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Henri Johansson

FINDING THE PRODUCT/ MARKET FIT

– Lean Canvas framework as a tool for establishing customer-validated market orientation in early-stage startup businesses

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Tämän opinnäytetyön tarkoituksena on tutkia malleja sekä tietoperustaa startup-yrityksen markkinakelpoisuuden ja liiketoiminnan skaalauspisteen määrittämiseksi, sekä laatia tutkitun tiedon pohjalta koherentti ja tutkittuun tietoon perustuva rakenteellinen etenemisehdotelma kyseiseen pisteeseen (eng. Product/Market fit) pääsemiseksi. Työ keskittyy ennen muuta digitaalisessa ympäristössä toimivien yritysten toimintamallien optimointiin, mutta on muutoksin sovellettavissa myös perinteisemmille yritystoiminnan aloille, kuten teollisuuteen. Prosessin taustaideologiana toimii ns. lean startup-menetelmä, joka on tunnettu konsepti liiketoiminnan kehittämisen alalla. Opinnäytetyön tietoperustana on käytetty tieteellistä kirjallisuutta sekä akateemista tutkimusta pääasiassa 1990- ja 2000-luvuilta, muutamiin pääteoksiin nojaten.

Työssä esitelty prosessi perustuu jatkuvaan testausdatan hyödyntämiseen sekä moniportaiseen asiakasvalidaatioon. Sen keskeinen elementti ja aloituspiste on lean-kangas (lean canvas) - yksisivuinen ja yhdeksästä segmentistä koostuva liiketoimintasuunnitelma, jonka eri segmenttejä testataan ja validoidaan potentiaalisten asiakkaiden parissa jatkuvasti oppien ja kehittäen. Prosessin tavoitteena ei ole rakentaa kerralla valmista tuotetta, sillä suuren epävarmuuden vallitessa on suuri todennäköisyys rakentaa jotain, mitä markkinoilla olevat potentiaaliset asiakkaat eivät halua tai tarvitse.

Tavoitteena onkin rakentaa ensin pienin ja kevyin mahdollinen elinkelpoinen ratkaisu, joka vastaa asiakkaiden ongelmaan (Minimum Viable Product, MVP). MVP-konseptin tarkoituksena on tarjota vain ”riittävän hyvä” ratkaisu ongelman ratkaisemiseksi, jotta tuotteen markkinakelpoisuutta päästään testaamaan mahdollisimman pian. Järjestelmällisten kokeilujen ja asiakkaiden parissa validoidun datan perusteella tuotteen käytettävyyttä parannetaan ja ominaisuuksia lisätään huolellisesti analysoiden niin, että lopulta tietyt liiketoimintamittarit viestivät tuotteen ja liiketoiminnan skaalauskelpoisuudesta laajemmalle markkinalle.

Startup-yrityksen rakentaminen on jatkuvien paineiden ja lähes kaoottisen epävarmuuden alla tapahtuvaa systemaattista ja tehokasta ongelmanratkaisua, johon harvoin on eväitä ilman tarkkoja prosesseja. Yhteiskunnan ja poliittisen konsensuksen arvostuksen lisäämiseksi tieteellinen tutkimus ja dokumentaatio aiheesta olisi elintärkeää, ja tämä opinnäytetyö on pieni osa tätä tutkimusta.

ASIASANAT:

Startup, markkinakelpoisuus, lean, tuotekehitys, liiketoimintariski

BACHELOR´S THESIS | ABSTRACT

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Lean Canvas framework as a tool for establishing customer-validated market orientation in early-stage startup businesses

The purpose of this thesis is to study the models and the knowledge of defining a systematically validated point in the development of the venture where scaling the business can be started and the product successfully satisfies the needs of the market (the Product/Market fit). Based on that research, a viable, coherent structure on how to reach that point in the business development of the company is constructed and introduced.

The thesis primarily concentrates on optimizing the functions of business and product development of digitally oriented businesses, but can be applied to certain more traditional industries. The ideological background of the thesis relies on lean startup -methodology, which is a well-known concept of developing startups. The theoretical basis of the thesis mainly consists of business literature and academic research from 1990's and 2000's, grounded on a few principal pieces.

The process introduced in the thesis is based on constant utilization of testing data and continuous customer validation. The central element and the starting point of the process is the lean canvas - a one-page business plan consisting of nine segments that are tested and validated with potential customers along with constant learning and agile product development. The objective of the process is not to build a complete product at once, as high uncertainty dominates the environment and the risk to build a product that the potential customers do not want or need is prominent.

The goal is to build the smallest and lightest viable solution that solves the problems of the customers - a Minimum Viable Product, MVP. The purpose of the MVP-concept is to only offer a "good enough" solution to the problem, in order to enable the iteration towards Product/Market fit as soon as possible. Through systematical experimentation and customer-validated data, the usability of the product is improved and extra features are developed until certain metrics point to the scalability of the business to a larger market.

Building a startup company is essentially systematical and effective problem-solving in the midst of constant pressure and uttermost uncertainty. A viable business can hardly be built without precise structures and explicit procedures. In order to improve the valuation of these themes in the society and political consensus, academic research and documentation is vital. This thesis is a part of this research.

KEYWORDS:

Startup, product/market fit, lean, business development, business risk

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1. INTRODUCTION

This thesis studies the models of finding a customer-validated market orientation in small-sized startup businesses. This iterated, systematically established point where the business can be started to scale up is called the product/market fit.

The product/market fit is an outcome of continuous engaging of customers throughout the product development cycle as well as testing, pivoting, and applying the Lean Canvas strategy in order to maximize the efforts for speed, learning and focus.

The product/market fit is also a valuable breakthrough in order to raise funding for a venture. The start-up marketing and product development strategies of placing a ”Minimum Viable Product” and, unique value proposition, as well as finally reaching product/market fit are investigated in this particular thesis.

2. STARTUPS

First, it’s by all means necessary to define the meaning of a startup company. A startup is a relatively new term that established itself around the 1990’s and early 2000’s as the Internet got widely adopted in the world. It can be stated that some of the very early startups have been such companies as Ford Motors or Hewlett-Packard, as they did apply some of the frameworks, practices and processes of building a business that have later been documented and presented as models for building a startup business. From this perspective, startups have existed for many decades or even centuries, but only with the recent research and knowledge we have been able to define the meaning of the term.

Surprisingly enough, no clear and simple definition for a startup is stated in the academic literature. The definition of a startup has to be drawn from business literature. Two well renowned and greatly appreciated thought leaders, Steve Blank and Eric Ries, have defined startup in ways that function as a definition for the term ”startup company” or ”startup” in this thesis. Blank (2012) defines a startup as a temporary organization in search for a scalable, repeatable and profitable business model. Ries (2011), on the other hand, acclaims that a startup is a human organization to deliver a product or a service under conditions of extreme uncertainty.

Based on these two definitions, the following definition of a startup is applied in this thesis:

Startup is a temporary human organization searching for a scalable, repeatable and profitable business model for a product or a service, under conditions of extreme uncertainty.

In addition, it is important to note that every startup has a founding team consisting of one or more founders.

2.1 Startups’ characteristics

A startup is essentially any form of an entrepreneurial venture - often confused with ”Software As A Service” (SaaS) ventures, which refers to a subcategory of startups. While SaaS -ventures as well as other forms of software startups do form a prominent part of all startup companies worldwide, a startup doesn't always have to look for software products in order to be a startup.

Startups do share the following main characteristics:

1. Youth and immaturity
2. Limited Resources
3. Multiple Influences
4. Dynamic Technologies and Markets (Sutton, 2000).

A major amount of startups are relatively young and only possess a small amount of experience but many startup founders do have relevant business experience from their pre-startup careers (Sutton, 2000). Some founders of startups have founded several previous startups and pursued different goals, and their career consists of building companies again and again. This form of being a startup founder, yet not unusual in the industry, lacks an academical definition and can be seen more as a way of life than a definitive profession. The usual expression for these startup founders is ”a serial entrepreneur”.

The relatively limited resources of startups are typically concentrated on outbound activities: product release, product promotion and building strategic partnerships (Sutton, 2000). Scarce human resources of startups also limit their abilities to invest in product research and development, as well as in customer involvement methods.

In its early stage, a startup can be very sensitive to various influences from outside of the venture; such as potential investors and venture capitalists, as well as customers, partners and competitors (Sutton, 2000). The inconsistency of such influencers can cause business strategy -related problems. Proactive listening of outside collaborators can be valuable, mut experts argue that the founders usually do know the best what they are to do next with their respective venture. The high amount of uncertainty and the lack of knowledge on market segments and customer needs often characterize a typical startup. Startups are often backed by venture capitalists and share the following characteristics:

1. New, non-existing market
2. New business

3. Breakthrough product

4. Opportunity to start small and grow

5. Dynamic business model

6. High growth potential. (Watts, 2001)

7. Shorter time to market than non VC-backed companies (Hellman & Puri, 2000).

These types of characteristics of startups can potentially result in discontinuous innovations. Discontinuous innovations can be radical innovations or absolutely new innovations (Garcia & Calantone, 2002) and tend to possess at least one of the following attributes:

1. 5-10 times improvement in performance compared to existing products

2. 30-50 percent cost reduction or

3. New-to-the-world performance feature (Rice, O'Connor, Peters & Morone, 1998).

According to some researchers startups can be divided into two subcategories: innovators and imitators. Innovators are the first to introduce a new product to a market while imitators seek to build products and services that do have existing and established competitors in the market but look forward to compete with them feature-wise (Hellman & Puri, 2000). Imitators are necessarily not better than existing alternatives, but they tend to provide solutions to markets where the original innovators are not yet present. A well-known example of an imitator company builder is the German Rocket Internet (www.rocket-internet.com).

