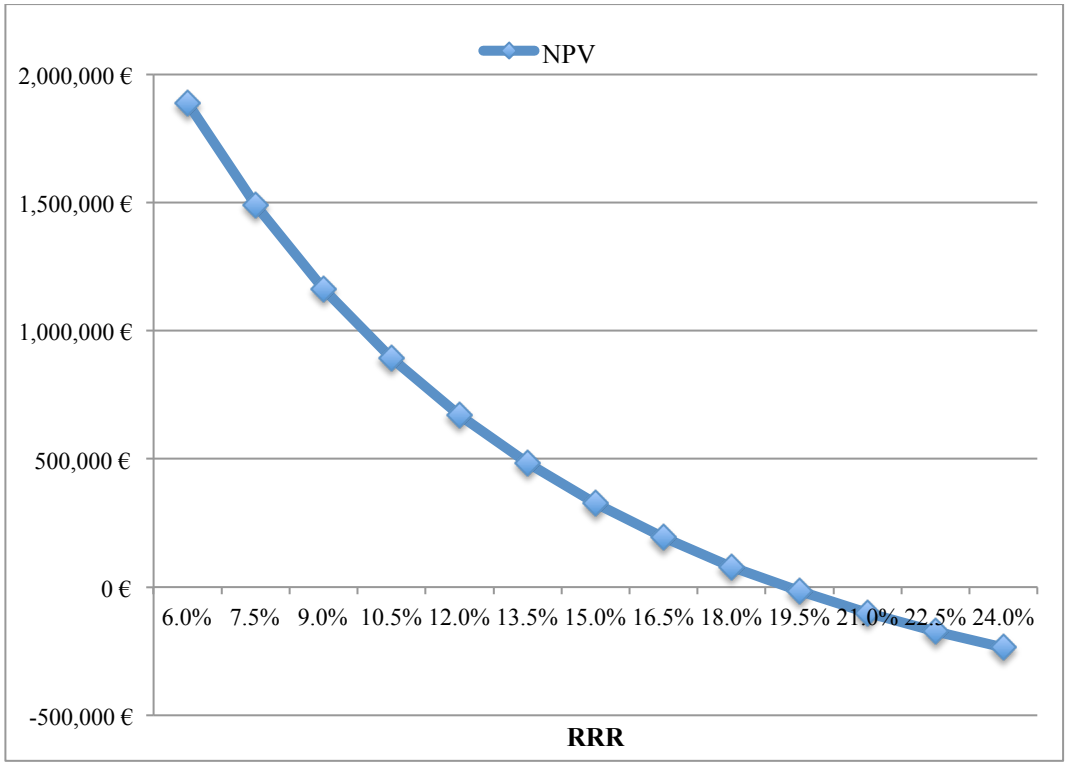

Figure 8. Sensitivity analysis chart of alternative scenario 1

Another way to demonstrate the different scenarios for ski resort project is to change RRR of original investment plan where all the 1,56 million euro investments are done in the beginning of the project. In alternative scenario 2 sensitivity analysis shows how NPV changes when RRR is changed. Sensitivity

analysis for alternative scenario 2 is shown in table 11 and figure 9. If the project RRR would be dropped to around 10 %, there wouldn't be so much pressure on the annual visitor amounts.

Table 11. Sensitivity analysis of alternative scenario 2

	RRR	**NPV**
-60%	6,0%	1 745 176 €
-50%	7,5%	1 318 248 €
-40%	9,0%	965 666 €
-30%	10,5%	672 335 €
-20%	12,0%	426 544 €
-10%	13,5%	219 150 €
0%	15,0%	42 971 €
10%	16,5%	-107 668 €
20%	18,0%	-237 282 €
30%	19,5%	-349 479 €
40%	21,0%	-447 163 €
50%	22,5%	-532 683 €
60%	24,0%	-607 949 €

