LAMK Lahden ammattikorkeakoulu
Lahti University of Applied Sciences

Lean on LAMKES

LAHTI UNIVERSITY OF APPLIED SCIENCES
Faculty of Business and Hospitality Management
Degree Programme in Business Administration
Bachelor's Thesis
Autumn 2017
Ville Muhonen

Lahti University of Applied Sciences
Degree Programme in Business Administration

MUHONEN, VILLE: Lean on LAMKES

Bachelor's Thesis in Business Administration 28 pages, 8 pages of appendices

Autumn 2017

ABSTRACT

This thesis is about learning while doing and the goal is to give students some tools in the challenging world of entrepreneurship. It has very strong personal views and not that much academic references, because entrepreneurship is about doing something yourself and building something new.

The theory part of the thesis covers agile development and Lean in an entrepreneurial environment. The functional part is about Lamkes and how to implement Lean tools in a workshop to a non-profit society. The outcome can be replicated in the society for future use and will be used by the author of this thesis as a product for his business.

The last part are the conclusions and the experiences of the thesis author. It will also give a few points how this subject can be researched and developed further. The thesis visualizes why agile development is useful and even needed to jump start a transformation into a more flexible company or in this case a society.

Key words: LAMKES, Lean, agile, entrepreneurship, startup

Lahden ammattikorkeakoulu
Liiketalouden koulutusohjelma

MUHONEN, VILLE: Lean on LAMKES

Liiketalouden opinnäytetyö, 28 sivua, 8 liitesivua

Syksy 2017

TIIVISTELMÄ

Tämän opinnäytetyön teemana on tekemällä oppiminen ja sen päätavoite on antaa opiskelijoille työkaluja pärjätäkseen haastavassa yrittäjämaailmassa. Se sisältää vahvoja henkilökohtaisia näkemyksiä ja normaalia vähemmän akateemisia viittauksia, koska yrittäjyyden pääidea on luoda omaa ja rakentaa uutta.

Opinnäytetyön teoriaosa käsittelee ketterää kehittämistä ja Leaniä yrittäjähenkisessä ympäristössä. Toiminnallinen osa käsittelee Lamkesia ja miten voittoa tavoittelemattomaan yhdistykseen voidaan toteuttaa Lean-työkaluja työpajan muodossa. Työpajan lopputulos jää yhdistyksen käyttöön ja on toistettavissa tulevaisuudessa sekä tulee olemaan kirjoittajan oman yrityksen tuotteena.

Lopuksi on kirjoittajan päätelmiä ja kokemuksia aiheesta, sekä muutama vinkki, miten aihetta voisi kehittää ja tutkia eteenpäin. Opinnäytetyö osoittaa ja näyttää, miksi ketterä kehittäminen on hyödyllistä ja jopa tärkeää nytkäyttämään yritys tai tässä tapauksessa yhdistys ketterästi vauhtiin.

Asiasanat: LAMKES, Lean, agile, yrittäjyys, startup

TABLE OF CONTENTS

LIST OF FIGURES

1 INTRODUCTION

I think the real beginning was a rainy afternoon in FellmanniCampus. First time ever having pizza and a couple of beers in the cafeteria of a school building in a very interesting company of some entrepreneurs. You should never have prejudice towards entrepreneurs, because they might do and be the complete opposite of what you thought. Also, the impact of entrepreneurs to you, could be something totally different than you expected. Well I might have had some prejudice, because I did not get sucked in to the rabbit hole yet, since I had basically not a clue about entrepreneurship.

Second time was the charm. In the second event of LAMKES, I realized that I wanted to be part of this society. Under two months passed and I was one of two guys leading the society. Me, a guy with basically no knowledge of entrepreneurship, running an entrepreneurship society.

This practice-based thesis is about surviving with a student driven nonprofit registered society, in a cruel world of entrepreneurship and business. How can students co-operate with seasoned businessmen and -women who are expecting a lot and not giving much in return? How to be efficient enough to survive today's world of business? The main question is: ”Why is agile development important, in a student driven society's risk management?” Using the tools of agile development is a good base to start growing and identifying what you have. Having the attitude of doing stuff and not that much thinking about what could or could not be done, is a great way to get things done. Also having the courage of going head first in to troubles: like thinking back on how you jumped in to a full stadium of gladiators, and then especially learning, that it might have been wiser to just use the stairs, because now you have a twisted ankle. After all this, the main point is getting out of the ring victoriously! Even with a broken ankle! So who gives a ****! In entrepreneurship, it is very often all about the attitude and the cojones!

2 AGILE DEVELOPMENT

There are two words in agile development. Agile means something that is kind of quick, dexterous, nimble, effective, efficient and flexible, like a cheetah. If all the companies could be like the cheetahs in savanna, would they be best at what they are doing? No, because then they would have insane competition and everything would be really hectic. But would it benefit for a lot of companies to be more agile? Yes, absolutely.

> Agility is the ability to adapt and respond to change … agile organizations view change as an opportunity, not a threat (Highsmith 2017).

The second word is development. It is a big word with many meanings. Is there a thing you cannot develop more? Who knows? People think there is, but after a year or ten, they might realize that: “Hey, that is so old fashioned, we should change that and that”. Even the Bible is being changed, so the language would fit the modern society better. The old and beautiful landscapes are being repaired, because nothing can withstand the destruction made by time. Everything develops and to stay on board of the changing times, development is needed.

> If everyone is moving forward together, then success takes care of itself (Ford 2017).

So, we have three options on how to develop: slow, steady or agile. In the slow option, we are probably getting everyone on board, no one is left behind, but the biggest risk is: are we keeping up with the changing time? What if we are not? For example, if a school is doing slow development, it means the students are not getting good education, because it is old fashioned and does not serve its purpose, but all the employees are keeping up with the development, so there is not that much management of change required.

> The bad news is time flies. The good news is you’re the pilot. (Altshuler 2017.)

Second option would be the steady option. This is the boring option, with really low risk involved, but the most boring option is usually in the long run the best option. In a steady development, most of the employees are keeping up with the change, some are not. Even with management of the change, everyone cannot withstand the changes, which has to be made. People have very different visions and when the vision of employee and the employer clashes, there might be some resistance and even opposition for the new visions and changes. Sometimes the employee has to be switched to another position or even fired because of the opposition.

But all this is part of normal life inside a normal company. People get fired/switched to another position everyday all around the world. If there are a few employees resisting the change, they will probably still go with the flow after some time, but direct opposition should be dealt with. A steady company is a little bit behind the changing times, but not that much to risk complete destruction and old-fashioned products.

> The only thing worse than starting something and failing… is not starting something (Godin 2009).

Third options would be the agile one. This is almost as risky as the slow option, but in a very different way. You cannot win if you do not play and you cannot score if you do not shoot. Slow option would be basically low stakes, where the system always wins and agile option is basically high stakes = high rewards. Playing with high stakes requires risk management or it is just stupid or charity. High stakes mean high for you, which might not be even close to high for someone else. Someone else might give away something every day, which you would not afford to give away in your lifetime. Are we talking about money or something else? Who knows, but we are talking about high stakes now.

