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CUSTOMER INVOLVEMENT IN LEAN STARTUP PRINCIPLES: CASE OF GAME DEVELOPMENT STUDIO

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ABSTRACT

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The objective of this thesis is to better understand customer's role in lean startup methodology. The aim is to find out how customers are involved in lean startup methodology implantation and increase the likelihood of new venture survival.

This study emphasizes the usage of customers in shaping of new product development processes within companies, through iteration and constant communication. This communication facilitates the development of features that are requested by the customers and enhances the prospects of the new venture.

The empirical part of the study is a single qualitative case study that uses action research to implement the lean startup methodology into a pre-revenue venture and examines its customer involvement processes. The studied case company is Karaoke d.o.o., developing a game called kParty. The study used the theory discussed in the literature review: customer involvement (in the survey and interviews conducted for the lean startup methodology), lean principles (through the implementation of lean startup methodology) and lean startup methodology, which are the central building parts of this thesis as a whole. The thesis contributes to the understanding of customer involvement in lean startup methodology, while giving practical implications of customer orientation and product market fitting.

АННОТАЦИЯ

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Целью данной диссертации является анализ роли вовлечения клиентов в применении принципов бережливого стартапа. Задачей является исследование того как клиенты вовлечены в принципы бережливого стартапа и как это помогает увеличить вероятность успешного выживания стартапа на ранних стадиях.

Исследование ориентировано на вовлечение клиентов в процесс создания новых продуктов в компании через постоянное общение и коммуникации. Общение с клиентами позволяет развивать разработку дополнительных функций для клиентов и улучшает перспективы нового предприятия.

Эмпирическая часть работы представлена кейсом с качественным анализом, в котором используется активное исследование с целью внедрения принципов бережливого стартапа в действующем предприятии. Исследуются процессы вовлеченности клиентов на первичных стадиях существования компании. Исследуемая компания – ООО Караоке – разработчик игрового приложения kParty.

Исследование основывается на теории, представленной в обзоре литературы о: вовлечении клиентов (через опросы и интервью), принципах бережливого стартапа (через их внедрение в действующие компании) и методологии бережливого стартапа, которая является основополагающей концепцией данной диссертации. Исследование вносит вклад в применение принципов бережливого стартапа путем формирования выводов, основанных на практическом применении ориентации на клиентов и подгонки продукта под конкретный рынок.

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1 INTRODUCTION

1.1 Background

New ventures have been essential to nations economic growth and technological innovation through history (Crosby, 2000). New venture creation adds to job creation, overall economic prosperity and innovation of countries. It builds healthy, sustainable and competitive systems. Entrepreneurship is vital on many levels, but business creation is hard and grueling, in which many fail. The number of failed ventures is high, with one third of them failing within the first year and 50% failing within the first five (Shane, 2008; Wise, 2013).

This has made for a discussed topic in the academic world, with varying factors being noted for the failure or success of a new venture (eg. McDougall & Robinson 1990; Barron & Hannan 2002; Zahra 2007). Entrepreneurs are overly confident about their market entry and overestimate their chances of success (Cassar, 2014). It is well known that new venture creation is complex, with product development, financial and organizational structuration being at the forefront of the entrepreneurs task list. Adding to that, the ventures that are focused on a technological industry have additional worries. The life cycles in technological industries are much shorter than the overall industries average and the barriers to copying the products by competitors are low. Entrepreneurs who are in the technological industry function in highly uncertain and relentlessly evolving markets, in which the speed of innovation, product development, customer communication, threat of competitors, as well as other things have an effect on the business performance (Goktan and Miles 2011).

Academic literature, which emerged from these discussions, provides a very detailed outline of characteristics of successful new ventures and a well-defined backbone to the reasoning behind failed ones. McGrath introduced Discovery Driven Planning (1995) stating that it is easy to project and plan in a conventional

environment in a larger company, but that these managerial practices fall short in small, uncertain ones. Margaretta (2002) states business model quality decides the fate of the ventures. Teece (2010) describes a business model as a tool with which entrepreneurs can find out the customers wants and needs, how much they are willing to pay someone to fulfill those needs and how the organization can meet those needs most effectively. Chesbrough (2010) adds that business models are the sources of potential competitive advantage. Further, Rajgopal (2003) states that the business model drives the overall performance of the venture. Business models are positioned in the cross section under strategic management research, as well as entrepreneurial research making them units of analysis of entrepreneurial ventures (Morris et al, 2005).

Ries (2008) argues that most failures of new ventures are based to the lack of customer communication. He emphasizes the need for customer feedback throughout the new venture creation process, stating that a new venture requires in-depth understanding of their potential customers and their behaviors. Looking from the demand side, we observe that customers want a solution that is fitting to their needs (Teece, 2010). Additionally, these customer needs should be fulfilled as fast as possible, due to the nature of high-tech sectors in which competition barriers to entry are low.

Technology based ventures should focus on short-term goals, unlike other longer-term planning based industries (Kuratko, Audretsch 2009). They need to be flexible due to short life cycles. This requires the entrepreneur to learn quickly, make fast decisions and beat the competitor to market. Technology based venture are volatile by nature and application of the same rules as in corporate ventures is risky, if not a mistake (Shrader, Simon 1997). Applying a procedure with a more flexible approach, like lean startup methodology could allow the entrepreneur to meet the users requirements more rapidly and effectively due to agile and lean processes. Manufacturing and supply chain management literature discusses key advantages of the combination of lean principles and agile

methodology to increase product development speed and minimize costs and waste (Shah and Ward, 2003). Agile methodology is a process where incremental development creates requirements and solutions on the go, focusing on speed and flexibility while progressively improving the product and reducing the cost (Beck et al., 2001). Lean manufacturing focuses on short learning cycles in which a stream of continuous improvements are implemented, which minimize waste and expenses, while improving production cycle times (Shah and Ward, 2003).

Recently, these concepts started being used in other fields and disciplines, increasingly implemented in the management domain across the board. One of the new methodologies introduced includes the lean startup. Ries (2011) introduced the lean startup concept, which focuses on incorporating the customer development framework with agile and lean principles. Similar to lean manufacturing and agile methodology, it focuses on the minimization of unnecessary costs, decrease in waste and time of the product to market, increasing the products chance of survival when it inevitably does end up in front of the customers (Gehrich, 2011). The lean startup methodology will be used in this thesis, and through its implementation we will explore customer involvement and the benefits of using the methodology. The researcher found the lean startup approach interesting due to its praise in the practical implementation in technology companies in Silicon Valley. Additionally, there was a gap in the research regarding customer involvement in lean startup methodology, which seemed like an interesting topic to explore. Due to repetition we shall use the acronym LSM for lean startup methodology from now on.

1.2 Research Objective

Lean principles are applied to ventures to improve company operations and their results. There is a misconception though, which makes the assumption that lean presents fewer activities. This is usually not the case, in product development for example, maximizing value may require doing more activities, not fewer (Tyson, 2003).

Research has focused heavily on the lean principle process in systems engineering, product development and is gaining an interest of the strategic management and entrepreneur research fields. That being said there seems to be a gap in the research of customer involvement in the implementation of lean principles. Consumer based technological ventures rely heavily on customer involvement and communication (Teece, 2010).

In this thesis the researcher will look at how customers are involved in the development of a new product in lean startup methodology.

The following research question was formed:

How is customer involvement in lean startup principles beneficial to new product development in new ventures?

1.3 Thesis Layout

The Master Thesis is structured in the following way; first, the literature review is given with an analysis of related literature relevant to the subject, after which it continues to overview the key literature for the thesis – Lean Startup Methodology. Secondly, the case company is introduced. After which, the research approach and design are laid out, with the data collection methods, data analysis methods and the reliability and validity of the master thesis in question. After which the empirical results are presented and explained. The following section includes the lessons learned through the implementation of the LSM on the case company. In the final section the conclusion is provided, with the academic contributions and potential further exploration of the methods.

2 LITERATURE REVIEW

2.1 New Venture Creation

New venture creation is a process of developing new organizations, in which four variables are taken into account: individual(s), environment, process and the organization (Gartner, 1985). Further, new venture creation can be defined as a business that is looking to achieve and hold on to competitive advantage by using its resources (Oviatt and McDoughall, 1994).

Over the past decades, various studies have emerged on the topic of new venture creation and formation, with theoretical concepts and empirical studies focused on the phases, which are involved in a formation of a new venture. According to Birley (1984), the process of new venture formation happens in a sequence, from the decision to pursue a business idea, the creation of a legal entity, finding a source of funding, hiring staff and so on. Katz and Gartner (1988) created a framework of properties that are required for new venture creation: the intention to found an organization, acquiring the resources needed for formation and daily business, establishing the boundaries of the said organization, and exchanging resources across these boundaries. Vesper (2010) added on a similar framework, which says that the new venture creation process requires five key features: product idea, required technical know-how, contacts within the industry of question, resources and users.

Individuals have to overcome three hurdles in the process of becoming self-employed, those being the hurdles of aspiration, preparation and entrance (Katz, 1990). The aspiration proposes that an individual has to have an honest intent of becoming self-employed, while the preparation proposes the need for adequate pre-hand work being done, for example, acquiring the needed resources and doing market research. The final hurdle of entrance reflects on the business formation. Reynolds and Miller (1992) noted four events that indicate the

emergence of an operational business: personal commitment of the entrepreneur, financial support of investors, first sales and employment. The study of Reynolds and Miller (1992) shows that not all events are needed for firm creation and that they are not occurring in a particular order.

2.2 New Product Development

New product development is critical to the performance of a new venture, with significant variability existing in new product development scenarios (Song, Di Benedetto, 2008; Zahra et al., 2000; Brown and Eisenhardt, 1995). NPD is usually a multi-step process, which starts with the idea development and moves ultimately to the commercialization of the product. The desired product and type of innovation infers how complex the process of product development will be.

An incremental innovation in which only a certain feature is added on to an existing product may not even require a full NPD process (Zahay et al., 2011). On the other hand if we look at a radical innovation, it can require a full development process. We will look at the customer as part of the NPD process, but first we need to explore the steps of the process to understand where the customer fits in. Typically, NPD consists of generic five-stages (Crawdford and Di Benedetto, 2000):

- Opportunity spotting and selection
- Generation of concept
- Critical evaluation of concept
- Development of product
- Product launch

This five-stage model overlaps with others in NPD literature, including the ones by Song and Montoya-Weiss (1998), Urban and Hauser (1993), Johnne and Snelson (1988), while Cooper and Kleinshmidt's (1986) stage gate model provides a more in-depth approach touching on seven stages of new product

development. We will look more closely at Crawford and Di Benedetto's (2000) typical five-stage model, along with Cooper and Kleinshmidt's (1986) stage gate model as well.

Opportunity spotting and selection

This stage uses the current customers as a source of information regarding the needs of the market to create the initial new product idea. Crawford and Di Benedetto (2000) described this stage as the creation of new product opportunities through spinout of exiting products. This term could be expanded onto markets, which don't yet exist as well. Potential customers are essential to evaluating the attractiveness of the market and assessment if there is place for a new product or not. This opportunity identification and selection stage is critical in the overall NPD process, because it directly correlates with the development activities and overall direction of the product (Crawford and Di Benedetto, 2000). Generally speaking, the customers contribute a lot in this stage (Zahay et al., 2004). Entrepreneurs can assess how big the opportunities are and choose to pursue the solution or stop all activities and rethink.

Generation of concept

With the information collected from the opportunity spotting and selection stage the new venture starts with the initial product concepts and the customers can be used to provide more technically oriented feedback (Zahay et al., 2004). Customers can be used to narrow the possibilities and pinpoint the most attractive concepts.

Critical evaluation of concept

The evaluation stage requires a clear vision of a concept, provided in the generation of concept stage. It should be accepted by both the customers and internally as the most promising solution. In this stage concepts could be reveled

that solve problems or provide needs to customers that they didn't know they had. This provides a fruitful ground for radical innovation. On the other hand, it could also provide a conclusion in which the generated concepts are not solving any customer problems or needs, missing the potential markets (Zahay et al., 2004; Crawford, Di Benedetto, 2000).

Development of product

In the product development stage the transition from concepts to product development arises. The mockups and product concepts are fine-tuned and molded into finished products and services. The requirements of technologic development and market need must me reviewed again and tested on potential customers (Urban and Hauser, 1993).

Product launch

In this stage the products that were developed in the last stage are manufactured on a larger scale and start to be sold. The marketing ramps up in this stage, as does the operations department. Due to manufacturing negotiations with factories in the case of a hardware product, additional customer feedback and time constraints, the resulting product is a compromise of various trade-offs (McGrath, 1995). Even if the last stages were done correctly, there is a possibility of the product not meeting the demand on the market it was expected to. That being said, in the launch phase the biggest amount of feedback is acquired and should be used for constant improvements (Crawford and Di Benedetto, 2000).

Stage Gate Model

Stage gate model consists of seven stages: strategy setting, idea generation, screening, business analysis, development, market testing and commercialization.

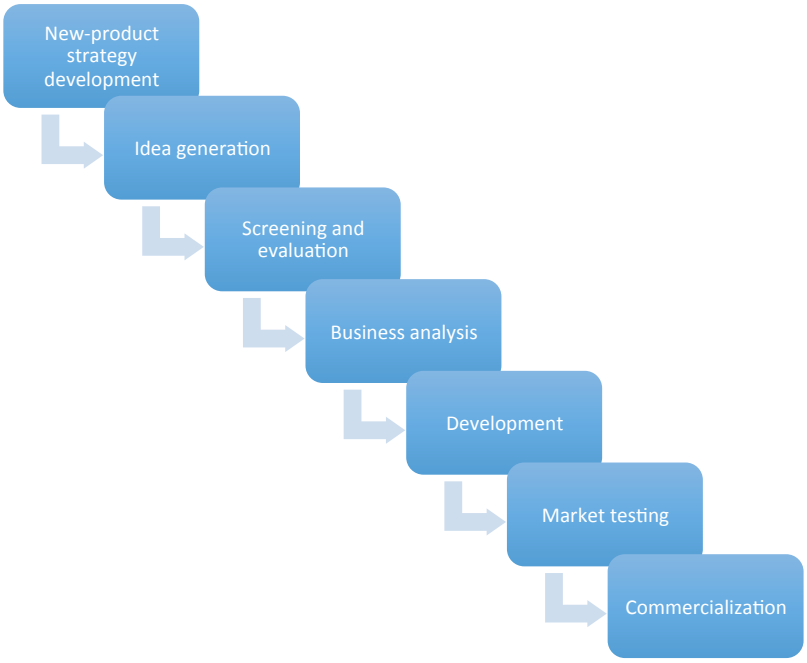

Figure 1 - Basic New Product Process (Cooper R., Kleinschmidt E. 1986)

Kleinschmidt and Cooper describe the Stage Gate in five steps; “preliminary investigation, detailed investigation, development, testing and validation, full production and market launch.” The preliminary investigation determines the general technical and market merits. It provides a quick review of market assessment and in-house assessment of technical feasibility. From this point the process moves on to the second, more detailed investigation phase. In this phase the management looks at competitive analysis, user needs, conceptual testing, additional technical appraisal, manufacturing appraisal, legal assessment and a detailed financial analysis.

If the project passes all these requirements, it’s time to move to the development stage. Even though this stage emphasizes technical work, marketing and customer feedback activities flow parallel with it. The fourth stage looks at testing and validation of the project. It attempts to validate the product, the process of production and customer acceptance. After this stage is green lit,

the final stage proceeds with full production and market launch (Cooper R., Kleinschmidt E. 1986).