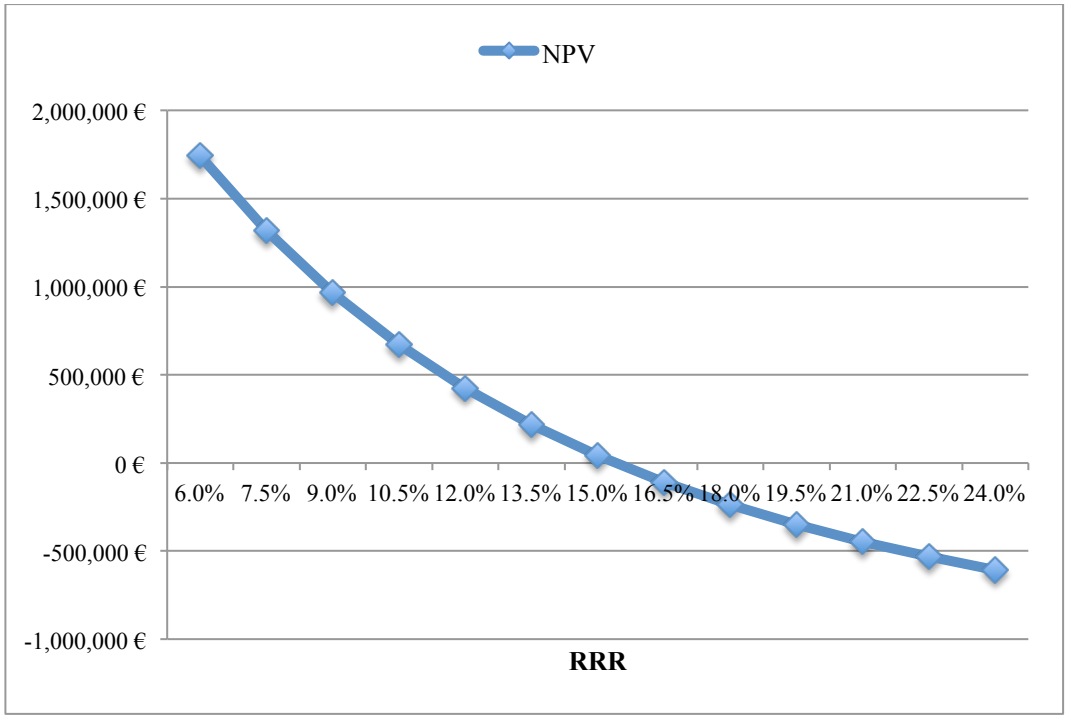

Figure 9. Sensitivity analysis chart of alternative scenario 2

Alternative scenarios 1 and 2 could be the ones that should be researched more in the future. These scenarios are more down-to-earth project plans because 15 % RRR can be considered to be high when talking about this size ski resort projects in Finland. Another fact is that timing of the project should be at least two-staged. This way cash flow doesn't require that high incomes in the beginning of the operation but gives it time to grow.

6 SUMMARY

The main goal in this thesis was to clarify, can ski resort project be profitable and what are the critical success factors in the industry. Through literature review fundamental knowledge about business plan, investment calculations, profitability and ski resort industry was gathered. With the help of this knowledge a plan of the process of how new ski resort company could operate in the industry was formed. To be able to start the process of business plan and investment calculations, more thorough knowledge of project, ski resort industry, area and competitors needed to be gathered with benchmarking existing ski resort companies and by creating an investment calculation model. The objectives for project were set with Kehy Oy and Russian business partners. Additional information was gathered by interviewing ski resort entrepreneurs, workers and specialists.

With the help of Voitto+ program the base of investment calculation model was created and used as a tool for determination of investments, incomes and expenses of ski resort project. Model was used to make income statement, cash flow forecasts and sensitivity analyses for the project. The most important factor to make ski resort project profitable is the visitor amount. Visitors are essential for the ski resort to make it profitable and that's why 35 000 winter season and 10 500 summer season visitors are needed to make the project profitable in the long run. Because of the nature of the ski resort industry, inferior seasons will occur, but the average amount of visitors needs to be kept at mentioned level. With the 1,56 million euro investment project can be profitable. Overall results were that NPV would be positive and IRR more than RRR, which both indicates that the project can be profitable.

Based on the theoretical knowledge, data from the professionals and made observations and calculations, it can be said that in ski resort industry, its most important critical success factor is to get the right personnel to work on the project to ensure that all needed knowledge and competence can be utilized for ski resort business. In addition, setting the objectives clearly and accurately is essential for

the company to be able to develop its operations in the future. The ski resort business can be profitable when the visitors are kept satisfied, needed investments are kept in reasonable amount and the operating personnel is experienced and enthusiastic.

