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LEAN ACADEMY SERVICE CONCEPT DEVELOPMENT

– DEVELOPING CUSTOMER FOCUSED
SERVICE CASE FOR COMPANY X



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LEAN ACADEMY CONCEPT DEVELOPMENT

Expand an existing business model needs creative ideas and good research before you can success. There are several ways to do this and lot of new service concepts studies as a reference to start with. The starting point is challenging and some of these new concept ideas does not work or fail totally. To success this new concept development it needs proper research and additionally piloting with user groups.

The theoretical part of the thesis studies three different new service concept development model area and adding the business model canvass to support this new service concept. All these three service concept development models has tested and proven on real life cases. After evaluating all the service concepts, the target is to establish a business model canvas to follow this final service model. Research focus area is user group, business model canvass and new service development.

This lean academy service development study is linked to Company X. The company is currently offering lean management service to various domestic and international companies on service area already. This Lean Academy service concept development is mainly targeted to use an offsite training program and to be used to share and develop the different companies' key employees to achieve better results inside their own companies and organizations. Main objectives for lean academy service concept study is to help companies and organizations to reduce their waste work and implement lean thinking methods to people's daily work.

The research has given valuable information and user feedback towards to all parties how has involved this study. There has been whole lot of user interactions and secondly this pilot phase has given the final direction to our goal. The New Service Development process takes time and effort before we finally get the end product or in this case the service. Companies should be brave to try new ways of working and this lean thinking is one step to that direction. Of course in some companies this kind of thinking takes much longer time than in others. Even some companies fails and they can't get the benefits what they wish for in the beginning of this lean journey.

This study shows that there are several ways to develop a new service concept that could enhance companies' business concept.

KEYWORDS:

Lean, new service development, business model canvas, customer feedback, customer focus, concept development

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LEAN AKATEMIAN KONSEPTIKEHITYS

Kun haluaa laajentaa nykyistä liiketoimintamallia tarvitsee luovia ideoita ja hyvää tutkimusta ennen kuin voi menestystä. On useita tapoja tehdä tämä ja paljon palvelukonsepteja, joita kannattaa käyttää apuna tutkimuksissa. Lähtökohta on haastava ja jotkut näistä uusien konseptien ideoista eivät toimi kun on toivottu tai epäonnistuvat kokonaan. Onnistuakseen tässä uuden palvelun kehittämisessä tarvitaan perusteellista tutkimusta ja sen lisäksi pilotointia käyttäjäryhmien kanssa.

Tutkimuksen teoriittisessa osuudessa tutkittiin kolmea erinlaista palvelukonseptia ja lisäksi osana oli liiketoimintamallin kartoittaminen tukemassa tätä uutta palvelukonseptia. Kaikki nämä kolme palvelukonseptimallia on testattu tosielämän tapauksissa. Eri palvelukonseptien arvioinnissa oli tavoitteena tutkia myös liiketoimintamallin toimivuutta loppullisessa palvelumallissa. Tutkimuksen painopiste alueet olivat käyttäjät, liiketoimintamalli ja uuden palvelun kehittäminen.

Tutkimuksen käytännön osuudessa keskitytään suomalainen Lean yrityksen palvelun kehittämiseen. Tämä yritys X tarjoaa tällä hetkellä Lean konsultointi palveluita suomalaisille ja kansainvälisille yrityksille. Lean-akatemia palvelukonseptin kehittäminen tukee yrityksen nykyistä palvelukonseptia ja tätä palvelukonseptia tullaan käyttämään yhtenä koulutusohjelman osana. Tämän Lean-akatemia päätavoite on auttaa yrityksiä ja organisaatioita tehostamaan omia menetelmiä ja ajattelemaan asioita erinäkökulmasta päivittäisessä työssä.

Tutkimus on antanut arvokasta tietoa ja palautetta kaikille osapuolille, jotka ovat olleet mukana tässä tutkimuksessa. Osallistujien palaute ja pilottivaihe antoi lopullisen suunnan tälle Lean-akatemialle. Tavoite oli luoda uusi palvelu tämän prosessin aikana ja tämä tavoite saavutettiin hyvin, joka palvelee tässä tapauksessa yrityksen tarpeita. Yritysten tulisi olla rohkeampia kokeilemaan uusia toimintatapoja ja tämä lean ajattelu on yksi askel siihen suuntaan. Joissakin yrityksissä tällaisen ajattelumallin läpi saaminen kestää kauemmin kuin toisissa. Aina yritykset eivät onnistu aluksi tai epäonnistuvat kokonaan tässä palvelukonseptin uudistamisessa.

Tämä tutkimus osoittaa, että on olemassa useita tapoja kehittää uusia palvelukonsepteja, jotka parantavat yritysten liiketoimintaa.

ASIASANAT:

Lean, palvelukonseptin kehitys, liiketoiminnan kehitys, liiketoiminta, asiakaskeskeinen palvelu, asiakaspalaute

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LIST OF ABBREVIATIONS (OR) SYMBOLS

<u>Abbreviation</u>	<u>Explanation of abbreviation (Source)</u>
B2B	Business to business
BMC	Business Model canvas
HBR	Harvard Business Review
NSD	New Service Development
IASSC	International Association for Six Sigma Certification
NIST	National Institute of Standards and Technology
TPS	Toyota Production System

1 INTRODUCTION

This lean academy service development study is very tightly linked to Company X. The company is currently offering Lean Management Service to various domestic and international companies. Their core competence is to improve productivity and bring those ideas on real life cases where companies can benefit their improved productivity. Additionally they can bring operational models and those are developed together with customers. Additionally they will ensure that there is continuous improvement happening after this lean journey has ended. All these lean customer cases are individual experiences and tailor made for that company special need.

This Lean Academy service concept development is mainly targeted to use an offsite training program and to be used to share and develop the different companies' key employees to achieve better results inside their own companies and organizations. Additionally one main target is to offer companies to embrace the lean methods and develop those methods further on their own company. Secondly there is an idea to have at least three or four steps development plan before individual person can manage these lean methods and also share this information afterwards other key persons inside the organization. After this final step, there would be a graduation from Lean Academy. At this point the idea is to have it similar, but not so heavy process than like example the Six Sigma certification by IASSC. I will review and analyze this point later on this master's thesis.

So far there is no similar service concept available from the domestic competitors in the Finnish market segment. We have developed and build this concept by using the Company X personal expertise and knowledge based on their own experience. Additionally by interviewing some of their key customers and those people how have participate on their pilot academy training in 2015.

The structure of this study is shown on the Figure 1 below. Chapter 1 *Introduction* describes the background of this master's thesis and the reason and business need for the study. In chapter 2 *Objectives and methods* the details about regarding the purpose and study methods are presented. This Chapter 3 *Literature and theory* describes the available theory on the subject and defines the framework for the study. In chapter 4 Research methods are data collection, the interview results and other collected data are put together. Chapter 5 Analysis provides analysis and ideas what should take into account when developing service further. In chapter 6 Conclusion are possible future study subjects introduced. This last chapter 7 *Summary* summarizes this study and the findings on this lean academy service development.