This process has proven to be very successful for big corporations in developing new products, but has proven to be very limiting when it comes to a smaller scaled high-risk environment such as a new venture. This is due to the fact that customer feedback is asked for at the development stage, instead of the investigation stages. Customer involvement in new product development is considered to be a successful way of creating new business opportunities (Yu & Hang, 2010). Companies are shifting from responsive customer strategies to more pro-active customer led cultures, giving more importance to the marketing strategies in the overall business strategy.

2.3 Business Model Design

In entrepreneurial research, business models describe how value is delivered to the customer, where to invest money to sustain the firm in the long run and how to manage the venture. Zott, Amid (2010) argue that one of the most important factors in new venture building is delivering a functional, well thought out business model. Business models integrate innovation, defined business practices and routines into the venture (Cavalcante et al., 2011).

Teece (2010) states that innovation; creativity and customer communication is required when designing a business model. Key customers should be taken into focus while designing the business model of the venture (Brettel et al., 2012). An adaptive business model, which is flexible and can change through the life cycle is another recommendation made by academics (Andries, Debackere, 2007). Further, we can state that business models are a reflection of the value creation and delivery of the business. Looking at business models from an economic perspective we can say they represent a core building block which is an useful instrument in finding new partnerships and investments for new ventures, with the

business model containing all the necessary information regarding the firms plans on creating value that can generate revenue (Trimi, Berbegal-Mirabent, 2012).

Business model innovation can leverage the ventures core competences, with entrepreneurs trying multiple business models in the early stages of the venture (Brown, Gioia, 2002). Innovation inside the business model is delivered in three different ways; modifying an existing model, technological innovation allowing a business to be a first mover and demand pull, in which customers demands force the entrepreneur to adapt the business model accordingly. In the case of the technology-push, small adaptations and iterations in the model can allow the business to increase its overall performance (Christensen, 1997).

Teece (2010) makes the argument that if a venture wants to profit from its innovation efforts, it needs to excel in both product innovation and business model designing. Teece (2010) argues that early business models are usually far from ideal and always changed during the process of the formation and growth of the venture, while Shirky (2008) makes the argument that having an ideal business model isn't essential to success, arguing that flexibility is the most important factor. He states that the entrepreneur has to adapt and change the business model following the current developments in the venture. The conclusion can be made that business models take shape through a process of trial and error, with the venture not confining itself to a single solution to the business model dilemma.

2.4 New Venture Planning

Academics often associate high failure of new ventures to the lack of precision planning in advance. They argue that a systematic approach to venture business planning will yield superior performance. On the other hand there's a growing opposition stating that new ventures should be focusing on speed, flexibility and continuous learning (Brickmann et al., 2010).

There are two theories behind new venture planning, the discovery theory business planning and creation theory business planning (Alvarez & Barney, 2007). There is a fundamental difference in these two approaches; the discovery theory punishes the entrepreneurs capability to follow a set business plan if he/she decides to drastically change the strategy of the new venture compared to the initial plan, while the creation theory praises the entrepreneur for being flexible and learning while doing.

Harrison et al.(1994) propose that managers view business plans as a end rather than a mean. It is common practice in the business that the entrepreneur puts a lot of effort into the complexity of a business plan with no real intention of further implementation, rather to impress venture capitalists, banks and other sources of capital. Additionally, entrepreneurs have a distorted vision of the world, an incomplete picture that produces a simplistic analysis, which could lead to false conclusions in their analysis.

2.5 Discovery Process and Adaption

Learning in new ventures is a consequence of actions taken by the entrepreneur and as such, should be approach by a scientific framework. Harper (1996) used the Popperian model:

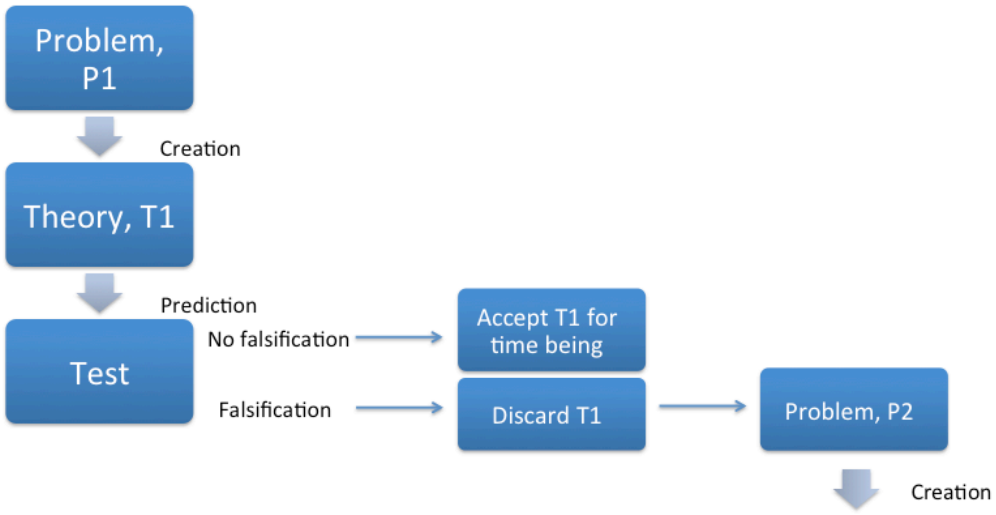

Figure 2 - Popper's Scientific Model (2005)

The model, when applied to new venture context, states that the initial start of the entrepreneurial process is when the entrepreneur locates a problem for the customer. He makes a set of hypotheses, aiming to solve the problem of the customer. These hypotheses are tested in the marketplace and in turn validated or discarded. The process usually continues through several sets of hypotheses, due to the uncertainty of the market. Additionally, even at the point of validation the entrepreneur is faced with a new set of minor problems. This process highlights the never-ending cycle of entrepreneurial learning and evolution to stay competitive in the market (Steiner L., 2007).

Sull (2004) built a similar model, which he divides into three steps; formulating a working hypothesis, assembling resources, design and run experiments. In the first step of hypothesis formulation the entrepreneur conceptualizes a model, which defines the market opportunity, the financial requirements to pursue that

opportunity and the value created if successful. Within this step a business plan could be used, but it is important to consider that there are multiple variables in the market, which can never be fully predicted due to the subjectivity of human nature. Before being able to test the working hypothesis, entrepreneurs need to acquire the resources needed. In step two Sull (2004) highlights the need for raising enough money to finance the next experiment, instead of over raising and hindering future performance of the firm. He states that the company moral could be tampered with if a large equity share is given out at an early stage, adding that raising money from the wrong sources could be fatal for a new venture.

In the last step, the design and experiment running, he states that the entrepreneur has to put the plan in action through field research, be it customer research, prototyping or closed beta. After the results of this stage the entrepreneur has to have high state of objectivity if the results are negative. The entrepreneur should be able to revise the hypotheses or give up on the new venture all together if there is no opportunity in the proposed market. Having quality, seasoned investors is very helpful at these stages, because they could give experienced advice and guide the entrepreneur.

These authors showed the need for the entrepreneur to test and revise the hypotheses, but it was in the early 2000s with the lean startup methodology, that higher focus was given specifically to new value proposition building in the new venture creation aspect.

2.6 Customer Involvement

Both academia and practice have been gaining an interest in customer involvement in new product development and innovation. Organizations can learn through customer involvement, while adding a new voice for customer requirements and needs (Prahalad and Ramaswamy, 2004). Customers come from various backgrounds and provide a very broad skillset, which the company

can capitalize on and implement in their daily product development tasks. Involving the customers in new product building has become a staple in technology SMEs (Lilien et al., 2002). Further, listening to customer needs bolsters innovation and helps create a clear picture of market needs. Resource dependence theory states that the customer needs and experiences can be used as a resource that the company is implementing to develop a new product and is essential to the success of the product (Pfeffer, 1987). This critical resource can be accessed through the customer involvement in the process of product building (Gruner and Homburg 2000). We can see in the new product literature that there is correlation between customer oriented ventures and higher new product performance (Atuahene-Gima, 2003).

Use of customers and involving them in new product development projects is considered a strategy to create new business opportunities. Companies are moving more and more from a responsive culture to a proactive culture, highlighting market strategies in the overall business strategy much more heavily (Yu & Hang, 2010). This aim of a proactive market oriented culture is to locate unmet needs of the customers and provide solutions, which in turn create future businesses (Eisenberg, 2011).

There are multiple ways of collecting information from customers, including face-to-face meetings, personal interviews, focus groups, and surveys. Additionally, electronic interaction channels and early prototype building are new alleyways of communication with customers. Through social media the company can build an environment in which the customer feels his contributions being weighted out and respected, making a community in which customers and companies work together to deliver a better product. The early prototype, also known as a minimum viable product (MVP) is used to gain access to potential customers, also known as early adopters.

Successful customer integration and involvement depends on finding the right candidates who are capable of delivering input, which contributes value to the business. These customers are called lead-users or early adopters (Hippel, 1986). They are the first batch of customers, who enjoy getting into new projects and products while in development and contribute to the business with their input. Prior studies suggest that early adopters have very different motivations and knowledge than the venture (Shah, 2006). They experience products from a different, user centric perspective, which could discover problems the developers of the new product looked passed. Further, Cohen et al. (2002) found that the early adopters opinions are most important when evaluating a new product within a venture. Early adopters have a market influence; usually being tech savvy bloggers – and can push for the adoption of the product through their networks (Hienerth and Lettl, 2011). They add value through content contribution, be it through feedback or participating in the new product development process itself.

2.7 Customer Co-creation

Ventures are starting to understand the value of the customers in content and value creation for the business (Prahalad & Ramaswamy, 2004; Hoyer et al. 2010). Customers are starting to actively take part and contribute to NPD. Consumer role is shifting from isolation towards open connections, that is, from a passive to an active role in product development. Customers are becoming more aware and are increasingly showing an interest in value creation roles in new product development aspects of the business. Due to this the concept of value creation is becoming more and more important in marketing theory (Prahalad & Ramaswamy, 2004). Due to technologic progression users are provided access to information more freely than ever and have the ability to communicate with other customers and businesses on a global scale.

Co-creation is defined as collaborative union between customers and producers in which they work together on new products (Hoyer et al., 2010). Co-

creation allows the customer to take an active role, as a participant, in the new product development process and lets him define the product itself. The benefits of co-creation for the venture can be divided into internal and external. The customer involvement in the new product development process allows the venture to create more optimized and specialized product due to the close communication with the customer (Hoyer et al, 2010). Due to this, the product has higher commercialization potential and market acceptance. Further, co-creation leads to minimization of costs. Customers are happily giving away ideas and outsourcing new product development efforts to the venture, decreasing the need for traditional market research.

Lead users bring a lot of value to the co-creation of a business, being motivated to take an active part in the NPD process. Lead users actively seek to solve their problems by trying out new solutions and alternative products. Using that to its advantage, a venture can test its prototypes and anticipate further customer needs and desires, leveraging its learning abilities.

2.8 Organizational Learning

A key concept of LSM is learning throughout the product life cycle through new value propositions. Reviewing organizational learning through the lens of organizational theory is necessary. Development of knowledge or learning is the process of reflecting after an activity and impacting future decision-making (Hurley, Hult, 1998). According to Zollo, Winter (2002), organizational learning is the constant adaptive process in which abilities are developed through adaption to the environment, with the goal being the creation of competitive advantages for the organization. Organizational learning is propagated by entrepreneurial surroundings, in which the goal is to increase the levels of innovation through flexibility and effectiveness of the ventures (Hurley, Hult, 1998).

Entrepreneurial research argues that entrepreneurship in its core is a process of learning, meaning that successful entrepreneurs need to have excellent learning capabilities (Cope, 2005). Theory states that there is a linkage in organizational learning and the discovery capabilities of the entrepreneur. Behavioral learning involves the entrepreneur to use trial and error to form understanding of the decisions made. Cognitive learning allows entrepreneurs to absorb knowledge and apply new decisions. Action learning takes place in real-time and enhances team performance and innovation by using learning communities (Lumpkin, Lichtenstein, 2005). We can further dissect the learning approaches into two, direct and indirect learning. Trial and error can be given as an example of direct learning, while indirect would be observing and adapting to the environment around the venture. Direct is explained to be harder to follow and consumes time, while indirect is easier to understand and clear to follow (Bingham, Davis, 2012).

In a venture context, two learning approaches can be interpreted. A seeding approach, when ventures use indirect learning and change towards direct later in the growth stage. The second one, a soloing sequence approach, in which ventures start with direct learning and change to indirect in the growth stage (Bingham, Davis, 2012). Soloing sequences are affective in short term, giving a good sense of current market sizing and entry barriers.

2.9 Lean Principles

The term “lean” was first introduced by Krafcik (1988) in his paper “Triumph of Lean Production Systems”. Lean manufacturing or lean production, is a multi-dimensional approach that incorporated various managerial practices, including just-in-time, work teams, quality systems, cellular manufacturing, supplier management and so on. The core idea behind lean is that these managerial practices can be combined and allow for a higher quality streamlined system which has no waste and produces accordingly to the customers demand (Shah,

Ward, 2003). It combines the principles used by Toyota and training within industry (TWI), which was a training program introduced by the United States Department of War in 1940s – compensating manpower by fast tracked internship programs that lasted 40 hours.

Toyota Production System (TPS) is structured around two main concepts: just-in-time and “autonomation” which stands for intelligent automation (Ohno, 1990). The idea behind TPS is that in the case of perfect production flows, there is no inventory; customer value features are the only product features shipped to market, making for a simplified product design, which puts effort only into the features the customer values (Naylor. et al., 1999).

According to Karlsonn and Ahlstorm (1996) lean production covers everything in an organization starting from product development to its distribution to end users. They mention that the lean manufacturing or lean production system is consisted of lean product development, lean supply chain, lean procurement and lean distribution. The focus for lean startup methodology falls under the lean product development aspects.

Lean product development offers the potential to decrease the development cycles and increase the quality of the end product. It incorporates several interrelated techniques including supplier involvement, cross-functional teams, concurrent engineering, and integration of strategic management of each development project. Lean startup methodology has set out to expand on this approach and incorporate “agile software development” principles alongside creating new key concepts for new ventures to incorporate in their business daily practices.

3 FRAMEWORK FOR LSM APPROACH

The author has decided to use the lean startup methodology literature and create a framework fitting the nature of the case study, that is, the gaming industry.

The first actors in the “lean startup” movement included Ries (2011) and Blank (2006). Blank (2006) is a serial entrepreneur who created the customer development methodology, building a model for new ventures to test and revise their hypotheses through customer interaction. Blank proposes a balance between product development and customer interaction, which in turn improves overall probability of the new product or service being used. Ries (2011), a former student of Blank introduced the bestseller “The Lean Startup” which commercialized the concepts that Blank was teaching and added new value to the frameworks. Additionally, adding on to the Lean Startup conceptualization were Furr, Ahlstorm (2011) and Cooper, Vlaskovits (2010). The method has gotten almost a cult like following in the IT industry and is subsequently being introduced to various other industries. The lean startup methods were adopted from lean manufacturing, the production philosophy that was introduced in Toyota.

Putting this into a new venture or startup context, we can define waste as any activity, which blinds the entrepreneur in his search of a business model, market fit and customer base. When looking at the lean startup methodology it can be seen it has connections to other management approaches like “Agile Software Development” and “Lean Manufacturing”.

Agile software development was introduced in 2001, representing a new approach, which focused on adaptive, evolutionary, early delivery development. The concept is known for flexibility and speed, often being used in development

teams (Martin, 2002). The case company is using Scrum, an agile software development framework for managing product development.