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APPENDICES

Appendix 1. Ski pass and season pass incomes

Ski Passes Price, adults Price, kids	Ski pass visitors / a	Ski pass visitors / d	Season pass visitors / d	1 hour 15,0 € 13,0 € 10,0 % 10,0 %	2 hours 19,0 € 15,0 € 10,0 % 10,0 %	3 hours 22,0 € 17,0 € 10,0 % 10,0 %	4 hours 23,0 € 19,0 € 10,0 % 10,0 %	1 day 25,0 € 21,0 € 10,0 % 10,0 %	50% 50%	Total / d	Total / a
				543,3 €	688,2 €	796,9 €	833,1 €	905,6 €		**3 767 €**	**339 040**
Mellonmäki	32 600	362	24,0	470,9 €	543,3 €	615,8 €	688,2 €	760,7 €		**3 103 €**	**279 260**
Total									**100%**	**6 870 €**	**618 300 €**

Season passes	Season passes sold	Season pass price	Total / Year
Adults	50	290 €	14 500 €
Kids	50	240 €	12 000 €
Total	**100**		**26 500 €**

Appendix 2. Summer activity, biathlon, snow walking and tubing incomes

Summer activity					
Visitors / a	10500				
Visitors / d	50	Half day	Whole day	Total € / d	Total € / a
Summer activity		10,0 €	20,0 €	750 €	157 500 €
Total				**750 €**	**157 500 €**

Biathlon	10,0 %	Visit biathlon while at ski resort			
Visitors / a	3260				
Visitors / d	36	Half day	Whole day	Total € / d	Total € / a
Pass + laser rifle (kids and students)		8,8 €	14,3 €	104 €	9 356 €
Pass + laser rifle (adults)		12,1 €	22,0 €	153 €	13 811 €
Pass + equipment + laser rifle (kids and students)		12,1 €	16,5 €	129 €	11 583 €
Pass + equipment + laser rifle (adults)		15,4 €	24,2 €	178 €	16 038 €
Total				**564 €**	**50 787 €**

Snow walking	1,0 %	Rent equipment while at ski resort			
Visitors / a	326				
Visitors / d	3	Half day	Whole day	Total € / d	Total € / a
Equipment renting (kids)		5,5 €	8,8 €	10,7 €	965 €
Equipment renting (adults)		7,7 €	11,0 €	14 €	1 262 €
Total				**14 €**	**2 228 €**

Tubing	5,0 %	Visit snow tubing while at ski resort			
Visitors / a	1630				
Visitors / d	18	Half day	Whole day	Total € / d	Total € / a
Rental, kids and students		5,5 €	8,8 €	64 €	5 792 €
Rental, adults		7,7 €	11,0 €	84 €	7 574 €
Total				**149 €**	**13 365 €**

Appendix 3. Skiing equipment, skiing lessons and ski maintenance incomes

Skiing equipment	25,0 %	Rent equipment while at ski resort						
Visitors / a	8 150							
Visitors / d	90	1 hour	2 hours	3 hours	4 hours	1 day	Total € / d	Total € / a
Renting		8,8 €	13,2 €	16,5 €	19,8 €	22,0 €		
Total		158,4 €	237,6 €	297,0 €	356,4 €	396,0 €	**1 445 €**	**130 086 €**

Skiing lessons	0,6 %	Wants to have skiing lessons while at ski resort			
Visitors / a	196				
Visitors / d	2	1 hour	2 hours	Total € / d	Total € / a
Skiing lessons		35 €	60 €		
Total		35 €	60 €	**95 €**	**8 550 €**

Ski maintenance	0,25%	Wants to use maintenance services from ski resort			
Visitors / a	82				Total € / a
Basic maintenance		45,0 €			738 €
Full maintenance		60,0 €			984 €
Basic lubrication		15,0 €			246 €
Special lubrication		30,0 €			492 €
Other maintenance, €/h		55,0 €			902 €
Total					**3 362 €**

