

Value creation in a micro software development company. Understanding the company business model and market place to boost growth: Kumea Oy

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> Bachelor's Thesis Degree Programme in International Business 2014



Abstract

Date of presentation

Degree programme

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Title of report	Number of report
Value creation in a micro software development company.	pages and
Understanding the company business model and market place to boost	attachment pages
growth: Kumea Oy	63 + 8
Teacher(s) or supervisor(s)	

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The objective of this thesis was to find out the case company's overall advantages in the market in which it operates and explore the financial viability of employment for all founders. The intention was to study how the company delivers values and how the customers perceive the company services and products; to find out the customers' expectations and comprehend what channels could better deliver the company's values. The purpose was to discover the business volume required to have all founders full-time employed in the case company.

The theoretical framework was based on literature about industry analysis by Porter, M., business development and strategic management modern theory by Osterwalder and Pigneur, SWOT analysis and breakeven analysis.

The study was conducted in the form of semi-structured and unstructured interviews, performed to the company founders, partner, and written questionnaire to the customers. The interviews were analysed qualitatively and the data gathered used in several of the analyses performed. In addition, the general data regarding the industry and competitors were gathered through statistical sources and surveys, mainly provided by Statistics Finland and Finder Yritystieto. The research methodology was qualitative.

The findings showed a slowly but constantly growing industry, recovering from the financial down turn of 2009. It seems that the company values are mostly delivered as planned, whilst the response speed and problem solving activities need improvement. The slow pace of given support appeared to be the major shortcomings in the company, due also to the lack of full-time employees in the company. The results indicated how important it was to consider strategies aimed at increasing the business volume and related revenues in order to be able to employ some of the founders.

In conclusion, there is room for improvement of the values the company wishes to deliver. A more attentive use of resources, e.g. human, and channels could lead to the creation of a more consistent effort in building awareness of the company in the target market to create a broader customer base and increase revenue streams. The most useful approach could be planning a marketing strategy for the future development. By combining these actions, the company would be able in the future to employ all founders, and thereby explore the possibility of expanding abroad.

Keywords

Business model analysis, industry analysis, online based services, software company, breakeven analysis.

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1 Introduction

Creating a sustainable market growth strategy for a small company in the intense competitive environment has become crucial in order to gain competitive advantage over the already existing and well-established competitors in the market.

The purpose of this paper, as agreed upon with the commissioning company, is to analyze the current market situation concerning the information technology (IT) sector, Kumea Oy structure and business model in order to have a better understanding of the added values the company is able to provide.

Kumea Oy is a small software company established in Mäntsälä, in 2011. Currently operating exclusively in the Finnish market, the company is planning to provide a wide range of tailored cloud services for municipalities, community colleges and educational centres within the Nordic Countries. Kumea Oy combines strong expertise of large software company with the agility of a small firm.

1.1 Research aim and question

The purpose of this paper is to review how an emerging micro company functions in a competitive market environment and how to achieve a competitive advantage in the Finnish market via the implementation of an investigative research of the industry and the chosen niche market in which it operates.

This study is going to provide Kumea Oy with in-depth analysis of the market conditions, competition and the value delivery of the company.

The expected value contribution for the company is to be presented a market analysis and proposal for the future development and growth, in order to gain a competitive advantage for the current and prospective customers.

The main research problem investigated is "How does an emerging micro company create value in its business model and become profitable."

The main research problem can be divided into the following sub-questions:

- How competitive is the industry in which Kumea operates?
- What are the clients' expectations from using Kumea Oy products?

- What marketing communication channels can help Kumea Oy in value delivery?
- At what level of sales could Kumea Oy employ all the founders full-time?

1.2 Structure of the research

The research will focus on the current status of the commissioning company and its offerings in order to provide a deep analysis of its business model, highlight the company strengths and weaknesses, and financial prospect for employment of all the founders.

The study first chapter is dedicated to a general introduction of the reason for the study itself and an overview of its structure and a short description of the commissioning company and its main product and services.

The second chapter will present the theoretical framework adopted to investigate the industry in which the company operates; a business model analytical tool to investigate how an organization creates and delivers value, and how revenues are generated; a matrix analytical tool to illustrate the strengths, weaknesses, opportunities and threats that influence a company, and finally a financial tool to investigate the financial growth prospects.

The third chapter describes the research methods used in this study; from the data collection method and questionnaire designs, to the reliability and validity of the information gathered.

The fourth chapter examines the market environment in which the company operates, describes the company business model in details and investigates its strengths, weaknesses, opportunities and threats, and illustrate possible growth scenarios.

Finally, the suggestion and conclusion chapter will offer recommendations, based on the analysis on the findings of this study, for value delivery improvement and illustrate the financial prospective growth needed to achieve the company's goals established and described in the research sub-questions.

The primary data will be gathered through qualitative interviews of the company owners, close collaborating company and prime customers.

The interviewees will be selected based on their experience in the software industry, either on the developer's or the customer's point of view. The interviews will be carried out with a face-to-face interview method, although certain customers might be not so easily reachable and thus will create the need for a phone/video call interview and or an e-mail based questionnaire.

The secondary data in use will be the industry statistics released by Statistics Finland (2013). These data will be used to analyse the industry and to quantify the competition out there. The market intelligence research techniques will be used to investigate the size of the competitors. The data gathered via 'Finder Yritystieto' and the 'Ministry of Employment and Economy' is freely available online.

To ensure the reliability and accuracy of the data gathered all interviews will be transcript and kept as a hard copy. This method will ease the analysis of findings as well and all data can be double-checked.

1.3 Introduction to Kumea Oy

In this chapter, we will provide a brief description of the commissioning company of this research study; e.g. the company's structure, its products, and main customers.

Kumea Oy is a small company operating in the field of information technology and communications. Established in Mäntsälä, 14th of April 2011, where it is headquartered, Kumea offers its services to clients located in Finland. Kumea Oy was founded by three young engineers as a mean to test their professional skills acquired while working and to test their capabilities as entrepreneurs. All the founders had a full-time employment to tend to at the establishment of the company, for this reason the entrepreneurial side was considered practically risk free.

The core values upon which the company was established are to develop simple and userfriendly interface products, to ease and speed workers workload efficiently and reliably. Once identified the first product idea, the company started its development at the summer of 2011. Currently there are four members in the Kumea Oy organization; Risto Hietala, chief executive officer and developer; Perttu Tikka, key account manager and developer; Teemu Pallaskari, developer and designer; and Antti Pallaskari, chief financial officer.

The main technical team consists of Risto Hietala and Teemu Pallaskari; who are in charge of the programming and testing, while Perttu Tikka is keeping contact with the customers, constantly mapping out their needs and reporting the progress to them. Perttu is also the main user interface designer for the current product.

The small size of the organization allows the company to react swiftly to changes and customer needs guaranteeing high customer satisfaction.

Kumea stands for high quality, security, and agility in the changing market combined with usability of its products and tailor-made service solutions. The company has just completed the piloting phase and is ready to tackle the target market.

1.3.1 The products and services

Kumea Oy is a software developing and web designing company offering an online booking management service, currently adopted for a physical facility booking, a volunteering management software, and an inquiry calculator. In this chapter, each of the above-mentioned products/services will be described in order to gain a better understanding of the company offerings.

Kumea core service Tilamisu consists of a cloud-based booking system for physical facilities that allows the user to reserve facilities of various sizes and destination of use online.

The service features a list of facilities, each one with a description of the destination of use and amenities; an integrated calendar function simplifies the search for the available facility in the desired date and time; an automatic system keeps track of the reservations made, and, when needed, generates a bill once a physical facility has been reserved. The automatic billing system sends the necessary information to the customers' billing software; this automatic operation makes sure that the data is immediately transferred without incurring in information loss. Tilamisu service allows the subscriber who owns or manages facilities to book online, in real time, and quickly facilities for its own use; or to consent a third party to hire a space online and receive an invoice based on the length of the booking and on the type of space rented.

Managing the facility booking has been simplified for Kumea's clients. Once Kumea grants the customer access to the service, the client receives the Administrator right account, which allows the personalization of the company page and the addition and removal of bookable units in a fast and efficient way.

This enables the customer to focus on the company core services and avoid spending time on non-essential support functions. From the customer's point of view, this practice reduces the amount of paperwork needed in order to run the system compared to the traditional way before subscribing to the Tilamisu service. In addition, this enables the customer to have a transparent booking calendar online available for anyone to see which facility might be available for hire at a particular time.

The current main target customers for Kumea Oy are municipalities, community colleges and educational centres in Finland. Municipalities' available spaces consist mostly of meeting rooms and sport facilities; while the educational centres offer lecture rooms. One of the three founders has extensive knowledge in working in the field the company chose for the market entry point. Other commissioning projects are not targeted to certain customer segments, but are evaluated individually every time and then tender offers are provided to the commissioning party in accordance with the competition laws and regulations.

The figure 1. shows the actual Tilamisu page currently available online. In the website every facility has a photo of the building in which it is hosted, and for more detailed information it is possible to click on the picture corresponding button (lisätiedot) to have precise data concerning the size, the destination of use, and a list of the amenities included in the space.

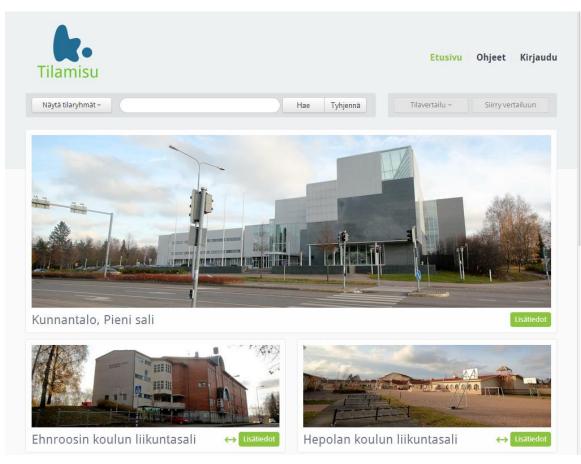


Figure 1. Front page of Tilamisu. Kumea Oy 2013.

Volunteer management software

Kumea is currently developing an online-based volunteer-work management software for Mäntsälän ATK palvelu Oy. The main reason for this software development project is the need to expand the pallet of products and a recourse shortage at the commissioning company.

The software is designed to help coordinating volunteers work by automating the process in order to avoid double bookings. The volunteers register to the online-based service and give their potential availability for the time that they would be available for the work. At this stage the volunteer will be added to a database, the coordinator will be able to allocate the time of the volunteer to an incoming help request. When the coordinator sees a request that is logged by a customer, proceeds to find a suitable volunteer to match the need of the specific customer who made the help request. Once the suitable volunteer has been found, the coordinator will introduce him/her to the person who made the help request. The coordinator will be able to allocate as many volunteers to a case as needed. The product features a build-in SMS service for urgent help requests from the customer to the coordinator and from coordinator to an available recourse. The person who submits the help request can be the person needing the help, a family member or a close one of the person who needs help or for example a municipality that is in need of volunteers to support their daily operations. The majority of people in demand of help are elderly citizens, disabled or in need of terminal care, but not only. There is also a growing need for peer support for single parents that are handled through this service. The figure 2. gives an overview of the product and the fields available for completion when a volunteer submits his/her availability to the system.

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Figure 2. Front page of Vapaaehtoistyö service, Kumea Oy 2013

Offer calculator for domestic lighting company

The last product described is the offer calculator for a domestic lighting company. Another ongoing project is the development of a software that will be used to support the travelling sales personnel of a domestic lighting company that assembles lighting equipment from readymade components. The product will be hosted online on customer company servers and it will provide current sales data for internal usage. Sales personnel will be able to provide accurate data of the custom builds that the customer might inquire. After the implementation of the software, a sales person of the client company can compose offers to their customers from any available components and the software will then calculate the manufacturing cost of the order and return the price that the sales person can quote to their customers. The parts data and manufacturing costs and queue will be updated automatically to the software so the sales person can give accurate delivery time estimations to the customer on the spot. The program will also have a feature to grant discounts to the price it first calculates. This software was commissioned directly to Kumea Oy by the customer.

Moreover, Kumea is carrying on a project for a new service that involves a strict collaboration with the main provider of the course booking service to the community colleges in Finland. This co-operation is the key for successful start for the company and it will help Kumea Oy to gain new customers and valuable references for business.

2 Theoretical framework

This chapter will describe the theoretical framework used in this study. The five forces analysis will be used to analyse the industry in which Kumea Oy operates and gain a better understanding of the competition. Osterwalder & Pigneur's business model canvas will be used to comprehend the company's value creation, delivery and capturing. The SWOT analysis tool will be used to evaluate the company's strengths, weaknesses, opportunities and threats; while the break-even point calculations will reveal the company profitability.