First, we look at Blank's (2006) Customer Development Model, which consists of four stages:

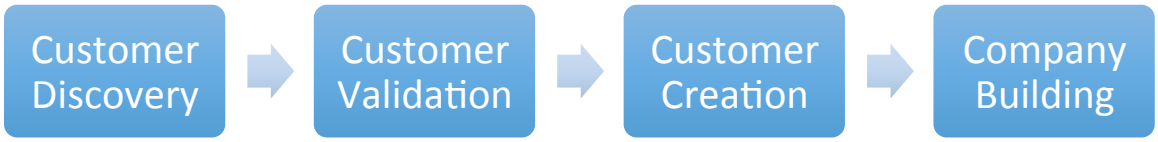

Figure 3 - Customer Development Model (Blank, 2006)

In the customer discovery stage the entrepreneur listens to the potential customer, his potential problems and desires with which he can conceptualize a market need. In customer validation the entrepreneur approaches the customer with a crude sales model and validates the market need. In customer creation stage the sales model is implemented and the initial sales are generated, driving interest towards the new product. In the fourth stage the new ventures focus is on growth and acceleration (Blank, 2006).

Ries (2011) adds the concept of building, measuring and learning in constant loop to LSM. The new venture should build minimum amounts of tasks, just enough to support the next communication with the customers. After which it should measure how the customers are behaving. Finally, the new venture should learn through constant validation of hypotheses. He highlights the need for startups to fail faster, instead of prolonging their existence for the sake of existing (Ries, 2011). The goal of the loop is adding an aspect from lean manufacturing, stating that new ventures should build, measure and learn faster. Learning is regarded as one of the core competences within LSM literature. Within LSM

every assumption, be it a business model, pricing, customer segment or market segment decisions, is seen as a new value proposition which is in turn tested. In order to test these new value propositions, it isn't necessary to have a finished product, rather focuses on the MVP version for value proposition testing.

Prototyping is the fastest way of validating a defined learning goal, which is set in the three steps of LSM implementation defined in the "Lean Startup Methodology Implementation" section.

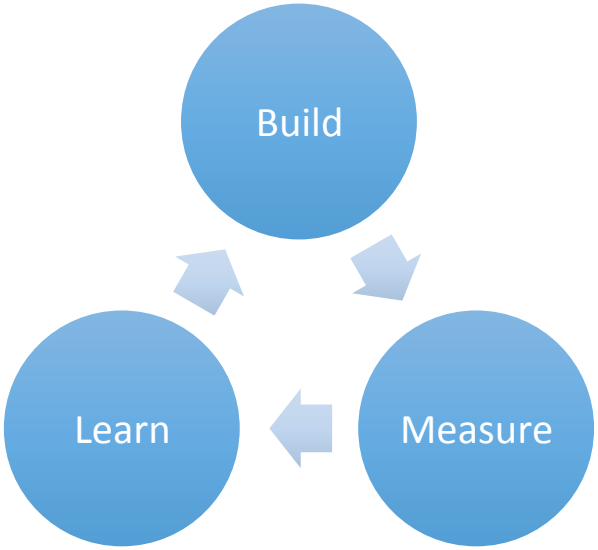

Figure 4 - Ries's Build-Measure-Learn Feedback-Loop (2011)

Figure 4 shows the Build-Measure-Learn loop, which is very suitable for situations in which the problem and solutions are unknown variables still. Implementing customer and agile development allows for better understanding of users while working on prototypes of the solution itself. Andreessen (2007) introduced the concept of a product market fit to the methodology. The idea behind product/market fit is that new ventures should focus on creating a product, which fulfills a market demand, i.e. the customers should want that product in the first place. Andreessen stated that: *"The number one reason for new venture failure is due to the lack of a market demand".*

Maurya (2011, 169-173) emphasizes ten keynotes for product/market fit:

1. Your business model IS your product – stating that the overall business model is the most important plan of a new venture, not the product it is trying to build
2. Explore different business models, prioritization of starting point
3. Understand the three stages of a new venture: A Problem/solution fit in which the venture finds out if the problem is worth solving, after which the product market fit is found, and finally in the last stage the venture grows and scales its business
4. Focus on metrics, find the right macro metrics for your new venture
5. Formulate hypothesis
6. Architect the learning process, i.e. set up a landing page for customer conversion, create a MVP and test it out on potential customers
7. Architect the speed through the MVP
8. Go only as fast as you can learn, use of agile development techniques
9. Validate qualitatively, verify quantitatively
10. Systematically test the model

Maurya highlights that while searching for product/market fit (PMF), it is critical to conserve cash and follow metrics, which will allow you to know when you actually do hit PMF. He states that most new ventures fail due to pre-mature scaling, trying to grow a business before it is ready to grow. Additionally he adds that there is the case when new ventures do not start scaling on time because they are still unaware that they have reached PMF, which allows for competitors to get into the market, start scaling and gradually take over the market.

3.1 Lean Startup Methodology Principle Guidelines

The general guidelines of the LSM are similar, providing fundamental principles, which guide the entrepreneur through the method (Ries, 2011);

Early stage customer involvement: Blank (2006) states that the new venture should not be guessing what the customer wants, rather find out through communication. He states that it is essential to having a better grasp of reality and the underlining variables that affect the potential customer. This principle highlights the need for the entrepreneurial communication with customers, understanding the customer problems and needs and the new ventures product proposition to tackle that problem.

Pivoting: A pivot is a correction in the hypotheses, due to rejection. The hypotheses in question can be related to the product, business model, or engine of growth.

Validated learning: Through trial and error an entrepreneur can measure and validate the effects of his decisions. The entrepreneur should analyze the results, reiterate and learn from the process.

Minimum Viable Product (MVP): Is an unfinished version of the product with which the entrepreneur can collect validated learning about the customer. Similarly, Furr and Ahlstorm (2011) define the Minimal Feature Set – which is represents the leanest product version, which the customers are willing to buy.

Constant Iteration: Allows new ventures to find the fastest and least expensive way to a product market fit.

Actionable Metrics: When going through the feedback loop, there will be a constant information flow to the new venture. The goal is to focus on the metrics that can lead to informed business decisions.

3.2 Lean Startup Methodology implementation

Due to every new venture being different there are changes that need to be applied to the model according to the venture at question, in the authors opinion.

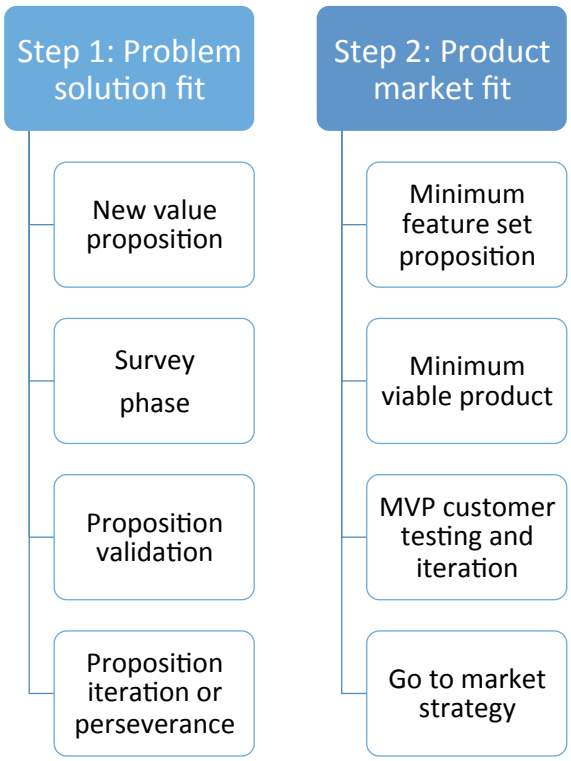

Figure 5 – LSM implementation process, own framework – built using LSM literature (Ries, 2011; Andreessen, 2007; Blank, 2006)

Figure 5 shows the lean startup process, which will be implemented in the case company. The author built the following framework using LSM literature as a guideline, for ventures in the pre-market phase.

Problem Solution Fit

The problem solution fit focuses on finding out if the new value proposition we create about a product need is correct. It consists of the creation of the initial new value proposition, collecting interviewees, proposition validation or perseverance. Additionally Blank incorporates a market evaluation in this stage.

Maurya (2012) suggests using three criteria while validating the problem proposition; need, viability, feasibility. Further, he suggests using different interviewing and observational techniques while validating the set new value proposition.

The initial new value proposition focuses on finding an existing problem for a group of customers in a market. LSM literature highlights that the venture should be addressing big enough problems, because customers are capable of dealing with small problems on a daily business without actively looking for a solution (Furr, Ahlstrom, 2011). The first new value proposition or “hypothesis” as called by Ries (2011) should be in accordance to the values of the venture and its company vision. Blank (2006) states that the problem solution new value proposition should tackle assumptions regarding the customer problem, the product, the competitors, the size of the market and the potential demand for the product. Similarly, Furr and Ahlstrom (2011) create two new value propositions in the problem solution fit, a “monetizable pain proposition” which focuses on the problem, and a “bigger idea proposition” that touches on customer group, benefits of potential solution, the competitors and what differentiates the solution to the existing competition.

The entrepreneur has to find potential customers for the new value proposition validation. The potential customers should be early visionaries, bloggers and early adopters, which are capable of adding value and new ideas to the entrepreneur (Blank, 2006). After the new value proposition is created and potential customers are found, the entrepreneur continues on to the interviewing process and the validated learning. Three potential mediums are applied for the gathering of information, email, telephone, or survey. Blank (2006) argues that if the response rate in a survey is lower than 25%, a real problem wasn’t found and the proposition should be reiterated upon. Furr, Ahlstrom (2011) state that if the response rate to emails and cold calls is higher than 50% a real problem is found and the entrepreneur can validate the problem solution value proposition.

The entrepreneur should try and minimize the amount of selling and focus on extracting as much information from the customer as possible. The length of the interview or survey is dependent on the complexity of the new value proposition. In some instances it is recommendable to do several interviews with the same

customers, with the first one focusing on the problem, while the others touch on daily activates and current market solutions. Blank (2006) highlights that it is important to be objective during interviews and avoid drawing conclusions from small fields of data. Further, Furr and Ahlstrom (2011) make the argument that the opinions could change according to the position of the customer in their daily jobs. They label the users in three groups: the end-user, the technical user and the economic user.

Blank (2006) argues that the venture should be trying to find out what kind of solution the customer is looking for while validating the new value proposition. Further, he highlights that the purpose of the new value proposition is to locate the customers who are willing to buy the product you are developing. He states that even though you can validate potential features and get feature requests the main goal is to fully understand the pain-point and find customers who are willing to use your product. If the response rate of the potential customers is low or negative feedback is received, the entrepreneur should seriously consider finding a new problem to solve. In the situation that the proposition is validated the entrepreneur moves to the market attractiveness evaluation.

After validating the new value proposition, the entrepreneur should do research on the market, its attractiveness and the potential barriers (Blank, 2006). Three things should be considered when evaluating the attractiveness: market size, market growth and the competition. When determining the size of the market, it is recommended to evaluate the percentage of customers, which have the proposed problem in the said market. Competition should be assessed thoroughly, with the focus being on understanding if the proposed problem is being currently addressed and in what way. Further, Blank (2006) highlights the importance of looking at industry trends, key players, unresolved needs and potential barriers. This information can be received through customer communication and secondary industry data analysis.

Product Market Fit

The LSM literature describes this stage as an iterative, learning process in which the goal is to use prototype building to create a product, which meets customer's needs with the least amount of effort and financial investments. The venture creates a minimum feature set proposition and builds a minimum viable product, with which it can approach customers and iterate according to the feedback.

Firstly, the minimum feature set proposition is built, which goal is to deliver a prototype of the product with the least amount of effort put into it, but still capable of conveying the future end product to the customers. Blank (2006) already touched on the feature set in the first new value proposition interview/survey phase and continuously develops the feature set throughout the LSM process. After the minimum feature set proposition is built, it is important to contact and communicate with the potential customers beforehand. The feature set is then developed into a MVP version of the product. Ries (2011) argues that the MVP should be scalable up to the production levels.

The MVP does not need to be a usable version of the product, it could be a dummy mockup version used to explain the product to the potential customers being interviewed (Ries, 2011; Blank, 2006). It gives the entrepreneurs equal understanding if the proposed solution are fulfilling the customer need or not. Blank (2006) highlights that it is important for the venture to stress to the potential customer that the product is in production and not ready for sale. The minimum viable product shouldn't be compared to traditional NPD, in which higher quality is an indicator of success (Blank, 2006). MVP versions of the product with lower quality are just as useful for understanding the customer desires in feature building as high quality ones, if not more. The prototype is used to learn from customers to better understand their needs and desires, with a real product in hands instead through hypothetical questions. Further, the real product can spark

additional questions by customers that wouldn't have arisen through the interview phase without it. Customers often do not see or fully understand the problem, until it is in front of them (Ries, 2011).

LSM literature propagates iterative processes to test the MVP versions of the product. Ries (2011) uses the Build-Measure-Learn loop (figure 4) to test the MVP version, with the goal being minimizing time and effort put into loop. In the first phase of the loop, building is based around the minimum feature propositions. Second stage is dubbed measuring, in which the entrepreneur focuses on understanding the customers reactions and propositions to feature building. In final learn stage, the entrepreneur interprets the data acquired in the measure stage and makes adjustments to the minimum feature set propositions are restarts the loop.

When interviewing the customers in the product market fit stage, an interview guide should be built to test the pain points, entrepreneur's solution, feature recommendations, and minimum feature set validation. Entrepreneurs should not make decisions based on small pools of customers, but use multiple customers to verify feature changes or recommendations. After four to six interviews a pattern often starts to emerge with which the entrepreneur can revise its minimum viable product (Ries, 2011).

Finally, when the data is analyzed the entrepreneur needs to decide if he will persevere of pivot. Ries (2011) argues that not enough entrepreneurs pivot their ventures accordingly, after seeing signs of potential danger. He states that ventures often use vanity metrics, which provide false hope to the ventures potential performance, for example looking at the amount of overall traffic coming to the website instead of the clicks on relevant content. Further he argues that entrepreneurs build unclear hypothesis in which it is not understandable what the results are and if it has been validated or not. In the end he says that

entrepreneurs often have a fear of failure and rather persevere, even though it will just lead to the failure of the venture in the forcible future.

After validating the product market fit value proposition, the go to market strategy is built. Blank (2006) highlights the need of gathering information about customer buying tendencies, approach towards competitor's products and other players in the industry. This can help better understanding the customer's preferences, awareness of the product and interest in the product. Additionally to validating the feature proposition, creating a MVP and creating a go to market strategy, in this stage the venture validates value propositions regarding the pricing structure and the sales channel, creating the initial business model. In Table 1, we look at the LSM main concepts and goals they are looking to achieve in a new venture.