1. Introduction
2. Objectives and methods
3. Literature and theory
4. Research methods
5. Analysis
6. Conclusion
7. Summary

Figure 1. Master's Thesis structure (Kotirinta, 2016)

1.1 Background

Why to develop a Lean academy and service model around it? Lean methods and lean thinking is very popular topic in many companies, even the lean thinking or lean process has been invented several years ago.

Machine presented a wealth of benchmarking data to show that there is a better way to organize and manage customer relations, the supply chain, product development, and productions operations, an approach pioneered by the Toyota Company after World War II. We labeled this new way lean production because it does more and more with a less and less (Womack and Jones, 2003, 23).

This is the main idea how this master's thesis is build-up to the lean academy philosophy. Surely there are several updates and an improvement after this first lean idea, but still the main idea has been kept the same.

1.2 Objectives

Main objectives for lean academy service concept study is to help companies and organizations to reduce their waste work and implement lean thinking methods to people's daily work. Additional objective is to provide Company X the new business model which then could bring more turnover and attract new business partners.

Overall Lean academy aims to offer and improve the total awareness of lean process and methods what companies could use. Of course there are different areas and needs for companies to improve their productivity and awareness of lean processes. Sure there is not just one right solution what we can offer, but the main idea and willingness is to give such good tools that those are enough to solve most problems independently. This lean academy is additional part of Company X service offering. Although for companies this can be also extended course for those key personnel's which are willing to develop their productivity. One of the main objectives is that lean academy consist various courses like: 1) Onsite trainings which will happen on customer premises, 2) Offsite training would take on place one place, 3) on-line trainings to manage some courses and then finally the 4) seminars and/or workshop days. On this master's thesis my objective is to focus on these more detailed and try to find the best solutions for Company X

2 OBJECTIVES AND METHODS

Good service models need always good design in background. I used this thought throughout the whole process for this Lean Academy research. I started thinking all the options on how it is possible to design a good service concept for a Company X in order to support their additional business model the best way possible. There are various ways to choose between different designs, for example with product and service developments. A major point of difference between these two is the involvement of customers in services (Ennew and Binks, 1996, 17). Additionally Alam (2000) defines that services tend to involve customers in their delivery, and then purchase intimate relationship with customers.

Customers are also in a big role when I carry out this research. Quite often there are new services coming out with the lack of customer input and the lack of strategic focus on new service development. Therefore, the new service failure rate is high and cause problems for services itself. Reasons might be the ineffective development process, and up-front thinking, or lack of customer orientation and input. These challenges include deciding how to organize for NSD and how to develop new services that are responsive to customer needs. However the past research has concentrated only on two broad issues: success factors of new services and normative NSD models. Considering the issue of NSD model in particular, the literature is almost silent on the details of NSD stages and their interface with the customers (Alam, 2002, 515).

Different new service development (NSD) tools and methods will be used to find out the optimal solution for lean academy. To follow the Company X lean focused business model and operations, the aim is to find out the service model which can fit their current strategy and business model. My main plan is to research and evaluate totally three different design methods for developing the new service concept which bring added value their business concept. After defining the new service model which model we take in to use, then the secondary focus will be creating business model canvas (BMC) around this Lean Academy.

Business model Canvas by Osterwald (Osterwalder, 2010, 14) is the method to be used to evaluate and analysis the lean academy concept and based on those findings aim is to build the marketing plans and customer-oriented lean academy model. Customer focus will be the major part of this naturally when defining this BMC part. The BMC consists totally of nine building blocks to describe the business model: 1) Customer Segments, 2) Value Propositions, 3) Channels, 4) Customer Relationships, 5) Revenue Streams, 6) Key Resources, 7) Key Activities, 8) Key Partnerships and 9) Cost Structure. Some of the needed data is available based on their current business, but surely it will be evaluate if those are valid for lean academy concept.

2.1 Background (Lean academy)

The Lean academy concept idea was originated by Company X already in the year 2009. Their first idea incubated they all worked at Nokia Mobile Phones during the 2000s. There are still today three management team members working at Company X who were developing this lean academy framework to as a course model as an internal learning program. Nokia was ahead of its time at all kinds of training courses and they invested a lot of money and resources for people. But when Nokia started reduce radically people after the year 2010, lot of these different experts put together their own companies and people start to sell their own expertise and knowhow to companies which needed new services. Also Company X has followed this path and they are doing well today on lean coaching business and helping small, medium and lately even big companies on their lean journey.

2.2 Research objectives

The intent of the research is to find out most suitable service model for Lean Academy service concept. Additionally the second objective is to find out the business model canvas (BMC) and implementation plans for Company X. So that those plans could support their daily activities and increase business.

There will be support material used and data from interviews and customer surveys from pilot project what Company X has done at early 2016. The research was focused on two areas shown below.

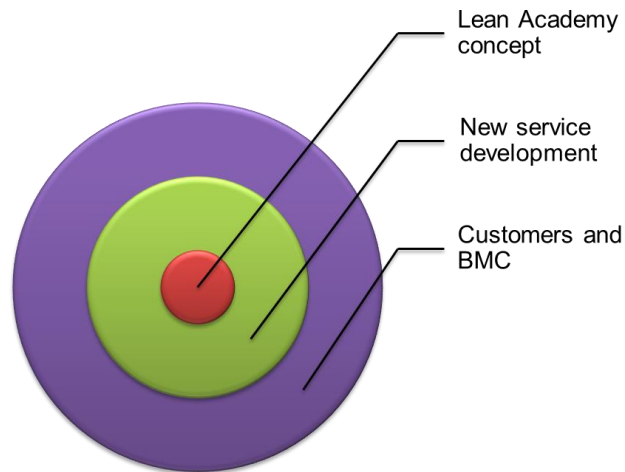


Figure 2. Research areas overview (Kotirinta, 2016)

Based on the research area and the research objective the following research questions have been formulated following:

Main research question: what is the most suitable service design model for lean academy concept?

Support research question: what is business model canvas outcome for lean academy?

Additionally the customer feedback has a very big role on this part also, the pilot course which was held on 2016 for small end customer group.

3 LITERATURE AND THEORY

In this paragraph I will share the details and some insight information about lean method and additionally the lean thinking and how it has been evolved during the years. Additionally it is important to understand the basics about lean thinking and how it has been developed to lean method and thinking. Since this lean thinking has a long history already in industrial corporations.

First of all it all started on service design methods and how we can choose the right one. I will focus on this study three different service development methods. All these have been used in the real-life cases previously. I have to analyse and evaluate and explain research question what could be most suitable to Company X and their current business model.