2.1 The industry classification

The Standard industrial classification TOL 2008 in use in Finland, defines the industry to which an enterprise belongs. The TOL 2008 classification is based on the European Union's classification of the economic activities, in accordance to the Regulation (EC) No 1893/2006 of the European Parliament and of the Council. (Statistics Finland, 2013)

Kumea Oy operates in the information and communication industry, and its services, more specifically, belong to the computer programming activities category, section 62010 (Statistics Finland, 2013). In order to define properly the competition in the industry and analyse the correct competitors the classification of the

The European Commission recommends a news clarification on the enterprises size, as specified in the Recommendation 2003/361/EC. According to the mentioned recommendation, the determining factors in classifying a company as small and medium-sized enterprise (SME) are fundamentally the number of employees, and either the turnover or the balance sheet total.

To this end, the table 1. provides the classification table currently in use to establish upon which the category a company belongs. In the table 1. it is clearly stated the ceilings according to which a company is classified.

Table 1. SMEs classification table. Recommendation 2003/361/EC. The table shows the limits set to identify an enterprise and Micro-, Small-, or Medium-sized according to the European Commission.

Company category	Employees	Turnover	or	Balance sheet total
Medium-sized	< 250	≤€ 50 m	≤ € 43 m	
Small	< 50	≤€10 m	≤€ 10 m	
Micro	< 10	≤€2 m	≤ € 2 m	

To sum up briefly, this chapter has defined the industry in which Kumea Oy operates and the enterprise size under which the company falls. These clarifications establish the starting point for the industry analyses and the evaluation of the competitors.

In the following chapter, the information and communication industry will be analysed by using Porter's five forces analysis; that will indicate the actors in the industry and their influence on the company.

2.2 Porter's industry analysis

Michael Porter's five forces analysis (Daniels, Radebaugh & Sullivan 2011, 441) is the framework in use to analyse the competitiveness of the industry environment in which Kumea Oy operates and the business strategy development needed to gain a competitive advantage in the target market.

The figure 3. shows a simplified version of the five forces model developed by Michael Porter and gives a visual support of the industry forces that have an impact on an organization.

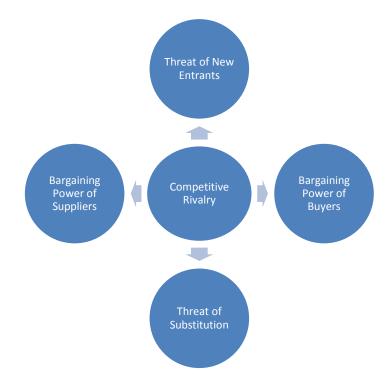


Figure 3. Simplified five forces model by Porter M. (Daniels et al. 2011, 442)

The five elements in details are as follow:

- Bargaining power of suppliers
- Bargaining power of buyers
- Threat of new potential entrants
- Threat of substitute product/services
- Rivalry among current competitors

Porter (Lynch 2009, 97) points out that organizations need suppliers of raw material, services or labour force in order to produce goods or services. The bargaining power of suppliers indicates the conditions under which a supplier can be more powerful in the market it operates and impose a high price on its materials. When in the market only a few other suppliers are able to deliver similar materials or there are no substitutes for the supplies offered, the suppliers acquire more power over the organization. The supplier may decide to raise the materials' selling price, the organization who uses those materials to provide the market with its products or services, will suffer a profit decrease unless the final price is promptly adjusted to take into consideration the new costs. (Lynch 2009, 97-98)

Porter refers to the bargaining power of buyers to discuss the leverage the organization's customers have. He indicates that their power over the organization is based on the number of buyers in the market with which to negotiate, hence the less buyers the more power they acquire. They also have more power in case the product, or service, that is offered by the company is undifferentiated therefore there are many options available in the market. In this case, the buyers might simply switch to a different organization to satisfy their needs. (Lynch 2009, 98)

The threat of potential new entrants is due to the attractive profit margin and ease of entry into the market. Porter (Lynch 2009, 99) indicates some major barriers to entry the market. New competitive entrants in a market need to match the economies of scale in order to achieve the low cost level of those already present. Product differentiation pushes new entrants to invest more capital in branding, designs, and materials in order to be noticed in the market. Therefore, a conspicuous capital investment may be required to enter a market. Having direct access to distribution channels ensures an advantage over the competition; government policies regulate the entrance into a market and may prohibit entities to take an important role in certain sectors.

Another threat comes from the availability of substitutes, which may render a product or service in the market redundant. Substitutes may introduce in the market a new technology or improve an economy of scale that can reduce significantly the organization profit margin. As Porter explains, the key points to analyze in this situation are the possible threat of obsolescence, the ease to switch to another product, the cost of providing extra services that will prevent from switching. (Lynch 2009, 100)

The last element in the five forces model is the extent of competitive rivalry. Certain markets are more competitive than others due to the number of organization in it. The extent of competitive rivalry is influenced by the large number of organizations in the market, the slow market growth, low level of differentiation among competitors, and high cost of production, to list the more important. (Lynch 2009, 100)

To summarize this chapter, the five forces analysis tool examines an industry competitive environment according to the bargaining power of suppliers and buyers, the threat of new potential entrants and the substitute product/service, and the rivalry among competitors. In order to understand an organization's structure and strategy, the next chapter will describe the business model canvas.

2.3 The business model generation

Establishing a business requires planning. Every business needs a structural plan defining the manner by which the organization offers and delivers value through its products/services, indicates how revenues are made and describes the organizational structure, its operational processes and strategies. A business model is the tool that satisfies all these needs.

Osterwalder & Pigneur (2010, 14) define a business model as a rational description of "how an organization creates, delivers and captures value". The business model shows how the main areas of a business are connected to each other, the interactions among the different parties involved and the cash flow generated by the business operations.

Osterwalder & Pigneur have designed a business model which presents 9 building blocks divided into the four main areas of a business: customers, offer, infrastructure, and financial viability (Osterwalder & Pigneur 2010, 15).

The 9 building blocks are:

- Customer segment
- Value proposition
- Channels
- Customers relationships
- Revenue streams
- Key resources
- Key activities
- Key partnerships
- Cost structure

The segments forming the customer area are the customer relationships, the customer, and the channels. The offer area is formed by the value proposition segment.

The segments describing the infrastructure area are the key resources, the key activities, and the key partnerships. The financial viability area is described by the revenue streams and the cost structure segments. The figure 4. below visually demonstrates the interaction among the building blocks identified by Osterwalder & Pigneur. (2010, 18-19) In order to have a clear understanding of the business model canvas and the mapping of a business model visual thinking is indispensable. By visual thinking we mean using visual tools such as pictures, sketches, diagrams, and notes to construct and discuss meaning (Osterwalder & Pigneur 2010, 148)

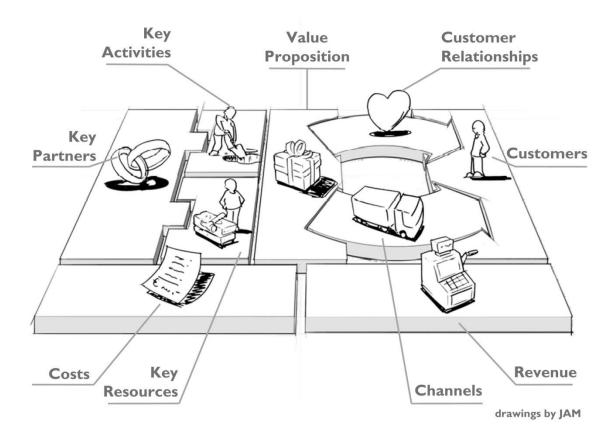


Figure 4. The business model by Osterwalder & Pigneur (2010, 18-19).

Each of the above-mentioned building blocks is going to be described in the following paragraphs.

The **customer** block defines the group of individuals or organizations to whom a company is offering its products and/or services in order to satisfy a specific need in the customer life or operations. Each customer segment has diverse needs and availability of money, requires a different distribution channel, and a different type of relationship.

A company also need to understand in which type of market its offering will satisfy the customers' needs; such as the mass or niche market, segmented or diversified one. (Osterwalder & Pigneur 2010, 20-21) The value proposition block is a set of benefits that a company offers to its customers. The element mix creating value for a customer segment might be quantitative, e.g. convenience, performance or accessibility to the offering; or qualitative, e.g. design, customization, customer experience. The value proposition offering is capable of better satisfying the customer's need with its features, advantages and benefits over the competition. (Osterwalder & Pigneur 2010, 23)

The **channels** block connects the customers with the value proposition of the company via communication, distributions and sales channels. The company decides which communications channel better reaches the customers, serves most cost-efficiently the distribution and deliver at its best the Values of the company. (Osterwalder & Pigneur 2010, 27)

The **customer relationships** block describes the type of relationships a company establishes with specific customers segments. The relationship types are chosen in order to efficiently serve the customers need and support the business. The motivation behind choosing a relationship type may involve the desire of acquiring or

retaining customers, or increasing the company sales volume. (Osterwalder & Pigneur 2010, 28)

Several categories of relationships can co-exist in a company to serve a particular customer segment. In accordance with the nature of service/product offered and the communication channels in use, some customers might need personal assistance, or might be able to take advantage of the self-service options given, automated services can support with advice and suggestions generated thanks to the information gathered on the customers through their previous purchases or use of the service. Other types of relationships that build a strong connection between the parties are the communities or co-creation of value, in which customers advice the companies on how to improve their services and products. (Osterwalder & Pigneur 2010, 29)

The **revenue streams** block shows the incoming cash flow generated by each customer segment. Each customer segments has a different revenue stream built on a particular pricing mechanism. The pricing mechanisms are based on fixed or dynamic pricing; more in detail, it might be a fixed list price, bargaining, auctioning, market or volume dependant, etc. In service offering organizations revenues are generated by usage fees, subscriptions fees, licensing, etc. (Osterwalder & Pigneur 2010, 29-33)

The **key resources** block indicates the most important assets required to make a business model work (Osterwalder & Pigneur 2010, 34). An organization requires resources to create and deliver a value proposition to its customers, maintain relationships and generate revenues in order to be profitable.

The essential resources an organization requires are:

- physical: e.g. as buildings, manufacturing facilities and vehicles;
- intellectual: e.g. brands, patents and copyrights, customers' database;
- human: e.g. human interaction and creativity, skilled employees; and
- financial: any form of cash, liquidity and credit security a business needs in order to operate efficiently. (Osterwalder & Pigneur 2010, 34-35)

The **key activities** block indicates the actions a company must take to operate successfully. At any level of production, distribution, customer and partner interaction, all action taken must be implemented to optimize the resources available and generate revenues.

Osterwalder & Pigneur (2010, 36-37) classify the key activities as:

- Production: manufacturing of tangible goods, as well as designing and delivering a service or soft product;
- Problem solving: customers' needs require customization, consultancy and problem solving capabilities:
- Platform/Network can also be key resources when it comes to IT based or interactive business interface models.

The **key partnerships** block describes the network of suppliers and partners that make a business model work (Osterwalder & Pigneur 2010, 38).

Partnerships can be formed with non-competitors, with competitors in order to deliver excellence, with buyers/suppliers in order to ensure a reliable flow of supplies or with other businesses to create a joint venture and create a new business. The main reasons for creating partnerships can be creating economies of scale and optimizing the allocation of resources and activities, reducing the competition in the market, and acquiring essential resources and activities from third parties when needed. (Osterwalder & Pigneur 2010, 39)

The **cost structure** block lists all the costs incurred to operate a business model. A business model cost structure can be either cost-driven, aiming at minimizing all costs at any level of operations and value-driven when the added value and value proposition delivery is more important than maintaining a low price.

Therefore cost structure can have fixed and variable costs, economies of scale and economies of scope. (Osterwalder & Pigneur 2010, 40-41)

To summarize, this chapter has described the structural plan according to which an organization creates, delivers and captures value and how the organization's main business areas are connected to each other. Based on the infrastructure and offer business areas, the following chapter will demonstrate how a company can analyse its internal strengths and weaknesses, and the external opportunities and threats in order to decide what strategic actions are needed to improve its competitiveness in the market. In the same way, based on the financial viability the breakeven point analysis – in chapter 2.5 – will investigate the profitability of the organization by evaluating the revenue streams and the cost structure segments.

2.4 SWOT analysis

A SWOT analysis will help us understand the company current situation. A SWOT is an analysis of the strengths and weaknesses present internally in the organization, coupled with the opportunities and threats that the organization faces externally (Lynch 2009, 302).

Strengths include internal capabilities, resources, and positive situational factors. Weaknesses include internal limitations and negative situational factors that may interfere with the company's performance. Opportunities are favourable factors or trends in the external environment that the company may be able to exploit to its advantage. In addition, Threats are unfavourable external factors or trends that may present challenges to performance. (Kotler & Armstrong, 2010, 78)

Internal	S trengths	Weaknesses
External	O pportunities	Threats
	Positive	Negative

The figure below shows the matrix according to which a SWOT analysis is carried out.