One of the most prominent experts in the field, Eric Ries, states that startups essentially are powered by three core drivers:

1. The use of open source platforms and free software

2. The application of agile product development methodologies (in order to reduce waste and unlock creativity)

3. Rapid, customer-centric iteration of products and services under construction, via proactive utilization of customer segment feedback. (Ries, 2008)

Various definitions of startups exist, and startups are described for instance ”companies that work to solve a problem where the solution is not obvious and success is not guaranteed” or simply just ”a state of mind”. American Heritage Dictionary suggests the following definition:

1. The act or process of setting into operation or motion.
2. A business or undertaking that has recently begun operation (American Heritage Dictionary, 2017)

Many experts claim, though, that the age of the venture is rarely seen as a definitive factor, although some state that a five year old company can still be a startup where as ten years can not. Experts collectively agree that the main attributes of a startup are the ability to grow and scale and the tendency to adapt technology to solve problems (Robehmed, 2013).

A startup is a venture aiming for an impact and has its finger on the pulse of the future. The term ”startup” directly points to a certain freshness and innovativeness.

2.2 The differences between startups and established firms

Startups tend to be different from established firms. Whereas companies that have gained their leverage on the market and have successfully established a solid business to scale and grow often search for predictable financial results and have a low need for new innovations (Watts, 2001), startups backed by venture capital want, and even need to, take risks and provide innovation. This is the inevitable outcome caused by the venture capitalist expectations: they expect their investment selections to provide substantial returns.

In addition, the compensation systems in startups and established firms are different from each other. Whereas compensations in startups are usually based on stock ownerships, in established enterprises they tend to rely on salary (Watts, 2001).

It could be stated that startups have significant disadvantages in comparison to established firms, but they also do possess prominent advantages. Established companies can be more or less stuck with platforms and technologies they have been using ever since and that their customers already value (hence the low need for innovation when the business does well) (Christensen, 1997). Disruptive solutions tend to be valued more in emergent markets (Christensen & Rosenbloom, 1995). Established enterprises are often primarily focused on addressing their existing customers' needs rather than business opportunities in markets where potential customers' needs can be difficult to define. Introduction of new products and services in markets already occupied could, in turn, lead to cannibalizing the sales of existing innovations. Also the managerial processes in many established organizations do not necessarily back up this form of disruptive innovation inside the company (Christensen & Rosenbloom, 1995).

Christensen & Rosenbloom (1995) have found that in incumbent companies the ability and incentive to create new applications for markets might be low. They suggest that startups perform better in product development that addresses customer needs. Disruptive innovations in emerging markets created by startups performed better than the ones brought to markets by established firms. The findings point out that startups have a great advantage and a serious opportunity to build valuable businesses in markets that are not essentially targeted by established firms.

2.3 Where do startups come from?

2.3.1 Creation vs. discovery

Startup's meaning of existence is to exploit various entrepreneurial opportunities in markets where businesses are expected to be profitable. Experts have yet to reach a mutual understanding on where these opportunities come from. The dominant perspective is that entrepreneurs actively discover these business opportunities, but it is also claimed than opportunities are rather created instead of being discovered (Suddaby, Briton & Si, 2015). The scholars defending the discovery theory investigate the world as ”real”, whereas creation theorists tend to view entrepreneurs as artists creating the opportunity. According to Ries (2011) and Blank (2012), for instance high-tech startups have unique characteristics that enable these ventures to be founded in different ways.

2.3.2 Key components of startup opportunities

Startups are usually way more diverse and complex than their founders may claim in sales pitches. Park (2005) states that startups consist of three key components that have a great influence on their performance and initial ability to benefit from entrepreneurial opportunities in markets. The components are:

1. The entrepreneur / the entrepreneurs (founders)
2. Knowledge and experience and
3. Technology (Park, 2005).

2.3.3 The founders

Startup founders are creative solution seekers motivated by meeting unmet needs and solving unsolved problems or improving existing products through innovation. Entrepreneurship is the result of the mentioned scenario, and can seem to happen accidentally as well (Shah & Tripsas, 2007). Simon (1985) claims that effective problem solving is the consequence of valid knowledge that allows the entrepreneur to act wisely in situations that require intuitive, rapid decision-making. He states that intuitive knowledge is the product of proactive training and learning via experience. Creative performance forms when calculated risks are taken, and the validity and accuracy of these risk evaluations is dependent on the founder's knowledge. When risks are successfully calculated by the risk taker better than the competitors do on average, the gambling factor is reduced dramatically.

2.3.4 Knowledge and experience

In the era of continuous disruptive innovation enabled by the Internet, existing knowledge might not always be solely an advantage (Katz, Allen, 1982). For example in the software industry a successful development team can be the one with relevant experience in Internet software development, and therefore the team tends to be younger than in many other industries. (MacCormack, 2001). It is, however, widely agreed by scholars that prior knowledge has a positive effect on the performance of entrepreneurial ventures more often than a negative one. This knowledge could be gained from

previous work experience, studies or personal life (Cohen and Levinthal, 1990). Shane6 (2000) found that previous knowledge of markets and ways to serve them, as well as understanding of customers' problems are vital in order to successfully exploit entrepreneurial opportunities.

Von Hippel (1988) stated that entrepreneurs establish new companies in order to solve customer problems that they have learned about from working with potential customers in previous workplaces. Bhide (1994) has studied the Inc. 500 list of fastest-growing companies, and has found in his studies that up to 71 percent of entrepreneurs were inspired in their pursue of new ventures by knowledge learned under previous employment relationships.

2.3.5 Technology

One of the cornerstones of modern-era entrepreneurial activity is technology. It has a great impact on the chances of effectively recognizing venture opportunities (Shane, 2000). Orientation to technology in marketing activities, for instance, is what distinguishes many startups from established firms in various markets and industries. Startups tend to exploit technology that is cutting-edge, but with very limited resources (Julien, 1995). By studying the research of Carayannis and Alexander (2002), as well as Park (2005) it can be said that many startups can vastly benefit from combining their capability to learn new technologies with their understanding of customer needs.

3. WHAT IS PRODUCT/MARKET FIT?

This thesis essentially studies the process of finding the product/market fit, a critical stage in the lifecycle of a startup company that enables the venture to start scaling - expanding the business in found segments with relevant problems to be solved and needs to be met. Before the process of finding product/market fit can be looked into, the concept of product/market fit needs to be defined.

A straightforward, universal definition that would be mutually agreed by academic scholars and scientific researchers remains to be unfound. One reason to this might be the relatively young age of many concepts and terms in the startup business world. One of the most prominent experts in this field, Marc Andreesen, has however attempted to define product/market fit and his 2007 definition is widely accepted in the particular field of study of startup businesses.

Andreesen (2007) claims that in the broad range of startups in different industries, there is great variation in the levels of success and competitiveness and a vast diversity of calibers and qualities of startup teams, products and markets. He states that the mentioned three terms are the core concepts needed to understand in order to effectively look into the meaning of product/market fit. He defines them in the following way:

- The caliber of a startup team can be defined as the suitability of the CEO, senior staff, engineers, and other key staff relevant to the opportunity in front of them.
- The quality of a startup's product can be defined as how impressive the product is to a customer or a user who actually uses it.
- The size of a startup's market is the the number, and growth rate, of those customers or users for that product (Andreesen, 2007).

Obviously, the perspective on the order of importance of these three factors is different depending on who is being asked from. Many will say that team is the most important factor because after all everything comes down to the people behind the startup, but for instance an engineer’s perspective on the issue could as well be more product-concerned. Andreesen, nevertheless, strongly claims that market is the most important factor because in a great market with plenty of customer potential, the market pulls the

product out of the startup. He sees the market - the customers' needs - as an organism that has an inevitable need to be fulfilled by the first viable product possible, whatever the need is. The market has zero interest on how good the team behind the product is as long as the solution works. Conversely, in a horrible market the entrepreneurs can have the best product in the world created by the best possible team, and the venture will eventually fail. Market consists of the customers and the customers have to exist in order for the business to bloom.

Andreesen famously quoted the founder of the American venture capital firm Benchmark Capital, Andy Rachleff, presenting Rachleff's Law of Startup Success, which has then been cited frequently in startup-related blog posts and conversation:

1. When a great team meets a lousy market, market wins
2. When a lousy team meets a great market, market wins
3. When a great team meets a great market, something special happens (Andreesen, 2007).