> You only lose what you cling to (Buddha 2014).

Going so fast with your company or society that people are dropping overboard all the time. Is it worth it? Sometimes it is, for some people it is, but sometimes it could go horribly wrong. Agile development is a tool to be

used only for a short while, it is not meant for long time survival, more like a burst of rapid growth. Everyone knows that speed increases risk, so here the risk management becomes important.

How to make rapid growth, without losing too much? This is the question you want to ask yourself. Most employees will not withstand rapid change, even the main product might change. Being forced in to overdrive of efficiency will risk the wellbeing of everyone. Some employees might burnout, some might start hating the leadership who forced them to change so quickly, some might thank them for enlightening them. No one can completely predict what will happen in agile development. Mistakes will be made, they should be seen as learning possibilities, but same mistakes should not be repeated.

When you are done with agile development, it is time to slow down to a steady and healthy pace to secure the future and charge your batteries for a new burst of agile development. As an example, we did this in the society Lamkes (explained in Chapter 4). Making a big turnaround in company's strategy is called pivoting and a perfect tool to pivot and to start an agile development process is Lean.

> A pivot is a change in strategy without a change in vision (Ries 2012).

3 LEAN

Some people say it is a way of life. For some it is a way to think. In this thesis, it is a tool in a toolbox. It is not for any specific usage, more like a multi-tool with hundreds of thousands of millions of ways to use. Everyone can use it, it might be useful for everyone and it might change your life and your way to think or it might be something completely useless. Let us start with some basics.

> If you always do what you always did, you'll get what you always got (Einstein 2014).

3.1 Five basic concepts of Lean in a nutshell

Lean started from Japanese automotive industry in the beginning of 20th century. Japan and especially Toyota took over the motor vehicle market from the US and Ford with the Lean way of thinking. They were able to make better cars with less resources. Even though these basic Lean concepts were used in the development process of cars, with some refining they can be utilized in basically any company, society or even everyone's personal life. So, to get the most out of Lean, it is important to make your own Lean and think about how to change these basic Lean concepts to fulfill your personal needs or your company's needs. (A Brief History of Lean 2017.)

3.2 Understanding and maximizing value

You can start this by thinking what is our product? Let us say we are a company that makes drills. Our drill is the best drill in the market. It is the cheapest, most durable and most precise and most powerful drill in the market. These might not be the correct values for every customer. The customers are not searching for the drill because of the drill itself, so we need to identify our customers and their needs. Once we do that, we might find out that our customer is searching for a hole or holes in his/her wall. Is the hole, the value this company is providing? Yes, more than the drill itself. If the customer wants a precise hole (precision), as many holes as possible

(durability), as quickly as possible (powerful), and as cheaply as possible (cheapest), then all the original values are good for that customer as well.

> Any effort that is not necessary for learning what customers want should be eliminated (Ries 2011b, 56-63).

But what if the customer is only looking for a way to put a painting on the wall and not the hole itself? So, maybe this was not our customer after all. Do we want to fix the customers problem and make something the customer wants or do we rethink who is our customer and keep making these amazing drills? These are choices that need to be made and it is very Lean to start identifying the choices, to understand the value your company does for the customers, employees, partners, owners etc. (Medinilla 2012, 22.)

> We must learn what customers really want, not what they say they want or what we think they should want (Ries 2011a, 38).

What if we need to maximize this value? How? We need to look in to the whole company that is making the drill. Which parts are essential for the perfect hole in the wall to satisfy the needs of the customer and what parts of the company are so called waste, which does not add value to the customers. When you start looking at the whole process, you might start noticing a lot of things that are unrelated to the holes in the walls and realize, that there is so much that can be eliminated from meetings, managers, reports, inventories, logistics, overproduction, delays to so many other things. But keep in mind that maximizing the value requires you to start removing the waste to bare minimum but not less than the minimum.

It is also very important to keep in mind that there might be other customers that are looking for different kind of value than the hole in the wall. Before removing something completely, it is wise to make a test period without the process and gather information. Was the company more efficient without the process or did removing the process hinder some other process? Should the other process be removed as well? Keep asking questions and keep answering them to make new questions. Lean is about questioning, development is about questioning. The most effective way to improve is to

start questioning. It is tough for those who realize their mistakes, especially if the mistakes are told to everyone, but it is necessary to be more efficient and Lean. (Medinilla 2012, 22-23.)

> Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning. (Einstein 2016.)

3.3 Optimizing the value stream

To find the value stream, we need to start looking for the flow. By defining cycle time and lead time, it will be easier to identify the value and the waste, which we can remove to add more value. Afterwards we can start creating a Value Stream Map to place different activities in the company on a correct sequence to reduce the cycle and lead time by removing the waste. (Medinilla 2012, 23.)

Cycle time is the time used for each cycle which means a work step. For example, in a laundry there are three steps: wash, dry and fold. If washing would take 30 minutes(min), drying 45 min and folding 30 min in this order. The bottleneck is drying because it takes longest, so it will increase the cycle time also to 45 min. Washing is before drying, so it will have a cycle time of 45 min also, since doing more washing will just pile up the loads of laundry before the drying. But since folding is after the drying we can do it in 2/3 cycle time which is 30 min and we can use the rest of the 15 min for something useful like taking another customer or returning a done laundry etc. The 45 min cycle basically means the time we use per batch of laundry to use in a cycle before we can add another batch to the same work step. (Zhou 2017.)

Lead time is the whole time used for the process, which is 45 min + 45 min + 30 min = 2 hours. This is the time for the feature to be asked by the client and finished by the laundry company. After finishing the laundry might be stored somewhere waiting to be obtained by the customer and could consume more lead time, but in this example the customer picked the

laundry immediately. You may choose if you wish to include or exclude the pre- and post-times of the process. (Zhou 2017.)

Value stream map starts by grabbing a piece of paper and a pencil. Start from the end, where customer comes to obtain the value from the company (Medinilla 2012, 23). Write down all the steps in between the process until the order was received by the company. In a laundry example, it would be something like this (times used are examples for the processes, just to clarify the example):

Laundry example from end to start:

Delivery (5 min) –> storage (26 hours) -> folding and packing (30 min) -> drying (45 min) -> washing and waiting for the dryer to free (45 min) -> laundry paid by the customer and received from the customer and waiting for the washer to free (25 min).

Identifying the waste and performance ratio comes from dividing the Non Value Added time (NVA time) = waste and Value Added time (VA time) (Medinilla 2012, 23). Delivering the package does not add much value to the customer, since the package is already paid, it can be picked up in one minute. So, the whole delivery is 4 min NVA time and 1 min VA time. The package staying for 1560 min in the storage is fully NVA time. Folding, packing and drying the laundry is optimized and creating a lot of value to the customer, 30 min + 45 min VA time. The washer is used for 30 min which is VA time but the 15 min of waiting for the dryer to finish is waste and NVA time. Receiving the order from the customer adds maybe 1 min to VA time to the customer but the rest of 24 min waiting for the washer to free, is NVA time.