Figure 5: SWOT analysis matrix Lynch 2009, 302

From the SWOT matrix the factors are grouped to formulate possible strategies for the company. Grouping is done in accordance with the TOWS model, which proposes that the four indentified parts are cross-combined to take full advantage of an opportunity or to counter a threat or weakness that was found out in the analysis. Strengths are combined with weaknesses, opportunities and threats to formulate strategies for the company. Same model is applied with the weaknesses. (Weihrich, 1982)

With reference to chapter 2.3 summarization, the following chapter will investigate the profitability of the organization by grounding its evaluation on the revenue streams and on the cost structure segments.

2.5 Breakeven analysis

A Breakeven point analysis (Braun & Tietz, 2013, 400) is a form of internal reporting which aims to discover the revenue that is needed to cover all the costs that occur. Said analysis can be applied to the company as a whole or to the individual parts of the company to provide a better insight to the profitability of a division.

> "Company's breakeven point is the sales level at which operating income is zero. Sales below the breakeven point result to loss. Sales above the breakeven point provide a profit". (Braun & Tietz 2013, 400)

Before performing the analysis, the company costs have to be categorized into fixed, variable and semi variable. Fixed costs are the costs that occur regardless if there are any

sales. Variable costs are directly related to the sales. Semi-variable costs have a component from both of the above; this means that there is a fixed part that will occur regardless of sales and a variable part that changes in proportion to sales. (Whiteley 2004, 39)

Braun and Tietz (2013, 400) identify three different approaches to the breakeven point analysis, which ultimately result in the same conclusion but that are used for different purposes. Listed below, the first two approaches measure the breakeven point in units, whereas the last one gives the breakeven point as monetary value.

- Income statement approach
- The shortcut approach using the unit contribution margin
- The shortcut approach using the contribution margin ratio.

An easy way to present the breakeven point analysis is to prepare a chart that includes all the elements. The chart needs to display the level of fixed costs, sales and variable costs. The breakeven point can be found in the intersection of variable costs and sales that are presented in monetary value.

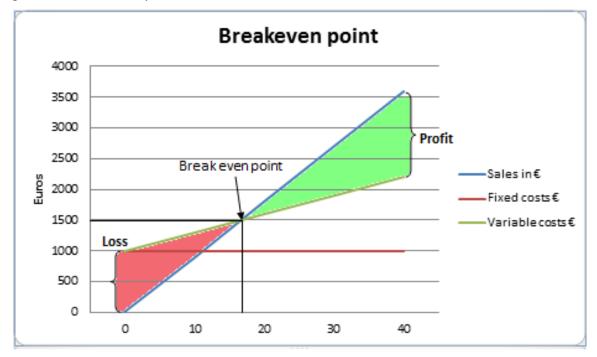


Figure 6. Breakeven point analysis in graphic format (Braun & Tietz, 2013)

Braun & Tietz identify BEP not only as a tool to find the absolute breakeven point but also as a way to conduct a sensitivity analysis by performing a series of "what if" scenarios (Braun & Tietz 2013, 411). With this technique, one can play different kinds of scenarios of sales and costs that could occur and see how it would affect the breakeven point. For example, if a company wants to hire a new person then those costs would be allocated to the fixed cost pool, thus raising it and raising the sales that are needed to achieve the BEP

To summarize the theoretical framework, the tools that were presented above are going to be used to analyse the environment where the company operates, the company's business model, the internal and external factors influencing the business, as well as the profitability.

3 Methodology

This chapter will give an understanding of the data collection process adopted in this study. The chapter will present justification for the selected research methods, selection criteria for the interviewees, identification of the possible biases, reliability and credibility of data and an overview of the different questionnaire designs.

The primary data collection was performed through interviews carried out with three distinctive interest groups; three of the company founders, the key partner and the client base of Kumea Oy. The results gathered through the interviews are applied to several topics, which include, but are not limited to, Kumea's business model generation, SWOT analysis and breakeven calculations.

3.1 The justification of the selected research method

Due to the exploratory nature of the research topic, the primary data was collected through qualitative method. This research method is preferable in the case where the aim of the research is to find out what is happening and to gain new insights to the topic (Saunders, Lewis, Thornhill, 2009, 139). The justification of the said method derives from the main research questions that are highly subjective and require open-ended questions to be asked from the interviewees (Saunders et al.2009, 323).

The semi-structured and in-depth interview types provide an opportunity to ask further elaboration of the answers that the interviewed persons provide to an initial question. This method enables the researcher to build a more comprehensive picture of how the respondent perceives a question and the values behind it. (Saunders et al., 2009, 324)

The secondary data used was collected from statistical sources and it is of qualitative nature. The secondary data consists of continuous governmental surveys that explain how the market has been developing during a specific set of time (Saunders et al., 2009, 260-262). Justification of the use of this data comes from the need to understand the environment where the researched company is operating in and the basis for the development direction (Saunders et al. 2009, 259).

3.2 Data collection

The primary data was gathered in the form of semi-structured and unstructured interviews to three distinctive interest groups, each one of which had their own set of questions.

The data collection method for the company shareholders was a face-to-face interview that was performed in a semi-structured manner, as the researcher had a set of open-ended questions that were grouped by themes and were asked from the interviewee during the course of the consultation (Saunders et al., 324). Following Saunders et al. (2009, 338) suggestions, the answers the interviewees gave were then probed further to gain better understanding of the individual respondents' perception of the topic.

For the collection of data from the Kumea's key partner, the interview was performed in an unstructured manner. By using the unstructured interview method, the researcher is simply steering the general theme of the discussion in to a desired direction. This method makes possible for the interviewee to explore the options and possibilities of the current theme of the discussion in a free manner, without added pressure from having to answer specific questions right away (Welman & Kruger 2001, 187-188).

The data collection method used to gather information from the clientele was an openended questionnaire provided to the respondents via email. The questionnaire was translated into Finnish and then the answers were translated into English because of the language barrier. For this reason, there are no direct quotes from the customers in the analysis or discussion. The answers were collected in two distinct methods; one part of the respondents replied directly to the email with their answers, while some respondents preferred a direct interaction with the interviewer in the form of a phone call. In the latter case, the researcher could ask probing questions that were based on the respondent answers to the questionnaire.

3.3 Sampling

The data collection was made from three different interest groups. As mentioned previously, the groups were formed by the company owners, key partner and the customer base.

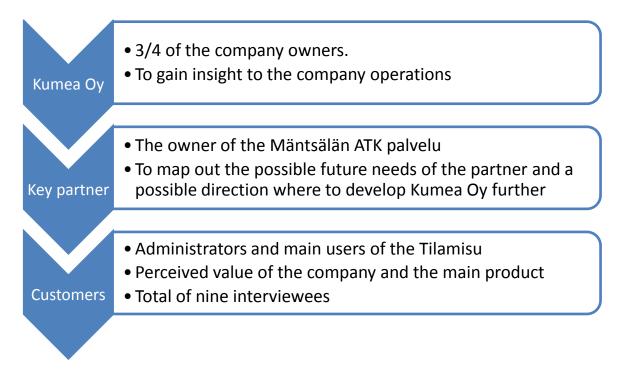


Figure 7. Questionnaires and interviews interest groups

The first sample was the Kumea Oy's founders apart from the one in the research team thus there were three interviews performed to Kumea Oy owners. The researcher decided to recuse himself in order to avoid the possible bias and to keep the research more transparent. The company owners were interviewed face-to-face and all the three interviews were performed separately. The respondents were asked not to discuss the questions with each other before all the interviews were completed. The duration of the interviews varied from forty-five minutes to one and a half hour. The reason for having all the owners selected as respondents was that they all are focusing on slightly different functions in the company and their backgrounds are different, therefore their answers may have brought valuable insight from different perspectives.

The second sample was formed by the owner of the key partner company. This interview was to attain deeper understanding of the partner's needs from Kumea Oy and the direction where the partner company would like to see Kumea's business to be developed. The owner of the Mäntsälän ATK palvelu has a long and successful career in providing course-booking software for the same target audience to which Kumea Oy caters.

The third selected group was the administrators and main users from the customer base, for a total of nine respondents. These users were selected on the basis that they have been working with Kumea Oy in the development and/or implementation of the main service currently available online, Tilamisu. The administrator users are the ones that import all the data concerning the managed facilities to the system and the main users are the ones that have daily user experience from using the online service. These two sub groups brought in the customer perception of the company as a whole and the main product.

3.4 Research ethics

In order for the research to be performed ethically, researchers must follow the nonmalfeasance principle whilst performing the study (Saunders et al., 2009, 186). The topic of privacy was inquired from the company owners and they gave permission to use their names in the thesis. Kumea Oy gave consent for the research with the condition that the customer names would be hidden in order to protect business critical data. To this end, all the customer interviews will be addressed collectively. To avoid bias the other researcher was not present when the close relative was interviewed.

3.5 Structure of the interviews and the questionnaires

The interviews were all performed by using open-ended question and the continued with probing questions when the interviewee seemed to have more valuable data concerning the question.

The open questions allow the interviewee to explain in his/her own words the current subjective perception that (s)he has at that time regarding the question. When using openended questions the researcher needs to pay attention not only to the answer but also to the delivery of the said answer in order to indentify underlying attitudes that might lead to valuable data through probing questions (Saunders et al. 2009, 337).

The structure of the questionnaires was designed so it was divided to clear themes that explored a particular research area. Most questions were asked at least twice from different viewpoints to clarify and to validate the first answer that the respondent gave.

3.6 Reliability and validity

The reliability of a research refers to the consistency of the results in case the research was duplicated. The signs of a reliable research are that the research can be duplicated by peers who will come to similar conclusions and from the transparent use of sources and datasets (Saunders et al. 2009, 156).

In order to counter the possible threats to the reliability Mr. Antti Pallaskari recused himself from interviewing his brother who is the co-founder of the company that was being analysed. This measure was also beneficial to the research, as the interviewees had to explain the concept to a person who had not been developing the company operations from the beginning, thus reducing the chance of observer bias (Saunders et al. 2009, 157). The counter measure adopted to reduce the observation bias was that both researchers grouped the answers individually and then compared the results in a matrix form.

The validity of the research can be defined by the close examination of the results and if they are what they seem to be by cross-referencing the data with the reality. During the research, all the results must be based on either primary or secondary data and logical leaps that are not backed up by existing data must be excluded from the primary work (Saunders et al. 2009, 159).

Robert K. Yin (2009) identifies tests that can be performed to evaluate the validity of the research. The tests for internal validity that are going to be used are pattern matching, analysing rival explanations for the occurring events and logical consistency (R. Yin, 2009, 41).

3.7 Data analysis

The answers were summarized and grouped by both researchers individually and then the results were compared. The occurring discrepancies were discussed in detail. Due to an exploratory approach, the answers may not be universally true, but they were true in accordance with the respondents' perception on the matter at the time that the interview took place. The subjective nature of the answers poses a possible weakness to the results that were based on the insight of the interviewees.

4 The industry and the business environment analysis

In this chapter will be investigated the competitive industry environment in which Kumea Oy operates, a rational description of the company adopted business model with a particular focus on the customer and value offer areas will lead us to a SWOT analysis of the company, and finally financial investigation of the future growth perspective.

4.1 Investigation of the industry: Five Forces analysis

Kumea Oy is a micro enterprise operating in the Information and communication Industry, according to the Standard industrial classification TOL 2008 in use in Finland. Its services, more specifically, belong to the computer programming activities category, section 62010. (Statistics Finland, 2013)

The Information and communication industry in Finland has been growing rapidly in the years 2006-2008, as we can see from the Figure 5. When the financial crisis of 2009 hit Finland, also the IT sector turnover suffered.

Since then the sector has been recovery steadily and the turnover of 2011, amounting to ca 6061 million Euros, almost reached the same level of the one of 2008, which amounted to ca 6090 million Euros. (Statistics Finland, 2014)

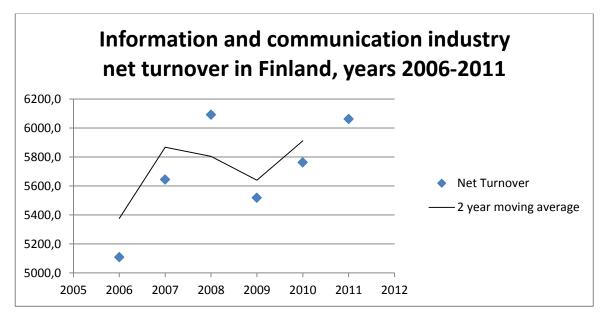


Figure 8. The information and communication industry turnover in Finland, years 2006-2011 (m Eur) Statistics Finland, 2014

The Industry net earnings have followed the same fluctuations than the turnover. In 2008, the net earnings amounted to 370 million Euros, and dropped to 216 million Euros in 2009.

The net earnings are also recovering, from the low 216 million Euros of 2009, have grown to 229 million Euros in 2010 and reached 251 million Euros in 2011.