Companies are all the time launching new services or alternative services for something which is currently used. But still quite often these are not successfully launched and end the customers are preferred to use to so call old and working services instead.

3.1 Basics about lean thinking

The lean thinking as a concept has been generating a lot interest in manufacturing and service organizations around the world. Lean philosophy has gotten its recognition only over recent years, but it is not a new concept. Even though during the last years it has been interested in large amount of companies are embarking their lean journey. Perhaps there are economic difficulties or companies want to put more effort on their efficiency and do more with less work or using other resources. Larger amount of the manufacturing companies have used lean principles already since the 1980s. Today lean thinking is on all industrial areas and service areas. The company for which I do this master's thesis have more customers today on service and public segment, than in traditional industrial segment.

So, what is lean? Probably the best definition comes from the National Institute of Standards and Technology (NIST) in the United States, which defines lean as “a systematic approach to identifying and eliminating waste (non-value added activities) through continuous improvement by flowing the product only when the customer needs it (called “pull”) in pursuit of perfection (Sarkar, 2007, 7). This can be also put following; the core idea is to maximize customer value while minimizing waste. Simply, lean means creating more value for customers with fewer resources. To achieve all this, lean thinking changes the focus of management from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services through entire value streams that flow horizontally across technologies, assets, and departments to customers.

The critical starting point for lean thinking is value. Value can only be defined by the ultimate customer. And it is only meaningful when expressed in terms of a specific product (a good or a service, and often both at once) which meets the customer’s needs at specific price at specific time (Womack and Jones, 2003, 20).



Figure 3. Principles of Lean (Womack and Jones, 2003)

The concept is not new and originally emerged from the Toyota Production System that was created Taiichi Ohno. Today there are many success stories companies like Trek Bike cycles, Dell Computers, John Deere, Nokia and many more.

One very common misconception is that lean is suitable only for manufacturing. That is not true at all. Lean thinking applies in every business and every process. It is not a tactic or a cost reduction program, but a way of thinking and acting for an entire organization.

Today lean is in all industries and services, including healthcare and governments, are using lean principles as the way they think and do. Many organizations choose not to use the word lean, but to label what they do as their own system, such as the Toyota Production System (TPS) or the Danaher Business System. Reason is that to go further on the point that lean is not a program or short term cost reduction program, but the way the whole company operates. This is so called way of working method. The word transformation or lean transformation is often used to characterize a company moving from an old way of thinking to lean thinking. It requires a complete transformation on how a company conducts business.

3.2 Service design and development

Design and service design is processes which consist various parts of different phases and test rounds to find out right combination. I will familiarise myself to three different service design process and make the judgement based on those reasons with are following:

- 1) Has a fit to this service concept
- 2) Gives a best outcome overall
- 3) End result satisfy myself and company

Word design has many different definitions, but at its heart it is about the process of translating ideas into reality, making abstract thoughts tangible and concrete (Davies, 2005, 4). This is a very valid point when doing this study and I will

pay attention to this and additionally my target is to design a service that helps Company X to serve their end customer even better than today.

This service design process is a process where we try to make these usable, easy to use and desirable. Some companies have made their services more desirable than others. Good example is e.g. the Apple iTunes, which serve their end-users by providing music experience that is better than competitors. There are different services all around us like shops, restaurants, public transportation, different authorities and they all try to serve us in their best way, and some do it better than others.

Service design is the process of creating these touchpoints and defining how they interact with each other and with the user. To design a great service it is important to have service users in mind: are they staff, suppliers or customers? Using design tools and methods can deliver an in-depth understanding of user behaviours, their likes and their needs, which can enable new solutions to be developed. Service design can be used to re-design an existing service to make it work better for users, or it can be used to create an entirely new service. (Davies, 2005, 4)

New Service Development (NSD) has been relatively neglected in the literature on innovation. Valuable insights are available in the extensive new product development (NPD) literature, which can be considered while developing services. However, it is recognized that there are a number of aspects distinctive to services, which are likely to affect its development (Shekar, 2007, 4). This is a valuable guideline when we are developing our service. There is one main role on the Company X staff and their customers which can give valuable feedback.

New service development has a similar development process to product development, but there are also significant differences in the activities and the research techniques (Johne & Storey, 1998, 9). Johne and Storey in their comprehensive review of service development literature commented on the importance and lack of effort to develop specific service development models. There are lots of studies that product firms, service firms are less likely to perform concept tests, test marketing, launch activity and are inefficient in predevelopment activities. Quite often

companies rush on the market with their first idea or product without doing proper concept testing before market launch. Personally I have been part of quite many times this kind of concept testing, marketing and launch activity process, which I believe is a huge advantage, when doing this service development concept. But still quite often this kind of early stage of problem description, idea creation, concept definition and screening is forgotten even it is vital for the success of the future business.

There is of course this process archetype definition which is very basic way to do design. There is always input and output and in the middle there is this process where something happens and we get some kind of outcome. This is basic process model what I think that most of people think that is a design or service process.



Figure 4. Simple design process (Kotirinta, 2016)

Additionally new service development process involves recognizing chances and opportunities in a fast changing technological environment. So we can on the other way say that new service development concerns all the activities involved in realizing new service opportunities, including product or service design, marketing, business model design, and risk management.

The new service development process involves recognizing chances and opportunities in a rapidly changing environment issues. For example, car manufacturers should recognize that rising gas prices are an opportunity to create and develop more electricity cars and additionally opportunity. Surely this kind of new service development is a risk for companies on other hand, if they are not willing

to follow these trends. There are always investments what is needed, either money or extra work hours.

Here is couple of key things about good design. First we need to have the user understanding. Designers have to understand the needs and desires of the people who will use a product or service by spending time with them. This approach ensures that solutions will fit for purpose and are desirable to the people who will use them. By focusing on human stories and insights designers build empathy for users, and ensure ideas being developed are relevant (Davies, 2005, 3).

Secondly there is always need piloting or prototyping for various idea and concepts to find out that one which fit to your business model. Prototyping can be applied to both products and services, and allows real world feedback from users that ensure better, more relevant outcomes. Quite often it can be quick and cheap and it allows a solution to be iterated and improved before it is rolled out for mass market.

After all service design is all about making the services which we find usable, easy and desirable. There are services are all around us – shops, restaurants, buses, hospitals, restaurants and the bars help us get to work, get our food, or keep in contact with each other. Service design is the process of creating these touchpoints and defining how they interact with each other and with the user. To design a great service it is important to have service users in mind: are they staff, suppliers or customers? Using design tools and methods can deliver an in-depth understanding of user behaviours, their likes and their needs, which can enable new solutions to be, developed (Davies, 2005, 6)

3.2.1 Service model – Double Diamond

First service model what is used to analyse and try the process is called the double diamond design process. This design process is divided to four different main phases: Discover, Define, Develop, and Deliver.