Andreesen describes Rachleff more or less stating that the lack of market is the primary death cause of many startups. Therefore, one can fail on a great market but when equipped with a decent product and a competent team, a good market will tend to lead to success and poor market will tend to lead to failure. Likewise, neither a superb startup team or a magnificent product will bloom on a poor market. Markets that don't exist don't care how smart you are, Andreesen concludes. Rachleff's Corollary of Startup Success, withdrawn from his Law of Startup Success, is that the only thing that matters (in a startup's success) is getting to product/market fit (Andreesen, 2007).

Most of ambitious startup ventures fail before product/market fit ever is found, so startup companies should focus solely on finding product/market fit before scaling the business. A startup's life can be defined into two parts: before and after product/market fit. This thesis concentrates on the actions performed before finding the product/market fit, and the following definition by Marc Andreesen will be applied in this paper:

Product/market fit means being in a good market with a product that can satisfy that market (Andreesen, 2007).

4. HOW TO GET THERE: THE LEAN CANVAS

4.1 Lean

Lean is a management and manufacturing philosophy that became famous in the early 1990's, when James Womack, Daniel Jones and Daniel Roos investigated the production processes of Toyota in their book "The Machine That Changed the World". The book gained international attention, documenting Toyota's principles to effective management and manufacturing for the first time.

Lean refers to minimizing waste without sacrificing productivity. It consists of five core parts, which are:

1. Value definition is based on customers' views
2. The value chain is identified and everything that does not increase value will be removed from the process
3. The value chain should be solely based on suction control caused by customer needs
4. Employers should be taken along to all development
5. Organization's continuous learning (Womack, Jones, Roos, 1990).

The roots of the term lie in various sets of principles of optimizing production chain in order to manufacture more products with less wasted effort (at Toyota this would obviously mean more cars), but lean thinking has then been applied to many different areas of business and life in general, including for instance:

- Lean management
- Lean leadership
- Lean services
- Lean supply chains

- Lean software development
- Lean marketing
- Lean sales
- Lean UX development
- Lean analytics
- Lean startup.

From the viewpoint of this particular thesis, lean startup is an important concept to understand as lean startup methodology will be referred to throughout the following parts.

4.2 Lean Startup and Lean Canvas

Lean startup is a common methodology for business and product development in startups. The core idea of lean startup is to shorten development cycles by proactive experimentation, continuous iteration and customer-validated constant learning (Penenberg, 2011). The main hypothesis is that startup companies are required to invest time and effort into iterative building of products and services in order to satisfy the needs of early adopters. By doing this the market risk will be reduced and expensive research and product launch investments can be avoided (Adler, 2011).

Lean startup methodology was first created by Eric Ries, based on his experiences of integrating the earlier defined lean philosophy to high-tech startups (Ries, 2008). Ries's highly recognized 2008 book, The Lean Startup, is one of the most fundamental pieces of work in this field, and naturally a major inspiration for this thesis as well.

Another renowned expert of lean startup, Steve Blank, has stated that a technique called discovery-driven planning has also a prominent source of inspiration for lean startup methodology (Blank, 2013).

The lean startup methodology, as the earlier presented concept of lean manufacturing, aims to reduce waste in product and business development loops to zero (Ries, 2011). Only customer-validated, value-producing practices are effectively continued. This validation is executed through proactive seeking of customer feedback, both qualitative and quantitative, and using key performance indicators based on relevant metrics in each stage of the startup (Tam, 2010). Customer feedback is exceptionally important,

as it produces the evidence on whether the startup is designing features that the potential customers really want to have or not (Adler, 2011). The aim of the lean startup process is to avoid time-taking business plans, costly perfectionism in product development and the need of large funding from venture capitalists or other third-party investors (Schonfeld, 2011).

The core idea of lean startup is to assess the actual and accurate demands of potential customer segments and find ways to meet this demand using the lowest possible amount of resources (Loizos, 2011).

4.2.1 Minimum Viable Product (MVP)

Startups often do not possess the resources to invest vast amounts of time and money to an elaborate product (Adler, 2011). The risk of failure is simply too likely to unfold. This is why an ”MVP” - a Minimum Viable Product - is a critical stage of lean startup methodology -based product development (Ries, 2011).

According to Ries (2011), a Minimum Viable Product (MVP) is the ”version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort”. The primary objective of an MVP is to pressure test business hypotheses and assumptions and to help the founders of a startup to get acquainted with the learning process in the earliest stage possible (Ries, 2009).

4.2.2 A/B testing

An A/B test is an experiment in which ”different versions of a product are offered to customers at the same time” (Ries, 2011).

The goal is to document and evaluate differences in customers’ behaviors by dividing them to separate control groups. This is how the founders are able to observe, measure and analyze the impact of variants and versions of the product.

4.2.3 Actionable metrics and vanity metrics

Actionable metrics are data that enables the founders to make validated business development decisions (Ries, 2009).

Vanity metrics are data that do not exactly mirror the startups key drivers. The relevant difference is that actionable metrics are pieces of measurable information that accurately reflect the objectives of the earning model, while vanity metrics produce no direct correlation between the metric and the revenue. One example of a vanity metric could be for instance ”the number of new users gained per day”. A notable number of new users gained per day easily seems to benefit any given business, but does not give insight on the cost of acquisition of each new user. Therefore, it’s rather a vanity metric than an actionable one, because if the cost of acquisition is higher than the gained revenue, the venture is not profitable and the business not on a solid base.

4.2.4 Pivot

Steve Blank defines a pivot as ”changing or firing the plan instead of the executives” (Blank & Dorf, 2012).

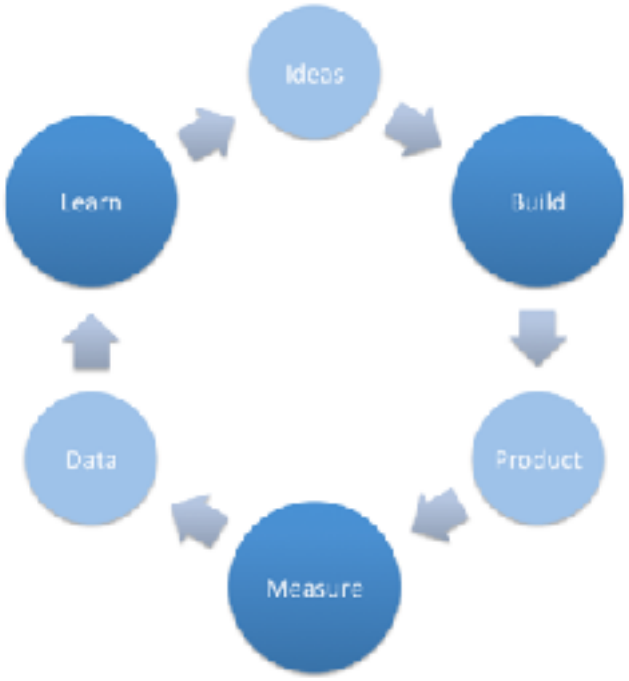
Eric Ries defines a pivot as a ”structured course correction designed to test a new fundamental hypothesis about the product, strategy and engine of growth” (Penenberg, 2011). That being said, pivot actually means establishing a completely new approach to the problem, or even attempt to solve a different problem that the initial one, if the original strategy produces little or no results. One well-known example of a successful startup pivot is Groupon. Groupon was originally founded as The Point, an online activism platform for social collaboration, but gaining only minor results, the founders pivoted to launch a coupon promotion platform built on a WordPress blog site. The first coupon promotion only managed to allure 20 sign-ups, but Groupon founders quickly understood that this was a start to something bigger. In only three years or so, Groupon’s net worth would grow to a billion dollars (Ries, 2011).

4.2.5 The Build-Measure-Learn loop

The Build-Measure-Learn loop is vital for lean startup company’s ability to quickly iterate products and services. The term refers to a learning cycle of utilizing feedback and creative input to build consequent product versions and measure their impact on the market. In the Build-Measure-Learn loop consists of three essential parts:

1. Building product versions based on feedback and/or new ideas

2. Measuring customers' and potential customers' reactions and behavior against the product versions
3. Learning via the information gathered and making decisions whether to persevere or pivot the idea (Maurya, 2012).