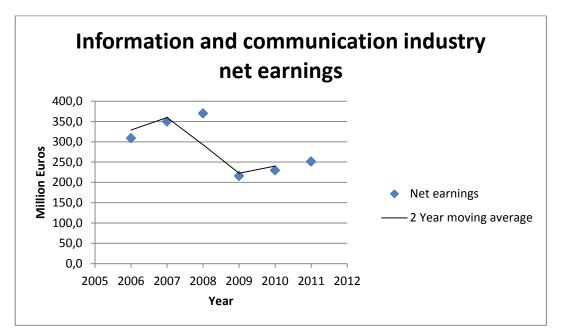


Figure 9. Information and communication industry net earnings in Finland, years 2006-2012 (m Eur) Statistics Finland, 2014

We are going to analyze the following elements concerning the Information and communication industry in the Finnish market:

- Threat of new potential entrants
- Threat of substitute product/services
- Bargaining power of suppliers
- Bargaining power of buyers
- Rivalry among current competitors

4.1.1 Threat of new potential entrants

The amount of companies that operate in the software design and development industry (TOL 6201) has been growing steadily during from 2007 to 2011. There has been more

than 430 new companies founded during that time frame but at the same time the turnover per company has remained stagnant after the dip of 2009 (figure 10).

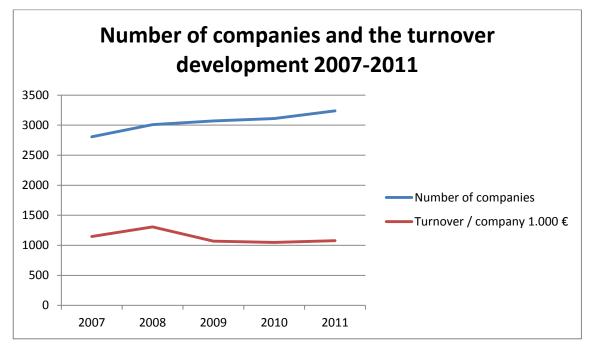


Figure 10. Amount of companies in the information and communication industry and turnover/company in 1000 €. Statistics Finland, 2014

The steady growth at the amount of companies operating in the industry couple with the increase of personnel working in the field (figure 11) indicates that the threat of new potential entrants is quite high. The establishing costs of the companies are low, as little to no initial investment is needed to enter this field. Possible new entrants only need to invest in computer equipment and specific development tools that they are going to use. In case of internet development services, they also need a service provider from whom they will purchase the server space and time. Both of the above investments are relatively easy compared to other more traditional industries and that might be the explaining factor for the growth of the number of companies.

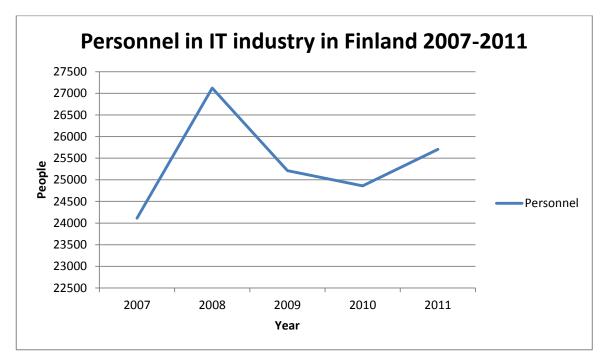


Figure 11. Amount of personnel working in the SW development industry (TOL 6201) Statistics Finland, 2014

4.1.2 Threat of substitute product/services

Currently, the only substitute products for the company service are outdated paper versions of booking systems, which are rendered useless by the advancements in the technology. Material schedules are not easy to update and upkeep manually; which results in customers to switch to online services that are updatable all the time and not tied to office hours or personnel to keep them running. Thus, the threat of substitution with current state of IT equipment and the trend towards the paperless offices is quite small. In the foreseeable future, some technical advancement may render this service obsolete, but that kind of technology is non-existent at the moment.

4.1.3 Bargaining power of suppliers

Kumea Oy relies on a variety of suppliers in order to have access to essential tools for its daily operations. According to Tikka (18.03.2013), the company has currently three main suppliers; the server provider, the online payment delivery provider, and computer hardware, software and peripherals supplier.

Kumea Oy relies on a server provider to satisfy its need for server access. Because of the company size it is unadvisable to keep own servers due to the possible maintenance issues that might arise, thus making it mandatory to purchase the service from outside supplier.

Supplier switching cost is relative low, so they have to compete quite fiercely for the customers. Suppliers compete with the uptime percentage and bandwidth fees. Most big suppliers have their servers in data centres that are managed by the company engineers 24/7. There are many service providers that a company can use so the server providers bargaining power is quite limited. The security certificate side follows this trend, there are several providers, and the competition is quite fierce for the customers so the customers are in quite a good position compared to the suppliers.

This trend does not hold true when it comes to online payment systems and those providers hold quite substantial power over the client companies. There are only two suppliers for the Finnish online payment transaction delivery from customer to banks and three systems to deliver invoices from online purchases. These companies hold quite strong bargaining power over the companies that want to do business in Finland on this chosen sector.

4.1.4 Bargaining power of buyers

The bargaining power of the customers/buyers is quite substantial in the beginning, as the company does not have a broad client base. The power, which a single customer holds over Kumea Oy, diminishes as the company gains more clients.

The pilot phase was done with few key accounts that have helped in developing the first product and those customers will remain as influential entities for the company. Individual customers are needed for the company but the impact on the revenue is quite small as the price of Tilamisu is so low. On the other hand, this means that Kumea Oy needs a large quantity of subscribers in order to be profitable.

4.1.5 Rivalry among current competitors

The degree of competition in the software sector is quite high and there are quite a lot of new companies being formed every year. The fight for the customers intensified during the economic downturn in 2008 as the whole industry was struggling as the customer companies did not have that much money to spend on the new software and services. The tight competition situation is driving marginal down in the web service industry. This is reflected in the aggressive pricing that companies use in order to attract prospective clients.

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Products are quite different with every provider and with software; the quality is directly proportional to the skills of the people who are writing the code. The big players of the field were attracting the skilled programmers with their interesting projects and seemingly unlimited resources. In recent years, the said big software vendors have downsized the operations in Finland leaving highly skilled labour unemployed. This results in more small companies being formed thus affecting the competition. (See appendix 1 for a list of competitors)

4.1.6 The direct competitor

In the following chapter the most important competitors of Kumea Oy will be analysed by exploring their financial statements summaries; in the specific their turnover, and their operating profit. These will give a comprehensive overview of the current competitors in the Finnish market. The companies selection is based on the similar offering placed on the market and the size of the enterprise that can be more similar to Kumea Oy reality, in order to have a valid comparison only micro and small companies are taken into consideration. The data shown referred to the financial year 2012 and is freely available on the website of Finder Yritystieto (15.03.2014).

There are few companies providing the same type of facility booking management service as Kumea Oy. Some of these companies, listed below, have been identified as direct competition while others, not taken into account here due to their company category, are more geared towards larger corporate customers and are not targeting the municipal and educational segments. During the research, we were able to indentify four competitors that are offering similar service and features as Kumea Oy.

The first to be analysed is **Timmi Software Oy.** Established in Jyväskylä in 2004, the company offers solutions to manage the operative functions of the clients' organization. The typical customers are municipalities and community colleges, which need to organize large amount of course offering and classroom time management via this software. According to the company financial statement (Finder Yritystieto, 15.03.2014), has a net turnover of 1.039 million Euros in 2012. Its turnover has been growing slowly but constantly from 1.010 million Euros of 2010 to the 1.019 million Euros of 2011. Timmi Software Oy employed 17 workers in 2011, but the latest data for 2012 are not available.

The second competitor here analysed is **Netorek Oy**. The company caters mainly to the healthcare services and Finnish Defence Forces so their target segment is not directly aimed to the same market as Kumea Oy's. Netorek Oy employs 10 people full time (Suomen asiakastieto, 2014) and its turnover for the year 2012 was 824,000 Euros. The financial statement data provided by Finder Yritystieto (15.03.2014) show a net turnover reaching almost 1.6 million Euros in Q1 of 2011, which dropped quickly to 824,000 of the last year statement.

The oldest competitor in the Finnish market is **DoWeb Oy**. DoWeb Oy was established in Forssa, 1997. DoWeb Oy offers IT solutions ranging from company home pages to support systems. Its product portfolio is significantly wider than the other companies and they cater to mainly to companies that need of holistic IT solutions. According to Finder Yritystieto (15.03.2014), the company has two offices and employs four persons. The company net turnover amounts of 183,000 Euros in 2009, it gradually decreased until reached 144,000 in 2011, and it is stable at 168,000 Euros in the years 2012 and 2013.

Lastly, **Nepton Oy** was established in Espoo, 2000. Nepton Oy offers Human Resource support activities that are based on cloud services. All the products are web based so the personnel that are using the software are not tied to a specific location or device that has the software installed on it. According to the company financial statement (Finder Yritystieto, 15.03.2014), Nepton Oy employs 17 workers and has a net turnover of 746,000 Euros in 2012. Its turnover has been decreasing rapidly from 2.2 million Euros of 2010 to the 1.8 million Euros of 2011, until it has halved in 2012.

To have a better understand the competitiveness of these companies, the competitors' turnover and their operating profit (expressed in percentage) is presented in a visual format respectively in figure 12. and figure 13.

The figure 12. shows the competitors turnover in the years 2009-12. As we can see from the graph half of the companies had an extremely quick raise up to 2010, then the turnover volume drastically decreased. On the other hand, the other two companies experienced a quite regular fluctuation of business volume.

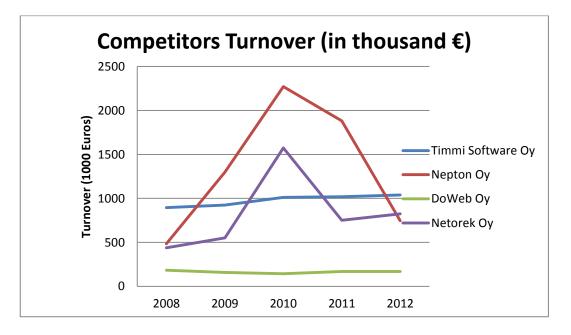


Figure 12. Competitors turnover in thousand Euros. Data available for the years 2009-2012. Finder Yritystieto, 2014

The figure 13. shows the competitors' operating profit for the years 2008-2012. According to the data gathered from Finder Yritystieto (15.03.2014), all the companies have experienced a rather impressive decrease in their profits.

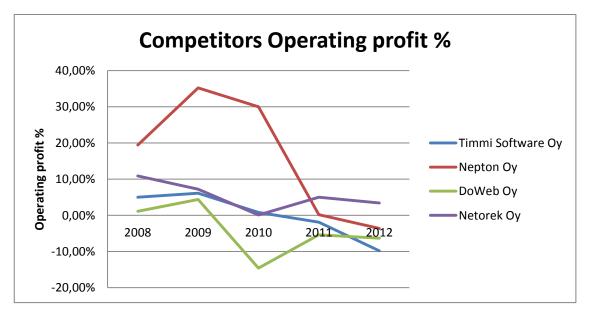


Figure 13. Competitors operating profit percentage Data available for the years 2008-2012. Finder, 2014

(See appendix 2 for a list of the competitors' financial ratio summary as found in Finder Yritystieto) The Porters five forces analysis focuses on the competitiveness of the industry and the market as a whole and in the next chapter there will be company specific analysis of the business model for Kumea Oy. The next chapter will introduce the case company by dividing it to smaller segments that are easier to understand and manage.

4.2 Kumea's business model

In this section will be described the current state of Kumea business model building blocks. (see appendix 4.)

As previously mentioned, a business model is a description of the activities and partnerships a company builds; the model gives an overview of a company organization, operational processes and its offers and the value delivery.

4.2.1 Kumea's customer segments

This chapter describes Kumea's customer segment building block and explain the characteristics of each segment in terms of needs' satisfaction, benefits from product/service offering, and type of relationship established between Kumea and the customer segment.

Kumea Oy has currently two Customer segments; one is the niche market formed by municipalities, educational institutions, and colleges in need of a facility booking management services; the second segment is formed by commissioning customers, predominantly a company, who request the development of a particular software for their own use or for commercialization purposes.

Kumea's facility booking management customer segment requires the fulfilment of organizing and managing a large amount of information and requests concerning their facility assets. These customers need to organize, supervise and plan the use of the company real estate assets, both for internal and external use, in order to be able to maximize the profit coming from the rent of their own facilities for educational, training and sport related activities to third parties.

This customer segment has generally a large pool of employees who access directly the facility booking system for their own use, therefore demanding a comprehensive tool, practical and easy to use for non-computer savvy. In order to empower each individual in

the customers' organization a dedicated internal initial training and written manual, for further reference, are provided by Kumea. This practice is essential in order to enable every user to access and avail oneself of the system autonomously.

In addition, the customers have the possibility to upgrade and enlarge the range of services for which they have subscribed to as their business volume grows. It is essential to meet their necessity to maximize their profits, retain clients and gain more visibility among the tough competition in the market of facility rental management.