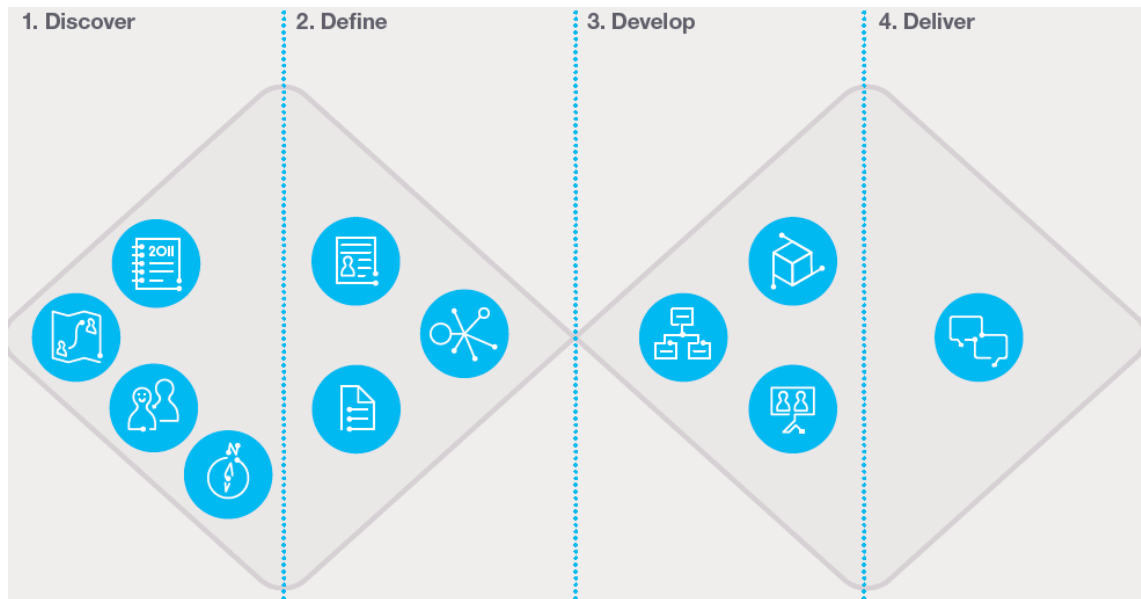


Figure 5: Double diamond phases (Davies, 2005,7)

This visual representation of the design process was developed by the United Kingdom Design Council in 2005 through in-house research (Davies, 2005, 23). The Design Council was created in 1944 (it was then called the Council of Industrial Design). The purpose of the Council was to build Britain's ability to produce high-quality consumer goods, which in turn would boost the nation's economy in a competitive post-war market. In the time since, the Council has played a significant role in shaping design discourse and praxis in Britain and beyond. The Council's influence extends from its roots in industrial design to newer and less tangible disciplines such as service and interaction design (Davies, 2005,23§).

The 'Double Diamond' process maps the deviant and similar stages of a design process. As such, the model seems like a linear process. It describes significant up-front design, before going on to produce a final solution. By working this way means that solutions are generally perfected before public release. Biggest advantage it that it's expensive to change a physical product after it has been shipped. Another significant effect is that a lot of time passes before knowing it's efficacy in a real market.

3.2.2 Double Diamond – Discover phase

The first quarter of the Double Diamond model marks the starting point of the whole project. This begins with an initial idea or inspiration. In our case the lean academy idea was generated originally many years back by current owners on Company X. Originally the idea has been develop this format what is today.

The beginning of every design project is marked by an exploratory phase where insights and inspiration are gathered. This Discover phase can be triggered in many different ways such as social trends, novel technology, and the launch of a competitor service, or in the case of the Keeping Connected Business Challenge, a funding call. In the Discover phase we begin to identify the problem, opportunity or need to be addressed as well as define some of the boundaries of the solution space. This exploration uses both qualitative and quantitative research methods and can involve both directly engaging with end users and analysis of wider social and economic trends. This research builds a rich bank of knowledge that will inform the rest of the design process and act as a guide and inspiration to the design team (Davies, 2005, 8).

The start of this project is a period of discovery, gathering inspiration and insights, identifying user needs and developing initial ideas.

Objectives of discover phases are:

- 1) Identify the problem, opportunity or needs to be addressed through design
- 2) Define the solution space
- 3) Build a rich knowledge resource with inspiration and insights



Figure 6: Discover phase tools and methods (Davies, 2005)

There are these four tools what can and should be use during the discover phase. Most important role is the user group and user area scanning and collect data from various user groups. Below is short description of these tools and methods and explanations. How those are used I will go more specific level on analysis chapter.

1) User Journey Mapping

A User Journey Map is a visual representation of a user's journey through a service, showing all the different interactions they have. This allows us to see what parts of the service work for the user (magic moments) and what parts might need improving (pain points). A User Journey Map takes the user's point of view and explains their actual experience of the service (Davies, 2005,11).

2) User dairy

User Diaries are a method for gathering in-depth qualitative information from users by giving them a way of recording away from researchers. It allows people to tell about their own lives in their own time, and explain what they do over a number of days or weeks. User Diaries can be realised in many different formats but usually consist of some personal background information and a 'diary' style format for capturing information over time. This basic information can be supplemented with additional questions or tasks. Sometimes cameras or other

documentation equipment is provided to gather visual feedback for researchers (Davies, 2005, 12)

3) Service Safari

A Service Safari is a research method for understanding services. Researchers go 'on location' and experience a service first hand to find out that service experiences are like. A Service Safari might be focused on a particular service (like going to Tesco), or type of services (like going to a supermarket). Alternatively it might look at a wider range of services to get an idea about what makes a positive service experience (like services where I can buy food) (Davies, 2005, 13).

4) User Shadowing

Shadowing is a research method for understanding how people interact with the world around them (including services). It involves observing a user directly to identify and understand their needs. Researchers follow a particular person as they go about their lives or use a service and document what happens in an unobtrusive way (Davies, 2005, 15).

These all four phase are equally important to do and find out the core strategy. We need to understand firstly what we are doing and additionally how we do it so that it will satisfy user expectations by end of this process. It may take few rounds to get all answers these four points listed here.

3.2.3 Double Diamond – Define phase

This second part represents the definition phase, where service designers try to make sense of all the possibilities which are identified in the discover phase. Our case the define phase took a while and there was several ideas on the table. Quite often this define phase can be the most problematic because in this phase we need to define a clear picture of what we want to develop our service.

The initial Discover phase is about opening out and exploring the challenge to identify problems and opportunities. The Define stage channels these towards actionable tasks. The mass of ideas and findings are analysed and structured into a reduced set of problem statements. These are aligned with the organisational needs and business objectives to identify which to take forward. The Define phase results in a clear definition of the fundamental challenge or problem to be addressed through a design-led product or service (Davies, 2005, 7).