Appendix 4. Energy usage

Facility	Electricity consumption			h/d	kWh/d	h/a	kWh/a	0,14	€/a	kWh
	P nom	Ratio	P adapted					€/kWh / d		%
Cable car(s)	100	0,85	85	10	850	1 000	85 000	119,0 €	10 710,0 €	21,1 %
Service Ski Center	10	1	10	24	234	8 760	85 500	32,8 €	11 970,0 €	21,2 %
Parking (150 cars)	4	1	4	24	96	8 760	35 040	13,4 €	4 905,6 €	8,7 %
Slope lights	45	1	45	8	360	800	36 000	50,4 €	4 536,0 €	8,9 %
Pedestrian walks lights	3	1	3	8	24	2 920	8 760	3,4 €	1 226,4 €	2,2 %
Snow making system	200	0,85	170	10	1 700	1 000	153 000	238,0 €	21 420,0 €	37,9 %
Total kW	**361,760274**		**316,8**		**3 264**	**23 240**	**403 300**	**457,0 €**	**54 768,0 €**	**100,0 %**

Appendix 5: Cash flow forecast for one-stage investment

Cash flow forecast		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total investments	-1 564 000 €																				
Other visitors		21 078	23 713	25 031	26 348	26 875	27 412	27 961	28 520	29 090	29 672	30 266	30 871	31 488	32 118	32 760	33 416	34 084	34 766	35 461	36 170
Regular ski resort visits		26 080	29 340	30 970	32 600	33 252	33 917	34 595	35 287	35 993	36 713	37 447	38 196	38 960	39 739	40 534	41 345	42 172	43 015	43 875	44 753
Average money usage / customer		19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €
Ski resort revenue		494 640 €	556 470 €	587 385 €	618 300 €	630 666 €	643 279 €	656 145 €	669 268 €	682 653 €	696 306 €	710 232 €	724 437 €	738 926 €	753 704 €	768 778 €	784 154 €	799 837 €	815 834 €	832 150 €	848 793 €
Other revenue		327 153 €	368 047 €	388 494 €	408 941 €	417 120 €	425 462 €	433 972 €	442 651 €	451 504 €	460 534 €	469 745 €	479 140 €	488 723 €	498 497 €	508 467 €	518 636 €	529 009 €	539 589 €	550 381 €	561 389 €
Expenses		720 203 €	740 234 €	750 250 €	760 265 €	772 811 €	785 609 €	798 662 €	811 976 €	825 557 €	839 409 €	853 538 €	867 950 €	882 649 €	897 643 €	912 937 €	928 537 €	944 449 €	960 679 €	977 233 €	994 119 €
Net cash flow	-1 564 000 €	101 590 €	184 283 €	225 630 €	266 976 €	274 975 €	283 133 €	291 455 €	299 943 €	308 601 €	317 432 €	326 440 €	335 627 €	344 999 €	354 558 €	364 308 €	374 253 €	384 397 €	394 744 €	405 298 €	416 063 €
Cumulative net cash flow	-1 564 000 €	-1 462 410 €	-1 278 127 €	-1 052 497 €	- 785 521 €	- 510 546 €	- 227 413 €	64 042 €	363 985 €	672 586 €	990 017 €	1 316 457 €	1 652 084 €	1 997 083 €	2 351 641 €	2 715 949 €	3 090 202 €	3 474 600 €	3 869 344 €	4 274 642 €	4 690 706 €
								6,8													
Present value factor	1,000	0,870	0,756	0,658	0,572	0,497	0,432	0,376	0,327	0,284	0,247	0,215	0,187	0,163	0,141	0,123	0,107	0,093	0,081	0,070	0,061
The interest-bearing net cash flow	-1 564 000 €	88 339 €	139 345 €	148 355 €	152 644 €	136 711 €	122 406 €	109 569 €	98 052 €	87 724 €	78 464 €	70 166 €	62 731 €	56 072 €	50 109 €	44 771 €	39 994 €	35 720 €	31 897 €	28 478 €	25 422 €
Cumulative interest-bearing net cash flow	-1 564 000 €	-1 475 661 €	-1 336 316 €	-1 187 961 €	-1 035 316 €	- 898 605 €	- 776 199 €	- 666 631 €	- 568 579 €	- 480 855 €	- 402 391 €	- 332 225 €	- 269 494 €	- 213 422 €	- 163 312 €	- 118 541 €	- 78 547 €	- 42 826 €	- 10 929 €	17 550 €	42 971 €
Pay-back time																				18,4	