Therefore, to satisfy the needs of this specific customer segment Kumea has developed its Tilamisu service. Tilamisu is an online facility booking management service; it displays a list of facilities with detailed amenities, the booking system is organized in a user-friendly calendar view, and a build-in billing option that automatically generates a bill for external users, calculated on the price of the facility booked, the length of time for which it has been booked.

The relationship established with these customers is based on dedicated customer assistance, training offering and constant re-evaluation of the clients' needs over time; these offerings contribute to create and maintain a solid and long-term relationship.

The second customer segment of Kumea is formed by commissioning customers who request the development of a particular software for their own use or reselling. Generally, the commissioning party is a company that needs to satisfy a particular aspect of its business activity and seeks an exclusive product, customized designs and unique bundle of options.

The customize product delivery demands a customized offering. The activities connected to this particular customer segment are multiples; starting from the first steps of consulting and planning, the parties involved need to evaluate which options might better suit the needs of the commissioning company. In addition, the designing and development phases of Kumea are essential in meeting the customer's requests, this phase may make or break a deal, hence gaining a valuable customer or losing the possibility for future projects. Finally, the testing activities run by Kumea might involve also the commissioning party and its employees, or beta testers upon request. These activities call for a strict cooperation between Kumea and its customer.

Therefore, this type of clientele requires a significant time and knowledge investment and the relationship established likely to be short-term oriented, but certainly intense.

4.2.2 Kumea value proposition

As Osterwalder & Pigneur point out (2010, 22), a company's "Value Propositions Building Block describes the bundle of products and services that create value for a specific Customer Segment". In other words, each customer segment requires a diverse offering mix to satisfy its needs and perceive value, compared to the other segment. Therefore, Kumea's bundle of products and services can be divided into two main groups, each one of these aims to satisfy a particular customer segment.

Kumea's general value proposition for all its customers is based on reliability, performance and accessibility. Hietala (20.04.2013) states that Kumea's value lies in the user-friendly interface, the cost-effectiveness and the reliability of the service developed. The following paragraphs will describe the value proposition mix for each customer segment previously analyzed (See chapter 4.2.1).

Kumea value proposition for the facility-booking management service customer segment is a bundle of cost and risk reduction, simplicity and accessibility.

Kumea's services allow the customer to maintain record of all requests, check for immediate availability and have a constantly up-to-date database of their offerings; thus reducing costs of managing the system manually, as prior to the adoption of the service, and ensuring no data loss. Kumea turnkey solutions designed for this customer segment have a short delivery time and customers can be working within few working days from submitting their request and the payment of the corresponding subscription fee.

The simplicity of use is given by the user-friendly interface and its intuitive organization. Accessibility, at anytime and anywhere, is guaranteed with an internet connection and any device able to support web page visualization. This is the added value perceived by the customers. (Tikka 18.03.2013)

Kumea's customers satisfaction and value perception for this specific segment is possible through simplicity of use and ease to understand the product interface, improved performance in the work place, fast turnkey delivery time and cost reduction. The subscription to Kumea service solves the customers' problems related to time consuming facility management activities, which previously were handled by one person or a small group of employees over the phone, via e-mail or face-to-face. Hietala (20.04.2013) refers to these activities as inefficient and unreliable, due to the time allocated to perform them and the high possibility of losing data. In fact, Hietala states that the customers turned to Kumea to find more efficient solutions concerning these problems.

The second customer segment we are going to analyze is the Commissioning customers. Kumea value proposition for its commissioning customer segment is a mix of novelty, customization and performance. When it comes to customizing and tailor designing a product Kumea's activities have to meet the specific requests of the commissioning customer. To be successful in this task it is important to maintain a high level of design and feature novelty, and take advantage of the need discovered during the consultation time with the client. The planning and implementation of the tailored features and design will satisfy the customer's needs if it meets the customer's expectations.

This dedicated element mix is enhanced with a dedicated consulting and planning formula, that ensure a thorough understanding of every customer's needs and allow Kumea to tackle every request in cooperation with the customers. In order to provide an excellent service and deliver added value, Kumea offers customization of its products and, on demand, personnel to guide and train its customers.

4.2.3 Kumea's channels

The channel building block is a description of the means of communication in use with each customer segment and of the mean of delivery the company value proposition to each defined segment. The following section will describe the steps taken by Kumea and its partners in communicating efficiently with its target customer segments.

Kumea communicates with both its customers segments via own direct sales force and support personnel, both online and face-to-face. The use of its own direct channel allows the company to support the customer segments throughout the whole channel phases; from raising awareness about its services and products, and helping evaluating the different offerings, through the cooperation that will eventually lead to purchasing and delivering the service/product, until the post-purchase support. Kumea focuses especially in the phases of evaluation of the customer's needs, during which it has to carefully understand what value proposition will better satisfy the customer's needs and solve the customer's problem. This phase will be successful if the consultation activity carried on will be able to identify the needs of the prospective client and suggest a suitable solution.

Kumea has the support of its partners when it comes to contacting potential customers and take advantage of its channels, e.g. while attending fairs, seminars and business related events. The partners can easily reach Kumea's target customer segments through their activities, since they share the same business field. The partners support is crucial in raising awareness towards the company services and introducing Kumea's products to potential customers.

When this possibility occurs, Kumea's own direct sales performs mainly four of the channel phases; evaluation, purchase, delivery and after sales; the partner has the significant role of being Kumea's Ambassador and raising awareness towards Kumea's services and value propositions.

Partners are most likely to concentrate their efforts on the first two step of the channel phase; raising awareness about the company bundle of service and product, and supporting this activity by sharing the evaluation and feedback of their own clients who have been satisfied by the cooperation with Kumea.

The approach used with the commissioning customers is slightly different. Generally speaking, this customer segment decides to contact the company independently, after having evaluated Kumea's reviews via feedback and word-of-mouth concerning the company performance and value propositions. In this case, Kumea works in-house throughout all five channel phases. Occasionally Kumea takes a direct approach and participates in invitations to tender to offer its service to potential new customers.

The only available channel when taking part in tendering is the written communication; this communication method has to convey the value propositions of Kumea, meet the requirements of the company and, above all, evaluate the correct allocation of time for the project in order to remain competitive in the market and generate revenue.

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In addition, in this case, an important role in the channel communication and selection is played by the company partners, who are frequently in direct contact with Kumea's potential customers. Partners are often directly raising awareness concerning upcoming services, and choosing the most appropriate product and/or services to advertise and help delivering Kumea value proposition by promoting its planning, designing and development activities to the their customers.

Therefore, we can state that the channels in use serve cost-efficiently Kumea, which does not engage in specific marketing campaign nor in advertisement, but firmly believe in acquiring customers thanks to their professional and quality work (Hietala 20.04.2013).

4.2.4 Kumea's customer relationships

The customer relationships building block describes the type of relationships Kumea establishes with each of its customer segments. In a company's relationship with a defined customer segment various categories and type of relationships can co-exist. These relationship types may be driven by different reasons; the most commons are customer acquisition, customer retention or upselling. (Osterwalder & Pigneur 2010, 28) Kumea has currently two customer segments, each one of these has divergent necessities and expectations to be met.

The facility booking customer segment is the largest customer segment in terms of number of clients and regular revenue stream converging into the company, due to the subscription contract type customers need to have in order to be granted access to Kumea's service.

This customer segment demands a dedicated personal assistance and customization of the service offered through additional features, designs and training sessions. These customers cannot afford to change service providers very often; by reason of financial investments and personnel training changing service provider would cause a considerable financial loss, in terms of money and time invested in adapting to the new system and the related training time and costs. The rapport established with this customer segment calls for a personal, long lasting relationship, that needs to adapt to the changing necessities of the customer's evolving business in order to retain it.

By investing in in-house training and dedicated customer assistance Kumea creates a long lasting bound aiming at customer retention. Although the initial costs required in acquiring

customer and developing a trustworthy and reliable relationship are elevated, Kumea looks at this expense as a long-term investment, which so far have been able to confirm its validity through actual customer retention. (Tikka 18.03.2013)

The second customer segment is the commissioning customer. This segment is mostly a large account in financial terms, but the relationship type established calls for personal assistance and short term intense cooperation and co-creation involvement. Kumea personal assistance philosophy takes place also in short –term projects and indicates that Kumea personnel is fully involved with the customer during each phase of the business relationship; from the evaluation and mapping of the customer's needs to the delivery of the product commissioned.

During this time, Kumea deeply involves the commissioning customers into the cocreation process and in the brainstorming sessions. This type of relationship is certainly financially costly and more time consuming compared to the previously examined customer segment, but it allows optimizing both parties' resources and revealing itself as both time-effective and cost-effective.

As Tikka (18.03.2013) confirms, the design of a solid action plan demonstrates to be a costeffective investment for both parties; with the newly provided information, Kumea can develop the product requested, while the commissioning company may supply further details and feedback at different stages of the process.

We can summarize by saying that Kumea focuses on finding and establishing long-term personal relationships with its clients. Due to the nature of its work, Kumea needs to fully understand the needs of its clients, and the best practice is to investigate the customer's expectation and collaborate in creating the best bundle of service options. Although customers' needs are often quite similar, each customer has different expectations and plays an important part in value creation at Kumea. Co-creation and personal assistance are the keys to build strong customers relationships and ensure customer retention.

4.2.5 Kumea's revenue streams

Any business needs revenues to be profitable and remain an active player in the market. This section will investigate Kumea's revenue streams; it investigates how revenue streams are created and designed in order to maximize the profit connected to each customer

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segment. Osterwalder & Pigneur (2010, 30) assert that a business model encompasses two types of revenue streams;

- Revenues generated by recurring customers' payments;
- Revenues generated by a one-time customers' payment.

Similarly, to other building blocks, the revenue stream block differentiates between the customer segments due to the different pricing strategies adopted. Therefore, each customer segment will be analysed separately.

First to be analysed are the recurrent revenues generated by the facility booking customer segment. This revenue stream is due to the monthly subscription fee customers pay to be granted access to Kumea online services. These revenues are based on a fixed menu pricing and are calculated on stable variables; the subscription fee, the volume package and the billing feature.

The basic subscription fee includes a set amount of facilities that can be managed online, an introduction training provided and customer support for the duration of the subscription.

When the basic facility allowance cannot satisfy anymore the customer's growing business, the volume package variable allows the customer to upgrade its basic subscription service plan and increase the number of available facilities offered online.

The billing feature is an additional option capable of generating an automatic billing event to the customers accounting and billing software when a facility is reserved by a third party, hence not booked for the customer's internal use. The billing feature generates the billing event by calculating the rate of the facility rented and the length of the reservation (charged per hours).

According to Tikka (18.03.2013), this revenue stream amounts to approximately 80% of the total revenues of Kumea. The customers are willing to pay for Kumea's products and services and switch to Kumea in order to receive dedicated assistance, have an up-to-date database available 24/7 and a simple and intuitive user interface.

The revenue stream associated with the commissioning customer segment is generated by a mix pricing mechanism, in which elements of the fixed menu pricing are interacting with

dynamic pricing elements. This particular pricing mix aims at satisfying the needs of the commissioning customer segment.

The fixed price element concerns the customer's need for consulting and planning activities performed by Kumea; while the dynamic price elements are constitutes by the design, the implementation, and the dedicated support offering.

The consulting and planning activities create a solid base from which it is possible to estimate the price related to the design and development of the product and its features; occasionally, a real-time-market price is added to these prices. The real-time market price is generally established during the consulting and planning stage of the interaction with the customer. During the negotiation time the customers states its delivery time, and when urgency in the delivery time is requested, therefore Kumea charges an extra fee in order to prioritize the customer's project and meet its request.

According to Tikka (18.03.2013), this revenue stream amounts to approximately 20% of the total revenues for the year 2013, however it may fluctuate significantly since it depends on the demand for tailor-made solutions. This customer segment is willing to pay for Kumea's products and services in order to receive dedicated consulting assistance, large influence on the development and co-creation process, and customized features.

4.2.6 Kumea's key resources

The key resources building block shows which assets are the most important when it comes to being able to operate according to a particular business model (Osterwalder & Pigneur 2010, 34).

Kumea most important key resources that allow delivering its value propositions into the target market, keeping the vital customer segment relationships, and generate revenues are the intellectual, human, and physical resources.

The intellectual resources used are product development copyrights, partnerships, partner's database; which allow to market exclusive products to Kumea's prospective clients. Partnership and partner's database can supply an important insight to the prospective clientele and its needs. For this reason creating strong and long lasting partnership are essential tasks in the company activities (Tikka 18.03.2013).

The knowledge-intensive business nature of the company is the most important human resources in the engineering and computer services. It is the key professional resource available, since it allows Kumea to develop its products and services in-house and make the company an attractive option in the specific market it operates. The professional knowledge is strictly connected to a particular individual and related to a highly specific subject/topic. Therefore, in the computer engineering business losing knowledge intensive personnel may result in losing as well business volume, if the company is not able to find a valuable substitute.