Objectives of define phase are:

- 1) Analyse the outputs of the Discover phase
- 2) Synthesise the findings into a reduced number of opportunities
- 3) Define a clear brief for sign off by all stakeholders

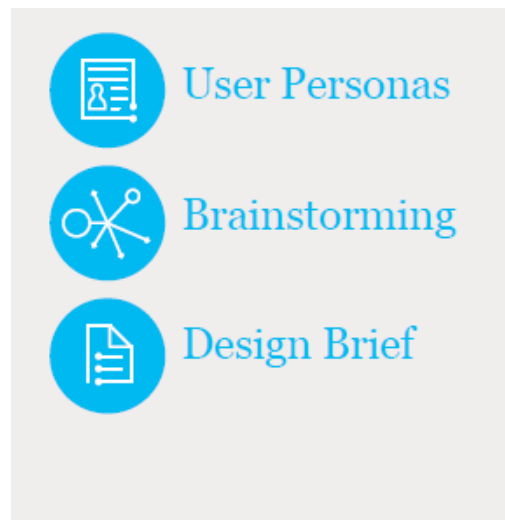


Figure 7. Define phase tools and methods (Davies, 2005, 8)

Key methods during the define phase are following: project development, project management and initially project sign-off. This initial strategy guides the execution of a solution, but strategy is never complete. A strategy should adapt when we make we new discoveries. It doesn't need to define all details of a solution. Instead, the focus should be on the desired outcomes or impact to achieve.

To go through these three tools what are used in the define phase. Below is short description of these tools and methods and explanations how those are used and what should be the out.

1) User personas

User Persona is a character that embodies user research in an easily identifiable and understandable form. It brings together lots of information about similar people to create a single character that represents the group. Personas are normally created as a set, showing different types of users with different needs. User personas can be communicated in a wide variety of formats but are normally a combination of images and text. A Persona can cover information such as name, age, occupation, where they live, family, hobbies & interests, likes & dislikes, and most importantly needs (Davies, 2005,16).

2) Brainstorming

Brainstorming and other ideation techniques are used to generate alternative solutions and opportunities quickly. They identify the most interesting or important ideas to take forward as part of the design process. Brainstorming is particularly useful to break out of established patterns of thinking, and develop new ways of looking at things. It also helps overcome many of the issues that can make group problem solving a difficult or unsatisfactory process (Davies, 2005, 17).

This method is often used on other process development tools and it can be used as a separate tool to find idea and solutions some specific problem. Personally I have been part of brainstorming sessions on work when we have tried to find solutions to our current issue or problem.

3) Design Brief

A Design Brief is a clear definition of the fundamental challenge or problem to be addressed through a design-led product or service. It is a structured statement that outlines goals, constraints, budgets and timelines. It communicates

project outcomes, identifies potential risks and highlights how these will be mitigated (Davies, 2005, 18). Target is to create plan for develop phase and define the problem or challenge to be addressed. Often this is a written document which is easily understood language and provides clear direction. We should avoid being overly rigid in specifying detailed design work.

3.2.4 Double Diamond – Develop phase

This next phase takes the initial design brief and through an iterative process of developing and testing, refines the product or service concepts until these are ready for implementation. When using design and creative techniques, the design team and partners develop the individual service components in detail and ensure this link together to form a comprehensive experience.

Development phase includes lot of testing to ensure that service is robust and focus will on the user group what we have targeted. Final product or service will be done and it is ready for implementation.

In Company X case the biggest focus was on business model canvas and most of the time has spent on that, since there was no business plan form this lean academy and we together decided that is what they would need.

Objective defined by Davies on her study are following:

- 1) Develop the initial brief into a product or service for implementation
- 2) Design service components in detail and as part of a holistic experience
- 3) Iteratively test concepts with end users



Figure 8. Develop phase tools and methods (Davies, 2005, 9)

There are three parts which I study and analyse on this development phase.

1) Service blueprinting

A Service Blueprint is a detailed visual representation of the total service over time - showing the user's journey, all the different touchpoints and channels, as well as the behind the scenes parts of a service that make it work. A Service Blueprint helps everyone involved in delivering the service understand their role and ensure the user has a coherent experience (Davies, 2005, 19).

This part often look similar what is the User Journey Map. The biggest difference is that it maps the future service, not the existing. This service blueprinting is visual diagram which identify the key stages, touchpoint and other elements which make the service. Biggest aim is to communicate the service to the people delivering it, as well as to users during testing.

2) Experience prototyping

Experience Prototyping is a way of testing new service ideas or designs for specific touchpoints. Experience Prototypes are about communicating what the experience will be like and allow the design team to test and refine their solutions with potential users. They also help build buying from partners and other stakeholders. Making prototypes 'early, ugly & often' is important in design process phase. Experience prototypes don't need to

be refined or take a long time to make, it is more important to create something quickly, test it, and then iterate the design. They can vary from paper sketches, to a physical model, to a fully acted out service (Davies, 2005, 20). Our case the prototyping was a pilot course what Company X held on selected user group during 2016. Additionally we collect user survey after this pilot course. That is also defined on Davies study that we have to gather feedback from potential users. Secondly she advises that we should find out whether parts of the service meet users' needs and how they can be improved.

3) Business Model Canvas

The Business Model Canvas is a visual tool for describing and developing business models. It was created by Alex Osterwalder and it has been introduced in his book *Business Model Generation*; it can be applied to both new and existing services (Davies, 2005, 20).



Figure 9. Business Model Canvas template (Five Whys, 2012)

The Business Model Canvas (BMC) is a strategic management and lean start-up template for developing new or documenting existing business

models. It is a visual chart with elements describing a firm's value proposition, infrastructure, customers, and finances. It can be used many ways in the organizations and companies. It is powerfully and fairly easy to use tool for companies and different organizations. The Business Model Canvas was initially proposed by Alexander Osterwalder based on his earlier work on Business Model Ontology. Quite often the business model canvas is made in chart mode and when there are total nine different business areas analyses which are filled. When using this chart mode it is fairly easy to compare companies and also it gives quickly the main idea of the company profile.

The business model canvas is a perfect tool for start-up companies; it has proven that it works. It is process where you can easily test and verify your business idea. It requires many iteration rounds and also it requires that you test your ideas also with your customers. There is no way that you could make a perfect solution or product on the first time. You have to ask feedback and try to sell that idea your organization and fix those issues which end customers did not like on your product or service. Like the business model needs review rounds and new versions also the business model canvas requires updates and continuing focus at the founders and management team.

3.2.5 Double Diamond – Deliver phase

In the Deliver phase, the product or service is launched and begins to address the needs identified in the Discover phase. The final concept is taken through final testing phase, then finalised and signed off. It is important to ensure that systems are in place to capture user feedback, especially for services. The Deliver phase is also the point to feedback lessons from the process towards colleagues and partners, sharing new knowledge, insight tools, or ways of working (Davies, 2005, 9)

This final part is about design scenarios and stories of a future situation or service offering. By creating a concrete story about a potential future, or set of futures, design scenarios help create shared understanding and enable meaningful discussion. While scenarios are used as a tool across strategy and management disciplines, within service design they are mostly used as communications tools and emphasise storytelling and narrative. Big target is describing a use case of a particular service in development. Secondly create shared understanding of a potential future service or situation.