Counting the performance ratio is to divide the VA time with total time used in the process. In the example VA Time 107 min is divided by total time used 1710 min = the performance ratio is 6.3%. This is very bad performance ratio, but it also includes pre- and post-time of the process. Without the overnight storage time, it would be way over 50%, which suggests that the value map was most likely not specific enough and should be done again.

In the first Value Stream Map, it is not rare to get 9-20% performance ratio (Medinilla 2012, 23).

Analyzing the results and removing the waste is the last step of optimizing the value stream. If we can only create value 6.3% of the time used, something is clearly wrong in the company of the example. It is easy to start looking at the biggest numbers first, because there is biggest possible time to gain. In this case that is a good place to look at, since this company had an average time of 26 hours for customers picking up their laundry. For this laundry company, it would be a good idea to start thinking how to reduce this time for better usage of important storage space and the waste time consumed in this. Sometimes it is easy to find the problems and sometimes it takes an exact analyzation of the results. In both cases, the results should be analyzed carefully, since there might be time to gain from multiple sources.

After the optimization, the company has gained good knowledge of their own work process. Even if the process does not remove much of the waste time used, the process will help to understand the company and give light to these multiple black boxes known as work steps. Bringing a good general view of the company to the person or group doing the optimization. (Medinilla 2012, 23.)

3.4 Pull production

Just like many of these steps, also this one requires the knowledge of what is your product, who is your customer and what are the needs of the customer. Is all this necessary to keep the customers happy? Or would the customers be just as happy or even happier with less? What is enough for the customer? Sometimes less is more. It is not always about refining the product to the last little detail as possible. It is about making the product good enough to keep the price reasonable or maximizing the profit, depending on the company's and customers' needs. If the company is trying to sell a luxury product to a smaller customer base, clearly the product should have something unique to give and amazing quality. Then again if

the customer is looking for their laundry to be done in an hour or two. You do not need to pack the laundry in a golden bag, it is not what the customer is expecting. Getting rid of things is hard, but finding the perfect amount of work and pieces done is even harder. Very often it is about pulling production. Manufacturing just enough for what the customers are ordering and getting rid of all the useless stuff, that are taking unnecessary space in the warehouses is usually more Lean than non-Lean. (Medinilla 2012, 24.)

> Building something nobody wants is the ultimate form of waste (Ries 2011a, 181).

Some people will argue that there must be some kind of plan which has to be followed, but Lean is about doing things and learning from mistakes. Especially when you are reducing waste, it is very important to collect feedback and learn from it. There is no point to demolish anything or pull production, if it was essential for something. It will cause more problems than before. So, following in the footsteps of Eric Ries' Lean Startup, but going even further: Build, Measure, Learn & Demolish. Keep following this square over and over. It is important to get rid of the non-working parts of your company to achieve the true value. (Medinilla 2012, 24; Ries 2011a, 9.)

> The only way to win is to learn faster than anyone else (Ries 2011a, 111).

3.5 Single-piece flow

Do you still think multitasking is good for you? It is not. Trying to write two emails at the same time is a pain in the butt and also very slow. Writing one email at a time is way more efficient and actually gets the job done faster than trying to write two emails at a time. Concentrating on one piece at a time, will ensure smooth flowing, maximum possible speed and less interruptions. There is a law called Little's law, which proves that more pieces add more cycle time, which proves that multitasking is actually just waste of your time. Moving from task to task is a lot more important than

trying to do many tasks at the same time. So, finishing a task before starting a new task, or at least going to a point where you cannot move further at the current task is the key to optimal efficiency and effectiveness. (Medinilla 2012, 24-25.)

> Efficiency is doing things right; effectiveness is doing the right things (Drucker 2006).

How to reduce overlapping tasks and get rid of multitasking? That is the hard question. One way is to start creating lists. There are multiple ways to do this. There are tons of applications for some quick notes for the daily tasks. In computer or mobile phone, it is very easy to add notes in between or in the start of your task list to ensure to maximize the visibility of the most important tasks and to keep the tasks in order. Having multiple task lists might seem like a huge task at the beginning, but when you get used to it, it allows your brain to focus one task at a time and single-piece flow, instead of trying to remember two or more things at a time.

3.6 Continuous improvement

Lean is not about being Lean or not Lean. There is no line that can be drawn somewhere, which would separate the Lean companies to the non-Lean companies. Lean is about making your company a bit Leaner every day, every week and every year. It is about continuity. About constant change for what is required of your company. Times are changing, people change, environments change and to be Lean, the companies need to keep up with the change to keep the value as high as possible. (Medinilla 2012, 25.)

> Kaizen: A hopeless but joyful strive for perfection that makes us better every day. Today, better than yesterday. Tomorrow, better than today. A martial state of mind that makes us train constantly and never be satisfied with our current skill, no matter how high it is. (Medinilla 2012, 25.)

4 LAMKES

4.1 The Society

LAMK Entrepreneurship Society and LAMKES (pronounced LAMK-E-S) are the official ways of speaking of Lamkes, but this thesis will mostly use the casual Lamkes (pronounced casually Lamkes) because the society drives for casual interaction and being easily approachable. Lamkes is one of newer entrepreneurship societies in Finland, being founded 2015 (LAMKES History 2017). The basic idea for the society is not a new thing and not invented by Lamkes. Finnish entrepreneurship societies started in Helsinki at the Aalto University. Aalto Entrepreneurship Society (AaltoES) is the biggest and most active student driven entrepreneurship society in Europe (Pystynen 2017). They started a movement that includes now 19 entrepreneurship societies in Finland and keeps growing every year (Student-run Entrepreneurship Societies 2017).

A startup is a company that is confused about:

1. What its product is,
2. Who its customers are,
3. How to make money. (McClure 2013.)

4.2 My LAMKES Pitch

Entrepreneurship and especially startup culture is all about pitching your ideas to the investors, judges of some competition, customers and employees, so here below is a pitch of a Vice Chairman of the board in LAMK Entrepreneurship Society:

So, what is Lamkes? Officially it is a student driven, nonprofit, registered entrepreneurship society, but I like to call it, half startup and half society. What is our goal? Well, our main goal is to be one of the main influencers in Lahti regions startup ecosystem. First, we are doing that by creating and increasing entrepreneurial attitude, which is being: very self-driven, creative,

able to find possibilities and grab them for your own and others benefit, able to maintain and work under huge pressure, able to try new things and overcome the mistakes and finally coming on top because of all the things you have learned in the process. With this attitude, we can move mountains and build things no one has ever even dreamed of except the entrepreneur her/himself.

One of the ways we are creating this attitude is events called Lamkes Talks. It is our first concept, where some inspiring speaker or few, comes in front of the audience to talk about the story of their life and what made them interested about entrepreneurship. Giving some useful information, tips and tools for future entrepreneurs or just an interesting story for anyone willing to listen. The audience get a chance to network with others who possess similar mindsets and of course the speakers themselves who are always very open to young people interested about entrepreneurship.