Table 1 - Lean startup concepts revised, based on lean startup literature (Ries 2011; Maurya 2011; Furr, Ahlstorm, 2011; Cooper, Vlaskovits, 2010; Andreessen, 2007; Blank 2006)

Concept	*Category*	*Main Goals*
Operation	Efficient	• Prioritize goals • Increase productivity • Increase efficiency • Decrease cycles • Increase speed
	Minimize cost	• Minimize efforts • Reduce waste • Assess potential risks • Minimize risks
	Continuous Improvement	• Base decisions on learning • Driven by metrics • Optimize

		• Increase speed of iterations
	Customer focus	• Validation of every feature • Customer development • Customer discovery • Customer validation • Creation of value for customers
Experimentation	Limitation	• Commitment to new value validations • Constraints of new value propositions • Goal setting for new value propositions • Unexpected variables in new value propositions
	Execute	• Running new value propositions • Applying • Getting out of the building • Talking to customers on a daily basis • Decreasing cycle times
	Revise	• Testing • Failing • Gathering relevant data • Measuring • Double checking • Focus on learning

		instead of scaling in beginning
Iteration	Strategy	• Document strategy • Document vision • Build company towards vision • Shape culture to fit vision
	Manage	• Build-Measure-Learn • Rapid iteration • Small tests, fast results
	Adopt	• Iteration • Pivot • Change in strategy
	Learn	• Customer feedback • Learning goal • Interviews • Surveys • Maximize learning • Problem interview
Prototyping	Prototype	• Landing Page • Minimum viable Product • Minimal feature requirements • Incomplete products • Revisions
Validating	Validate	• Concepts • Customers • Market Demand • Pricing • Problem • Value propositions

Table 1 shows the main goals which the entrepreneur is trying to achieve with the implementation of lean startup methodology in their venture. It highlights the minimization of unnecessary costs, decrease of waste and time of product to market, which was adopted from lean manufacturing. Additionally, it advocates iteration and continuous improvement, which is taken from agile software development. Lean startup methodology further expands on these concepts by adding prototype testing through the MVP and validation of new value propositions to bolster the learning of the entrepreneur.

4 RESEARCH METHODOLOGY

In this section the research methodology is described. First, the case company is presented in detail. After which the research approach and design are built up and supported by literature. Further, the data collection method is described and presented. Finally, the data is analyzed and presented.

4.1 Case Company

The researcher has opted to use his company, Karaoke d.o.o., a small game development studio based in Zagreb, Croatia. The company was founded in 2014 and has been subsequently working on its first project, kParty. kParty is a competitive multi-user karaoke game which allows real time singing sessions. It is built on Angular.JS with HTML5, using node.JS as the server side scripting technology and WebRTC for the audio syncing. Further, it is the first online karaoke game which allows real time singing sessions for users. The game has been in development from May 2014 and was in alpha stage while the master thesis was being conducted.

The company has two additional co-founders alongside the researcher. They are both from Belgrade, Serbia and currently situated in Belgrade. Additionally, the company has two employees, located in Belgrade, who take on the positions of part-time developers. Karaoke d.o.o. has acquired a seed investment before the development phase and has subsequently started development of the application.

Due to having set deadlines for product launch, the company has opted for a stage gate like product development model with agile software development. This was due to the fact that the investors were happy with the vision of the company and product proposal, which limited customer communication in the early stages of development. This lack of communication with potential customers and early

adopters seemed like an interesting research topic. In this master thesis the researcher will gradually implement LSM into the case company and portray the results and findings.

4.2 Research Approach and Design

This thesis explores customer involvement in LSM implementation in a case company.

The author has opted for a research question of exploratory nature, in which he implements LSM and creates new value propositions. The thesis explores customer involvement through its various phases and how it benefits the venture in their product development processes when applying lean startup methodology. Case studies are preferred when “how” and “why” questions are being asked and when the study is a phenomenon within a real-life context (Yin, 2009). A single case study approach was implemented, being that it was an appropriate research design.

Some academics have stated a distain towards case study according to Yin (2009). It is perceived that a research bias is possible, which in turn altercates the direction in which the findings are generated. There is space for conclusion biases as well. Further, the method provides little basis to scientific generalization. That said, Yin (2009) argues that the goal of case studies is not to do statistical generalization, but to expand and do analytic generalization. In the case of this thesis, the goal was to explore customer involvement benefits and expand LSM by seeing its limitations in a specific scenario.

4.2.1 Action Research

The research strategy of the thesis can be presented as action research in which the researcher takes an active and interactive approach to problem solving (McKay & Marshall, 2001). Action research was an appropriate approach for the case, because of the real-life implementation of the LSM (see figure 6). The purpose behind action research is to contribute to a scientific field while solving real life phenomena. The researcher took an active part in the implementation of the LSM, while at the same time, standing back and analyzing the process to contribute to entrepreneurial decision-making processes.

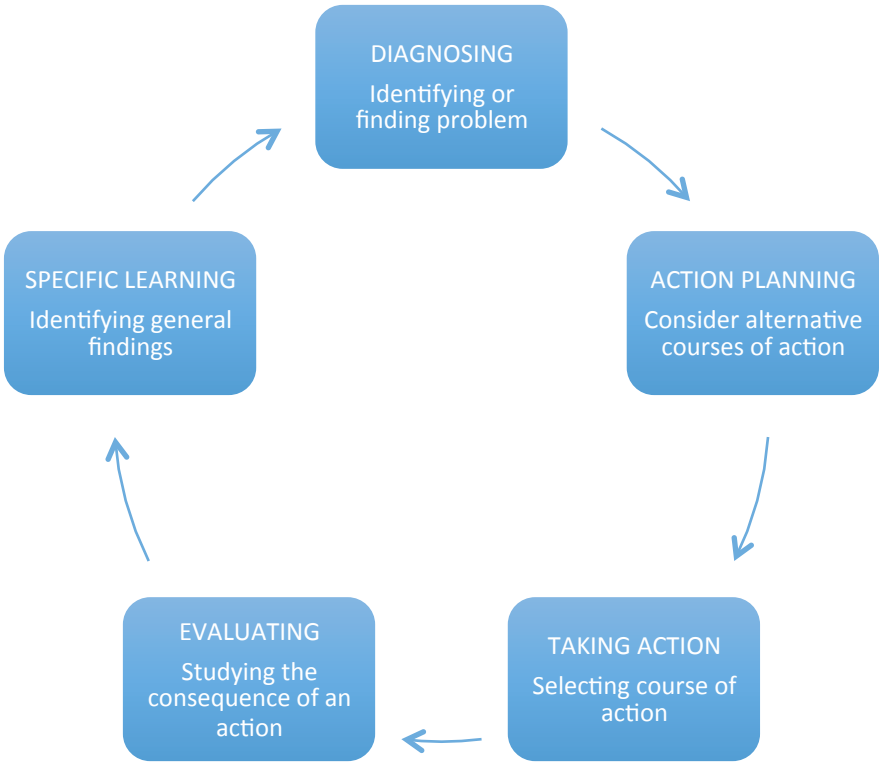

Figure 6 - Action Research Model (Elden, Chrisholm, 1993)

Action research was implemented for the single case study, in which a diagnosis of a problem was given within the case company. Through the involvement of the author as a co-founder, insights into the company structure, culture and context were available. Potential has been seen in the implementation

of LSM principles into the company to improve customer involvement and communication, which in turn helped in validating the problem solution fit and product market fit for the company. Further, the implementation procedure was monitored, evaluated and modified if the results were unsatisfactory.

Action research has received some criticisms from researchers, who argue that there is a potential of the research design spiraling from general investigation cycles into more specific cycles. They argue that it cannot be fully planned or channeled toward a particular path. Checkland (1981) states that the researcher can set broad aims and objectives, but cannot be confident in the research design because the responsiveness is highly dependent on situational adaptation.

As the form aims to develop the understanding of the context and promote change, an exact map of each cycle is impossible to anticipate and plan at the beginning of the research (Zuber-Skerritt, 1992). It is also sometimes critiqued from the positivist viewpoint, stating that the method lacks precision and quantifiable results. However, Zuber-Skerritt (1992) argues that the method is not set out to be unbiased and objective, but to deliver a subjective viewpoint and emergent theory from the interpretation of human behavior within the context under investigation. In the case of this thesis, Zuber-Skerritt (1992) argument was used to validate the reasoning for using action research. The goal was to look at LSM implementation on the case company, which is subjective and unique in its own right. Further, the context has to be taken into account and through the interviews with co-founders and potential customers a subjective view of the situation is given. That doesn't bar the results as not reliable, but gives room to interpret the human behaviors and perceptions of the case company. Emergent theory is created, with practical and theoretical contributions created, with which the merits of the approach are proven.

4.3 Data Collection

The data collection method can be determined by the nature of the studies and the overall objectives proposed in the study (Hair et al., 2003). This study uses methodological data triangulation for its data collection (see figure 7).

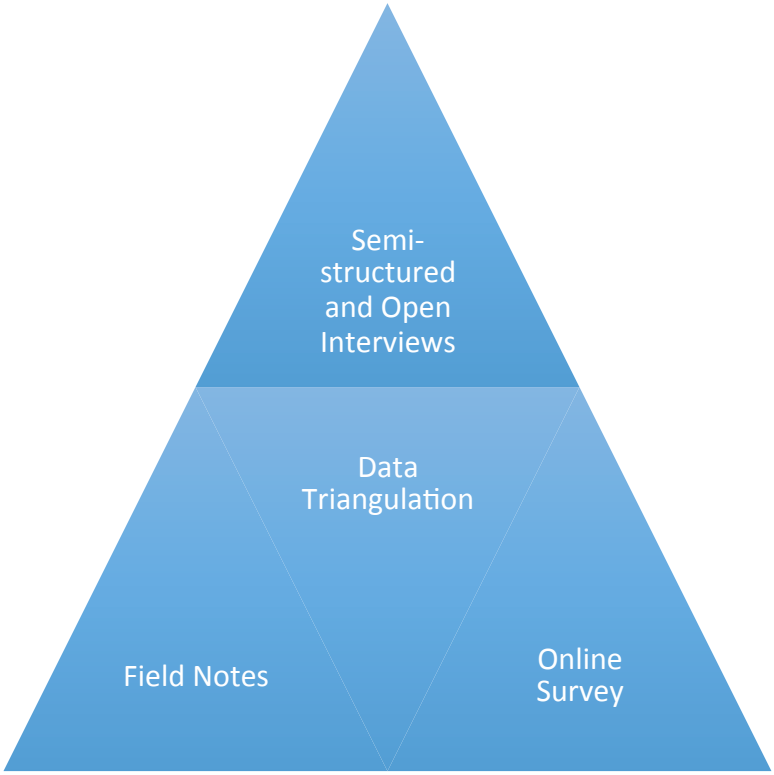

Figure 7 - Data Triangulation Analysis

Data triangulation uses multiple sources in the same study for the creation of validations. Triangulation is argued to increase the single case study accuracy, by using multiple methods in studying the same phenomena (Smith & Kleine, 1986). Data triangulation is divided into three types: time, space and person (Denzin, 1978). Time represents the amount of time used for data collection; space is the environment from which the data is collected; person represents the people who are involved in the data collection itself (Begley, 1996). Further expanding on the three types of data collection we see theoretical, investigator, analysis and methodological triangulation.

In our case, methodological triangulation is used. Methodological triangulation represents the use of two or more methods to gather data (Mitchell, 1986). Methodological triangulation is widely used in social sciences. In our case this triangulation occurs at the data collection design, which can be seen in figure 7. Three data collection methods were used; semi-structured and open interviews, online survey and field notes.

4.3.1 Interviews

Data was collected for the lean startup methodology process by doing interviews with potential customers attained through the mailing list on the landing page. The potential customers were invited to use the minimum viable product of the application and give their opinions regarding the features in the application. These were structured so that the main focus would be the individual perceptions of potential customers. The interview questions were created in accordance to LSM literature and used for the structuring of the overall interview. Yin (2009) highlights that the researcher should be perusing a line of inquiry and remaining unbiased throughout the interviews. Five 30 to 45 minute long, semi-structured interviews were conducted.

The five potential customers who replied positively to the interview invite were first invited to use the application for 10 minutes and were shown the main features through the game flow, guided by the interviewer. The topic of the interview included LSM, value propositions, features and customer involvement. The interview included 12 semi-structured questions and lasted between 30-45 minutes. These data was used to validate the second new value proposition, which focused on the product market fit. The interview questions can be found in the APPENDIX, while the details and conclusions of the interviews will be in the section of empirical results. Due to the interviews being semi-structured, constant note taking helped with keeping the needed information in focus during the interviews. The amount of interviewees was estimated by data saturation, which

Bowen (2008) explains as *"…bringing new participants continually into the study until the data set is complete, as indicated by data replication or redundancy. In other words, saturation is reached when the researcher gathers data to the point of diminishing returns, when nothing new is being added".*

Additionally, two open interviews were also conducted with the co-founders of the venture. The interviews included 10 open questions and were 30 to 45 minute long, with the main topics being LSM, product development and customer involvement. Through this interviews it was found out what the co-founders think of customer involvement and the applicability of LSM to the business, current opinions on the customer involvement and what are the potential future implications of the application of lean methodology for the business. The interview questions can be found in the APPENDIX, while more details regarding the results and conclusions can be found in the empirical results section.

4.3.2 Field Notes

Field notes were used to follow the daily process during the implementation of the principles. Considering the author is the co-founder and is involved in the daily business of the venture, a salience hierarchy was used. In salience hierarchy, notes are taken of observations that are found the most beneficial and interesting to the topic, unlike the comprehensive note-taking approach in which the author records notes systematically and comprehensively describing everything that happens during a certain time period (Emerson et al., 1995).

The field notes were incorporated in the study because it helped reconstruct daily occurrences in an effective manner, without missing details or changing perceptions of events due to repetition of daily business. The field notes were kept in an open manner, mostly focusing on the lean principle implementation and customer involvement in the process. They were used to additionally validate

some aspects of the LSM implementation, which may not have been highlighted during the interview and survey processes, but were thought to be important to mention in the discussion and conclusion sections.

4.3.3 Online Survey

A deductive qualitative survey was sent to 302 potential respondents, 250 being Facebook fans and 52 being on the kParty mailing list. The topics of the survey included LSM, product/market fit and customer feedback. The survey took approximately 5 minutes to fill out, having 7 questions and was conducted online, over the SurveyMonkey web service. The data was used to reinforce the first new value proposition, which focuses on problem solution fit of the case company. The survey questions can be found in the APPENDIX, with 99 responses being received in the one week of the survey being open. This gives a response rate of 32.78% Further, the results will be portrayed in the empirical results section of the thesis.

4.4 Data Analysis

Eisenhardt (1989) states that data analysis is the focal point of theory building for case studies. She adds that it is the hardest and least coded part of the data process. The collected data, which included a survey, sent 302 potential respondents, two open interviews with the co-founders; five semi-structured interviews with early adopters and notes taken were grouped into three groups of codes/themes – the first one focusing on the first step of LSM implementation, the problem solution fit in which the survey and the field notes were used. The second one focused on the second step of LSM implementation, the product market fit in which case the interviews and field notes were used. The third coding group used the data acquired from the two open interviews conducted with the co-founders. The themes for all three coding groups were generated through the LSM literature.

Data Set	Means of collection	Amount of data collected
Survey	Web service – SurveyMonkey	99/302 responses -> 32.78% response rate
Semi-structured interviews with potential customers	Skype	5 interviews
Open interviews with co-founders	Skype	2 interviews
Field notes	Notes	Two pages of notes

Table 2 - Data collection summarized

The analysis prioritized on the customer involvement in the lean principle implementation in the company and how it improved the overall new product development process for the case company. LSM literature was used, alongside academic research related to lean practices to find the most appropriate practices regarding customer involvement and implemented in the companies daily business. The field notes were used to ensure important aspects weren't forgotten and/or neglected.

4.5 Reliability and Validity

Ensuring the study has reliability and validity is needed to draw conclusions from the research and it being applicable in future research (Carmines & Zeller, 1979).

There are three factors that ensure validity according to Yin (2009); construct validity, internal validity and reliability. With construct validity the researcher is

trying to ensure that the study measures the correct concept that is being studied (Yin, 2009). Yin argues that the researchers should use multiple sources of evidence, a chain of evidence and interviewees reviewing the interviews to insure construct validity. In the case of this research, multiple data sources were used; open interviews with the co-founders, semi-structured interviews with the closed beta applicants, an online survey and field notes. Further, a chain of evidence was created through the field notes of the daily business practices within the firm. Due to time constraints, the interviewees didn't review the interview transcripts.