3.2.6 Service Model – Dr. Aruna Shekar model

The second service model which I choose is Dr. Aruna Shekar model and the main reason for me was that she has taken a lot user experience comments on her study. Additionally it is formal process which is easy to follow and implement. By using a formal process and not skipping steps in the process has long been a differentiating factor. A review of service development by Cowell in 1988 highlighted the following points (Shekar, 2007, 4);

- Services development appeared to be technology driven rather than user driven.
- Generally, the rate of new service creation is quicker, while user adoption of new services is slower, relative to new products.
- There are more service improvements rather than service innovations.
- In most services, users are involved in the service production process.
- Service staffs are critical to service production and delivery.

The importance to successful innovation is a systematic development process and user's involvement in the process has been recognized. A service differs from goods in some important ways and these differences present special challenges to service developers. When developing new services, the following four service characteristics need to be considered: intangibility, inseparability, variability and

perishability. This means the service cannot be examined before purchase (an in the case of tangible goods), it is produced and consumed at the same time, it varies from one service to another within the same category and it cannot be stored (Shekar, 2007, 6).

When developing a service there are totally different focus points and work methods when developing products. There is high involvement from users and phases which cannot be standardised like we can on normal products.

	Products (Goods)	Services
Production / Assembly	Customer not involved in the production process Production is not visible to the customer (hence, the manufacturing facility is unimportant to customer)	Customer is part of the production phase Most of the process is visible (hence, service facility is very important)
Purchase Use	Production can be standardised and controlled Production takes place at a separate location and time from use Purchase is separated in time from use The customer controls the use of the product. The firm may provide guidelines, but is outside the process when it actually happens	Assembly cannot be easily standardised Assembly and use occur simultaneously Purchase and use occur simultaneously The supplier is integrated into the use process and can control this

Figure 10. Differences in the User Interactions in the Development Processes for Products and Services (Shekar, 2007).

Additionally Dr. Shekar highlights still the user's role in services. Both service and manufacturing organizations try to satisfy identifiable user needs. The satisfaction of needs in each case requires stages of development (well defined and well-researched in the case of goods, but not services) for the creation, purchase, use and evaluation of the new product or service. The difference between services and goods lies in the distinctiveness or reparability of the steps and the degree of involvement between the user and service staff in each step. The partnership of the service staff and the user is a direct result of the unique characteristics of services. This leads to important issues of process management of the service staff and users. The two main cases of service failures have been found to be poor, or lack of, market research and process. Few relatively recent

studies deal with the formal process of service development and the user's participation in the stages of development (Scheuing and Johnson, 1989, 25)

Shekar has developed following process for new service development. It consist totally seven stages and shows a comparison of the user's interaction in the various stages of development of manufactured products and services. The development of a new service is usually far more complex than the development of tangible product.

Development Stages	New Product Development	New Service development
Problem Identification Idea Generation	Contact with users helps identify the problem Various idea generation techniques have been used and the user may be involved.	Contact with users and service staff can help identify the problems Similar techniques could be used, but participation of both service staff and users will be beneficial.
Concept Development and Evaluation	Formulation of basic concept definition and presenting users with verbal descriptions and or sketches to get their reactions	It is important to seek both user and service staff descriptions for the concept. Evaluation should involve both groups
Business Analysis	Analysis of financial, technical and manufacturing issues.	Analysis of economic, technological and operational issues (which includes cost of hiring and training service staff, facility changes and delivery system enhancements).
Development and Testing	Construction of product prototype (technical, marketing, manufacturing, research and development, design functions) and testing	A challenging step in the case of intangibles (technical, marketing, human resources, operations, logistics) - again essential for service staff to play a part.
Market Testing	Tangible product tested on a limited market.	Standard approaches are difficult; therefore, internal testing, simulations or role-playing may be used.
Commercialisation	Internal and external launch preparations required	Excellent internal marketing required to maintain enthusiasm for the new service, due to slow new service adoption by users.
Post evaluation	Consider minor modifications and improvements to product based on market reaction.	Customer satisfaction surveys. The service concept definition may provide a focus point for improvements to service quality.

Figure 11. Development process for products and services (Shekar, 2007)

There are similarities when we look at Davies design methods for developing services. Example this user group analysis and business analysis and even the prototype phase or this internal testing group studies.

General service idea generation and screening should be included both service staff and users in generating service problems and possible solutions. Focus groups with users and service staffs proved to be valuable source of practical ideas. The Idea-generation techniques will aided in the generation of service

ideas. There can be used simple checklist screening matrices and scoring methods helped reduce the number of ideas into a few selected categories of ideas. On Davies design method we had this brainstorming which can be fairly easily say that it is similar that this idea generation technique.

Dr. Shekar NuServ model (Figure 12) was used to guide the involvement of users and service staff in service development. The nature of that involvement was tested in the four case studies to validate the conceptual model that was first proposed. The empirical research enabled a refinement of the conceptual model. The NuServ model shows the nature and intensity of involvement of users and service staff at various sub-stages of the development process. It also highlights the iterative nature of development, which is shown by the arrows looping back into some sub-stages. This model has proved extremely useful to inform users and service staff about their contributions and role in the process of service development, enhancing communication, cooperation and motivation. Compared to earlier models, this model appears to have more sub-stages in the first stage of development, but the empirical case studies showed the importance of these steps, which could be attributed to the intangible nature of services (Shekar, 2007, 14).

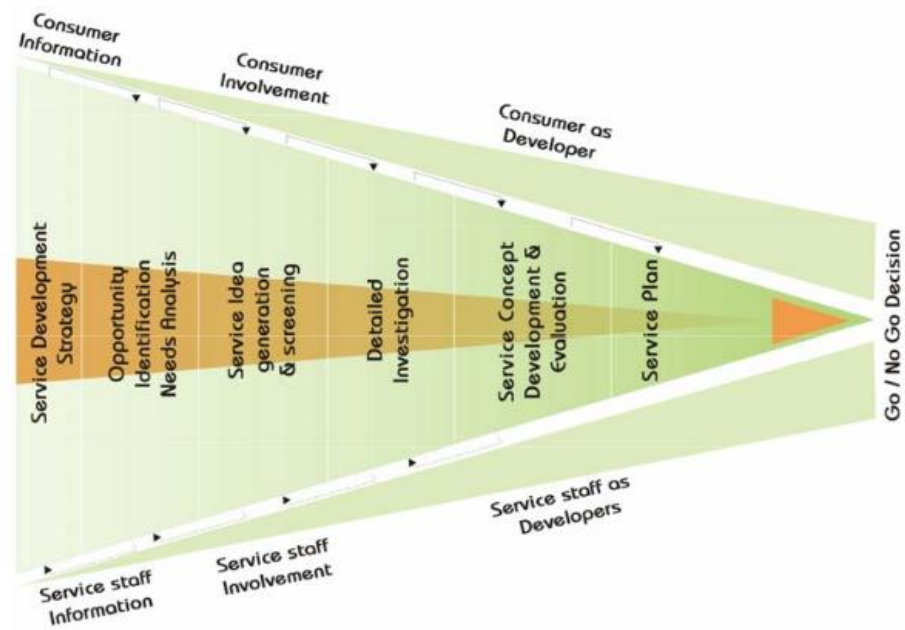


Figure 12. NuServ model (Shekar, 2007)

Many other models start with problem description while the NuServ model begins with service development strategy and then goes into problem identification. This initial sub-stage of strategy development was found to be critical to direct the development, give it focus and ensure that it met the overall vision of the organization, and a match with the portfolio of services.