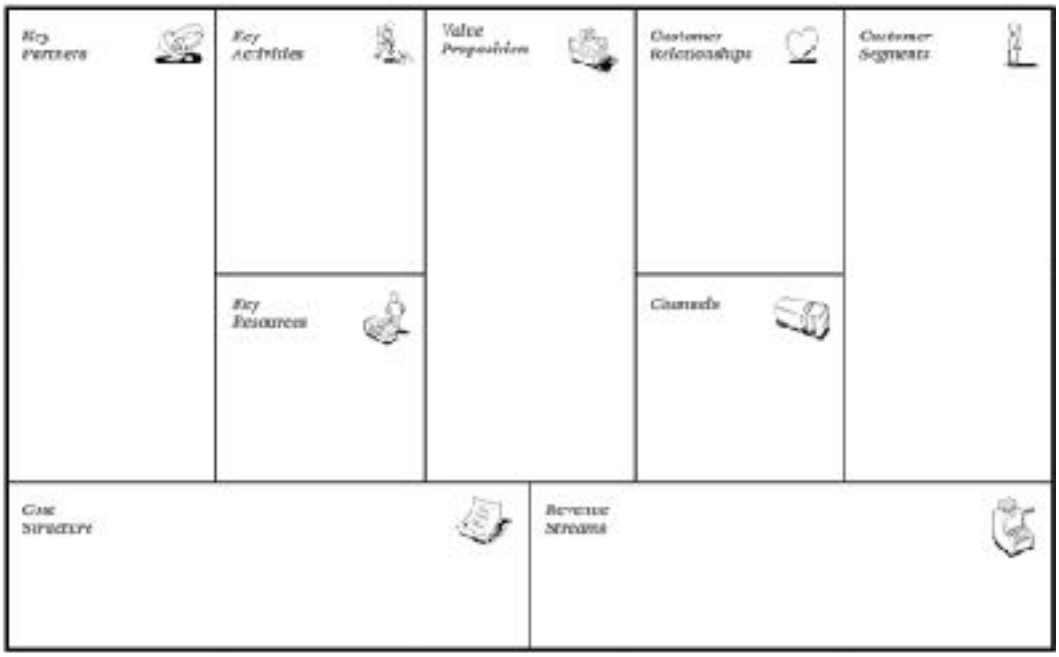


Picture 1. The Build-Measure-Learn -loop (Hypeinnovation, 2016)

This rapid cycle of iteration and product improvement enables the startup to eventually discover the product/market fit and later fine tune and optimize the business when scaling.

4.2.6 Business Model Canvas

The Business Model Canvas is a strategic management template documented by Alex Osterwalder and Yves Pigneur. It is invented to develop models for new businesses or improving existing business models. Business Model Canvas is a visual template describing the outline of a business model and important elements, such as the value proposition and potential customers (Osterwalder, Pigneur & Clark, 2010).



Picture 2. The Business Model Canvas (Unicornomy, 2016)

4.2.7 Lean Canvas

The Lean Canvas is essentially an iterated version of the Business Model Canvas, adapted by Ash Maurya. It is specifically modeled for early-stage startups. It focuses on addressing potential customer problems and solutions for them via a documented visual chart that replaces the traditional business plan (Maurya, 2012).

The Lean Canvas, being one of the major cornerstones for a modern startup to ever reach product/market fit, is carefully examined in the next part of this thesis.

5. HOW TO APPLY LEAN CANVAS AS A TOOL FOR FINDING THE PRODUCT/MARKET FIT?

There are obviously multiple theories and sets of principles available for startup founders to gain knowledge on how to successfully establish a realistic roadmap on how to find the product/market fit. Ash Maurya, one of the very prominent experts on the field of building a startup, has created the concept of ”Running Lean”, a dynamic combination of Eric Ries’s Lean Startup earlier mentioned in this thesis, and Steve Blank’s famous Customer Development Approach.

Maurya’s Running Lean is also examined in this thesis, as it offers a modern framework to establish customer-validated product/market fit in startups with high uncertainty and limited access to capital in the early beginning of the company’s history-to-be.

Running Lean is essentially distilled into three steps:

1. Documentation of ”Plan A”

2. Identification of the plan’s riskiest parts

3. Systematical testing of the plan via various experiments.

These three steps will be covered in detail in this thesis.

5.1. Documentation of ”Plan A”

Many people with entrepreneurial mindsets are driven by passion and determination, but the passion-driven visions can not reach their full potential without solid and constant documentation of facts. Without proper testing of assumptions and hypotheses and multiple experiments, the venture is danger of becoming a faith-based passion project without a systematical roadmap.

This being said, the first absolute step is writing down the vision and sharing it with other people. The traditional way of doing this would be to invest a decent amount of time and effort to write an average 60-something page business plan. The traditional plan,

though, tends to be very static and rigid and therefore doesn't suit well for many startups in need for rapid iteration loops and continuous experimentation. The form of choice of Running Lean is Lean Canvas - a flexible one-page business plan.

Picture 3: The Lean Canvas (Blankcanvas, 2017)

Lean Canvas is an adaptation of Alexander Osterwalder's Business Model Canvas.

Lean Canvas is a superior choice of form for three main reasons: it is fast, concise and portable. While a traditional business plan can take weeks or months to produce, the Lean Canvas can be sketched in few hours or days depending on the effort put to brainstorming and prioritizing. The Lean Canvas forces its writer to pick the words carefully and get to the core of business very quickly. It is also easier to share with other people, meaning that more people will read it and the amount of potential feedback is therefore greater. This will lead to more frequent updating of the canvas.

Maurya (2012) points out that entrepreneurs should view the entire Lean Canvas business plan as the ”product”, instead of the traditional concept of a product that is sold or marketed. Understanding of this perspective allows the founders to ”own” the business

model and to apply various product development techniques to build the company, including Running Lean.

Lean Canvas helps the entrepreneurs to deconstruct their business model into nine distinct parts, that can be systematically tested.

5.1.1 Brainstorming possible customers

In the very beginning, most startups only have an idea of a possible problem, an idea on what the solution to the problem could be like, and possibly an idea of a customer segment to start with. Picking a business model, a customer segment or rushing to build a solution for the problem has a big chance of leading to a untested product or service that no one really wants, so multiple segment groups have to be explored and experimented upon. According to the Running Lean theory, this early stage has four concrete phases:

1. Distinguishing customers and users from each other: a customer is someone who's paying for the product, while the user doesn't. A product can still obviously have both.
2. Splitting customer segments: One can't, at least not effectively, build and design a product for everyone. The segments have to be small enough to be realistically tested.
3. Putting the customer segments on Lean Canvas: Maurya recommends, that building of Lean Canvas business plans starts with putting all the segments to one canvas with different colors, or other marks to distinguish them from each other. This is only recommended for visualization.
4. Sketching an individual canvas for all the relevant segments: It is recommended to start with a handful of potential segments, obviously the most promising ones. An own Lean Canvas is to be sketched for each of these segments. (Maurya, 2012)

5.1.2 Sketching the canvases

The point of the first sketches is to do it quickly (in less than 15 minutes) - the idea being that the first sketch only gives a a decent snapshot on the entrepreneur's vision.

Rather than spending vast amounts of time and effort to create a perfect initial business plan, the goal should be to establish something to start with and something to develop during the process. Therefore it's also allowed to leave some sections blank if needed. "I don't know" is as correct of an answer as anything else. The canvas also should fit on one page, so certain conciseness is welcome. The best result is reached, when the entrepreneur sketching the canvas doesn't try to predict the future and ponder upon various alternatives too much.

In "Business Model Generation", Alex Osterwalder presents several techniques to approach a business model canvas, including customer-centric approach (Osterwalder, Pigneur & Clark, 2010). The Running Lean procedure relies heavily on customer segments and customer feedback, so it's a natural perspective to begin with.

Problem- and Customer-segments

The problem- and customer -segments of the canvas pair to each other tightly, and in essence the decisions made on them tend to effect the rest of the canvas, so it's advisable to tackle them together first. This is made by listing the top 1-3 problems of the customer segment the canvas under investigation is meant to, as well as documenting existing alternatives - how competitors-to-be are or are thought to be addressing these problems. The existing solutions can be unobvius, as well: for instance, many online-based tools for collaboration or document exchange would not find that their core competitor is another online tool, but simply email. For many potential customers, the current solution for a problem could also be to just ignore it.

Next, other user roles need to be identified, as not everyone is a customer while they could well be users. For example for Google, the users are the people actively searching things from the internet, while advertisers are customers. The problem and customer segments should contain the needed information on all potential users, but concentrate specifically on customer segments narrow enough characteristic-wise, to define an early adopter rather than a mainstream customer. Defining early adopters' attributes is key to building a viable product.

Unique Value Proposition

Unique Value Proposition is essentially a line of text to tell the audience what distinguishes the respective product from other alternatives in the market. The Unique Value

Proposition often headlines the website of startup products. Maurya (2012) defines the Unique Value Proposition (UVP) as something that explains ”why you are different and worth getting attention”. An effective UVP can be crafted by utilizing the teachings of modern advertising theory; it has to be different from the competitors’ equivalents, but in immediate connection with the customer problem the product is attempting to solve. Likewise, the UVP’s core audience should be the early adopters. A decent UVP doesn’t list the features, but draws a picture in a reader’s mind on the benefits that the product offers. Careful copywriting and subtle exploring of other good UVP:s are obviously relevant tools for crafting an UVP.

Channels

One of the most common reasons of startup failure is that the entrepreneur is not successful in channel building - the customers don’t simply find the startup’s product. The channels, just like about anything else in the Lean Startup process of building a venture, can and have to be iterated during the process. Finding the correct channels in the very beginning is not a purpose nor a goal. Nevertheless, it’s absolutely vital that the scalable channels to enhance real growth are identified rather sooner than later. In early channels the attributes that matter vary to a great extent depending on the startup’s industry et cetera, but some important notions can still be made.