Who knows if some participant of the audience might find someone to start their own company with and that is exactly why we are doing the second concept of Lamkes Work, which is a workshop for some interesting company or topic. Giving the participants a chance to work in multidisciplinary teams and learn useful tools like brainstorming, team working, pitching, time management etc. Workshops are a good example of the Lamkes attitude of Learning by doing.

We are also doing some incubation and acceleration with entrepreneurial students and entrepreneurs who are willing to work with students. Incubation means basically like hatching an egg inside your head. It is brainstorming for a business idea, trying to make a dream in to a business. Acceleration is taking things further. Taking the idea into the next level, making it reality. How to get money to start and how to make money with the idea? How to organize a team and decide responsibilities? What skills, tools & knowledge are needed as a starting entrepreneur? These are not easy things to teach or even learn, but when done right, the potential to learn and accomplish is beyond our imagination in Lamkes.

It is very responsible work we are doing. Entrepreneurship is not for the weak, you need to have a strong will and believe in yourself and your idea. Self-confidence will take you far. When you stop worrying and start doing, there will be plenty of mistakes, but they must be taken as learning opportunities. If you keep repeating the mistakes, that is bad, but personally I like to encourage others to make mistakes, because that is the fastest way to learn. It is important to not judge too hard, in the big picture, small mistakes are usually easy to fix, when fixed early. Most important is to discuss about the mistakes, so others would not do the same mistakes again.

Personally, I see Lamkes as a light in a dark tunnel of startup-culture. Our job is to show the way to the lost entrepreneurs and those who are trying to find their way in the dark alone. Entrepreneurship is way easier with a team and with good networks. The cause of entrepreneurship is so interesting that doing work for the society is kind of a hobby of mine and gives me more than it takes, even if it does not pay salary. Through entrepreneurship I have been given the option to choose my own path and walk it exactly the way I want.

Failure is prerequisite to learning (Ries 2016).

5 IMPLEMENTATION OF LEAN TO LAMKES

Lamkes being a new society is in a rather dangerous starting position to start implementing new strategic tools. It is a very flexible society, which makes it an easy testing ground and being a learning environment for a university reduces the risk and gives a lot of backup when needed and makes it possible. Teachers are glad to help every time students are interested in testing the concepts learned from classes in the learning environments, which is exactly what Lamkes is meant for.

So why is it dangerous? Well, Lean is about being efficient. That means usually more work in a shorter amount of time. Not that many students are willing to do extra work. There is a big risk of losing people from the society while making it more efficient. Can you be more efficient with less amount of people? That is a good question and it should be thought through carefully. Lamkes is a non-profit society, which means it is not paying salary. So, what is the point of being more efficient? Well time to study is limited. The point is to get as much out of Lamkes as possible. That is why I came up with the idea of doing a Lean workshop for those interested.

5.1 Workshop

Point of this workshop is to implement the knowledge of the agile development and some Lean tools to Lamkes and to the participants of the workshop. This workshop was assuming, that most members of Lamkes and the average customer of Lamkes, does not know how to use these tools and probably does not even know about their existence. The results can be found starting from page 18.

5.2 Basic structure of the workshop

1) Lamkes Introduction 5 min
2) Customer definition 5 min for me to talk + 10 min for brainstorming
3) Lean introduction (5 steps)
    a) Understanding and maximizing value 10+10 min brainstorming
    b) Break 10 min (fruits and drinks)
    c) Optimizing the value stream 15+30 min brainstorming
    d) Pull production 5+5 min questions
    e) Single-piece flow 5+5 min discussion
    f) Continuous improvement 5 min
4) Step – brainstorm – step – brainstorm – step….
    (PowerPoint slides are as an attachment of this thesis)

5.3 Planning the workshop

I started the planning of the workshop obviously by choosing the subject and the target audience for the workshop. Since my thesis is all about agile development, which is too large of a subject. I decided to go with only one subject: Lean. Not really some traditional Lean manufacturing, but more like my own view of Lean, which has a strong impact from the book Agile Management from Medinilla. It would be rather easy to explain and implement Lean in to the society's actions, because the society is rather Lean to begin with. I started thinking about, should I have the workshop only for the members of Lamkes or should I invite participants from outside. Since Lamkes has had workshops before it would be rather easy to involve students and other people, who are not members of Lamkes as well. Getting some out of the box views from people wanting to join would most likely just benefit my cause of implementing my views of agile development in to the society. It also shares the knowledge of entrepreneurship from Lamkes outside the society, which is one of the basic principles of the society.

My second step was creating a basic structure for the workshop. I would have to tell the participants what Lamkes is, since the workshop would be about the society and there would be some participants who are not

members of the society. Next, I would have to tell people what Lean is, since it is lined up with the main goal of the workshops. I was first thinking about talking for like an hour about Lean, but realized I can just talk about Lean piece by piece and throw some brainstorm action in between the lecturing. This will keep the audience interested when they can interact directly to the information they receive. Before telling the audience about Lean, I should mix the seating order. To maximize the output of this workshop, it would be beneficial if every group/table would have at least 1 member of Lamkes and someone who already knows about Lean or at least a few who has heard about it. I also realized that for the Lean workshop to be successful, we would have to define the customers of Lamkes and their needs to have a successful Lean workshop.

Third step was to invite people in to the workshop. I talked to people who would be beneficial for the workshop and asked them to join personally and I did a public announcement in Lamkes Facebook by sharing a link to Google Form and giving the participants some basic information about the workshop. The invitation also included a question about the basic level of knowledge about Lean before the workshop. This helped me to see the result of the sharing of Lean knowledge afterwards and it helped me to fix the seating order.

Fourth step was to start thinking about the little details like quality and sharing of the workshop. I got the workshop recorded, so I can watch it afterwards as a learning experience and it was valuable for this thesis. I also needed some materials for the workshop, like pens, Post-it notes etc. and some refreshments like fruits and drinks to keep the energy up. I also talked with a teacher in LUAS who is responsible of Lean workshops and got some really good advices, how to tell some really difficult Lean methods in a simpler way.

5.4 Results

The results category includes three figures. Figure 1 shows the percentage of workshop participants' occupations. Figures 2 and 3 are showing the knowledge of Lean of the participants before and after the workshop.