Results	
Required rate of return (RRR)	15,0 %
Net present value (NPV)	42 971 € > 0 €
Internal rate of return (IRR)	15,4 % > RRR
Interest bearing pay-back time	18,4 years

Appendix 6. Cash flow forecast for alternative scenario 1

Cash flow forecast		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Total investments	-1 000 000 €					- 564 000 €															
Other visitors		21 078	23 713	25 031	26 348	26 875	27 412	27 961	28 520	29 090	29 672	30 266	30 871	31 488	32 118	32 760	33 416	34 084	34 766	35 461	36 170
Regular ski resort visits		26 080	29 340	30 970	32 600	33 252	33 917	34 595	35 287	35 993	36 713	37 447	38 196	38 960	39 739	40 534	41 345	42 172	43 015	43 875	44 753
Average money usage / customer		19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €	19,0 €
Ski resort revenue		494 640 €	556 470 €	587 385 €	618 300 €	630 666 €	643 279 €	656 145 €	669 268 €	682 653 €	696 306 €	710 232 €	724 437 €	738 926 €	753 704 €	768 778 €	784 154 €	799 837 €	815 834 €	832 150 €	848 793 €
Other revenue		327 153 €	368 047 €	388 494 €	408 941 €	417 120 €	425 462 €	433 972 €	442 651 €	451 504 €	460 534 €	469 745 €	479 140 €	488 723 €	498 497 €	508 467 €	518 636 €	529 009 €	539 589 €	550 381 €	561 389 €
Expenses		720 203 €	740 234 €	750 250 €	760 265 €	772 811 €	785 609 €	798 662 €	811 976 €	825 557 €	839 409 €	853 538 €	867 950 €	882 649 €	897 643 €	912 937 €	928 537 €	944 449 €	960 679 €	977 233 €	994 119 €
Net cash flow	-1 000 000 €	101 590 €	184 283 €	225 630 €	266 976 €	- 289 025 €	283 133 €	291 455 €	299 943 €	308 601 €	317 432 €	326 440 €	335 627 €	344 999 €	354 558 €	364 308 €	374 253 €	384 397 €	394 744 €	405 298 €	416 063 €
Cumulative net cash flow	-1 000 000 €	- 898 410 €	- 714 127 €	- 488 497 €	- 221 521 €	- 510 546 €	- 227 413 €	64 042 €	363 985 €	672 586 €	990 017 €	1 316 457 €	1 652 084 €	1 997 083 €	2 351 641 €	2 715 949 €	3 090 202 €	3 474 600 €	3 869 344 €	4 274 642 €	4 690 706 €
								6,8													
Present value factor	1,000	0,870	0,756	0,658	0,572	0,497	0,432	0,376	0,327	0,284	0,247	0,215	0,187	0,163	0,141	0,123	0,107	0,093	0,081	0,070	0,061
The interest-bearing net cash flow	-1 000 000 €	88 339 €	139 345 €	148 355 €	152 644 €	- 143 697 €	122 406 €	109 569 €	98 052 €	87 724 €	78 464 €	70 166 €	62 731 €	56 072 €	50 109 €	44 771 €	39 994 €	35 720 €	31 897 €	28 478 €	25 422 €
Cumulative interest-bearing net cash flow	-1 000 000 €	- 911 661 €	- 772 316 €	- 623 961 €	- 471 316 €	- 615 013 €	- 492 607 €	- 383 038 €	- 284 986 €	- 197 263 €	- 118 798 €	- 48 632 €	14 099 €	70 171 €	120 280 €	165 051 €	205 046 €	240 766 €	272 664 €	301 142 €	326 564 €
Pay-back time													11,8								

Results	
Required rate of return (RRR)	15,0 %
Net present value (NPV)	326 564 € > 0 €
Internal rate of return (IRR)	19,2 % > RRR
Interest bearing pay-back time	11,8 years