Internal validity relates to how well the relationships between the variables are defined, especially to avoiding confounding, overlapping of independent variables affecting the results (Yin, 2009). In the case company the implementation of lean principles reacted in a specific way on customer involvement. The internal validity is considered high in the case study due to being able to control and mitigate the process.

Reliability sees if the results of the study could be replicated or not. A study has high reliability if it could generate the same results if repeated with the same object. A general rule in qualitative analysis is that reliability is lower due to the subjective nature of the data collection. It is true with this Master's Thesis, even though field notes were used and specific, outlined steps were followed during data collection and analysis, the reliability is considered low due to the potential customers being anonymous and the data collection being done within a specific time frame in a ever changing industry.

5 MAIN FINDINGS

The empirical results from the case study of Karaoke d.o.o. is presented in this section. The results show the implementation of two steps of the lean startup methodology process, problem solution fit and product market fit, which can be found in figure 5. Further, it summarizes findings and experiences during the LSM implementation, giving an explanation for this specific case and the customer involvement aspects.

5.1 Customer Development Through Problem Solution Fit

The first step in the LSM process, problem solution fit, consists of four phases.

The first phase is the new value proposition or “hypothesis” building, in which the initial problem is identified and new value proposition is created. The second phase is finding and communicating with suitable potential customers. The third phase is validating the new value proposition through customer communication. Finally, the fourth step deals with market attractiveness and assessing the potential customer scope and size. The value proposition can be rejected and iterated upon if the customers reject it or the market seems unattractive, there are barriers of entry too large to handle and so on.

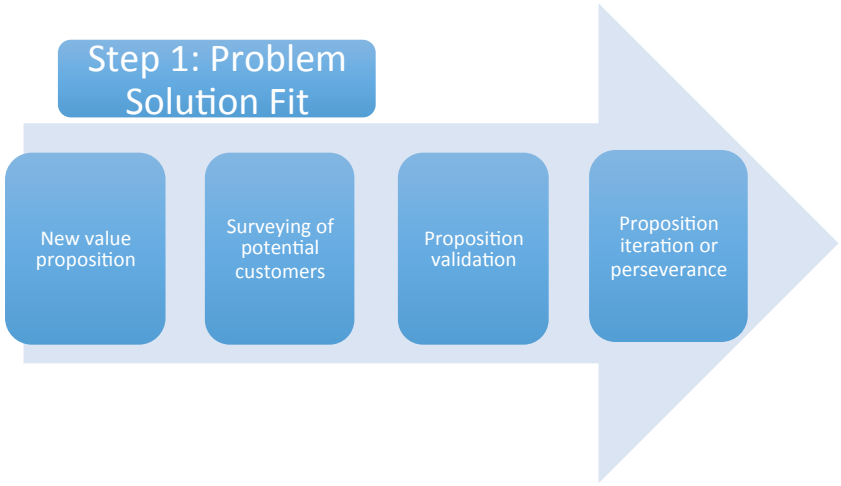

Figure 8 - Problem Solution Fit framework used for Karaoke d.o.o.

In figure 8, the problem solution fit framework used for Karaoke d.o.o. is presented. The nature of the gaming industry is different than regular consumer technology, for which case a hybrid framework was used. In the framework, the new value proposition was built upon interest of customers in the application, not necessarily due to problem identification. The thesis touches upon this topic in the third phase of problem solution fit – the proposition validation.

Phase 1: New Value Proposition

Due to the case company being already in late development and having a closed beta of the application, the value proposition was subsequently developed at an earlier stage. That being said the LSM process wasn't applied beforehand and the problem solution fit could still be used. The value proposition was based on the main features of the application:

- Real-time singing sessions online
- Competitive ladder system

Additionally, an overall assessment of interest in the idea and understanding of the presentation was included in the customer survey, which was used to test the new value proposition.

The new value proposition was structured: 'is there an interest for an online competitive multi-user karaoke game with real-time singing sessions'. In phase 2, the data collection will be explained for the new value proposition validation.

Phase 2: Surveying of Potential Customers

LSM advises use of relevant communication with customers which have used similar products and/or require a problem being solved. With these guidelines, some filtering was done when picking the sources for the survey pool. The beta application mailing list was used, along with the Facebook fan page of the application to survey the potential customers. The overall pool of potential

respondents was 302, 252 Facebook fan page followers and 50 mailing list followers.

The questions were devised to focus on idea generation, main differentiation features from competition and the interest of application usage. The survey was structured to be short and comprehensible, but still a source of relevant information usable for new value proposition validation. The questions of the survey can be found in the appendix.

The surveying was available for one week and attained 99 out of 302 potential responses, making for 32.78% response rate. The survey had 58.33% responses by females and 41.67% by males, with the dominant age groups being 18-24 with 42% respondents and 25-40 with 55% respondents. The survey used the Likert scale for scaling responses, with 1 being the lowest and 5 being the highest possible response option.

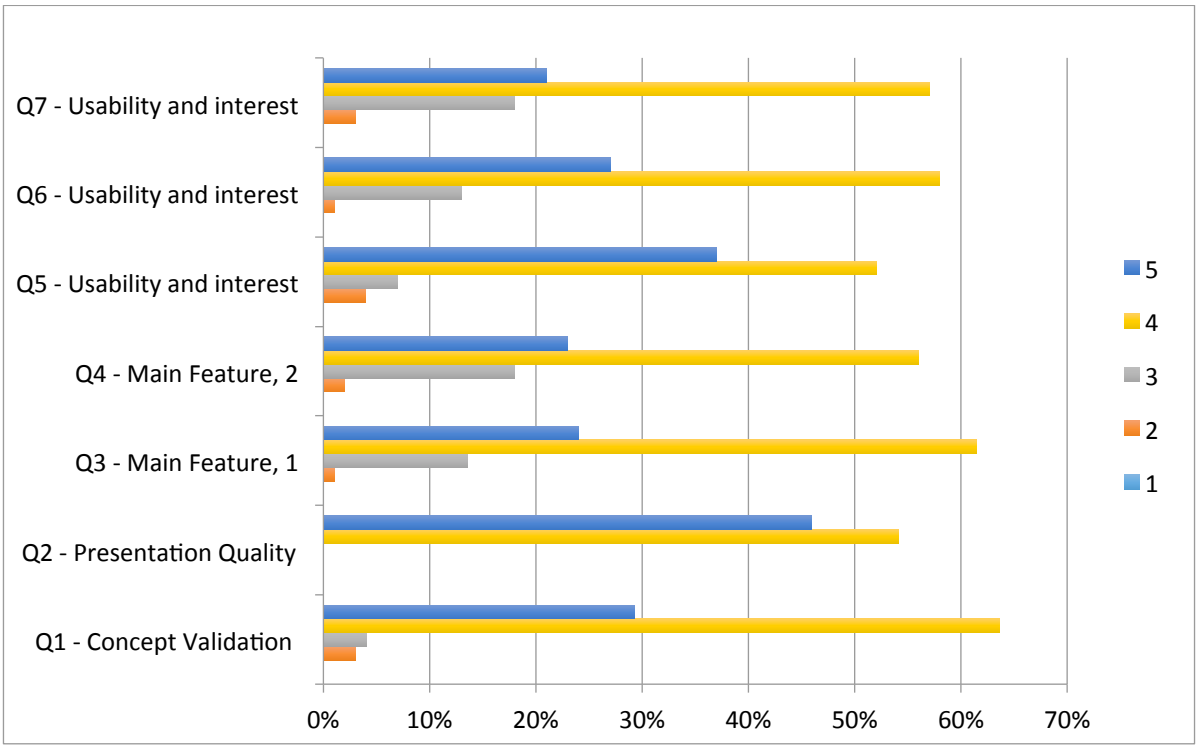

Figure 9 - Survey Results

The results can be found in figure 9, and as mentioned before the questions can be found in the appendix under ‘SURVEY’. The first question focused on the concept and idea validation of the application, asking the respondents if they find kParty novel and are interested in using the application. Majority of the answers fell into the ‘somewhat interested’ and ‘very interested’ categories, with 94% of responders answering with those two responses. The second question touched on the presentation of kParty, is the concept clearly delivered and made understandable. All the responses fell under 4 and 5, that is, under ‘understandable’ and ‘very understandable’ categories. Question three tackled the first main feature, live singing sessions, asking the respondents if they think it is important for the user experience to have this feature in online karaoke games. The responses varied between 3, 4 and 5, with 14% falling under ‘undecided’, 61% under important and 24% under very important. The second feature question, or question four in the survey, asked the respondents about their opinion on the competitive ladder system. Similarly to question three, the weighted average was 4, with 18% falling under ‘undecided’, 56% stating that ladder play was important for karaoke games and 23% saying it was very important.

Question five asked the respondents if they would be interested in testing out the kParty application in the closed beta. The majority of the answers fell under 4 and 5, with 52% respondents saying they are ‘interested’ and 37% stating they are ‘very interested’ in testing out the application in the closed beta. The sixth question asked if the respondents would invite friends to play the game with them, through their friend lists on Facebook. The majority of the respondents answered with 4 and 5, stating that they probably or definitely would. Finally, the seventh question asked the respondents would they use the ladder system introduced in the application and compete with other users who they are potentially not acquainted with. The answers varied between 3, 4 and 5, with 18% of the respondents being undecided, 57% stating ‘probably yes’ and 21% saying they definitely would.

Phase 3: Proposition Validation

After the new value proposition was created and the customers were surveyed, it is time to validate the new value proposition. The main challenge in this phase in the LSM is the decision to continue and persevere or pivot and iterate. As mentioned earlier, the approach to the new value proposition was modified due to the nature of the gaming industry. If we approached it as a customer need, our opinion is that it would almost always be denied because of gaming not being perceived as a necessity, but as a mean of enjoyment and entertainment. This prompted us to focus on customer desire and willingness to use the application, validate the value proposition by highlighting the applications main features, which differentiate it from the competition.

The first thing Blank (2006) notes is that if the response rate is lower than 20%, there is probably a reason for pivoting already because if the potential customers aren't exited about taking the survey/taking an interview that is enough evidence in itself. The 33% response rate seems appropriately high to move on. By examining the survey results we can see there is a clear interest in the usage of the application. It can be argued that the relatively high indecisiveness of the respondents when it comes to the feature questions can be a sign for some worry. This could be accredited to not understanding the questions fully or being interested in one feature, while not too interested about the other.

The usability and interest questions further validated the prospect of the interest in the application. The very high interest in the closed beta testing showed a high interest in early user adoption and could be an indicator of interest in customer involvement in the product development process. Adding to that, the high number of users interested in inviting their friends to use the application with them adds to the argument that a interest in user involvement is evident through the survey results. Finally, the ladder system seems to be moderately accepted, with a slightly high level of respondents not being sure if they would use it. This

can be accredited to the lack of understanding of the concept mentioned before when talking about the main features, but could also be an indicator that a smaller portion of users aren't confortable with playing with users who they are not acquainted with and would like to play strictly with people from their friend list.

We can conclude that the new value proposition was validated, with the response rate being high and the respondents showing a sincere interest in the application. The next phase includes the decision to iterate or persevere, along with looking at market size/attractiveness.

Phase 4: Proposition Iteration or Perseverance

With the new value proposition validated and receiving positive feedback from the survey, the decision was made to persevere. This was expected, because the company was already in full swing development and customer were involved in a lesser extent through verbal communication over friends, family and acquaintances. That being said, quantifying this and having a clear feedback from customers adds a lot of value to potential communication and marketing of the application in the future. It also allows for the entrepreneur to be more confident in himself, because he knows he is, at least in theory, building something the customers want to have.

When estimating the size of the market, we investigated revenues of competition and their user base on different platforms. Further, we looked at different karaoke solutions, including standalone websites, platform based applications, mobile applications, console solutions and so on. The online karaoke market segment was perceived to be big enough for Karaoke d.o.o. to pursue. The competition was existent, but seems to be stagnating and the barrier of entry to the market seems low. The technology that Karaoke d.o.o. used for its application is relatively new and has yet to be introduced to an online karaoke game, which can be seen as a competitive advantage.

5.2 Customer Validation Through Product Market Fit

The second step in the LSM process, product market fit, looks at how the product satisfies the demand of the market. We used interviews to determine the product market fit and test the MVP proposition. This stage consists of four phases, the first phase being the creation of the minimum feature set proposition with the help of the data acquired in the problem solution fit stage. The second phase is the development of the minimum viable product with which the interviewees can be hands on with the product, but at the same time minimizing the expenses and time put into development. The third phase is the MVP customer testing in which the customers use the MVP and are interviewed. The fourth phase is the development of the go to market strategy and getting ready to launch the product to market.

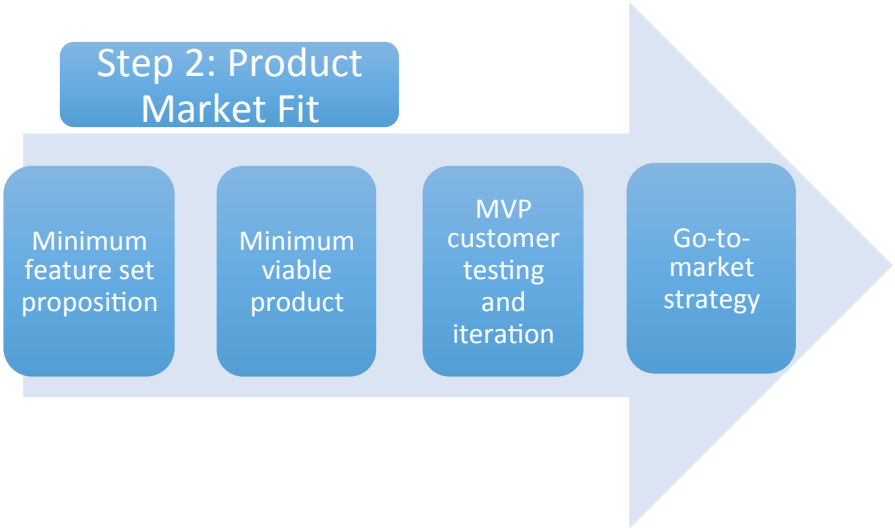

Figure 10 - Product Market Fit framework used for Karaoke d.o.o.

In figure 10, the product market fit framework for Karaoke d.o.o. can be seen. The beta version will be used for the MVP, since the product is already in deep development. This will allow for more in-depth assessment, but could also be dangerous if the product features are found unnecessary or unwanted by the beta applicant testers. That being said it is better to know it before the product launch,

but in an ideal scenario it would be best to allocate and test these LSM new value propositions in the very early stages, before development has started.

Minimum Feature Set Proposition

In the previous phase we surveyed potential customers and used the data to validate the new value proposition that was set. We used the data again for the minimum feature set proposition. Due to the application already being in development, the feature set is existent and used in Scrum and by the developers to have a clear vision of what needs to be done at each step. With the two main features being one of the topics in the survey, these will be the main focus of the minimum feature set proposition building. The application currently has a casual game developed, with the voice integration and song matrices, along with other smaller features. The ladder has yet to be integrated and is fairly complex to make. With the customers showing a larger interest in the casual game mode win which they can invite their friends from the friend list, the decision was made to do the MVP without ladder play. Furthermore, it was decided that the minimum feature set proposition included a casual game mode with real time audio and chat communication, and a limited list of song matrices integrated in the system.