Firstly, no free channels exist - even the unpaid channels (such as social media ones) require a prominent investment of limited human capita in terms of time and effort. Return on investment -calculations can be challenging with such channels. Less complicated is the value determination of paid channels, for instance search engine marketing, but obviously they can be expensive yet still ineffective. The choice between unpaid and paid channels is an important question to ponder for an early-stage entrepreneur.

Of great importance is also the decision on inbound and outbound types of channels. Inbound channels, such as whitepapers, webinars or ebooks ”pull” leads and customers organically via relevant content, whereas outbound marketing channels, for example advertisements, trade shows and cold calls, ”push” the messages directly to audiences.

A startup also has to come up with an early plan on how to build its sales models. In general, automated sales outperform the direct, manual salesmanship in most products (the list of exceptions being long as well). An automation system lacks the capability to

learn, though, so direct sales tends to be useful for early-stage firms. The indirect sales strategy of partnering with a more established company in order to achieve a greater leverage in sales might sound like a good idea to many, but often fails as the sales reps of the mentioned larger company do not see the value of a brand new, unproven product compared to the ones they are familiar with. The same problem applies to external salespeople, such as freelance growth ambassadors.

In early-stage startup marketing, retention beats referral and affiliate programs in the very start. One must have something to spread the word about before the referral programs and viral potential can step in to the picture.

Revenue Streams and Cost Structure

What it comes to finances, instead of an overoptimistic two- or five-year forecast, an early-stage lean startup should concentrate on defining a reliable runway required to build a Minimum Viable Product before anything else. In revenue stream calculation, the most important factor to take a stand on is obviously pricing. The MVP might look, feel, or work like it's not worth charging, or asking a price could be considered as embarrassing, but price is always part of the product.

An MVP is not always synonymous with a buggy, laggy, halfway ready product - it just addresses the most important problems of a potential customer instead of a majority of them. If a product solves at least one problem of a person, it's worth money - perhaps not a substantial amount but still money. Early start with pricing also accelerates initial learning and iteration. Free products make it ”too easy” for a customer to say yes on a buying decision, and validation of pricing (being one of the riskiest parts of Lean Canvas) gets delayed. The price-free MVP's often hardly generate customer commitment, so asking for a price later on can be of extreme difficulty if the startup wants to keep its customers. That being said, only a few paying customers in the beginning might well be enough to provide enough vital information for validated iteration. Price is also a crucial marketing tool; it plays a grand role in selection of core segments. Some reference price anchors and insight on them might well be found from the existing alternatives hopefully mentioned in the Problem box of the canvas.

The cost structure can be complicated to accurately compute, but a list of operational costs needed to credibly take the product to the market is still of high importance. The list ought to focus on the present situation rather than faraway future, and attempt to

count the needed capital to interview for example 50 customers or build and launch an early MVP.

The revenue streams and the cost structure inputs, when calculated reasonably enough, can and have to be used to find a break-even point in which the startup pays for its costs and keeps itself alive. The estimate on how much time, money and effort is needed to get to the break-even point, in addition with a list of other things, define investor search input and further business strategy development.

Key Metrics

Virtually every startup does have certain key metrics that are used to measure the performance of the venture. Metrics are used to measure the business progress, and, perhaps even more importantly, to detect certain ”hot spots” in the customer lifecycle.

American angel investor and entrepreneur Dave McClure has sketched a reasonable model for investigating the key metrics relevant in different stages of the sales and marketing funnel. The model, informally referred to as ”Pirate Metrics”, depicts the following stages:

1. Acquisition
2. Activation
3. Retention
4. Revenue
5. Referral

Picture 4: AARRR Metrics (Innovation Playground, 2013)

Acquisition depicts the moment when an unaware visitor or similar is turned into a potential prospect. In traditional inbound marketing, for instance, this point could be a sign-up on a website.

Activation describes when the potential prospect gets acquainted with a gratifying user experience for the first time. This does not necessarily mean buying something, a first user experience could as well be any active contact with the business.

Retention is engagement with the product, or ”coming back”. Retention is more than often one of the key metrics in finding the product/market fit.

Revenue, as the headline promptly states, is the event of getting paid by the customer.

In the referral stage, the metric points the events when a satisfied customer generates traffic of new potential prospects in the conversion funnel - shares, promotes and recommends the product to others. The widely used Net Promoter Score (NPS) is a one example of a decent Referral metric.

Unfair Advantage

Generally being the most difficult section of the Lean Canvas to fill up, the ”unfair advantage” is typically one of the last boxes to be explored. In order to describe a compe-

titive advantage as ”unfair” to competitors, it has to be something else than pure features. Being the first in the market is necessarily not an advantage either - it certainly takes a lot of work and a good number of mistakes to succeed in that situation.

Anything worth copying is likely to be copied, so competitors to follow might find their product/market fit easier than the pioneers in the respective market. Therefore, a real unfair advantage is something that cannot be easily copied or bought (Cohen, 2010).

Solution

When all of the other boxes of the canvas are full, the solution options are to be tackled. The solution box is essentially the product itself - and in the very beginning it’s smart to not sketch out anything too complicated to develop on in the later stages. A wise move is to attempt to define the very simplest thing that can be built to address the problem, considering the framework consisting of the details in the boxes filled.

5.2 Identification of the plans riskiest parts

5.2.1 Prioritizing where to start

Risk

Incorrect prioritization is one of the top contributors of waste - the very possible outcome is to end up making only marginal progress and get stuck in the later phase. Startups are generally very uncertain, but uncertainty is not equivalent to risk. Uncertainty is the lack of complete certainty - the existence of more than one possibilities. Risk, however, is a state of uncertainty where some of the possibilities involve a loss, catastrophe or an other undesirable outcome (Hubbard, 2011).

When applied, the Lean Canvas model captures uncertainties and risks - but not all of the risks are equal to each other and therefore have to be quantified. Business model risk ranking is a key step in the process, as without any know-how on the scale of the possible outcomes of each risk, determining where to start and what to avoid is highly difficult. The probabilities of a specific outcome have to be compared to the associated loss if the risk realizes, and the payoff if it doesn’t.

Maurya (2012) divides the risks of a startup into three categories:

1. Product risk: getting the product right
2. Customer risk: building a path to customers
3. Market risk: building a viable business.

Tackling all of the mentioned simultaneously is a difficult task, so the have to be ranked, based on the stage of the product, and tackled systematically.

Business model ranking

A highly important stage is laying the Lean Canvases created next to each other, and prioritize which of the models is the one to start with. The basic objective is to find a big enough market that can be reached with customers who need the product, and so can be built a business around. A systematical ranking of the models can be done by investigating the relevant perspectives on the Lean Canvas segments, and prioritizing them. The segments thought to be the most important ought to stand on the top of the list. Maurya uses the following weighting order:

1. Customer pain level (the Problem segment): who needs the product most?
2. Ease of reach (the Channels segment): if one of the models definitely has an easier path to customers than the other models do, it should be taken into serious consideration.
3. Price/gross margin (the Revenue Streams and Cost Structure segment): if one of the models is expected to maximize the margins compared to the others, it has to be noted - the fewer customers needed to reach break even, the better.
4. Market size (the Customer Segments box): which of the models have the biggest potential market given the objectives of the business?
5. Technical feasibility (the Solution segment): which one of the models has the most feasible solution from investment perspective?

External advice

Another effective technique for risk control is simply seeking external advice. Hubbard (2011) refers to this with the method of ”Instinctive Bayesian Approach”. The Running Lean methodology heavily relies on fast learning via customer interviews, but when prioritizing risks advisor advice can also play a major role in finding the right course. Customers tend to have the right questions, advisors might have the right answers - their knowledge could emerge valuable in broadening or narrowing down customer segments and refining or outrighting business plans.

An advisor could, for instance, be a potential investor or another entrepreneur with specific expertise. When interacting with advisors, specific open questions often produces the most applicable information: what does the advisor consider to be the riskiest part of the plan? Have they confronted similar risks and problems? How would they test these risks and who would they recommend talking to next?

The information produced by advisor interviews should not be considered as absolute validation or judgment - the founder has to maintain the ownership of the business plan and he or she is the one responsible of synthesizing the advisor intelligence into a coherent whole.

5.2.2 Preparing for experimentation: The problem/solution team

The original Lean Startup philosophy by Eric Ries sees traditional business departments as causes of unwanted friction. Instead, a problem team and a solution team should be formed. The problem team engages with the outside world - conducts customer and advisor interviews, runs experiments et cetera. The solution team is responsible of the in-house activities such as code writing, design development and so on. Obviously, heavy cross-functionality and good communication between teams is required. Together, they form the problem/solution team that is in charge of and accountable for the business development of a startup.

The ideal problem/solution team in the early stage would be two to three people - that’s when communication stays fluent and the staff costs reasonable. More important than the number of the members is, though, that the right talent is accessible at all times. A startup can well be built alone, but this requires active ”work hacking” - schedule control and timetable management.