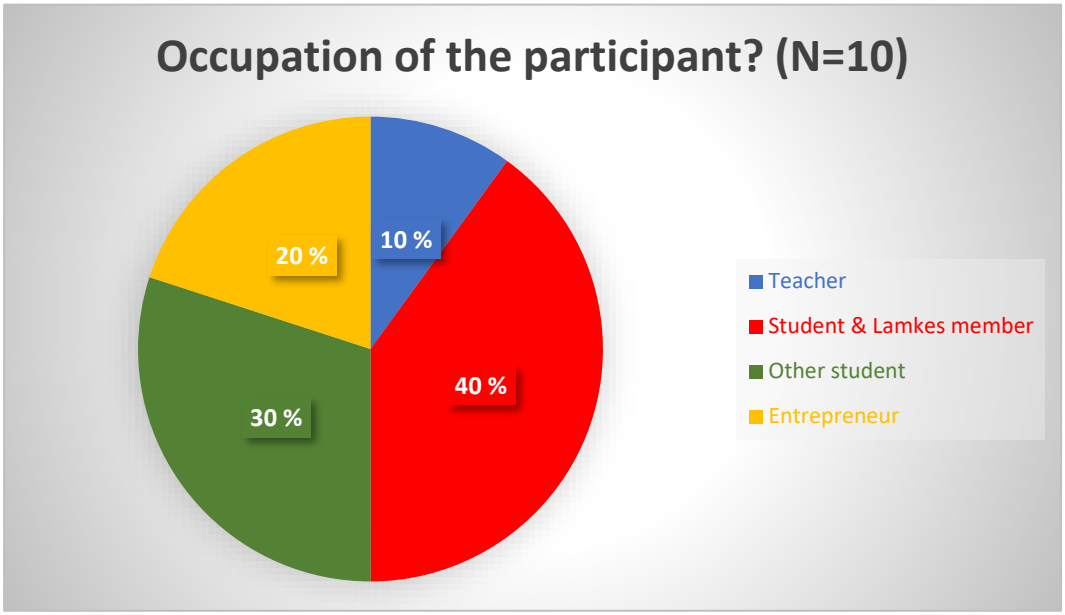


Figure 1 Occupation of the participants

The Figure1 shows that the workshop had participants from multiple occupations, but mostly students. Students are an excellent target to test workshops like this, because they are in school to learn and improve themselves. Students usually have a very open mind for new things and they are willing to be taught by another student. The secondary goal for the workshop was to share information, which was achieved by having a teacher participating in the workshop. Both entrepreneurs were also students, but having some entrepreneurs in the events is very important for the society to share the knowledge and attitude.

The original assumptions were correct as seen in the Figure 2 below. Ninety percent of the participants knew only the basics of Lean or less. There was clearly a need for Lean training.

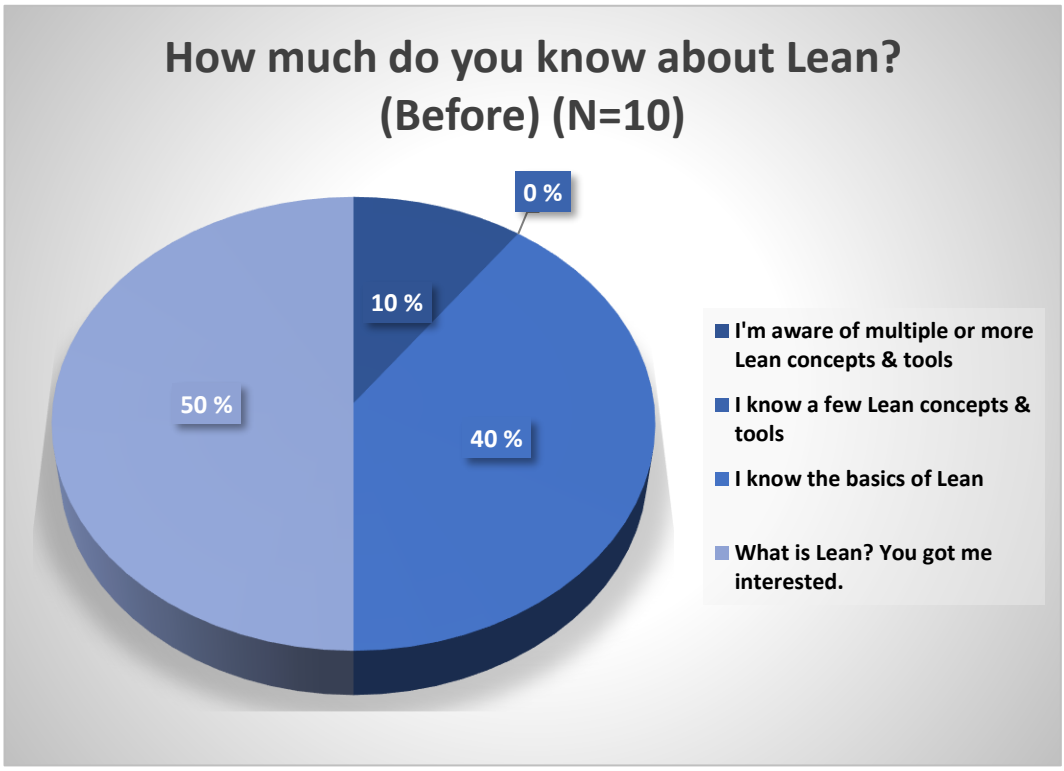


Figure 2 Lean knowledge before the workshop

Figure 2 and Figure 3 are the questionnaires for collecting information. It is very important to measure what you build. There is clearly not enough information for academic research, but enough to see that the workshop was successful for this audience. This workshop was a prototype/pilot for future use and has plenty of things that can be improved. I personally thought, that the workshop was so good that I will use it in more advanced form in my own company and make it a tool in my toolbox.

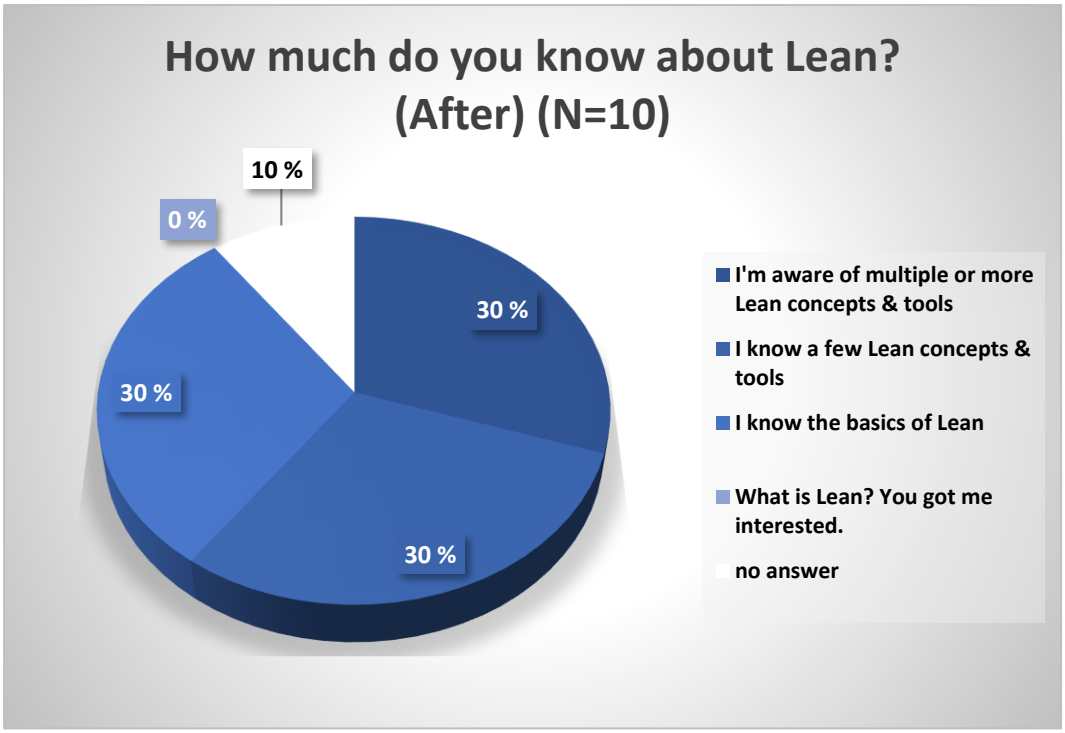


Figure 3 Lean knowledge after the workshop

We can see in the Figure 2, which has been done before the workshop. Fifty percent of the people did not know what Lean is and 40% said they knew the basics. In Figure 3, which is done after the workshop. Everyone knew something about Lean, only 30% said they know only the basics and 60% of the people answered that they know at least a few Lean concepts & tools. There was 10% of people in Figure 2 which has already knowledge of multiple Lean tools & concepts, so clearly they would not get that much out from a basic level Lean workshop like this, but this 10% was sharing their knowledge to other participants, which allowed the workshop to be even more successful. Now there is 30% of people who can share this knowledge forward and allow others to get the chance of becoming more Lean and efficient.