Minimum Viable Product

After establishing the minimum feature set proposition, the minimum viable product was created to be tested on the beta applicants. The goal was to see if the potential customers would accept the minimum feature set proposition or if there would be a need to change and adapt the main features before launch of the application. This step was conducted throughout the development process of the company, spanning for nine months and ultimately delivering the beta version of the application. Usually this step would be perused in a less timely and costly manner, but do to the nature of the case it allowed for the use of an almost finished product to be tested. The audio technology, which was mentioned as a

competitive advantage is Web Real-Time Communications (WebRTC), which was open sourced be Google and supports browser to browser voice communication and peer-to-peer file sharing without external plugins. The song matrices used for the MVP version are of LRC format, which is a text based format synchronizing song lyrics to audio files.

Five beta applicants for the mailing list were selected to test out the application and give their thoughts on several topics including; the main features, the value proposition and improvement suggestions. The questions from the interviews can be found in the appendix under ‘SEMI-STRUCTURED INTERVIEWS WITH BETA APPLICANTS’.

MVP Customer Testing and Iteration

The interviewees were picked on random through the mailing list on the landing page of the application for the beta testers. They were given an explanation of the application and the interview taker went through a session in the game with them. This took approximately ten minutes, in which an open format of communication was used, unrelated to the interview itself. The interview started after that, with the background questions of age and gender. Four of the five interviewees were female and all were in the age group of 25-40. All five interviewees stated they play online social games, with three stating that they tried out other online karaoke solutions already. Two of the five stated that they sing karaoke on a weekly basis and the other three stated they sing karaoke at least once per month. This gave a ground of relevancy, as the interviewees were potential candidates for frequent usage of the application and showed a sincere interest in online karaoke solutions.

The next topic was the feature set, with the first question being about general gameplay and first impressions. The interviewees were very pleased with the

sound quality and the live voice delivery in the game. Three of the five interviewees stated that ‘it sounds better than Skype’ which seemed like an interesting patter of recognition. Due to the use of WebRTC this is quite understandable. Additionally, the candidates showed a patter when it came to the design, which was universally appreciated by all five. One candidate noted that the song matrices are somewhat off beat, which was a good assessment due to problems with finding the right formats and using an LRC, a simpler format of karaoke matrices than usual.

The next question touched on the ladder play option, which wasn’t included in the MVP version. The interviewees were asked if they found ladder play interesting or would they prefer to stay with casual games. Two of the five candidates stated that they aren’t sure if they would play the ladder system, but would try it out. The other three stated that they would definitely give it a try, but are unsure if they would play it on a regular basis. This proved that the decision of not using the ladder system was correct and would probably be wise to not use it in the launch of the application either, due to it being a complex and timely feature to include in the application. The next question touched on a feature in the ladder system, the option of re-rolling. This is one of the potential points of the freemium revenue model and monetization of the application. It was additionally explained to the users that to use the feature it would require buying tokens. Two of the five said they were unsure, with three of the five saying they wouldn’t use it. This seemed consistent with the last question in which all five seemed hesitant towards the ladder system to begin with.

When asked about what would they like to be added to the game and if there were features they wanted to see in the launch version of the application, the users had several feature recommendations. The first feature a user wanted to see added was icons/avatars for the users in game. This seemed like a very interesting option, which should definitely be assessed additionally and included, if not in the launch, in the latter version of the application. It was put under

‘potential feature’. The second feature a user wanted added was a camera view option, so the users could see each other in games while competing. This was another feature that was thought of before and subsequently put under ‘potential feature’. The third recommendation for a feature was to provide larger playing fields, that is, making it more than four players. This was put under ‘potential feature’ as well. There were additional comments, including increasing the song base and including player levels, which are planned already for future feature implementation. They were included in the ‘potential feature’ list.

The next subset of questions was on the topic of the value proposition provided to the customers. When asked if they would use the application and to give some reasoning behind the answer the respondents mostly answered positively. One of the respondents answered that she would ‘definitely try it out, but I am not sure whether I would have enough people to play with from my friends’, another said that she would use it but hopes there would be extensions beyond the current beta version because she thinks it could get repetitive over a period of time. The next question asked about the monetization process and if the user would be willing to pay for reroll or rather have songs locked, for which they would pay tokens to unlock. The answers were mostly indecisive, with one interviewee saying she wouldn’t pay for tokens in general. This raises the question of the monetization of the application and if the freemium model will be applicable or will pay adds be a better solution for this particular application.

The final subset of questions was on the topic of suggestions on further improvement. The first question asked the interviewees to say on a scale of 1 to 10 how willing they would be to recommend this application to friends. The mean of the interviewee’s answer was 7, giving a positive response to the prospect of marketing the application through using word of mouth and the customers themselves. Finally, the last questions asked again if they would like to see something added to the application. This was done so that the interviewees could have some time to think between the feature proposals question and this one.

One interesting response was from the girl which mentioned the avatars in the feature set, stating that using the animations from the explainer video which kParty has on its landing page would be something she would like to see as a feature. This was added to the 'potential feature' list.

Go-To-Market Strategy

The go-to-market strategy was created with the guidance of the lessons learned from the previous steps of the LSM. The new value propositions were accepted and showed there were an interest and a market for the product. After this, the potential feature list was examined from the last step and used as a guideline for the feature development of the first version of the application.

Table 3 - Potential Feature List for kParty 1.0

Potential Feature List	
Avatars for users	Future versions of application
Camera enablement	Future versions of application
More players in game	Future versions of application
Increasing song base	Included in first version of application
Player levels	Included in first version of application

It was decided that the implementations of the first three features recommended in the interviews with the beta applicants be used in latter version of the application due to time constraints. Additional data collection through surveying will be done regarding those features to validate if they are wanted by larger groups of users. The song base will be increased as recommended by a user for the 1.0 version of the application, from the current 15 to 100. This requires financial investments due to song rights and limits the size that can be

used, but is crucial to have a list large enough for users to be able to play for an extended period of time without feeling limited content wise. Finally, the player levels will be included in the 1.0 version as recommended by a user. This is a feature that was found attractive by beta applicants and other respondents. Additionally, variable experience points and leveling is a standard in the gaming industry, and is starting to be adapted by others by gamifying their businesses.

The 1.0 version of the application is planned to launch on Facebook, which will in a sense be a proof-of-concept for the application. This will allow for further evaluation, if shown as a success the aim will be to expand towards the Asian market. The stand-alone website will be implemented during this period. Additional outlets, like mobile and other platforms are a possibility, but were not planned at this stage. The marketing plan was created, with paid ads being used and the search engine optimization being done. Guerilla marketing campaigns were planned as well, using the connections that the founders had in the regional music business. Further, clear and understandable milestones based on metrics were set in place, to evaluate the performance of the campaigns and strategies put in place.

5.3 Interview with Founders

The co-founders were interviewed to see the current new product development process, the company culture and what their thoughts were about LSM. Additionally, they were asked about customer involvement and the applicability of LSM to the business and future implications. The interview guide can be found in the appendix under ‘OPEN INTERVIEW WITH CO-FOUNDERS’.

The first question asked for them to explain their current roles in the company. It was shown that the co-founders had a clear understanding of their positions and how they influence the companies daily business. The first co-founder responded that he focuses on backend development, with him being the

development team lead. The second explained that he takes a wider role, which includes product development, but also technical aspects such as infrastructure design, QA/testing and being involved in marketing, finance as well. When asked about the company culture, the first co-founder stated it is a flat architecture with high flexibility, with a very relaxed cultural feel to it. He added that it is still in the early stages, that is, in the incubation phase, which touches on the answer of the second co-founder. The second co-founder noted that it is tough to talk about culture in this early stage and described it as a clear structure with enthusiastic individuals who care about product design and functionality. This shows an interest towards product first, over other aspects of the business. It also implies that the company culture is still in its very early stages and is still unclear towards which kind of culture is the company constructing itself. This could imply that the company isn't putting enough emphasis on company culture building.

When asked about the product development process and customer involvement, the co-founders pointed out how the product development process went, which software development methodology was used and highlighted that customer involvement was lacking, in turn reinforcing the need for implementation of a more customer-oriented methodology. It was said that the product development process went through several stages, searching for the right features and technical aspects, by communicating with potential customers and looking at other companies in the gaming industry. Additionally, it was noted that on the software development side, Scrum was used – an agile software development methodology. It was further highlighted that milestones were used, which were set by the product owner and that those were the main guiding points in the product development process. Customer involvement was said to be existent, but lacking in the opinion of the co-founders. They said that the product is still trying to get tailored to the wants and needs of the customers, but at the same time they highlight that the case of game development should be taken into account.

In the following question, the co-founders addressed potential problems in the LSM methodology and provided recommendations for improving customer involvement within the company. The co-founder with the development role highlighted that the product cannot be shipped early or a MVP used like in other consumer technology spaces, saying that the industry is highly reliant on bloggers, game rating sites and word of mouth. The MVP or an early released product could do more damage than good, because bad ratings and feedback could prove to be fatal. It was said that involving customers in day-to-day decisions regarding product development was beneficial, that the final product could be controlled and shaped that way to the liking of the customers. Additionally, it was highlighted again that the methods should be modified for game development due to existing threats. The co-founders said that the customer involvement could be improved through hiring of a customer relationship specialist, adding that with hiring the right people the growth rate will improve and in turn directly influence the revenue streams.

When asked about LSM, they said that it has the right tools for young companies to launch their products faster, which are custom tailored to their customers. Additionally, it was added that its approachable and understandable and it has similarities with agile development, which is a highly praised in the software industry. When talking about the advantages one of the co-founders said that the MVP is the most crucial and beneficial advantage of LSM. He stated that with it the startups know what they need at a early point, gather data on how to improve the product in development and pivot if necessary. It was also stated that it is advantageous because of the short cycles and high focus on learning throughout the startup process. When asked about implementation of LSM in the case company, they agreed that it could definitely beneficial. Again, it was highlighted that the right context is necessary due to the influential bloggers, game ratings and word of mouth having such a high influence in the game industry. Additionally it was noted that LSM puts an emphasis on problem solving which isn’t the case in game development and that it needs to be refined and

tailored. They said that the benefits of LSM would be gathering information from early adopters regarding the features, allowing for reiteration or validation.

6 DISCUSSION AND ANALYSIS

In the discussion section we will talk about customer involvement in the Lean Startup Methodology in the case of case company Karaoke d.o.o.. The principles of LSM described earlier in the literature review will be addressed.

6.1 Customer Involvement through Customer Development and Customer Validation

Fundamentally, LSM tries to involve customers in the creation of a new venture. The importance of customer involvement was evident during the case study. The new value propositions were accepted due to the customer feedback, willingness to communicate with the company and as such shouldn't be underestimated. New ventures should be focused on speed, flexibility and continuous learning as mentioned before (Brinkmann et al., 2010). LSM focuses on the early communication with customers and puts a highlight on the entrepreneur's willingness to 'get out of the building' and learn from the customers as soon as possible.

The first principle highlighted in LSM literature is the development of customers through a new value proposition, which tests the potential customer's problems and the suggested solution. The so called 'problem solution fit' is probably the most important, fundamental aspect of LSM literature because it can decrease a lot of time spent and efforts put into a venture in the earliest stages by a very simple method of surveying or interviews. One of the potential drawbacks noted

in this master thesis regarding LSM is the fact it focuses on the real problem solution over anything else. Blank (2006) even argued the need for the entrepreneur to always be solving a existing customer paint point. This is not possible in game development due to the nature of video games being a source of enjoyment and entertainment over necessity.

The purpose of this step in the LSM literature is to receive feedback about the value proposition, customer's problems, conceptualization of the solution, the pricing model and so on. In the case of Karaoke d.o.o. it provided clearer understanding of customers reaction to the concept, to the delivery of the idea and to the features it included. In this step, customer involvement allowed the company to decide not use the ladder system in the MVP and made room for further decisions on other features in the following step of LSM. Furthermore, it provided the entrepreneur with a justification of perusing his idea into reality through quantifiable data. That data can be used in future negotiations with investors and for PR purposes.

The second principle is the validation of a demand in a market for a product or customer validation. Again, a new value proposition was used, in this case a minimum feature set proposition with which a MVP was created and used for beta applicant interviews. Customers were involved through this step by giving their opinion while being hands on the product. This allows for a much better understanding of how the product works, how they feel about each feature and what would they want to see changed. It allowed for the creation of a potential feature list for the first version of the application that will go to market.

One of the barriers faced in the customer validation according to one of the co-founders is that using a MVP in the game industry could be harmful or even fatal for a company. This is due to game critics, influential bloggers and word of mouth having such a big effect in this industry, that if they saw an unfinished product they could potentially decide to judge it on its lacking and buggy features. This

was avoided in the case of Karaoke d.o.o, due to the product already being in development and close to the product launch.

6.2 Opportunity Discovery

Even though over planning can be damaging to the company, entrepreneurs still need to put in some effort in finding a segment with an opportunity towards which the solution can be built. The challenge of finding the initial new value proposition to be tested through new value propositions is somewhat vague in the LSM literature. It can be linked to the popperian model user by Harper (1999) in the literature review. Similarly to LSM literature, the model starts when a entrepreneur locates a problem for the customer, but gives little explanation about the process of finding the problem or opportunity.

In the case of Karaoke d.o.o. the opportunity was found through daily life and wasn't being actively searched for. This is often the case with new ventures and could be used as a guideline for entrepreneurs seeking an idea. Actively searching for an opportunity could be perceived as counterproductive or could give a false sense of problem/opportunity existence. In the LSM literature the ability to listen to potential customers and understand their concerns is noted, with most of the LSM authors stating that new idea generation and opportunity creation can be found in the potential customer meetings.

6.3 Iteration, Validation and Pivoting

The LSM literature focuses heavily on the principles of iteration through learning and pivoting when facing larger problems. The overall goal is to make the iterations and learning cycles as short as possible, to get a competitive advantage. Ries (2011) explained that the decision of pivoting should be made when it becomes clear that the current business cannot be a scalable, that is, the business model is not sustainable. In Karaoke d.o.o. case, these principles were

followed in the two LSM steps implemented. The speed of implementation was relatively high, which can be expected from software-based companies and is highlighted by the LSM authors. Applications allow for effective modification and product testing, with the use of real-time data for optimization and fine-tuning the product features in the development phase. This could have been seen in the last subtopic on customer development and customer validation.

The LSM premise of locating a scalable business model should be addressed. In the interview phase it was highlighted by the customers that they have no interest for paying to re-roll songs or use tokens to unlock songs. This raises concern and is something the company needs to address and potentially pivot towards a different model instead of freemium. Furr and Ahlstorm (2011) highlight the need to repeat tests on the business model until the company develops a repeatable business model in which the entrepreneur is confident and will deliver enough value to the customers that they will be willing to pay for it.

6.4 Minimum Viable Product

One of the core parts of the LSM literature is the increase of the rate of learning and shortening the iterative cycles, in which case the development of the minimum viable product fits perfectly. MVP is crucial due to its speed and short lifecycles, which increases the potential number of iterations and chances of achieving a scalable business model. It is argued that the rapid prototyping approach of MVP's helps entrepreneurs decrease time to market. Sull (2004) highlighted that effective design and the use of experiments by entrepreneurs decreases uncertainty, through customer research and prototypes, which goes hand in hand with the LSM principles.

In the case of the Karaoke d.o.o., it could be argued that the version used on the beta applicants isn't a MVP, that is, is too developed to be considered a MVP. Ries (2011) described that a team should be able to deliver a prototype in weeks

and make reiterations through customer communication, through which a new prototype is put together for further learning. This ideology was used and even though it was already a developed product, it falls under a prototype due to its nature of testing potential features. The users accepted the MVP in the case of kParty with positive feedback and no feature chances were needed afterwards. That being said, it did show which features could potentially be added and gave the team at Karaoke d.o.o. a list of potential features to be tested further on beta applicants and decided if they will be added for the kParty version 1.0.