Maurya (2012) states that the most important areas of expertise needed in the early stage are development, design and marketing:

- The development expertise is heavily measured with prior experience in business development, along with skills in the respective technology
- The design expertise consists of expertise in aesthetics and usability. A product is a collection of user experiences, and when function could beat form in some markets, how things look and feel are becoming increasingly important.
- Everything else is more or less marketing. Marketing drives the external perception of a product: good copywriting skills along with solid understanding of metrics, positioning, pricing and channels is vital when measuring relevant marketing expertise.

Outsourcing some activities is an option, but should be examined with great doubt and careful consideration as that may tie the founders to certain third-party schedule restrictions and therefore slow down the iteration cycle.

5.2.3 Effective experimentation

The objective of a startup is to reach the product/market fit before running out of resources, and in the core of this process are speed, learning and focus, When moving forward and being focused, but not constantly learning, the risk is that the venture is basically just going in circles. When focused on the correct things and learning effectively but lacking speed, the business is at risk of getting outpaced by competition of running out of resources. With the very same logic, learning a lot in fast speed when not staying focused could result in premature optimization: thinking that the product is viable when the product/market fit isn't yet reached. The product/market fit is found by constant and effective experimentation.

An effective experiment tends to focus on they key metric wanted to achieve or the key takeaways wanted to be learned.These, obviously, vary by the stage and nature of the product. Multiple goals and metrics can be tackled in the same experiment, but this can lead to confusion and waste. Experiments should also be as simple as possible - experiment formulation should follow the simplest possible framework in order to test the hypothesis at hand.

Falsifiable Hypotheses

The Lean Startup method is heavily based on scientific methods that require more falsifiable or confirmable hypotheses than pure assumptions. A falsifiable hypothesis is a statement that can be clearly proven wrong (Maurya, 2012). When this step is ignored, it's tempting to convince oneself that the hypothesis is correct, even when it should by all means be declared false.

Qualitative validation, quantitative verification

The terrain before reaching Product/Market fit is filled with extreme uncertainty. This is not only a challenging setup, but also a starting point full of opportunities. Having a lot of uncertainty at a moment, not a vast amount of data is needed to rapidly reduce it by a significant amount (Hubbard, 2011). This is an advantage for an early stage startup. The initial objective is to generate and identify strong enough signals that do not require a large sample size. A strong negative signal is an message that a hypothesis does not work, and has to be refined or abandoned. A strong positive signal, however, doesn't necessarily indicate that the hypothesis could be scaled immediately - it only presents a clearance to move on forward so that the hypothesis at hand can be verified in the later phases with data gained by quantitative examination. This order of validation of hypotheses - first qualitatively and then quantitatively - is a key principle of Running Lean.

Another highly important perspective to the business development of a startup is absolute transparency of dashboards within the team. The objectivity brought by running experiments with company-wide access to data is vital (Stack, 1992).

Constant communication of learning

It's also of extreme importance to periodically communicate the learning progress produced by the various experiments - Maurya (2012) recommends a weekly cycle with the inner team and a monthly cycle with external advisors and investors. This allows the entrepreneur(s) to reflect on findings with the team and prepare better for the next round of experiments. Ries (2011) calls this innovation accounting.

The iteration meta-pattern in risk control

The experiments are key to tackling different risks. Some of them can be mitigated, but seldom completely eliminated through a single experiment. A lot of startups either pivot or abandon further examination because of the discourage suffered by negative learning, or get overoptimistic from positive experiences and ignore further testing required to build a viable business. The product/market fit is about more than ”building the right product” - in the core of it lies the scalability of the business model. Startups cannot blindly run experiments with aimless learning in mind - risks are only tackled via additive learning from staged iteration. The starting point is the Lean Canvas - the plan that should work. Methodical running of iterative experiments in each box of the canvas define the business development. With the following roadmap the risks can be tackled:

1. Understand the problem: Conducting customer interviews to find out whether the problem is worth solving, why so, for who and how is it solved at the moment?
2. Define the solution: Building a demonstration for visualizing the solution and testing it to learn if it works, who is satisfied and who isn’t and what would they be willing to pay for it?
3. Qualitative validation: Building an MVP (Minimum Viable Product) and soft-launching it to early adopters of the product - can the UVP (Unique Value Proposition) be realized and does it generate revenue?
4. Quantitative verification: Launching the product to a larger audience - is the product something that the people want to have, do sales scale up and is the business viable?

The same roadmap can be viewed via the risk categories examined earlier - the product, customer and market risks:

Product risk: Product development

1. Ensure you have a problem worth solving
2. Define the MVP

3. Build and validate the MVP at small scale (demonstrate UVP)

4. Verify it at larger scale

Customer risk: Building a path to customers

1. Identify who needs or wants the product

2. Narrow the segment down to early adopters that need or want the product at the very moment

3. Outbound sales

4. Scalable sales via inbound channels

Market risk: Building a viable business

1. Identify the competition and set a reasonable price tag

2. Test pricing first via getting qualitative feedback

3. Test pricing in a larger scale and make interpretations from quantitative metrics

4. Cost structure optimization to ensure profits (Maurya, 2012)

The Unfair Advantage segment is truly not validated before facing competition, so before product/market fit it's highly difficult to test.

5.3 Customer interviews

In Lean Startup business development, the swiftest way to accelerate learning is to talk to customers - customer interviews. This does not refer to surveys for various focus groups, but hands-on, face-to-face interviews with potential prospects in customer segments. The surveys tend to require a ready-made set of questions, which is problematic for early-stage startups as they normally do not know the correct questions to ask. In addition, conducting surveys also requires a prefabricated set of answers and formulating answer alternatives is impossible when not knowing the questions. Surveys lack the element of live interaction, which eliminates the possibility to examine body

language and other comparable external indicators. Crafted surveys bring their value in later phases, such as validating hypotheses quantitatively.

Maurya (2012) has laid out some principles for an effective customer interview. He strongly highlights the importance of few notes - building an interview framework around asking open questions instead of a sales pitch, sticking to a script, picking a neutral location and asking for enough time. He also recommends face-to-face interviews without providing incentives to customers interviewed, not recording them, and documenting the results immediately after an interview. Taking someone along to the interview ensures that nothing vital in the answers is missed.

5.3.1 Finding prospects to talk to

Knowing the interviewee already makes the situation more comfortable, so first-degree contacts that fit the target group should be the people to start with. Later, it's crucial to expand the network of interviewees by asking for introductions. The ”local card” might help as well - people generally like to talk to people they can identify with. One effective technique could be creating a ”teaser page” with the initial UVP and collecting email addresses or other contact details via subscriptions, but a lot of entrepreneurs prefer or have to stick to ”traditional” channels such as cold calling, LinkedIn and cold emailing.

5.3.2 Different types of interviews

The problem interview

In the problem interview, the goal is to understand the customers' views of the world and validate hypotheses related to problem- and customer segment boxes of the Lean Canvas. From the risk tackling perspective, the relevant questions attempted to get answers to are such as:

- What is the customer problem that you should be solving (product risk)?
- What are the existing alternatives and what's the competition environment like (market risk)?
- What kind of people need or want the product most (customer risk)?

In order to clearly document the results, falsifiable hypotheses on these questions need to be formulated. A sequence for a problem interview could be of following structure:

1. Welcome: brief the interviewee
2. Collecting demographics: asking introductory questions in order to identify which customer segment the interviewee represents
3. Telling a story: setting a problem context
4. Problem ranking: laying out different problems and asking them to be ranked
5. Testing the problem by exploring the customer's worldview: how do they address the problems at the moment?
6. The wrap-up: asking for a permission to follow-up, ensuring the interviewee maintains interest in the issue, and asking for introductions of referrals to find more potential prospects to be interviewed
7. Documenting the results: each of the interviewers independently document the information gathered in the interview and de-brief later on.

When the problem interview loop is running, results should be reviewed on a weekly basis to refine the problems. The problem interview stage is finished when three criteria are met: the entrepreneur is able to identify the demographics of an early adopter, a must-have problem and can describe the existing alternatives currently available.

The solution interview

After the problem interview stage, it's vital to start collecting data to formulate a viable solution. The idea is to test the solutions with a demo before starting to build an actual product. At this point, the entrepreneur has a clear image on the problem and the product's existing alternatives (information from the problem interviews), so next questions to tackle would be:

- Who are the early adopters (customer risk)?
- How will the company's product solve their problems identified (product risk)?
- What should be a sustainable pricing model to ensure revenue stream (market risk)?

With a demo, the objective is to validate that the solution will solve their problem. The demo later defines the development of an MVP. The demo needs to be realizable and real-looking, but easy to build and quick to iterate. Possible mediums for a demo could be, for instance, videos or mock-ups when building a software product or other intangible form of service, and sketches, CAD-models or early prototypes when building physical products.

Testing the pricing model is an important step in the solution interview. When it could be tempting to simply ask what the prospect would be ready to pay for a product, this approach is puzzling because usually the economic justification of a non-existent product is difficult to designate.