The figures do not tell how much knowledge of Lamkes was shared in the workshop, but some can be seen in the PowerPoint files, which are in the attachment, in the end of this thesis. Society was also given the A2 sheets of paper, which were used in the brainstorming sessions to share the knowledge for people outside the workshop.

6 DEVELOPMENT PROPOSALS AND CONCLUSION

6.1 Development proposals

Lean has given me a lot. It has changed my life. My personal life is more organized because it makes me more efficient. I like to clean and organize more to find the right items & papers faster. Lean has given me the tools and self-confidence to start my own company and become successful with it. I know that I will succeed, when I keep actively doing things, collecting feedback, learning from the feedback and removing the things hindering my way to the success and of course using everything I have learned while working for Lamkes and doing this thesis. I do not worry about the future that much anymore. I like to look at where the road takes me, because I know I have what it takes to become successful and achieve my goals.

Lamkes has lost a lot of people while going really fast and Lean, but it has learned so much in the process. Not everything can be fixed, but by demolishing what was built, a new and stronger society will be built. It is time to start slowing down and go back to steady development from the agile development. Many concepts were built and a few members learned more than others, but it is time to share this knowledge to others and to grow the amount of people in the society. There are some things that a small agile society cannot do, which a big and steady society could. For example, being able to do events on steady basis is something that can be done with more people. Continuity is very important and that can be achieved only through more people and time.

Usually when a big change is required, new leadership is also required. It is the same with Lamkes. The Board has gone through big changes and it is time for the old leaders to step out, they had their chance to drive this car called Lamkes as fast as possible. It went through the curves and did not even notice half the bumps in the road, but it is too risky to continue driving that reckless. It is time for new leaders to have their chance to jump in to the cold water and find their way to the shore.

It is all about controlling the risks. Lamkes avoided tons of risks by going so fast in the start, but now that so many concepts have been finished, it is easier to drive the car safely forward. This would not be possible without the help of the earlier leaders, but with teamwork the knowledge can be shared and the continuity can be achieved. The best way to share the knowledge is by allowing the others to do what you did to achieve the same knowledge. It is restricting the learning possibilities if you are standing in the way and not letting others to get their chance to dirt their hands. If you force the new people to do an impossible task, it might be a setback, but if the new guy manages to do the job, the knowledge learned is amazing and the feeling of victory afterwards is something to be desired for.

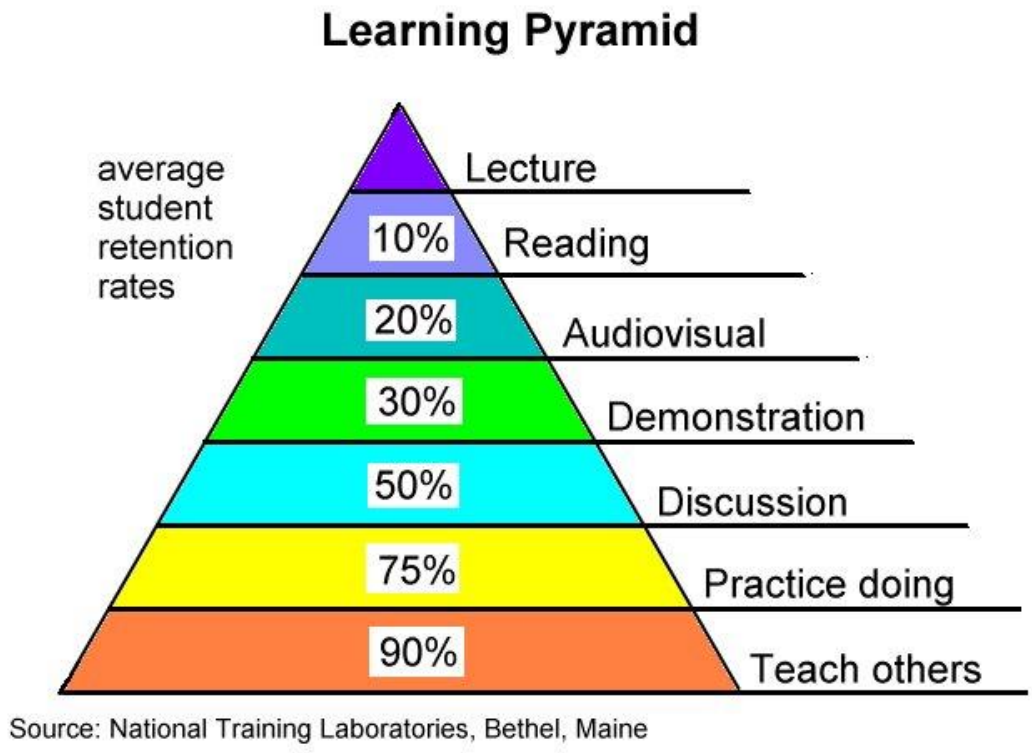


Figure 4 Learning Pyramid

Like you can see in the pyramid most effective way for the student to retain what has been taught is active learning. Teaching others and practicing of doing stuff. That was the purpose of the Lean workshop in this thesis. Idea was to teach Lean to others, so the teacher would learn the Lean himself

and cause discussion and practices, to give the participants a chance to learn Lean with the teacher. Secondary purpose was to share the knowledge of Lamkes in between the Lamkes members and to and from outside participants. All these goals were very successful.

Hardest part in teaching is to know what the others do not already know. To keep the students interested, something new and interesting is required. There is plenty of information in the world and with internet it is in your mobile phone all the time. Role of the teachers is changing and becoming more like a mentor to help the students to find their own answers and give them a chance to teach each other to achieve the maximum amount of knowledge in a short amount of time.

By giving the students more liberties on their studies, they are also gaining a double-edged sword. Some students do not realize the opportunity and spend their time on a hobby or a game, which hinders their learning. While other students are using all the time of the teachers to become exactly what they wish to become. World is students oyster and almost everything can be achieved through believing in yourself. There is plenty of similarities in future studies and entrepreneurship. That is exactly why the author of this thesis wishes to become a trainer, educator, instructor, teacher and a mentor. Mostly to learn from teaching others but also to give others the chance to follow their dreams and make this world a better place by fixing problems, instead of creating more problems.