7 CONCLUSION

Through the master thesis we looked at customer involvement as an essential aspect of LSM implementation in a game development studio. The gaming industry is known for high degrees of uncertainty regarding customer desires and needs. This imposed an interesting problem in which we explored if LSM is applicable to the gaming industry scenario. The research question formed was the following “How is customer involvement in lean principles beneficial to new product development? “.

Customer involvement in lean principles provides the entrepreneur insight to customer needs, preferences and desires. It gives a clear understanding of the pain points the customer has and provides the entrepreneur with feedback throughout the new product development process. The new value propositions initiated in the LSM implementation highly increase the involvement of customers in the daily business, bolstering the relationships between the early adopters and the business in question.

LSM was implemented in the case company and through action research the customer involvement was observed throughout the process. The first involvement of customers came in the new value proposition where it was observed if there was an interest in a real-time online multi-user karaoke game.

The potential customers were located through the landing page and the Facebook fan page, after which they were surveyed. This allowed the entrepreneur to communicate with customers who have shown interest in the application and better understanding of it. Through this validation of a new value proposition the entrepreneur had a clear understanding if there was a need to iterate, stay on course or pivot in a new direction completely.

Second, the customers were involved again as beta applicants for the second value proposition validation. In this step a MVP or in the case of kParty, an alpha version of the application was used, to better explain the features of the application with a hands-on-approach. This allowed for much clearer communication in which the customers gave feedback about the features, design and other aspects of the application.

Some barriers were noticed in the implementation of LSM to the case company. The problem solution fit is not applicable in the gaming industry, as noted before. Games are made for enjoyment and to stimulate the senses of the users, not to solve problems. This prompted on building a new value proposition on existing interest of customers and validating that instead of the product solving a problem and pain point for the user, like explained in the LSM literature. When it came to the MVP version, it seemed to be inapplicable to game development due to bloggers, game rating systems and word of mouth. In an industry, which is heavy, reliant on first impressions, this didn't seem like the most reasonable solution. The case company was further in development and subsequently had a product developed to an extent in which it felt confortable testing it on potential customers.

7.1 Theoretical Contribution

Lean startup methodology is becoming increasingly popular amongst companies with a technological background, providing a systematic new venture management approach. The academic research on the topic done is somewhat limited, especially on the subject on customer involvement in the overall process and this thesis sought to look at those gaps in academia.

Due to lean startup methodology being applied and heavily praised by practitioners, academia started to have an increasing interest (Shah, Ward, 2003; Gehrich 2011; Breuer, 2013; Thoring, Muller 2012). Lean startup methodology is suitable for new ventures because it assumes that high uncertainty and risk will be involved in the venture. The essence of the LSM approach sees an adaptive learning approach through quick iterations done by conducting a series of small experiments, or so-called new value propositions. Ries (2011) labeled this cycle as the build-measure-learn loop, which is constantly being used to tests new propositions, learn and reiterate accordingly.

LSM has many similarities and comparisons to other methodologies like “lean manufacturing” or “agile software development”. It should be noted that LSM is a connector of those methodologies, trying to create a unified method, which can be applied to every new venture. It draws and adds on to elements from various research domains, which include product development, marketing and organizational learning.

The thesis attempted to see in which parts of the LSM implementation is the customer’s involvement effort beneficial to the new venture, thus increasing the prospects of new venture success. Various literatures on the lean startup methodology were benchmarked to better understand the LSM approach. Further, a hybrid LSM framework (Figure 5) was built using the main sources of lean startup literature (Ries, 2011; Andreessen, 2007; Blank, 2006). The main

highlights of the model are Andreessen's problem/solution and product/market fit, which focus on developing a product that addresses a customers existing problem and provide a satisfactory solution in a large enough market (Andreessen, 2007). The framework developed focuses on the pre-market stage of the venture in which the main goal is to find the problem/solution and product/market fit, before starting to scale the business. The new value propositions allow the entrepreneur to test assumptions and learn accordingly, constantly making iterations to the business propositions without taking large financial risks.

Further, the thesis made theoretical contributions to the existing LSM literature by adding customer involvement aspects to the new value propositions and exploring further how customers are involved in the overall implementation of the LSM within the case company. The research showed that there are multiple types of information obtained through the LSM process from the customer involvement in the new value proposition testing. Firstly, they provide idea/concept validation in the problem solution fit. Additionally, they evaluate the main features and give the entrepreneur quantifiable data on the amount of potential customers that are interested in the product and if they see it as a viable solution to their problems. Additionally, in the product market fit stage we can see that the potential customers involved in the LSM implementation process provide feature recommendations and further validate the product and its features. It allows for the entrepreneur to make key decisions in the NPD process and have a clear understanding where to focus its product development efforts.

Potential barriers were found in the implementation of lean startup methodology in the gaming industry. Using a minimum viable product within a gaming context proved to be risky and not recommendable by the researcher. Further evaluation should be made on the subject, due to one case not being a large enough sample to approve or disapprove this notion. Additionally, the problem solution fit which is introduced as the initial step in the LSM is considered

not applicable within a gaming context due to the nature of games as a source of entertainment, not necessarily a problem worth solving. This thesis further supports the notion of entrepreneurship being approached as a method rather than a feat of heroic individuals or economic and technological forces driving markets (Sarasvathy, Venkataraman, 2011).

To conclude, this qualitative study supported the lean startup methodology notion by implementing it into the case company and receiving clear, concise results with which the company can further develop its product. It also provided insight into customer involvement in the LSM implantation phases, with the customers being the key players in idea validation, market fit recognition and feature validation.

7.2 Managerial Implications

Karaoke d.o.o. example showed how customers were involved in the process of implementing LSM and highlighted potential barriers and faults of the process. The purpose of the study was to suggest that customers play a large role in new venture creation and how their involvement can benefit the companies in question. Some guidelines are suggested in the following paragraphs:

Customer interactions from the get go. Entrepreneurs should be engaged with customers in order to test the initial ideas and better understand the problem solution fit with which they are faced. Through the customer interactions recommended in LSM they will be able to validate or iterate their new value propositions with which they can start product development. The managers should try and maximize their learning through customers by having regular communication, getting out of the building and having an open mind to the customers opinions and recommendations.

Customer Orientation. The company needs to be customer focused and understand the difference between the activities, which increase value for the customer and the ones that are wasteful. It should not put out features without validating them with the customers, further it should focus on customer discovery and customer retention.

Market fit. Evaluating the market fit and understanding where the product falls in it, during the early stage will help minimize risks and investments.
This evaluation can be achieved by a MVP, which can even be as simple as a virtual prototype which describes the solution in the most minimalistic way possible. Market sizing is also a key factor, which can help the entrepreneur realize the limitations and allow them to make realistic projections when using metrics for future performance.

Market Sizing. After the entrepreneur located the market fit, they should approach the customers and figure out market specifications, specifically the size. It is critical to understand if the segment is big enough or not, and to dismiss it accordingly. Customer archetype, where customers from competitors and other mainstream customers are contacted regarding the existing problem, is proposed by Ries (2011). This way the entrepreneur can understand the problems better before approaching his own early customers and it helps him be focused on who the customer targets are. Additionally, it helps clear out which new value propositions need to be validated and puts less emphasis on the product features, that is, removes part of the mystique regarding them.

Continuous improvement. The entrepreneur should focus on making decisions based on learning and have a data driven approach to everyday decisions. Additionally, they should also focus on optimization through customer involvement, i.e. using the customers as validators of value propositions. The goal is to constantly be increasing the speed to next iterations.

Measuring Metrics. It is essential that a startup rigorously measure and is honest about where it is and where it needs to be. Using new value propositions is a good way of testing and learning how to move towards better numbers as projected in a business plan. Most products have some customers, some growth and some positive results, but none survive if they don't have clear, concise understanding of what is happening with the numbers and realistic goals to strive towards to.

Experimentation and Revision. Customer development allows the entrepreneur to revise however many times its necessary for no or very little financial costs. Through the problem solution fit the entrepreneur is questioning his value propositions with surveys and interviews, while getting important insights from the customers. Additionally, the build-measure-learn loop highlights that it can be used in all situations, including testing of the business model – through product, pricing and feature tests, amongst others.

7.3 Limitations of the study

Due to the researcher being directly involved with the case company, there is room for future studies to explore cases in which there is not a direct tie between the researcher and entrepreneurs in question. That being said these connections are seen to be unlikely to affect the final results due to the LSM implementation being mostly revolving around customer interactions. The interviews with the co-founders had no affect on the new value proposition decision making, so in that regard this is dismissed as a limitation. LSM does use self reported measures in evaluating the decision making process in the new value propositions, this could be seen as a limitation and could be assessed through the use of more longitudinal studies in the future with qualitative financial measurements of business performance.

A potential limitation could be the use of a single case study, making its reliability relatively low due to the anonymity of the customers and specific industry in question. Utilization of a single industry makes for a more in-depth research and allows for deeper analysis, but also affects the generalization of the results. It is very likely that in different industries, different results in applicability of LSM will be interpreted. Also, customer involvement is expected to be much lower in industries of high complexity.

7.4 Further research

As qualitative methods were used it would be interesting to see further studies on a quantitative level on a more longitudinal study to see the results of the approach applied to new ventures. Additionally, it would be interesting to see studies done on other gaming industry related companies and create a standardized model for the problem solution fit and MVP versions of applications.

REFERENCES

Ahlstrom, P., Karlsson, C. (1996) 'Change Processes towards Lean Production: The Role of the Management Accounting System', International Journal of Operations and Production Management, Vol. 16, Issue 11, pp. 42-56

Alvarez, S. A. & Barney, J. B., (2007) 'Discovery and creation, alternative theories of entrepreneurial action', Strategic Entrepreneurship Journal, Vol. 1, pp. 11-26.

Andreessen M. (2007) 'Product/Market Fit', Business Management For Electrical Engineers and Computer Scientists, Stanford University Press

Andries, P., Debackere, K. (2007) 'Adaptation and performance in new businesses: Understanding the moderating effects of independence and industry', Small Business Economics, Vol. 29, Issue 1, pp. 81–99

Atuahene-Gima, K. (2003) 'The effects of Centrifugal and Centripetal Forces on Product Development Speed and Quality: How Does Problem Solving Matter?', Academy of Management Journal, Vol. 46, Issue 3, pp. 359–373

Begley, C. (1996) 'Using triangulation in nursing research', Journal of Advanced Nursing, Vol. 24, Issue 1, pp. 122-128

Birley, S. (1984) 'Finding the new firm', Academy of Management Proceedings, Vol. 47, pp. 64–68

Bingham, C., Davis, J. (2012) 'Learning Sequences: Their Existence, Effect, and Evolution', Academy of Management Journal, Vol. 55, Issue 3., pp. 611–641

Blank, S. (2006) 'The Four Steps to the Epiphany: Successful Strategies for Products that Win' (3th edition), Cafepress.com

Bowen, G. (2008) ‘Naturalistic inquiry and the saturation concept: A research note’, Qualitative Research, Vol. 8, Issue1, pp. 137-152.

Breuer H. (2013) ‘Lean venturing: Learning to create new business through exploration, elaboration, evaluation, experimentation and evolution’, International Journal of Innovation Management, Vol. 13, Issue 3

Brinckmann, J., Grichnik, D. and Kapsa, D. (2010) ‘Should entrepreneurs plan or just storm the castle? A meta-analysis on contextual factors impacting the business planning- performance relationship in small firms’, Journal of Business Venturing, Vol. 25, Issue 1, pp. 24-40

Brettel, M., Strese, S., Flatten, T. (2012) ‘Improving the performance of business models with relationship marketing efforts – An entrepreneurial perspective’, European Management Journal, Vol. 30, Issue 2., pp. 85–98

Brown, S., Eisenhardt. K. (1995) ‘Product development: Past research, present findings, and future directions’ Academy Management Review, Issue 3, pp. 343–378

Brown, M., Gioia, D. (2002) ‘Making things click—Distributive leadership in an online division of an offline organization’, The Leadership Quarterly, Vol. 13, Issue 4., pp. 397–419

Carmines E., Zeller R. (1979) ‘Reliability and Validity Assessment’ Sage Publications, Inc.

Cassar G. (2014) ‘Industry and startup experience on entrepreneur forecast performance in new firms’, Journal of Business Venturing; Vol. 29, No. 1, pp. 137-151

Cavalcante, S., Kesting, P., Ulhøi, J. (2011) 'Business model dynamics and innovation: Establishing the missing linkages' Management Decision, Vol. 49, Issue 8, pp. 1327–1342

Checkland, P. (1981) 'Systems thinking, systems practice'
John Wiley and Sons, Chichester, UK.

Christensen, C. (1997) 'The Innovator's Dilemma: When new technologies cause great firms to fail', USA: Harvard Business School Press

Chesbrough, H. (2010) 'Business model innovation: opportunities and barriers. Long Range Planning', Vol. 43, Issue 2/3, pp. 354–363

Cooper R., Kleinschmidt E. (1986) 'An Investigation into the New Product Process: Steps, Deficiencies, and Impact' Journal of Product Innovation Management, Vol. 3, pp. 71-85

Cooper R. (1990) 'Stage-Gate Systems: A New Tool For Managing New Products' Business Horizons, Vol. 33, pp. 44-54

Cooper B., Vlaskovits P. (2010) 'The Entrepreneurial Guide to Customer Development: A Cheat Sheet to the Four Steps to the Epiphany', CustDev

Cohen W., Nelson R., Walsh P. (2002) 'Links and impacts: the influence of public research on industrial R&D', Management Science, Vol. 48, Issue 1, pp. 1–23

Cope, J. (2005) 'Toward a Dynamic Learning Perspective of Entrepreneurship' Entrepreneurship Theory and Practice, Vol. 29, Issue 4., pp. 373–397

Crawford, C., C. DiBenedetto (2000) ‘New Products Management’, Homewood, Irwin/McGraw-Hill.

Crosby, M. (2000) ‘Patents, Innovation and Growth’, The Economic Record, Vol. 76, No. 234, pp. 255-262.

Denzin, N. (1978) ‘The research act: A theoretical introduction to sociological methods’, New York: McGraw-Hill.

Eisenberg, I. (2011) ‘Lead-User Research for Breakthrough Innovation’, Research-Technology Management, Vol. 54, Issue 2, pp. 50–58

Emerson, R., Fretz, M., Rachel I. and Shaw, L. (1995) ‘Writing Ethnographic Fieldnotes’, Chicago: University of Chicago Press.

Furr, N. and Ahlstrom, P. (2011) ‘Nail it then Scale it: The Entrepreneur’s Guide to Creating and Managing Breakthrough Innovation’, NISI Institute

Gartner, W. (1985) ‘A conceptual framework for describing the phenomenon of new venture creation’, Academy of Management Review, Vol. 10, Issue 4, pp. 696–706

Gartner, W., Carter, N. (2003) ‘Entrepreneurial behavior and firm organizing processes’, Handbook of Entrepreneurship Research, pp. 195–221.
Gehrich, G. (2011) ‘Built it like a startup: Lean Product Innovation’ Santa Fe, CA: RSF Publishing.

George, G., Bock, A. (2011) ‘The business model in practice and its implications for entrepreneurship research’, Entrepreneurship Theory and Practice, Vol. 35, Issue 1, pp. 83–111

Goktan, A., Miles, G. (2011) ‘Innovation speed and radicalness: are they inversely related?’, Management Decision, Vol. 49, Issue 4, pp. 533–547

Gruner, K.E. and Homburg, C. (2000) ‘Does Customer Interaction Enhance New Product Success?’, Journal of Business Research, Vol. 49, pp. 1– 14

Harper, D. (1996) ‘Entrepreneurship and the Market Process: An Enquiry into the Growth of Knowledge’ London, Rutledge.