Another area of difference between the proposed model and other models is the presence of the sub-stage of needs analysis. The needs-analysis sub-stage emphasizes a user-oriented approach to service development. The sub-stage included user activities such as service usage and attitude study, service problems identification and service attribute development. None of the previous models on service development showed the involvement of service staff, nor did they detail the activities. The NuServ model also shows the nature of the involvement of users and service staff. The input starts with providing information and proceeds quickly to service usage assessment, needs analysis, service idea generation and so on. The NuServ model was developed based on theory and tested via action research, therefore it is first-hand and empirical-based (Shekar, 2007, 14).

3.2.7 Service Model – Ian Alam method

Last service development model is Ian Alam's customer oriented process. He has analysed and made this study for customer service on financial services sector. This applies actually quite well to this lean academy service development, since both has strong customer focus and explore various stages of development process.

Alam states that there is little research carried out in the area of new service development (NSD). Although some researchers have paid attention to service innovation and new service success factors, little is known about how new services are actually developed. Furthermore, innovation has traditionally been associated with tangible products. As a result, the literature about new tangible product development is rich, but this literature does not capture the intricacies of NSD because of the unique service characteristics of intangibility, heterogeneity, perishability and inseparability. That is, the NSD process may be different from the development of a tangible product. A major point of difference between product development and service development is the involvement of customers in services. Services tend to involve customers in their delivery, and the purchase of services tends to involve a longer commitment and therefore a more intimate relationship with customers. Thus, customer orientation plays a more important role in service firms than in tangible product firms because of the four service characteristics noted above (Alam, 2002, 517).

This is the comment which has been carried out on other studies also and one major thing is different when we develop services versus tangible products, products does not develop so fast when we compare the service development trends. I think very concrete example is mobile phones product development over the past years and other hand the internet service development. Because several emerging trends in the market place such as heightened customer expectations, advances in technology and new forms of competition arising from the internet and e-commerce and increasing deregulation of many service industries are bringing increased competition to markets.

Alam says that, this research attempts to identify key stages of the development process and ties them to customer involvement and input for the first time. Essentially, this research responds to the call for a new thinking about NSD process and draws inspiration from other studies what have stressed the need for creating a new service/product development model that will enable customers to provide input throughout the development process. In addition, this research is delimited to business-to-business (B2B) services because business-to-business transactions are by far the more numerous in a modern economy but are under-researched (Alam, 2002, 516).

Perhaps this Alam's research is more customer focused, since there are several points and reference to customer interactions. We could say customer orientation has been defined as "the set of beliefs that puts the customer's interest first". This why it has been accepted that firms should be customer oriented because customer-oriented firms are more likely to deliver better service quality and enhance customer satisfaction.

Two models of New Service Development (NSD)

The extant literature contains merely two models of NSD, one is a eight- stage model and another is a 15-stage model. In contrast, the number of stages in new tangible product models is between seven and ten. In turn, this research found that there are 10 stages of NSD that can be incorporated into a model. More specifically, we identify two versions of this ten-stage model, one is linear and the other contains some concurrent stages (Alam, 2002, 524).

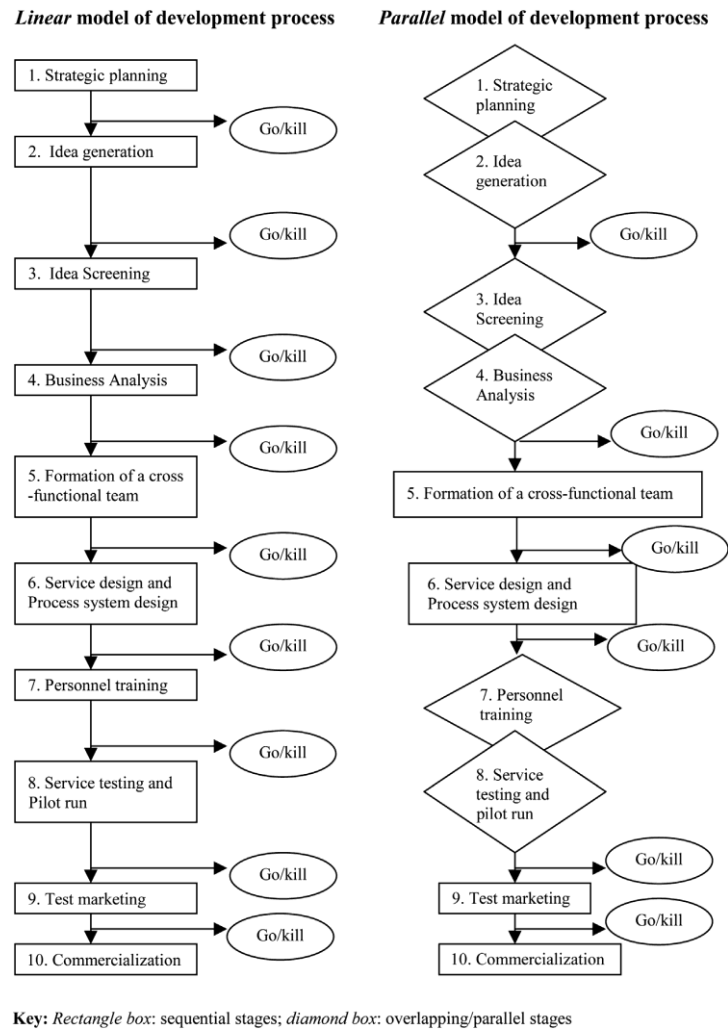


Figure 13. Two models of new service development (Alam, 2002)

Ten major development stages found in this research are the same as reported in one form or another in the existing service development studies (Scheuing and Johnson, 1989, 27). But this research is the first to identify two models of ten development stages. Moreover, one of this research's ten stages, the stage of formation of cross-functional team has not been reported in the earlier NSD models. Cross-functional cooperation in NSD will result from this newly found stage of formation of a cross-functional team, and so this stage links to previous research about that cross-functional cooperation in NSD (Lievens et al., 1999, 159) and in new tangible product development.