Lean has unimaginable amount of ways to be used and this thesis and the workshop covered only a handful of them. There are tons of people who will argue that the basic Lean concepts, which were used are not correct. There is something missing and something not essential included. Having all the information in the world might help or distract you to find the right Lean way, but this thesis is just one way to look at it. There is probably the right way for everyone out there, you can use the pattern below to find your own Lean (Figure 5):

A. Research it to learn it.
B. Try it on practice to build it.
C. Take notes to measure it.
D. Make sure to demolish the useless waste/information.
E. Continuity comes from repeating back to A.

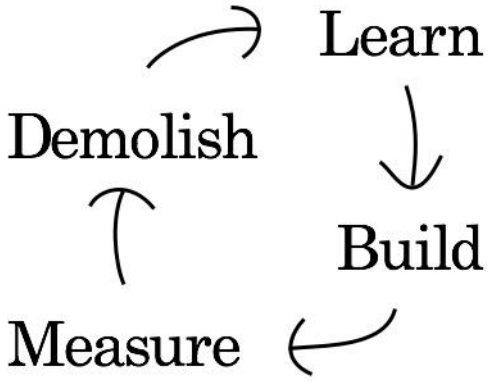


Figure 5 Learn Build Measure Demolish

6.2 Reliability

The validity and reliability in this thesis is questionable, because it was meant as a learning process with high amount of practical work. The results are useful in practice, but there should be much more results to make reliable statistics. Although, fewer participants are required to reach saturation, when the data of the participants contains less dross and are rich and experiential (Morse 2000). Having basically all the influential Lamkes members in the workshop, makes the results atleast somewhat reliable. There is always room for improvement, but like many other times the restriction was the time itself.

6.3 Conclusion

This thesis was about testing Lean-tools in an entrepreneurial environment. Main goal was to show the importance of agile development, in a student driven society's risk management. The theory part explained the Lean-tools which were used and the functional part includes a workshop designed to share the Lean-tools. The development proposals gave ideas on how to use the tools in the future.

The process started with planning a workshop and ended with writing this conclusion. Many things were learned while doing the process and a lot of things could and would have been done differently if given the second chance. Goal of giving Lean-tools to students were achieved and Lamkes has gone through an agile Lean-transformation.

The biggest gain of this thesis was to myself. Getting a chance to plan and build a workshop which can be turned in to a business is very important for my future. Being a Lean trainer is still faraway in the future, but it seems achievable with the help of this thesis. The process was also a good chance to share knowledge, while making the society atleast a little bit more Lean, agile, flexible and efficient.

I hope this thesis encourages to testing things in practice and trying out new things. It is very important for everyone to believe in oneself and one's own ideas and dreams. Now it is time for me to start believing in myself by fulfilling my dreams in the world of entrepreneurship and business.

REFERENCES

Written References:

Curedale, R. 2013. Design Thinking: Process and Methods Manual. Topanga: Design Community College Inc.

Drucker, P. 2006. The Effective Executive: The Definitive Guide to Getting the Right Things Done. New York: HarperCollins Publishers.

Medinilla, Á. 2012. Agile Management: Leadership in an Agile Environment. Berlin: Springer.

Morse, J.M. 2000. Determining sample size. QUALITATIVE HEALTH RESEARCH, Vol. 10 No. 1, January 2000

Ries, E. 2011a. The Lean Startup: How Constant Innovation Creates Radically Successful Businesses. London: Penguin Group.

Ries, E. 2011b. Build Measure Learn. Inc. Vol.33 (8) October 2011

Electronic References:

A Brief History of Lean. 2017. [accessed 21 August 2017]. Available at: https://www.lean.org/WhatsLean/History.cfm

Altshuler, M. 2017. [accessed 21 August 2017]. Available at: http://www.michaelaltshuler.com/michaels-quotes.html

Buddha 2014. [accessed 21 August 2017]. Available at: http://www.zenthinking.net/poetry/2014/9/27/unbind-yourself

Einstein, A. 2014. If You Always Do What You Always Did, You Will Always Get What You Always Got. [accessed 21 August 2017]. Available at: http://www.business2community.com/video-marketing/always-always-will-always-get-always-got-0857788#Yfhia00EkMO4e1Z7.97

Einstein, A. 2016. Wednesday Wisdom: Inspirational quotes to get you through the rest of the week. [accessed 21 August 2017]. Available at: http://www.telegraph.co.uk/men/thinking-man/wednesday-wisdom-inspirational-quotes-get-rest-week/albert-einstein-learn-yesterday-live-today-hope-tomorrow-important/

Ford, H. 2013. Henry Ford on Leadership. [accessed 20 August 2017]. Available at: http://gwclei.com/henry-ford-on-leadership/

Godin, S. 2009. [accessed 21 August 2017]. Available at: http://sethgodin.typepad.com/seths_blog/2009/03/nothing.html

Highsmith, J. 2017. [accessed 20 August 2017]. Available at: https://www.iss.nus.edu.sg/executive-education/discipline/detail/agile

LAMKES History. 2017. [accessed 7 February 2017]. Available at: www.lamkes.com

McClure, D. 2013. [accessed 21 August 2017]. Available at: https://twitter.com/davemcclure/status/337331430306758656

Pystynen, V. 2017. [accessed 21 August 2017]. Available at: http://brandnewhelsinki.fi/alussa-meille-tultiin-sanomaan-etta-olemme-hulluja/

Ries, E. 2012. [accessed 21 August 2017]. Available at: https://twitter.com/ericries/status/221318901018017792?lang=fi

Ries, E. 2016. [accessed 21 August 2017]. Available at: Krishnamurthy, A. Why Failure is a Prerequisite to Learning. https://www.entrepreneurship.org/articles/2016/07/why-failure-is-a-prerequisite-to-learning

Student-run Entrepreneurship Societies. 2017. [accessed 21 August 2017]. Available at: http://www.startupfinland.com/