The physical resources count the computers and server in use that allow the deployment of the design and development activities hence maintaining the operational flow in the company.

4.2.7 Kumea's key activities

To ensure a clear understanding of the products and services offered, we need to explain what key activities Kumea Oy undertakes to operate successfully. The key activities can be divided in to three distinctive categories; which are all needed to achieve and maintain high customer satisfaction. We have to bear in mind that Kumea Oy is a small company operating in the field of information technology and communications, its main scope is software development.

The first category, where all the projects start, is formed by the 'Consulting and planning' activities. The core activities in this category can be described as evaluating, consulting and planning; this is the starting point where all the projects begin.

The main activities Kumea Oy performs are business requirement evaluation, information and technical architecture planning.

During this phase, Kumea Oy performs an analysis of the customer needs by interviewing the client and mapping the specific requirements of the said customer. The business requirement evaluation is an analysis of the customer needs, carried out through interviewing the client and drawing the specific requirements. During this phase, the company also maps out the customer's existing IT-Solutions in order to meet the integration needed to avoid compatibility issues with the new software and the old infrastructure. The goal of this analysis is to document any issues that might have been overlooked with the old system and to propose corrective measures to the existing IT systems. Kumea Oy also performs Information architecture planning (IAP) for the customer project. In short, the IAP can be described as a process to make the website that the customer lands on to have the following features; primarily, the webpage should invoke interest in the visiting client after the person is interested the page should be informative and finally there should be interaction with the client. Kumea Oy is designing all the products to satisfy the above-mentioned three main points.

Written technical specifications about the product/service requested aim at satisfying the customer's wishes about the project outcome, and further investigate the customer suggestions before starting to work on the project. Kumea Oy is designing all the products to satisfy the above-mentioned two main points.

After discovering and outlining the customer needs and agreeing on the specific desired outcome, Kumea Oy initiates an independent evaluation concerning the limitations of the existing hard/software the customer uses, the application of the customer requests in order to start the coding (software development) implementation for the project.

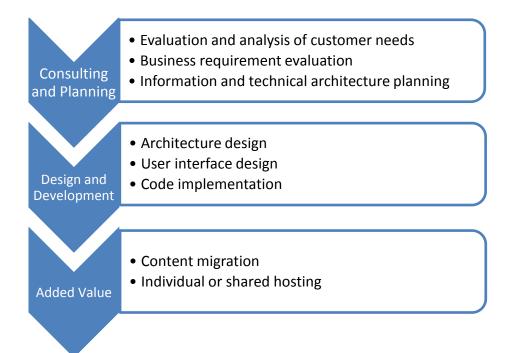


Figure 14. Overview of Kumea Oy key activities divided in to three distinct categories. Pallaskari, T. (10.03.2013)

The second category is formed by the 'Design and Developing' activities. The main activities performed under this category are the architecture design, user interface design, and code implementation. After finding out what customer needs are and the limitations of the existing hard/software Kumea writes a technical specification about the product in accordance with the customer's wishes before starting to work on the project.

One of the most demanding task is to design the architecture of the product and then to make a user-friendly user interface for it. These two tasks are extremely time consuming steps, although crucial in the successful product design. The code implementation task is among the crucial elements in programming. This task is performed in strict co-operation with all the technical developers in-house, and all the printed materials, instructions and descriptions are first realized in English language, due to the desire of Kumea founders to internationalize the company in the foreseeable future. Currently the company is contemplating the possibility of expansion in to other European markets.

The third and last category is formed by the 'added value' and services concerning the content migration and individual or shared hosting possibility. A valuable turnkey optional service of Kumea Oy is the offering concerning the content migration support and the dedicated or shared hosting offer selection. Content migration is the set of activities involved in transferring data from a system to another, in this particular case from the old customer system in to the new system implemented by Kumea Oy.

Hosting services are offered with two options, dedicated or shared. The dedicated hosting is an internet hosting service that allow the customer to leases an entire server for its use only and gives complete control over the server owner. The shared hosting instead offers server space in a shared server. This solution is more economical than the dedicated one, because the companies who shared the server space also share the maintenance costs.

Both of these activities can present unique challenges that vary from client to client. As the main product is an online service, Kumea Oy also has value added support functions that are designed to assist customer in the time of need. Kumea also provides dedicated and shared hosting service for its products.

Kumea's value proposition requirement for the reliability, performance and accessibility find application throughout the whole phases, from the consulting & planning, Design & Development activities, until the implementation of the added value tasks.

4.2.8 Kumea's key partnerships

Osterwalder & Pigneur (2010, 38) state that the key partnership building block describes the network of suppliers and partners a company uses to operate and be competitive in the market. Kumea Oy has so far established strategic alliance with non-competitors and buyer-supplier relationship to assure reliable supplies.

Kumea Oy has established a strategic alliance with non-competitor Mäntsälä ATK Palvelu. Mäntsälä ATK Palvelu provides essential physical and human resources. In fact, this extraordinary partner provides human resources that operate as Kumea Ambassadors at business events, sector dedicated fairs and addresses its own clients directing them to Kumea for dedicated IT projects. These valuable activities carried on by Mäntsälä ATK Palvelu have increased Kumea business volume in its years of activity and provided excellent free of charge advertising and business intelligence in the desired field.

Kumea Oy also thinks of this partner as a strong ally when it comes to a future expansion towards the Swedish market. Mäntsälän ATK palvelu Oy can boast of having acquired some customers in the market and this could be an advantage for Kumea Oy future.

Kumea Oy has also established buyer-supplier relationships to assure reliable supplies of high quality materials and services. The key suppliers are a network of well renowned companies that supply access to servers, dedicated assistance and maintenance and as well as hardware products when required. Another essential supplier of analytical tools is Google. In fact, to understand and analyse the customers' behaviour online, Google provides analytics concerning the traffic generated on the online service pages by the customer' visits.

4.2.9 Kumea's cost structure

The cost structure building block describes all costs incurred to operate a business model (Osterwalder & Pigneur 2010, 40). Kumea's operations are still in early stages so the cost structure the company has now is not the one that it will have when the company employs all the founders and the company has its own premises.

Kumea Oy can be placed in between of cost-driven and value-driven company. It can be classed as cost-driven as the product is highly automated after it has been set up for the customer and in ideal situation; it needs very little interference from the developer side to be run efficiently. This frees the developers to work on other projects and keeps the need for personnel at the minimum. Due to the server scalability, the product related fixed costs will not rise in any foreseeable future and this will help the company to lower the overheads that any one customer will have to cover. Economies of scale and scope are strongly present in the company operations as the current capacity can handle up to five thousand customers and the server capacity can be used to host any number of products that Kumea Oy will be developing for its customers.

Incurring fixed costs, at the moment, consists only of the server rental fees, certificates and from a telephone connection that the company owns. In the future the fixed costs will include all of the above, personnel salaries and the costs associated with the premises that the company will be renting for its operations.

Variable cost side will include the travel costs for the customer meetings and the marketing budget that will increase as the customer count gets higher.

To recapitulate this chapter dedicated to Kumea Oy business model, it is said that the four main area of business analysed interact deeply with each other. From the company infrastructure blocks, where all the operational activities are implemented, arise the values proposed to the customers. The value proposition influences the customer choice, relationships and communication established with them. The customer satisfaction will affect the financial viability by bringing revenues to the company that will be able to be profitable and continue its operational cycle. For this reason, it is beneficial to carry out a SWOT analysis that will investigate the company strengths and weaknesses, and highlight possible opportunities and threats in the market.

4.3 Evaluation of the business environment (SWOT)

The evaluation of the business environment was carried on by using the SWOT tool. The evaluation was done by combining the answers from all three-interview groups. This reflects the ideas and the perceptions that the customers and company owners have about Kumea Oy and its operations.

Strengths

The most frequent strengths identified in the interviews carried out to the customers and the company were the agility and speed of delivery, from the time the customer placed its order to the full implementation.

Kumea Oy's flat organizational structure enables the company to respond swiftly to the requests from the client and all the software updates that are not client specific are available for everyone using the program. The interview with the key partner validated the company founders' view; the best strength they have is the long experience in software development and programming.

The biggest strength of the company is the close collaboration with the provider of the market leading community college course booking software Hellewi. This collaboration enables Kumea to develop the products to work in synergy with the already existing system that most of the customers are using. Customers consistently reported in the interviews that the Tilamisu service is easy to use and the interface between Hellewi and Tilamisu is the main strength from the application side (Customer interviews, 7.3-13.3.2014).

Kumea Oy is on stable financial base; cost of running the business is covered and all the income that is not used for the running costs is being invested back to the development of the company and its products. Being a small and domestic company creates an image that it is easily approachable compared to large multinational corporations. This is specially valued in the community college demographic.

Products of Kumea Oy are easy and fast to implement. The administrative account side is simple and intuitive to use, and the users are not required to have a vast knowledge of IT-systems in order to use the products effectively. According to the customers (Customer interviews, 7.3-13.3.2014) the products are also economically friendly, compared to the other alternatives in the market; thus, switching costs to adopt Kumea products is a financially viable possibility that has essentially no risks for the customers.

Weaknesses

From the customer interviews, it was clear that the schedule according to which the company can provide updates to the software is perceived to be slow and it affects negatively the customer satisfaction (Customer interviews, 7.3-13.3.2014). The reason for this slow reaction time is that the company has currently no full-time employees; this is

identified as a weakness that the company is trying to actively solve. As Mr Tikka and Mr T. Pallaskari point out in the interviews, the fact that all the founders are currently full-time employed in other companies poses a challenge to the update frequency of the software (Tikka 18.04.2013; Pallaskari T. 10.3.2013). In the performed interviews, the customers stressed that the product appears to be promising and it could be implemented to production already at this stage, although solving some bugs in the system would make the daily operations easier. (Customer interviews, 7.3-13.3.2014).

The fact that no-one is working for the company full time and the fact that the product has just recently completed the pilot phase means that the internationalization plans will have to wait. Mr Tikka (5.3.2014) stated that first the company must employ at least two of the founders full-time before starting the expansion to other countries. The countries he listed as prospective targets were Sweden and Germany; Sweden as the key partner has existing contacts in the market, and Germany due to the potential market size.

From the company point of view, the lack of office premises means that all the meetings and training sessions have to take place at the customer's sites. This situation may project an unwanted negative image of the professionalism of the company. At the moment this is not a major issue, as the client base is small and the customers are located all around Finland.

Mr Tikka (5.3.2014) also told that the fact that the current customer base is so small means that it would be extremely important to be able to communicate effectively through the company own direct sales force and support personnel. It would seem that the communication style used by the engineers is not the most effective when dealing with non-technical people. To tackle this issue the technical support personnel is taking part in communication seminars; Mr Tikka and Mr T. Pallaskari are currently attending business management specialist courses offered by the Finnish Institute for Enterprise Management.

The marketing channel usage is also challenging when there is no one that can handle the customer contacts as a full-time job and none of the founders has experience from the marketing field, which hinders the advertising planning. As there is no one whose responsibility is the communication towards the customers this can cause delays when the customers send inquiries about specific problems they encounter.

Opportunities

The products of Kumea Oy are web based, thus making them accessible from any location and at any time. As the products are geared towards non-computer savvy users, they are easy to adopt by the customer organizations. This makes it easier for the decision makers to choose to use Kumea's services.

The political climate in Finland is pressuring municipalities to cut costs and to find better ways to handle the day-to-day operations. By using Tilamisu service, municipalities can cut costs related to the asset booking management, as there is no need for full time employee to govern the booking process.

In addition, the fact that Kumea's products are priced lower than the competitors' equivalent software poses a strong argument on why the decision makers would opt to replace the old system with Tilamisu.

The product(s) can be converted for purposes that it was not originally intended to, in order to reach wider markets. A facility booking system, such as Kumea's Tilamisu, could be used for time booking of professionals; thus, creating a new customer demographic. All Products of Kumea have been implemented in English and then the content translated to the desired language; thus, making it relatively easy to adapt the product to foreign markets. At the moment, however, Kumea Oy lacks the resources to expand the operations to the neighbouring countries but as Mr Tikka (18.3.2013 and 5.3.2014) explained, the biggest markets where Kumea Oy aims are in Sweden and Germany. As the Mäntsälän ATK palvelu already has contacts in Sweden, that market would be the logical direction for expansion when the company is in the financial position to start.

Threats

Company owners identified larger companies with more recourse to pose a threat for Kumea Oy in case they decide to make competing software, as they would have larger product portfolio and more variety in their services.