Harrison J., Thompson D., Flanagan H., Tonks P. (1994) ‘Beyond The Business Plan’, Journal of Management in Medicine, pp. 38-45

Hippel, E. (1986) ‘Lead Users: A Source of Novel Product Concepts’, Management Science, Vol. 32,Issue 7, pp. 791–805

Hienerth C, Lettl C. (2011) ‘Exploring how peer communities enable lead user innovations to become standard equipment in the industry: community pull effects’, Journal of Product Innovation Management, Vol. 28, Issue 1, pp. 175–195

Holahan P., Sullivan Z., Markham S. (2013) ‘Product Development as Core Competence: How Formal Product Development Practices Differ for Radical, More Innovative, and Incremental Product Innovations’ Product Development & Management Association, Vol. 31, pp. 329-345

Hoyer, W., Chandy, R., Dorotic, M., Krafft, M., Singh, S. (2010) ‘Consumer Cocreation in New Product Development’ Journal of Service Research, Vol. 13, Issue 3, pp. 283-296

Hurley, R., Hult, G. (1998) ‘Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination’ The Journal of Marketing, Vol. 62, Issue 3, pp. 42–54

Johne. A., Snelson P. (1988) ‘Success Factors in Product Innovation: A Selective Review of the Literature’ Journal of Product Innovation Management, Vol. 5, Issue 2, pp. 114-128

Katz, J. (1990) ‘Longitudinal analysis of self-employment follow-through’, Entrepreneurship & Regional Development, Vol. 2, Issue 1, pp. 15–25

Katz, J., Gartner, W. (1988) ‘Properties of emerging organizations’, Academy of Management Review, Vol. 13, Issue 3, pp 429–442

Krafcik, J., (1988) ‘The Triumph of Lean Production Systems’, Sloan Management Review, pp. 41-52

Kuratko D., Audretsch D. (2009) ‘Strategic Entrepreneurship: Exploring Different Perspectives of and Emerging Concept’, Entrepreneurship Theory and Practice, Vol. 33, Issue 1, pp. 1-17

Lilien, G., Morrison, P., Searls, K., Sonnack M., & von Hippel, E. (2002). ‘Performance assessment of the lead user idea-generation process for new product development’, Management Science, Vol. 48, Issue 8, pp. 1042–1059

Lumpkin, G., Lichtenstein, B. (2005) ‘The Role of Organizational Learning in the Opportunity-Recognition Process’, Entrepreneurship Theory and Practice, Vol. 29, Issue 4., pp. 451– 472

Maurya A. (2011) ‘Running Lean: Iterate from Plan A to a Plan That Works (Lean Series), O’Reilly Media

Margaretta J. (2002), ‘Why Business Models Matter’, Harvard Business School Publishing

Martin R. (2002) ‘Agile Software Development: Principles, Patterns and Practices’, Pearson Education

McDougall P., Robinson R. (1990) ‘New Venture Strategies: An Empirical Identification of Eight ‘Archetypes’ of Competitive Strategies for Entry’, Strategic Management Journal, Vol. 11, pp. 447-467

McDougall, P., Shane, S., Oviatt, B. (1994) 'Explaining the Formation of International New Ventures: The Limits of Theories from International Business Research', Journal of Business Venturing, vol. 9, Issue 6, pp. 469.

McGrath, R. G. and MacMillan, I. C. (1995) ‘Discovery driven planning’, Harvard Business Review, Vol. 73, pp. 44-54

McKay, J. and Marshall, P. (2001) ‘The dual imperatives of action research’, Information Technology & People, Vol. 14, Issue 1, pp. 46-59

Mitchell, E. (1986) ‘Multiple triangulation: A methodology for nursing science’ Advances in Nursing Science, Vol. 8, Issue 3, pp. 18-26

Naylor B., Naim M., Berry D. (1999) ‘Leagility: Integrating the lean and agile manufacturing paradigms in the total supply chain’, International Journal of Production Economics, Vol. 62, Issue 1-2, pp. 107-118

Ohno T. (1990) ‘Toyota Production System: Beyond Large Scale Production’, Productivity Press

Popper K. (2005) ‘The Logic of Scientific Discovery’, Taylor & Francis Group

Pfeffer, J. (1987) ‘A resource dependence perspective on interoperate relations’ In M. S.

Rajgopal, S., Venkatachalam, M., Kotha, S. (2003) ‘The value relevance of network advantages: the case of e-commerce firms’, Journal of Accounting Research, Vol. 41, Issue 1, pp. 135–162

Prahalad, C., Ramaswamy, V. (2004). ‘The future of competition: Co-creating unique value with customers’, Boston: Harvard Business School Press.

Reynolds, P., Miller, B. (1992) ‘New firm gestation: Conception, birth, and implications for research’, Journal of Business Venturing, Vol. 7, Issue 5, pp. 405–418

Ries, E. (2011) ‘The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses’, Crown Business

Steiner L. (2007) ‘New Venture Creation and Organization: A Familiar Sub-Narrative’ Journal of Business Research, vol. 60, pp. 1099-1107

Shrader R., Simon M. (1997) ‘Corporate versus independent new ventures: Resource, strategy, and performance indicators’, Journal of Business Venturing, Vol. 12, Issue 1., pp. 47-66

Sarasvathy, S., & Venkataraman, S. (2011). Entrepreneurship as Method: Open Questions for an Entrepreneurial Future. Entrepreneurship Theory and Practice, Vol. 35, Issue 1., pp. 113–135

Shah R., Ward P. (2003) ‘Lean manufacturing: context, practice bundles, and performance’ Journal of Operations Management, Vol. 23, Issue 2, pp. 129-149

Shane, S. (2008) ‘The Illusions of Entrepreneurship: The Costly Myths That Entrepreneurs, Investors, and Policy Makers Live By’, Yale University Press, London.

Song M., Di Benedetto A. (2008) ‘Suppliers involvement and success of radical new product development in new ventures’, Journal of Operations Management, Vol. 26, Issue 1, pp. 1-22

Shah S. (2006) ‘Motivation, governance, and the viability of hybrid forms in open source software development’, Management Science, Vol. 52, Issue 7, pp. 1000–1014

Shirky, C. (2008) ‘Here comes everybody: The power of organizing without organizations’, New York: Penguin.

Vesper, K. H. (1990) ‘New venture strategies’ (2nd ed.), Englewood Cliffs, NJ: Prentice Hall.

Shah, R., Ward, P. (2003) ‘Lean manufacturing: context, practice bundles, and performance’, Journal of Operations Management, Vol. 21, Issue 2, pp. 129–149

Smith, M., Kleine, P. (1986) ‘Qualitative research and evaluation: Triangulation and multimethods reconsidered’, San Francisco: Jossey-Bass.

Sull, D. (2004) ‘Creating Value in an Unpredictable World’, Business Strategy Review, Vol. 15, Issue 3., p. 14-20

Song M., Montoya-Weiss M. (1998) ‘Critical Development Activities for Really New versus Incremental Products’, Journal of Product Innovation Management, Vol. 15, Issue 2, pp. 124-135

Thoring K., Muller R. (2012) ‘Design thinking vs. lean startup: A comparison of two user-driven innovation strategies’, International Design Management Research Conference

Trimi S., Berbegal-Mirabent J. (2012) ‘Business model innovation in entrepreneurship’, International Entrepreneurial Management Journal, Vol. 8, pp. 449-465

Teece, D. (2010) ‘Business models, business strategy and innovation. Long Range Planning’, Vol. 43, Issue 2/3, pp. 172–194

Tyson, R. (2013) ‘On customer value and improvement in product development processes’, Systems Engineering, Volume 6, Issue 1, pp. 49-61

Urban, G., Hauser, J. (1993) ‘Design and Marketing of New Products’, Prentice Hall, Englewood Cliffs, NJ.

Zahra, Shaker A. (2006), “New Venture Strategy: Transforming Caterpillars into Butterflies.” In Simon C. Parker, ed., The Life Cycle of the Entrepreneurial Venture. New York: Springer, pp. 39–76.

Zahra S., Ireland R., Hitt M. (2000) ‘International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance’, Acadamy of Management Journal, Vol. 43, Issue 5, pp. 925-950

Zahay, D., Griffin, A., Fredericks, E., (2011) ‘Information Use in New Product Development: An Initial Exploratory Empirical Investigation in the Chemical

Industry' Journal of Product Innovation Management, Vol. 28, Issue 4, pp. 485-502

Zuber-Skerritt, O. (1992) 'Action research in higher education', Kogan Page, London.

Zollo, M., Winter, S. (2002) 'Deliberate Learning and the Evolution of Dynamic Capabilities. Organization Science', Vol. 13, Issue 3., pp. 339–351.

Zott, C., Amit, R. (2010) 'Business model design: an activity system perspective', Long Range Planning, Vol. 43, Issue 2, pp. 216–226

Watson, K., Scott, S. and Wilson, N. (1998) 'Small business start-ups: success factors and support implications', International Journal of Entrepreneurial Behaviour & Research, Vol. 4, No. 3, pp. 217-238.

Womack, J., Jones, T. (1994) 'From Lean Production to the Lean Enterprise' Harvard Business Review, Vol.72, Issue 2, pp. 93–103

Wise S. (2013) 'The Impact of Financial Literacy on New Venture Survival', International Journal of Business and Management; Vol. 8 No. 23, pp. 30-39

Yin, Robert K. (2009) 'Case Study Research: Design and Methods', SAGE Publications

Yu, D., Hang, C. (2010) 'A Reflective Review Of Disruptive Innovation Theory', *International Journal of Management Reviews*, Issue: *12*, pp. 435–452

APPENDICES

APPENDIX 1: SURVEY

Topic LSM, product/market fit, customer feedback
Time 5 minutes
Medium Online survey (SurveyMonkey)
Sample Size 302 potential survey respondents

Survey Questions	Answer Possibilities	Literature Relevance
Gender	M/F	
Age	insert	
Do you find kParty novel/new and have an interest in trying it out?	Not interested at all(1), Not very interested(2), Neutral(3), Somewhat Interested(4), Very Interested(5)	Dean D. et al(2006) 'Identifying Quality, Novel, and Creative Ideas: Constructs and Scales of Idea Generation', Journal of the Association for Information Systems
Do you find the idea behind kParty understandable, well presented?	Not understandable at all(1), Not understandable(2), Undecided(3), Understandable(4), Very Understandable(5)	MacCrimmon, K. R. and C. Wagner (1994) 'Stimulating Ideas through Creativity Software', Management Science (40) 11, pp. 1514-1532.

In your opinion, is the live session singing important for the user experience - When thinking in the context of other Karaoke games? (kParty provides the option of users singing and competing with others live, unlike other online karaoke games which work on a playback system)	Not important at all(1), Not important (2), Undecided(3), Important(4), Very Important(5)	Murthy, U. S. and D. S. Kerr (2003) 'Decision Making Performance of Interacting Groups: An Experimental Investigation of the Effects of Task Type and Communication Mode' Information & Management (40) 5, pp. 351-361.
In your opinion, is the ladder system important – When thinking in the context of other Karaoke games? (kParty provides the option of users competing with other users on a ranking system)	Not important at all(1), Not important (2), Undecided(3), Important(4), Very Important(5)	Murthy, U. S. and D. S. Kerr (2003) 'Decision Making Performance of Interacting Groups: An Experimental Investigation of the Effects of Task Type and Communication Mode' Information & Management (40) 5, pp. 351-361.

Would you be interested in testing the kParty application in the closed beta?	Not interested at all(1), Not interested(2), Undecided(3), Interested(4), Very Interested(5)	Von Hippel, E. (1976) 'The Dominant Role of Users in the Scientific Instrument Innovation Process' Research Policy 5, pp. 212–239
Would you invite friends to play the casual game, in which you sing the songs of your choosing?	Definitely Not(1), Probably Not(2), Undecided(3), Probably Yes(4), Definitely Yes(5)	Kano, N. et al. (1984) 'Attractive quality and must-be quality', Hinshitsu: The Journal of the Japanese Society for Quality Control, pp. 39–48
Would you try out the ladder system and compete with users you are not acquainted with?	Definitely Not(1), Probably Not(2), Undecided(3), Probably Yes(4), Definitely Yes(5)	Kano, N. et al. (1984) 'Attractive quality and must-be quality', Hinshitsu: The Journal of the Japanese Society for Quality Control, pp. 39–48

APPENDIX 2: SEMI-STRUCTURED INTERVIEWS WITH BETA APPLICANTS

Topic LSM, value proposition, features, customer involvement
Time 30-45 minutes per interview
Medium Skype
Sample Size 5 beta applicant interviewees

Interview Guideline	Semi-Structured Interview Questions	Literature Relevance
General	*Background (Age, Gender)*	
	Do you play online social games and if so which?	
	Do you sing karaoke in your past time - in bars, online, with friends? How often?	
	What do you think of online karaoke solutions, have you used them before?	
Features	*What are your thoughts on the gameplay?*	Kano, N. et al. (1984) 'Attractive quality and must-be quality', Hinshitsu: The Journal of the Japanese Society for Quality Control, pp. 39–48 Murthy, U. S. and D. S. Kerr (2003) 'Decision Making Performance of Interacting Groups: An Experimental Investigatior of the Effects of Task
	Do you find the ladder system interesting or would you prefer casual games?	
	Would you use the re-roll	

	option in the ladder system?	Type and Communication Mode' Information & Management (40) 5, pp. 351-361.
	What would you like to see added to the gameplay? Are there some features you would like to see added?	
Value Proposition	*Do you find kParty as something you would use and if so why or why not?*	Blank, S. (2006) The Four Steps to the Epiphany: Successful Strategies for Products that Win (2th edition)
	Would you pay for the option of using re-rolls on the ladder system? Would you pay for songs if they were locked?	
Improvement Suggestions	*What is the probability of you recommending this application to your friends? 0 being highly unlikely and 10 very likely*	Blank, S. (2006) The Four Steps to the Epiphany: Successful Strategies for Products that Win (2th edition)
	What would you like to see added to the application?	
	Anything you would like to add? Improvements, features, what you liked or disliked about the application?	

APPENDIX 3: OPEN INTERVIEW WITH CO-FOUNDERS

Topic LSM, product development, customer involvement
Time 30-45 minutes per interview
Medium Skype
Sample Size 2 co-founders

Interview Guideline	Open Interview Questions	Literature Relevance
General	*Can you give a general overview of your responsibilities within the company?*	Denison, R. (1990) 'Corporate culture and organizational effectiveness', Oxford, England: John Wiley and Sons
	Describe the current company culture.	
Customer involvement	*How is customer involvement incorporated in the current company daily business?*	Lagrosen, S. (2005) 'Customer involvement in new product development: A relationship marketing perspective', European Journal of Innovation Management, Vol. 8, pp.424-436 Kaulio, M. (1998) 'Customer, consumer and user involvement in product development: A framework and a review
	Do you think using customers feedback and involving them in daily decisions of the product development process is beneficial? Why or why not?	
	Do you see potential for improvement of customer involvement in the case company?	

		of selected methods', Total Quality Management, Vol. 9, pp.141-149
Product development	*How would you describe the product development process within the company?*	Blank, S. (2006) The Four Steps to the Epiphany: Successful Strategies for Products that Win (2th edition) Ries, E. (2011) 'The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses', Crown Business
	What do you think about the lean startup methodology?	
	What advantages/disadvantages do you personally think lean startup has to other product development practices?	
	Do you see potential in implementing LSM methods to the case company?	
	In your opinion, what are the benefits/drawbacks of implementing LSM to the case company?	