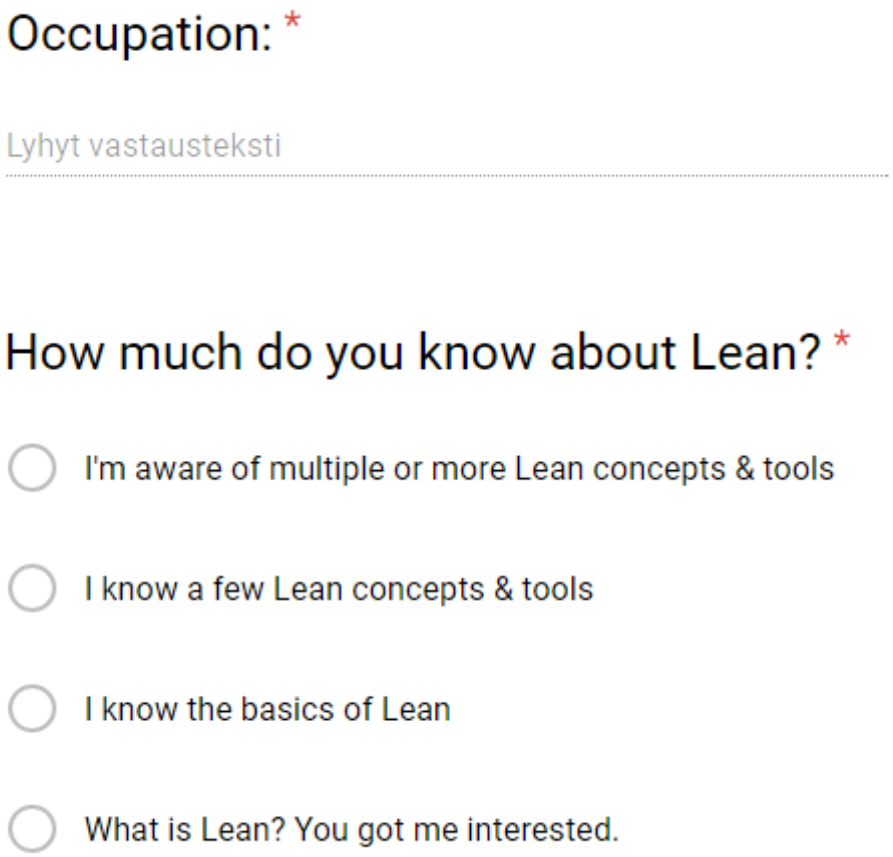
Zhou, F. 2017. Lead Time vs. Cycle Time. [accessed 21 August 2017]. Available at: https://www.isixsigma.com/community/blogs/lead-time-vs-cycle-time/

Other References:

Anonymous banner at the 15-M revolts in Madrid, 2011.

APPENDICES

APPENDIX 1: Questionnaire (Same questionnaire was used before and after the workshop)



APPENDIX 2: Customer definition form (Curedale 2013.)

Types of segmentations:

1. Behavior segmentation
2. Benefit segmentation
3. Psychographic segmentation
4. Geographic segmentation
5. Demographic segmentation

Keep in mind of the segmentations:

1. What is your target group's goals, emotions, experiences, needs and desires?
2. Information collected from just a few people is unlikely to be representative of the whole range of users.
3. What are the user tasks and activities?
4. How will the user use the product or service to perform a task?
5. What is the context of the user?
6. Where are they? What surrounds them physically and virtually or culturally?
7. How large is your user group?

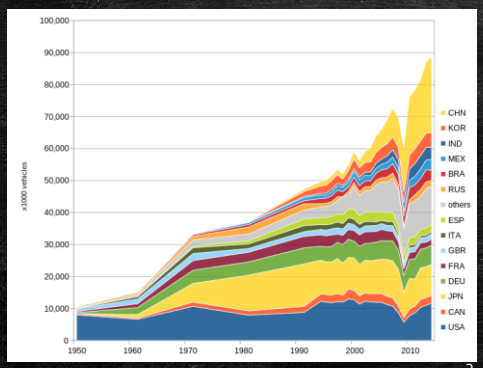
When defining your target audience, consider factors such as:

1. Age
2. Gender
3. Occupation
4. Industry
5. Travel
6. Citizenship status
7. Marital state
8. Income
9. Culture
10. Occupation
11. Language
12. Religion
13. Location
14. Education
15. Nationality
16. Mobility
17. Migration
18. Mental state
19. Abilities
20. Disabilities
21. Health

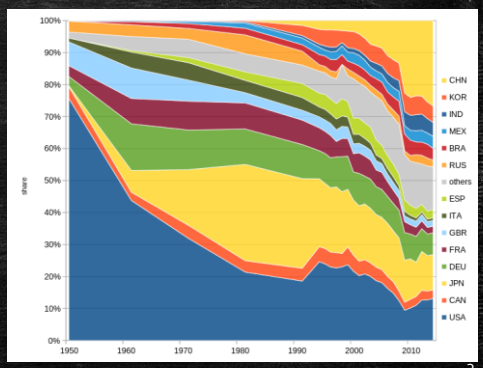
APPENDIX 3: PowerPoint for workshop

LAMKES Works:
Lean on Lamkes

The power of Lean manufacturing



3



3

LAMKES
ENTREPRENEURSHIP SOCIETY

Attitude
Team building
Networking
Incubation
Acceleration

Who is the customer of Lamkes?

Entrepreneurial-minded student / Yrittäjähenkinen opiskelija

Student-minded entrepreneur / Opiskelijahenkinen yrittäjä

Who else?

Step 1: Understanding and maximizing value

- No one really knows exactly what Lamkes is or will be
- What is the product?
  - Talks, Works, pitching event, Venture Camp
- Need of the customer?
- Which parts of Lamkes are essential for the value?
- Which are not, are waste of time

Example: Drill company

- Best drill in the market
  - Most powerful
  - Cheapest
  - Most durable
  - Most precise
- Customers problem: How to make a hole in the wall?

Step 2: Optimizing the value stream

- Finding the value stream
  - Cycle time (work step)
  - Lead time (whole work process, multiple options)
- How to reduce cycle time & lead time?
  - Removing waste will reduce cycle and lead time
  - Bottlenecks
- Value Stream Map
- Example: Understanding the society Lamkes and its work steps, will reduce waste in itself

Example: Laundry company

- Work steps:
  - Washing 45 mins
  - Drying 30mins
  - Folding 30 mins
- Finding the value stream
  - Cycle time???
  - Lead time???
- Bottlenecks

Example: LAMKES Talk

- Speakers
- Topic
- Schedule
- Book space / room
- Create content
- Inform Speakers
- Enrolment Form
- Marketing
- Feedback preparations
- Decide service
- More Marketing
- Photography prep.
- Final timetable
- Event prep. (space, food..)
- Have attitude!
- Clean up

Step 3: Pull Production

- Sometimes less is more
- Time is money
- Needs of the customer
- Expectations of the customer
- Build, collect feedback, learn and demolish

Example: Modern clothing companies

- Small stocks (~3 days)
- Ability to react quickly
- Changing models
- Keeping up with fashion
- Increasing production on particular models
- Maximum loss is small

Step 4: Single-piece flow

- Concentrating on one piece at a time
  - Smooth flowing
  - Maximum possible speed
  - No interruptions
- Little's law (more pieces add more cycle time)
- Finishing a task before starting a new one
- How to reduce overlapping tasks?

Step 5: Continuous improvement

Step 5: Continuous improvement

- Kaizen
  - *A hopeless but joyful strive for perfection that makes us better every day. Today, better than yesterday. Tomorrow, better than today. A martial state of mind that makes us train constantly and never be satisfied with our current skill, no matter how high it is.*[1]
- Perfection
  - *What's perfection good for, if we will never reach it? It gives us a true north so we keep walking on its direction.*[2]

References

1. Medinilla, Á. 2012. Agile Management: Leadership in an Agile Environment. Berlin: Springer.
2. Anonymous banner at the 15-M revolts in Madrid, 2011
3. https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_23.html_mfd Retrieved: 3.4.2017