The lack of active customer acquisition threatens the growth of the company and can lead to stagnancy, which is not beneficial for the company or existing customers. A very real threat is also the fact that there are planned municipal mergers, which would lower the potential client base. These mergers are driven by the government in order to cut the costs allocated for municipality activities. The laws that concern customers' data gathering and security will be going through a change due to the recent events in the world and as Kumea's products need the billing information in some cases, the laws must be abided. Changes in these laws pose a potential threat if they change radically. Changes in these laws pose a potential threat if they change radically. In the future when Kumea Oy is expanding the operations to abroad the local laws must be studied meticulously (Tikka 5.3.2014).

Table 2 SWOT-Matrix for Kumea Oy

	Strengths	Weaknesses
Internal	Small and agile organization	No full-time employees
	Experienced IT personnel	Absence of office premises
	Reliable domestic company	Communication towards customers
	Easily approachable	Lack of marketing strategy
	Improving communication skills	Slow update rate of the software
	Opportunities	Threats
	Competitive pricing	Large corporations
	Customers pressure to cut costs	Lack of customer acquisition
	Versatile products	Change in data laws and regulations
	Products base language English	Municipal mergers
	Expansion to other countries	
	Positive	Negative

Combining the results from the SWOT the company can make an action plan on how to turn the threats and weaknesses into something beneficial for the company or how to minimize the negative effect they have on the business.

Strength + Opportunity

Combining the agility of the company and the affordable prices with the constant pressure for the municipalities to cut costs Kumea Oy should move quickly and aggressively in the market.

Weakness + Opportunity

Challenges in marketing and communications are partly solvable by the fact that the service is online and customers can test it there. As most of the customers are municipalities and educational centres, company owners have enrolled on business management specialist courses in order to improve their communication skills and solve the communication issue.

Strength + Threat

To avoid the threat of the large corporations Kumea Oy must stress the approachability and the fact that it is domestic company. A small and nimble company can respond to customer requests faster than a large corporation can, due to the lack of bureaucracy when making decisions. The experienced personnel are monitoring the law changes in the field that company operates thus reducing the risk that the changing regulations possibly pose.

Weakness + Threat

The lack of full time employees and office premises can create a negative image of the company by portraying it as not as professional as the large corporations are. These issues should be taken into account in the communications and customer meetings where the Kumea representatives are meeting the prospective clients. Furthermore, the customer acquisition issue should be addressed by developing a marketing strategy that supports the current company structure and takes the focus off the lack of physical office space as well as full time personnel.

To recapitulate this chapter dedicated to Kumea Oy SWOT analysis, it is generally agreed that Kumea's strengths are its agility and speed to take actions, together with its competitive priced products/services, and the improvement effort of the communication skills of its founders/technical personnel. Kumea's weaknesses are mainly identified as the lack of full-time employees that also causes a slow response pace to the customers' enquiries, and the communications skills of the technical personnel when it comes to interactions and relationships with the customers. It has been suggested that Kumea's opportunities are its user-friendly product/service interface, cost efficiency, the possible adaptability of the purpose of use of the products, as well as the use of English language in every step of the implementation of the products/services; which will ease the future internationalization process. Finally, its threats are identified as the possible entrance in the market of large enterprises, the lack of customer acquisition, and the regulation change concerning the data managing systems.

With regard to the above-mentioned findings and the financial viability area investigated in the Kumea business model analysis, the following chapter will focus on the financial aspects concerning the profitability of the company and the possibility to employ all founders, as wishes by the commission company.

4.4 Breakeven point

The breakeven point analysis is a valuable tool for most businesses and it is especially important for start up companies. The analysis was performed by using the assumed average subscription fee and it ignores the income from other sources, as per request of the company. The main reason for this was to see at what level of subscriptions the company could employ the founders' full time, thus enabling them to work on the projects that the commissioning customers bring to the company. The transition from full time employment elsewhere to Kumea has to be done in phases; the company would first employ one-person full time when the income from subscriptions would be at desired level.

Firstly, we needed to indentify the occurring fixed costs. In accordance with the income statement from 2012, the monthly costs for the servers were $140 \notin$ per month. The SSL certificate that is needed costs $200 \notin$ per year and the domain rent is $50 \notin$ for the same time; these costs amount to $16.67 \notin$ and $4.17 \notin$ per month, respectively. The accounting and banking fees make up a monthly cost of $52.50 \notin$. The phone bill cost amounts to $20 \notin$ per month.

The first calculations reflect the current state of Kumea Oy, and do not take into consideration the company's office space rental and related costs. The second set of calculation take into account the expected monthly cost of the future office space and the related bills, for an estimated total of $500.00 \in$. The fixed costs excluding the office space amount to $233.33 \notin$ per month which can be considered to be extremely low. Due to the scalability of the server, the production costs will not correlate with the growing client base. With above costs of $233.33 \notin$ per month the company needs to have two subscriptions to cover the running costs.

As the founders decided against getting a salary pay from the company before it makes profit and the fact that the company does not have an office as of yet the costs of running the service are low. However, all the founders expressed in the interviews their desire to work full time for the company in the future. Risto Hietala brought forward a sum of 3000 € that would be sufficient salary and all the other founding members of the company agreed to this it was used as a basis for the calculations. After consulting with the owner of the Mäntsälän ATK palvelu Oy, the personnel side cost multiplier was chosen to be 1.6. The salary multiplied with the chosen factor brings the personnel cost of one employee to $4800 \notin$. These figures are gathered in to a figure below. For the purpose of the calculations an average subscription fee was chosen to be 200 \notin monthly. The chosen subscription price is the second lowest on the pricelist and it was chosen because in the interview the company owners indentified it as the most common price bracket for the early customers.

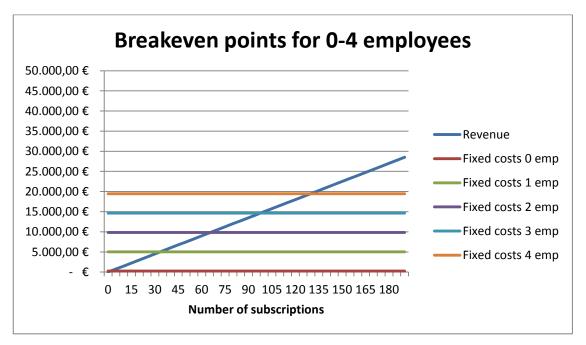


Figure 15. Breakeven point(s) for 0-4 employees compared to the amount of subscriptions needed to cover the costs.

The point when the first founder could start working full time for Kumea Oy is when the sales exceed 5200 € monthly, which in the amount of subscriptions means 26 monthly subscribers for the average fee of 200 €. The level of monthly revenue must exceed 20 000 € in order for all the founders to be able to work for Kumea Oy full time. In order for the second and third partner to start working full time for the company the levels of revenue must exceed 10 000 € and 15 000 € respectively.

During the interviews Perttu Tikka (5.3.2014) said that in the future the company will hire an office from Mäntsälä and the cost of the office space that would be sufficient for the company needs is estimated to be around $500 \notin$ per month. This sum would raise the needed subscription amount by two customers.

The figure 16. reflects the interviews' result where the company founders were thinking of the marketing budget and they came to the conclusion that in the future a marketing budged will be set to 10% of the revenue. To keep the graph from cluttering, it only shows the added variable costs for the scenarios where there are one and three people working for the company.

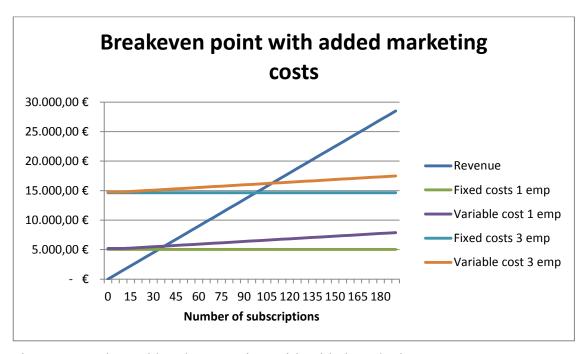


Figure 16. Estimated breakeven points with added marketing costs

The development costs of the Tilamisu service were calculated and in order for the software to break even it must produce revenue of 29 250 \in . The price of the product was calculated based on the time spent in the development, which was estimated to be 450 hours. In the budgeting the cost of one hour for a programmer is set to 65 \in ; thus, giving the price of 29 250 \in . This means that in order for the service to break even it needs to generate 147 subscription billing events with the average price of 200 \notin per event.

Currently the service has 12 subscribers and if the company owners still decide not to pay any salaries for themselves, the product will break even in two years and a month. However, this is a highly unlikely scenario as the amount of subscriptions has been rising steadily after the test phase ended in the summer of 2013.

To summarize this chapter dedicated to Kumea's financial viability and profitability, it is said that Kumea's future costs for establishing a branded office is relatively low due to the location chosen by the founders. The estimated future revenues needed in order to employ all founders and maintain an office space requires monthly revenue of 20 000 € which

translates to 100 subscriptions. If the marketing costs are taken into account the subscription amount rises to 110 and the required revenue to 22 000 €.

5 Discussion

This chapter consists of the discussion about the results and the validity of the research. In this chapter we will also give suggestions for further research, asses research ethics and the own learning.

The aim of the research was to provide an emerging software company with a better understanding of the environment where they operate and suggest means how Kumea Oy could improve their value delivery to the customers.

5.1 Interpretation of results

In order to answer the investigative question concerning the competitiveness of the industry in which Kumea Oy operates (see chapter 1.1), the corresponding IT industry environment was investigated by using Porters' five forces analysis. (Daniels, Radebaugh & Sullivan 2011, 441) The secondary data used to perform the analysis was collected from Statistics Finland. The findings suggest that the information and communication industry in Finland is growing; the amount of IT companies and the amount of people employed in the software industry has been increasing since the financial down turn of 2009. This growth has been mainly driven by the fact that large corporations have been off shoring their services, thus, leaving highly skilled personnel to establish smaller companies.

After the general analysis of the environment, a business model assessment was done for the company. The analysis of the company was performed by using the Osterwalder & Pigneur (2010, 14) business model generation framework that breaks the company operations and infrastructure in to logical blocks.

The results of this analysis together with the questionnaire run among the current customers, answers to the investigative question concerning the clients' expectations from using Kumea Oy products (see chapter 1.1). The main findings indicate that the company caters to two different customer segments, which have their own distinctive needs and expectations. The main customer segment for Kumea Oy is the facility booking management, formed by the municipal and educational organizations towards which the current product is geared to. In order to succeed in the value delivery and expectations fulfilment for this segment Kumea Oy needs to establish a close collaboration with the client and the partner company, to which the Tilamisu provides a complimentary service. The main value creation for this segment comes from cutting the customers' costs,

improving the effectivity of their facility booking operations, faster delivery of the service updates and a more efficient communication with the company personnel. The second customer segment is the commissioning customer, that requires a software to be developed for its own usage. The expectations of this customer segment are personalized services, clear implementation plan and an all-included turn-key delivery service.

To answer the investigative question concerning the communication channels that can help in the value delivery process, various data from the interviews have been analysed. The findings show that having a physical branded office would increase the reliability and credibility of the company. To develop the channel phase regarding the awareness towards the company, the founders should invest into formulating a marketing plan. Furthermore, to increase the efficiency of the communication established with the customers the company founders have enrolled onto a dedicated business program that will help them offering a better customer service for non-technical or non-computer savvy users.

A further study was performed to identify the company strengths and weaknesses by using the SWOT tool. In order to perform the SWOT analysis the researchers have combined the interview findings from all the interest groups (customers, company owners and the key partner). The evidence revealed the core strength of the company is the agility and strong personal mastery in the software development field. The main weaknesses identified from the customer interviews were the slow software update and bug fix schedule that the company currently has. This is due to the fact that all the founders are working full time in other companies. Kumea Oy would need at least one dedicated developer working full time for the company in order to be able to provide faster solutions to the customer problems. Kumea Oy should also take advantage of the agility of a small company and take aggressive measures when they identify a business opportunity.

To answer the investigative question about the level of sales needed in order to have all the founding partners working full time for Kumea Oy a breakeven point analysis was performed. The findings suggest that the best way to proceed is to phase the partners into the company. First partner can start full time when there are at least 26 monthly subscriptions. The revenues from 26 subscriptions will cover all the fixed and variable costs thus making it advisable to wait until this moment before hiring anyone full time. Part time working would be a solution before the desired level is achieved. For example, one partner could work 20% weeks for Kumea Oy if the main job allows this kind of arrangement.

5.2 Research reliability, validity, and ethics

Reliability of the research comes from transparent usage of the data that was gathered via interviews. Interviews were performed in a manner that reduced the possible interviewer bias and this Mr A.Pallaskari recused himself from interviewing the partner that is also his brother. All data was gathered to a matrix form and researchers grouped the data individually and after that compared the results. As the study is exploratory, the data is subjective and it was true for the respondents at the time that the interview was conducted. An exact reproduction of the research would be challenging as the circumstances are changing all the time. The analysis about the company is a constant subject of change so if the study is reproduced the results may vary to a degree. Market condition analysis results are affected by the change as well but the degree is slower and the history will hold true up until point that the data gathering was performed. All the findings are backed up by either the primary data that was gathered via interviews or the secondary data that was provided by statistical sources.