Maurya (2012) states that in the solution interview stage it's smart to mix up the old prospects that fit the early adopter demographic from the problem interview stage and have agreed with a follow-up actions, with new ones.

A solution interview formula could be for instance the like of a following one:

1. Welcome: brief the interviewee
2. Collecting demographics: introductory questions to further qualify the early adopter segment
3. Telling a story: setting a problem context
4. Demonstrating the solution carefully: finding out which parts of the demo resonate the most, what is not that important and what features are clearly missing
5. Pricing test: beginning with a starting price and making notes on possible hesitation, reluctance or direct approval
6. The wrap-up: follow-up permission, possible concrete commitments and potential referrals on future interviewees

7. Result documentation

As with the problem interview cycle, weekly reviews ought to lead to killing or adding features, confirming or starting over with hypotheses and refining the pricing model. The solution interview stage is done when the entrepreneur is able to (still) identify the demographics of the early adopter segment, still has a must-have problem to solve, can define the minimum features needed for the solution, has a price in mind that the customers would be willing to pay and, therefore, can think of building a viable business around it.

5.4 Getting to the MVP release

This thesis, exploring the Lean Startup philosophy and the Running Lean method, has a strong emphasis on constant learning in business development. Most of this learning happens after the MVP (Minimum Viable Product) release, so getting to this stage shouldn't take too much time from the start. The learning cycles related to the MVP release should begin as soon as possible after the pre-MVP interview stages. The first step required to be taken is to reduce the form of the MVP to the product's pure essence - when crafting the MVP a startup has to be building the smallest possible version of the product.

Each feature has to justify its existence in the MVP. The UVP (Unique Value Proposition) makes a promise on solving the customers' most important problem, and the MVP is to deliver only on that promise, not anything else. In short, the potential features can be labeled as ”must have -features”, ”nice to have -features” and ”not needed features”. Obviously, the not needed features have to be eliminated immediately, the nice to have ones archived to backlog (unless the feature happens to be a requirement for a must have -feature), and the must have -features to be concentrated in. Feature-related, possible specific customer requests brought up in the interviews should naturally be considered as well.

Maurya (2012) recommends a trial period, for example 30 days. This gives the entrepreneur extra time to worry about merchant accounts and other technicalities related to billing and payment collection. He also states that instead of wasting time on mere optimization, the focus in MVP release should be on accelerated learning, which the trial period allows (the optimization can be done when charging for the product).

5.4.1 Activation flow

After deciding on a trial period and distilling the features list, an activation workflow needs to be constructed. The activation flow is essentially a funnel that describes the path customers take from the first signup to the first gratifying user experience. The activation flow should contain only the critical steps of gathering information on leads. A simple enough activation flow allows the entrepreneur to spot where the prospects drop off if they do, and enables effective troubleshooting.

5.4.2 The marketing website

The purpose of the marketing website is to sell the product. It's the most crucial acquisition driver. In its essence, the marketing website consists of a landing page that is followed by other pages constructed to encourage an unaware site visitor to move forward in the funnel and turn to a interested prospect. The landing page focuses on the UVP supported by visuals, with a straightforward call-to-action. The calls-to-action are vital on every page in order to drive traffic forward. Primary calls-to-action lead to the next funnel stage, secondary ones could produce extra information on the product.

Other highly important pages on a marketing website are the ”About” -page and the ”Terms of Service / Privacy Policy” -page. The About page contains information on the company, tells its story and allows for the customers to connect; its idea is to provide a compelling reason to not explore the competitors' alternatives. Terms of Service and the Privacy Policy have to be adequate to meet the regulatory requirements, to avoid legal collisions.

Some products, having technical information that the early adopters could find interesting, could benefit from a tour page as well. The tour page provides specifications and details on the product.

5.4.3 Measurement preparation

When the customer lifecycle is successfully visualized and the marketing website is built up, the need to define metrics to investigate after MVP release emerges. The terrain before product/market fit consists mostly of qualitative learning, but some actionable metrics have to be followed in order to efficiently measure what the customers

do. The goal of the measurement is not to optimize conversion rates, but to identify problematic spots that the prospects get stuck with and then troubleshoot them.

An actionable metric is a metric that ties specific and repeatable actions to observed results (Maurya, 2012). The opposite of an actionable metric is a vanity metric, which only documents the current state of the product but does not give information on why the state is such and how to iterate forward. Examples of vanity metrics are the number of website visitors or number of downloads of a piece of content. Alone, they might keep growing continuously but do not provide relevant insight into the business development without the other metrics around them.

In addition, effective interpretation of metrics demands active communication with customers. When disappointed with a user experience, customers rarely report on that proactively but rather just abandon the product and forget its existence. They have to be reached out to find out why they were not satisfied.

After the MVP launch, the startup loses control on who uses its product. This is why segmentation preparation is vital too; the product might summon target groups not yet identified and business-wise unnecessary traffic (i.e. bot traffic) as well. To avoid errors in metrics interpretation, these segments have to be divided from each other and their metrics treated differently.

Because of all the mentioned reasons, a solid conversion dashboard for exploring metrics and making conclusions based on them is needed.

5.4.4 The MVP interview

Before launching the MVP, it’s advisable to seek confirmation for the development from early adopters face-to-face. After learning from them, design, positioning and pricing can still be refined for the proper MVP launch.

The marketing website, conversion dashboard and the MVP itself are all needed for a proper set of MVP interviews. The goal is to sign the prospect up for the product or the service, and whilst doing that, test messaging, price point and activation workflow. It’s particularly vital to conduct these interviews in person.

In an MVP, the risk control questions the entrepreneur is looking for answers to are following:

- Does the landing page get noticed, do customers fluently get through the activation funnel, are there usability flaws and does the MVP demonstrate and deliver on the Unique Value Proposition (product risk)?
- Are the chosen channels going to generate the revenue stream targeted (customer risk)?
- Is the price point on a correct level (market risk)?

A following framework of an MVP interview is workable for getting these answers:

1. Welcome: the brief
2. Showing the landing page: finding out if the product promise is clear and if the call-to-action click is the natural next step
3. Showing the pricing page: finding out what the interviewee thinks about the price point
4. Signup and activation workflow: making sure that the prospect navigates through the funnel correctly
5. The wrap-up: what did the customer think about the process, what can be improved and is he or she aware what will happen next?
6. Result documentation

5.4.5 Customer lifecycle validation

The last step before the MVP launch is to validate the customer lifecycle and improve all the steps needed to ensure that the MVP really works when it's launched. In other words, the customer lifecycle needs to be validated onwards.

Firstly, giving and receiving feedback from customers has to be made effortless. Easy-to-use feedback channels give the customers the picture that they are being cared about. The amount of feedback or support likely won't, at this early stage, cause a scaling problem of too many contacts. In addition, tech support is a good channel of gai-

ning feature feedback and, at its best, can accelerate learning on technology-related issues of the product. It also offers an opportunity to ask questions from interested prospects and increase commitment, referral and goodwill - tech support is a marketing channel as well.

If a trial period is being used, active troubleshooting should be applied immediately when possible. First objective is to reduce churn and abandonment on acquisition and activation paths, moving then on to increasing retention and engagement, getting paid, and collect favorable customer testimonials.

Validating and troubleshooting the acquisition and activation paths

The primary objective of validating and troubleshooting the acquisition and activation paths is to make sure enough traffic is driven to keep the learning cycle running. Examining the possible flaws in the process allows the entrepreneur to find out where the users drop off the acquisition / activation funnel if they do - and more importantly, where it happens the most. One should try to identify certain patterns in this; for instance do certain types of users (e.g. mobile / desktop platform users) have higher drop-off rates than others?

When the problematic user groups have been specified, the next step is to extract a list of users that experienced the most failures at particular steps in the funnel and contact them. Only by reaching out to them and finding out why this happened, needed correcting operations can be done and the errors fixed.

Validating and troubleshooting the retention path

The priority when validating and troubleshooting the retention part of the funnel is to get users to really use the product during the trial period. Email is a viable channel for such reminders as it can be automated, tracked and measured and reaches out to largely everyone. Email optimization can be applied for instance in a marketing automation platform to automatically send correct types of messages depending on the prospect’s stage in the funnel.

Other important aspect of this is to reach out and follow up with the early adopters and get their qualitative feedback on the service.

Validating and troubleshooting the revenue path

The goal of validating and troubleshooting the revenue part of the funnel is to ensure that the entrepreneur is getting paid by the users. This in mind, a payment system has to be implemented at the latest in this stage. Reaching out to paying customers and talking to them is vital in order to figure out details such as how they heard about the product, why they did the purchase and what could be improved further on.

Contacting the ”lost sales” leads is equally important, from the learning perspective and as well because they could be talked over.

Validating and troubleshooting the referral path

In this last part of the funnel, the idea is to get customer testimonials to be used as third-party recommendations on the marketing website. Short paragraphs by happy customers on positive experiences are sufficient enough.