In order to increase the reliability of the research the qualitative data used was recorded in transcripts, which then were used as basis for data grouping. Transcripts were kept as they were and all the analysis was done in separate files to ensure that the source data stays as it was recorded in the interview situation. Secondary source data was confirmed from Statistics Finland and cross-referenced to the data provided by Asiakastieto.

Particular attention was paid to the validity of the research and all the findings are based on the results of interviews and on the data gathered from secondary sources. There are no logical leaps that are not supported by existing data and findings are logically consistent with the observed reality.

The research was conducted in an ethical manner. The company request for data privacy was taken into account and respected, all the participants were informed in advance about the usage of the collected data. In the customer interviews it was also specified that the customer data will be handled anonymously in the research.

5.3 Suggestions for further research

In the process of the research, we were able to identify areas that would need further exploration but were out of scope of the current research topic.

Firstly, Kumea Oy would be in the need to comprehensive marketing plan that would help the growth and would give direction to the engineers. This would enable Kumea Oy to optimize marketing channel usage at the level of reached customers and financial means. Currently Kumea Oy is not following any set plan or even a set framework when it comes to marketing. An integrated marketing plan would drive awareness towards the company products and services and would optimize their financial efforts. Continuous market data assessment should be implemented as a possible tool that the company could use for planning purposes.

During the research, we concluded that the company is not yet ready to reach for the international markets and thus there is no plan for internationalization. Kumea Oy owners have a strong will to spread the products to Nordic countries and to central Europe so there would be a need for internationalization plans when the company is more mature and employs at least two of the founders full time. Exploring the business opportunities abroad will be the key for the success of the company after the foundation is firmly set in the domestic market. Company expressed a wish that in the near future they would be able to spread the operations to Sweden. This would be mainly done by using the existing contacts from the key partners' network of customers. Possible research direction for the internationalization could include identifying external partners in the target country and possibly finding promising contacts who could market the Tilamisu in chosen country.

5.4 Evaluation of the thesis process and own learning

Conducting the research and writing this thesis paper has been an educational journey to the company and to the researchers themselves. The teachings of the business model generation book have highlighted the importance of going to the simple roots of the things and that by dividing a complex system to smaller operational parts is beneficial in gaining a deep understanding of the bigger picture. We learned to approach the problem from an angle that wasn't familiar to us and while this was challenging like novelty normally is, it taught us to explore new possibilities and left us with analytical tools that can be used in the future at work. During the process of writing the thesis, we familiarized ourselves with the software industry in Finland thus gaining knowledge of the trends and outlooks that are related to it.

The Finnish software industry experienced great success stories during the process of writing the thesis; even if these happened mainly in the mobile gaming field, namely Supercell, Rovio and Applifier, these companies injected the whole field with optimistic drive with their success.

The main challenges that we faced whilst performing the research were data gathering from the secondary sources as the field that was studied was highly specific and the available free data is concerning the whole industry. Furthermore, we did not have financial means to purchase the specific reports that were available from the private sources; therefore, we based our competitor analysis on the market intelligence research only.

Another challenge that we experienced was that many of the existing customers of the case company were difficult to reach for an interview and unresponsive to electronic means of communications. This issue was luckily averted by asking the case company to directly contacting the customer via phone and reminding them that taking part to the research will ultimately be beneficial to them.

The Project management proved to be an arduous task due to unforeseen personal issues that caused delays in the tentative schedule and posed a great challenge during the process of writing the thesis. The original schedule was proven too ambitious and had to be reassessed to meet a more realistic timeframe.

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Appendices

Appendix 1. Competitors' products and overview (Finder Yritystieto 2014)

Netorek Oy is well established company in Finnish market providing services to several large customers including Finnish Defence Forces and some health care districts in Finland.

Netorek Oy products

- "Vihta-Ajanvaraus", a booking system that can be used to book available spaces or time slots for customer needs. Direct competing product for Kumea Oy
- "Netorek Booking System" to help maintaining customer contacts.
- "Netorek Calendar", online calendar for customer needs. Emphasis on easily manageable group features.
- An e-mail solution that can be used with Outlook mail program, mobile phone or with web browser.
- "Netorek Secure Proxy", Mobile safety feature to recognize the trusted mobile devices.

Nepton Oy was established in Espoo, 2000. Nepton Oy offers Human Recourse support activities that are based on cloud services. All the products are web based so the personnel that are using the software are not tied to a specific computer that has the software installed on it. Nepton Oy employs 14 people full time and their net turnover varies between one and two million euros.

Nepton Oy products:

- "Nepton Ajanvaraus", Browser based booking system for time slots and physical spaces.
- "Nepton Työteho", Effective tool to monitor, plan and manage employee's time consumption.
- "Nepton Jäsentieto", combines the user registry and group management and event management services under one, easily manageable, web portal.

Timmi-Software Oy was established in Jyväskylä, 2004. Company offers a solution to manage the operative functions of the client organization. Typical customers are municipalities and community colleges which take care of the course and classroom time management via this software. Timmi-Software Oy employs 10-19 persons in accordance

with "finder.fi" and their estimated net turnover varies between one and two million euros annually.

Timmi-Software Oy products:

- "Timmi", online calendar software to manage room bookings and related catering orders, staff and equipment requirements. The billing is automated through the system and the generated reports can be sent automatically to the financial office of the client company.
- "KUHA-kurssijärjestelmä", a product that is mainly directed to educational centers across Finland. This system is for managing the course planning, enrollment, implementation and bookings for the required classrooms. System also generates the reports that are needed for monitoring the activities from the financial point of view.

DoWeb Oy was established in Forssa, 1997. Company has two offices and employs 4 persons. DoWeb Oy offers IT solutions ranging from company home pages to support systems. Their net turnover is less than 0,2 million euros annually.

DoWeb Oy products:

- "Varauspalvelu FI" Room ordering / hiring service
- "Doweb-Asiointipalvelu", a service to deliver patient information safely from laboratory to the destination and to question/answer situations.
- "Doweb Intra/Extranet", is an intra/extranet product for sharing information with wanted target audience. User grouping and personalized user content can be managed with this software.
- "DoWeb Graphical design", a service to help customer companies with branding issues and to provide them with up to date looking web front.
- Website design with a content manager to help customers to update the content without DoWeb intervention.
- Internet and mobile solutions for publishing companies for easier customer care and added service value.
- "Doweb-tilausjärjestelmä", a web solution for automatically managed purchasing process.
- "DoWeb webshop", a webshop solution for small enterprices.
- "Tekstiviestipalvelu" SMS gateway for customer companies to market directly by sending advertising emails or reminders to the customers.

Appendix 2. Competitors' financial statements gathered via Finder Yritystieto, 2014.

Timmi Software Oy	2008/12 2	009/12 2	2010/12	2011/12 2	2012/12
Companys turnover (1000 EUR)	895	925	1011	1019	1039
Turnover change %	14.30	3.40	9.30	0.80	2.00
Result of the financial period (1000 EUR)	20	34	0	-21	-104
Operating profit %	5.00	6.10	0.80	-1.90	-9.80
Company personnel headcount	N/A	N/A	N/A	17	N/A

Netorek Oy	2009/12	2010/12	2011/03	2011/12	2012/12
Companys turnover (1000 EUR)	439	551	1574	752	824
Turnover change %	-33.10	25.50	185.90	36.50	9.50
Result of the financial period (1000 EUR)	43	50	-20	47	42
Operating profit %	10.90	7.20	0.10	5.00	3.40
Company personnel headcount	10	7	-	7	10

DoWeb Oy	2009/04	2010/04	2011/04	2012/04	2013/04
Companys turnover (1000 EUR)	183	158	144	168	168
Turnover change %	16.20	-13.70	-8.90	16.70	N/A
Result of the financial period (1000 EUR)	0	64	-22	-9	-11
Operating profit %	1.10	4.40	-14.60	-5.40	-6.30
Company personnel headcount	N/A	N/A	4	4	4

Nepton Oy	2008/07	2009/07	2010/07	2011/12	2012/12
Companys turnover (1000 EUR)	483	1300	2271	1881	746
Turnover change %	50.60	169.20	74.70	-41.50	-43.80
Result of the financial period (1000 EUR)	53	326	502	1	1
Operating profit %	19.40	35.20	30.00	0.20	-3.60
Company personnel headcount	11	16	27	27	17



Appendix 3. The advertising leaflet - Cover and content.(Kumea Oy 2013)

Customer Segments	Facility booking CS -Manage facility assets -Maximize profit -Time/cost savingtool -Comprehensive and easy -Dedicated assistance -Long-term relationship	Commissioning CS -Software development -Exclusive product -Customized design -Unique software -Dedicated assistance -Intense relationship	Commissioning CS One-time payment Mix menu pricing -D esign & development cost Option -Real-time market price
Customer Relationships	Facility booking CS -D edicated personal assistance -Long lasting relationship -Customer retention -Customer retention -Personal assistance -Short-term co-operation -Intense co-creation -Intense co-creation -Customer a cquisition/upselling	Channels	Facility booking CS Commi Recurring payments One-tim Fixed menu priding Mix mei Subscription plan -Volume package Option Billing feature
Value Proposition	Facility booking CS - Cost efficient - Risk reduction - Accessibility - Simplicity - Improved work performance	Commissioning CS - N ovelty - Customization - Performance	Streams
Key Activities	Consulting & Planning - Evaluation of customer's needs - Requirement evaluation - ITC planning Design & Development - Architecture design - User interface design - User interface design - Code implementation Added Value - Content migration - Content migration	Key Resources Intellectual - Partherships - Copyrights Human - Knowledge-intensive Physical resources - Computers & server acces	Fixed costs service -Server rental fee -Certificates -Telephone line bill Variable costs -Marketing Budget -Marketing Budget
Key Partners	Strategic Alliances Māntsālān ATK pahelu Oy - Physical resources - Human resources Buyer-supplier relationship - Relia ble - High quality - Services	- Analytical tools	Cost Driven Structure Highly automated service Economies of scale Value Driven Creating value

Appendix 5. Questionnaire for the company owners

Questionnaire for the Kumea Oy founders.

- 1. Why was Kumea Oy established?
- 2. Can you describe your title/role and tasks in the company?
- 3. What are your personal strengths and specific skills that you bring to the company?
- 4. Who are your target customers and why?
- 5. Pick three words/adjectives to describe your company
- 6. Describe your current product/service.
 - a. In what way your services are different from the ones of the competitors?
- 7. Can you describe the implementation process for a new customer joining the service?
 - a. What does the service package include? Guidance, tutorials, support...
 - b. Who is responsible for putting the customers' data into the system?
 - c. What is the average delivery time for a customize service to be operative?
- 8. What do you think Kumea strengths are?
- 9. What do you consider the biggest opportunities for Kumea?
- 10. What concerns you the most regarding the future of the business?
- 11. If you could, what would you improve in your current company status? At any level of operations, communications and performance.
- 12. What is your current marketing plan, if you have any?
- 13. How do you promote your services? Any advertising in paper/online..
- 14. What media channels do you think would be the most suitable for promoting your company/services?
- 15. Who do you consider your greatest competitors? Why?
- 16. What are the advantages, in your opinion, when it comes to choose your services instead of the competitors' ones?
- 17. What kind of support services do you need to purchase from outside sources (server rent, etc)?
- 18. How do you define/decide the product price?
- 19. Currently, you have no office space; do you think this has an impact on potential/present customers' perception of the company?
- 20. At which point do you think it would be relevant to acquire an office space?
- 21. Are you planning to have full-time employees/workers?
- 22. The company website is still under construction, when is it going to be launched?
- 23. Do you think not having a website have an impact on prospective customers?

- a. In a negative or positive way?
- 24. Can you tell me where do you see the company in 5 years.
- 25. What would you like us to find out in this research?

1. How would you describe the experience of doing business with Kumea Oy? Translation: Miten kuvailisit yhteistyötä Kumea Oy:n kanssa?

2. Are there any additional services that you would like to receive from the Kumea Oy

Translation: Olisiko teillä tarvetta jollekin lisäpalvelulle, jonka toivoisitte Kumea Oy:n toimittavan?

3. How does the use of Tilamisu affect the operations related to room / space reserving and renting? Translation: Millainen vaikutus Tilamisun käyttöönotolla on ollut tilanvaraustarpeenne käsittelyssä?

4. What kind of advantages have you indentified whilst using Tilamisu compared to the prior system?

Translation: Millaisia etuja olette huomanneet käyttäessänne Tilamisua verrattuna aiempaan järjestelmään?

5. Have you noticed any disadvantages while you've been using Tilamisu? Translation: Oletteko huomanneet heikkouksia Tilamisu-ohjelmistossa?

6. What kind of improvements in the software would support the daily operations of your company even better?

Translation: Oletteko huomanneet ohjelmistossa parannuskohteita, joilla Tilamisu palvelisi teidän tarpeita paremmin?