5.5 The MVP launch

Maurya (2012) determines that the product is ready for the MVP launch, when at least 80% of the early adopter group consistently makes it through the conversion funnel. More specifically, they should be able to fluently understand the Unique Value Proposition (UVP), sign up successfully, accept the pricing model, make it all the way through the activation workflow and provide positive feedback when asked.

Right before the launch (when being confident that the MVP works), the entrepreneur’s final step is to revisit the acquisition channels to make sure a constant stream of potential prospects are entering the conversion funnel. This is not, however, the best time for channel optimization. The primary channels can be supplemented by secondary channels, if needed - the goal is to establish just enough traffic to learn more after the launch and then validate the next steps to reach the Product/Market fit. If one has managed to establish a large pool of warm prospects, early access signups can be attempted to acquire from these leads before the actual MVP launch.

5.6 Feature iteration towards the product/market fit

The product/market fit can only be reached via systematical iteration and validation. After the MVP has been launched, various procedures are yet to be made in order to find the optimal scaling point. These steps mainly follow the learning-based iteration process introduced in this thesis.

5.6.1 Feature development

In a great market - a market with plenty of real potential customers, the market pulls the product out of the startup without unnecessary feature-pushing (Andreesen, 2007).

After the launch, usually feature requests start to pour in and the customers have different desires and expectations concerning the product development. The obvious reaction of a startup is to build more features, but that is usually not the smartest road to take. Too much features quickly make the UVP complicated and software development of new features takes time compared to troubleshooting the errors identified. Future feature ideas should be treated like experiments - kept in the backlog until further priority has been determined. Building and validating multiple features can become an ”addiction” of a kind and lead to waste (Yoskovitz, 2009).

Maurya (2012) recommends an 80-20 -rule in feature development - 80% of the entrepreneur’s time should be concentrated to measuring and improving existing features, whereas 20% of energy and time should go on developing new ones.

A good practice for constraining the features pipeline is to use the classic Kanban board system. A Kanban board is a workflow visualization tool that gives a good chance to optimize the flow of work (Leankit, 2017). Simply enough, the Kanban cards are moved in the board from left to right as they reach a new stage of development.

Picture 5: Kanban board (Denver Peak Academy, 2015)

A Kanban board helps with feature tracking very much in the same way that a conversion dashboard helps with marketing metrics. In this context, the buckets could be such as ”Backlog”, ”In Progress” and ”Done”.

All potential features (improvements to existing features, customer feature requests, own feature wishes such as nice-to-haves identified earlier) start from the backlog, which should be in decent priority order all the time. Before going any further, its important to analyze whether the feature is important enough in the first place to be implemented. One method for measuring this is to think it through the concept of a ”Minimal Marketable Feature”, MMF. Minimal Marketable Feature is the smallest portion of work that provides value for customers - if it’s remarkable enough to cause a need for any marketing, it’s remarkable enough to be implemented (Denne & Cleland-Huang, 2003).

A good test to find out whether the feature is an MMF or not is to think about whether it’d be worthy enough for announcing it in a blog post, newsletter, video or such. Features too tiny to mention are not worth developing.

From the backlog the features move on to the ”In Progress” -stage. The ”In Progress” -stage obviously holds in multiple of sub-steps, such as coding and deploying. The idea

of the Kanban board is that it only allows a certain number of projects to fit in a certain stage, allowing to maximize throughput while minimizing waste. Maurya (2012) sees that a suitable size for the ”In Progress” -bucket in the early stage would be one feature per founder / team member. The work-in-progress -limit effectively maintains the need for thorough examination of feature requests, as they have to be carefully prioritized from the MMF perspective.

In the ”In Progress” -stage, developing features that are customer-initiated starts with contacting the customer and ensuring that the problem is correctly understood on the both sides of the table. This serves for finding the root cause of the problem - though the customer might be asking for a specific solution, a more effective way of solving the problem could also exist. Also, making the customer to sell the need for the problem helps to distinguish the nice-have -features from the must-have -ones.

Internal feature requests are not to be treated any differently; in this context the other team members will do the work introduced in the previous paragraph.

The features that are really worth solving, move on to the mock-up -stage in which a sketch of the solution is conducted. After the mock-up is ready, an interview resembling the Solution interview takes place and validates the solution through the iteration process. Only after this validation the building of the feature, such as coding, takes place.

When the feature is ready and established, it’s moved to the ”Done” -bucket and released. Partial rollout is a smart move deployment -wise, as it allows for A/B -testing with a few target groups: do customers really act differently with the feature or without it and what is the effect on the workflow or metrics such as revenue? These results might as well vary depending on the customer segments. The final validation is made through usability interviews similar to the MVP interview to correct errors and make final changes before full-on feature rollout.

Quantitative verification is needed in the feature development as well, so after the full rollout the metrics need to be compared in a larger scale.

5.6.2 Feature request prioritization

Upon arrival, the feature requests have to be carefully analyzed to determine what should be done with them. The first phase is to compare the request against the product’s immediate needs an priorities; whether it’s the right time for this specific action or

not. After that, it’s vital to consider whether the feature requested is essentially a minor bug or a more relevant MMF. Emergency situations, such as workflow crashes, obviously ought to be fixed right away - the others will go to the backlog bucket of the Kanban board.

6. REACHING THE PRODUCT/MARKET FIT

Via constant learning, rigorous iteration, careful validation and hard work, the startup finally begins to get closer to the Product/Market fit - the point where scaling of the business could start. The first step in defining when this point has been reached is to set a metric to measure it. Only with a decisive metric the founders can systematically iterate toward achieving the Product/Market fit. Andreesen (2007) defined Product/Market fit widely by being in a good market fit a product that can satisfy that market, but more concrete goals have to be set to measure the Product/Market fit.

The American entrepreneur, angel investor and startup advisor Sean Ellis has a viable model for this, in the form of a qualitative survey to find out if the product has enough traction. The very key question in this survey is ”How would you feel if you cold no longer use the product?”, in which the customers have following alternatives to answer with:

1. Very disappointed
2. Somewhat disappointed
3. Not disappointed (it isn’t really that useful)
4. N/A - I no longer use the product

If the finding is that more than 40% of users say that they’d be ”very disappointed” without the product, there’s a great chance a sustainable and scalable customer acquisition growth can be built (Ellis, 2010).

Ellis determined the 40% benchmark by comparing the results of hundreds of startups. He concluded that the startups reaching results above 40% in this survey generally are able to scale the business, whereas companies with results under 40% consistently struggle with scaling issues.

The test requires the results to be of statistical significance, so a large enough sample size has to be formed - with various customer segments represented. When close enough to the Product/Market fit, the test helps the validation, but until then more iteration is needed.

6.1 Steering the product toward Product/Market fit

Iteration toward Product/Market fit happens by following the customer lifecycle conversion metrics. The two key metrics to measure are activation and retention, which together make up the value metrics.

The revenue metric, as valid as it is in many ways, does not necessarily correlate well with the Product/Market fit because of multiple simple reasons. Someone else might be paying for the product on behalf of the customer, or they might as well just forget to cancel the subscription. The customers surprisingly often do keep paying for products they don't use. While revenue is the first form of validation, retention is the ultimate form of validation (Maurya, 2012). Furthermore, in one-time products that are bought without a subscription, the revenue will follow the Product/Market fit whereas in multiple-use products it will follow activation and retention. In short, decent revenue is a result of finding the Product/Market fit, not vice versa.

Maurya (2012) recommends a following iteration framework in order to determine if Product/Market fit has been reached:

1. Conversion dashboard results need to be reviewed as frequently as on a weekly basis
2. The feature development backlog has to be effectively prioritized
3. Formulating bold hypotheses and testing them with the smallest things possible to build to run the experiment
4. Reviewing all the features constantly to ensure that they have a positive impact (the features that don't have to be reworked upon or killed)
5. Monitoring the value metrics - activation and retention - and making sure they grow steadily
6. Running the Sean Ellis test when the retention numbers approach 40%

The early traction exit criteria are:

- 40% retention of users

- Passing the Sean Ellis test.

When these two criteria have been met, the Product/Market fit has been found.

7. CONCLUSION

Finding the Product/Market fit is the first significant milestone and an invaluable achievement in the lifetime of a startup, because it allows the company to start scaling. Before achieving sustainable growth, for instance churn and cost of customer acquisition as well as viral coefficients and customer lifetime value -related metrics still probably have to be concentrated in, but the real remarkable accomplishment is to build something that the people want to buy and credibly confirm it. When demonstrated, this early traction - the Product/Market fit - gives the entrepreneur a permission to shift toward achieving sustainable growth via a scalable business model.

When reaching Product/Market fit, at least some level of success is almost guaranteed and with continuous tuning of growth engines a startup is able to cross the chasm between early adopters and mainstream customers. The key is to build a culture of constant learning and follow the framework in a thorough manner.

No methodology can promise absolute success, but the Lean Startup and Running Lean philosophies provide a repeatable process and an actionable model for building products that achieve the Product/Market fit and then can be scaled to produce prominent revenue.

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