Besides cross-functional co-operation, management seems to pay more attention to the idea generation and screening stages of the development process of financial services. The result is not surprising given the fact that financial services are basically ideas of concepts rather than a tangible entity. The more ideas firm can generate, the greater the probability of pursuing a successful one. Given this need for a large number of ideas for service development, it seems important for service firms to undertake comprehensive idea screening efforts. Such activity can eliminate weak ideas and retain those with strong potential. In turn, the result about test marketing being the least important stage concurs with previous studies that found that test marketing was not important in the NSD process.

Linear and parallel models:

We should consider the two models found in this research in more detail. Which of the two models shown in the Figure 13 is more appropriate, the linear or the parallel? Although the literature acknowledges that service firms can conduct parallel development stages, they do not provide details about the specific stages that should be carried out simultaneously. In addition, whether development stages should be linear or parallel remains open for debate. Because the linear sequential model is considered inadequate for NSD by some researchers (for example Scarbrough and Lannon (1989)), while others consider the linear model to be one of the success factors for new services.

Final verdicts from Alam's are following in his study. First, managers frequently confront a question: should they follow a sequential NSD process or conduct parallel stages? This research's findings suggest that ideally they should conduct NSD as a structured sequential process; however, some stages may still be carried out concurrently, if there is a need to develop a new service quickly. That is a parallel model can be more useful in competitive markets such as the financial services market studied in this research. Indeed, studies have highlighted that service developers are often pressed for time to develop new service quickly, because innovations are copied quickly in service industries (Alam, 2002, 528).

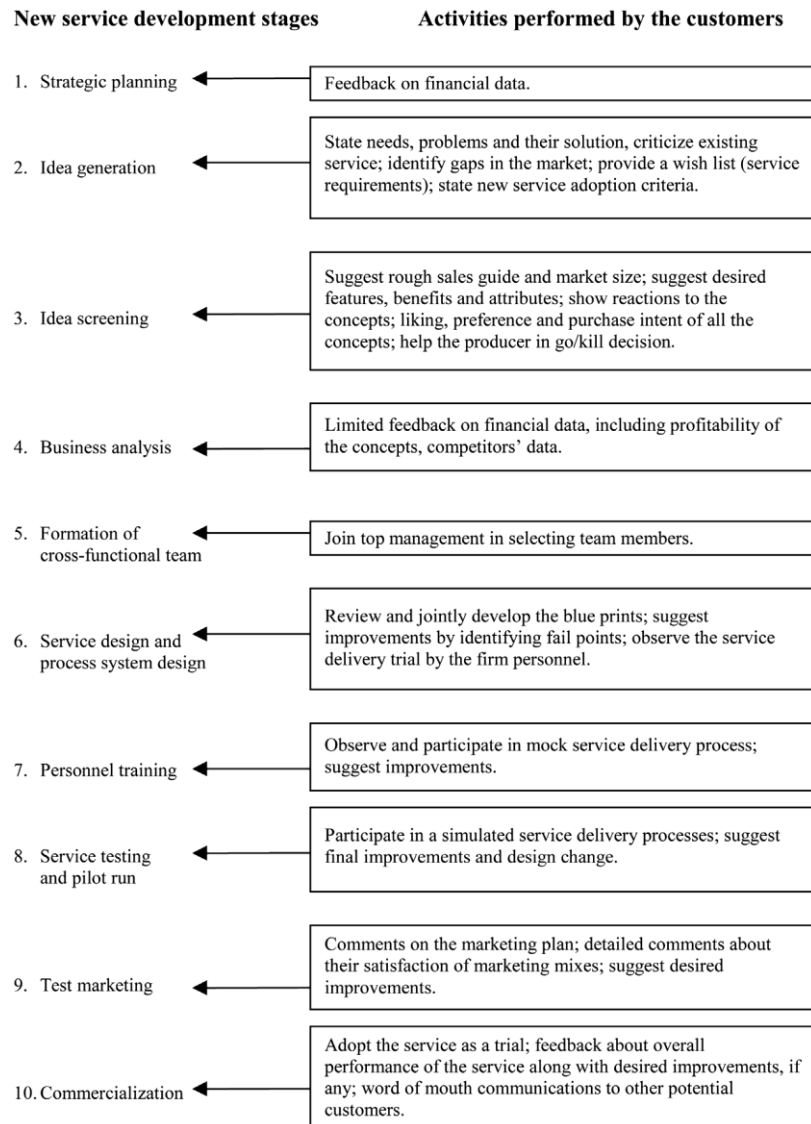


Figure 14. Customer's input in new service development process (Alam, 2002)

Secondly, managers should pay more attention to the idea generation stage. Since in the development process idea generation is the most important development stage of new services. Finally, managers should put more emphasis on developing services that match customers' needs. Thus, they should adopt a customer-oriented approach to NSD and obtain customer input in their NSD programs. Figure 14 above provides detail of the activities that customers may perform at various stages of the development process, which managers can use as a checklist of the customer activities for their NSD programs (Alam, 2002, 528).

My final verdict is based on these different methods what we have analyse and theoretical part which is do the service development you need lot of options and also to be brave, true yourself and learn from mistakes and even be little bit crazy ideas, totally of the box. What I learn from these methods that there are some basic elements which you need to study and test before you can select the one which you start to implement. One is that culture has influence to all studies at some point and additionally how people can behave on these different situations. After all the biggest thing is to collect actively user feedback and be open to all new opportunities what comes ahead and give some liberality to all ideas what you get out of your study.

4 RESEARCH METHODS

This Lean Academy new service development process I have used mainly qualitative research methods on the data collection part and interview part. On the analysis consist part of qualitative and quantitative research findings. Since qualitative research produces information only on the particular cases studied, and any more general conclusions are only hypotheses. Quantitative methods can be used to verify which of such hypotheses are true. Our case this quantitative part is covered on the survey which we did to pilot users during 2016. Focus was to find out the common path or repeating formula, if our user group was following some common survey results. Target of qualitative research may vary with the disciplinary background and quantitative methods can then be used to seek empirical support for such research hypotheses. The main difference between qualitative and quantitative methods is flexibility. Qualitative methods allow more use semi-structured methods and modifications for the interaction and collaboration between the researcher and the study group.

Research methods are described more details on the data collection chapter. Additionally there is data analysis part and the goal is to analyse and make the summary of the findings before we can choose the most suitable service development concept and start to build-up the final service model.

4.1 Interviews and data collection

Generally new service development requires a lot of ideas, several areas to study and finally to identify the core concept and understand the service how it's going to be look like. To identify the main data collection area, was the Company X initial idea and their vision first. Then become the user feedback analysis and finally the face-to-face interviews. Those were the main building blocks for Lean Academy concept as shown in Figure 15 on next page.

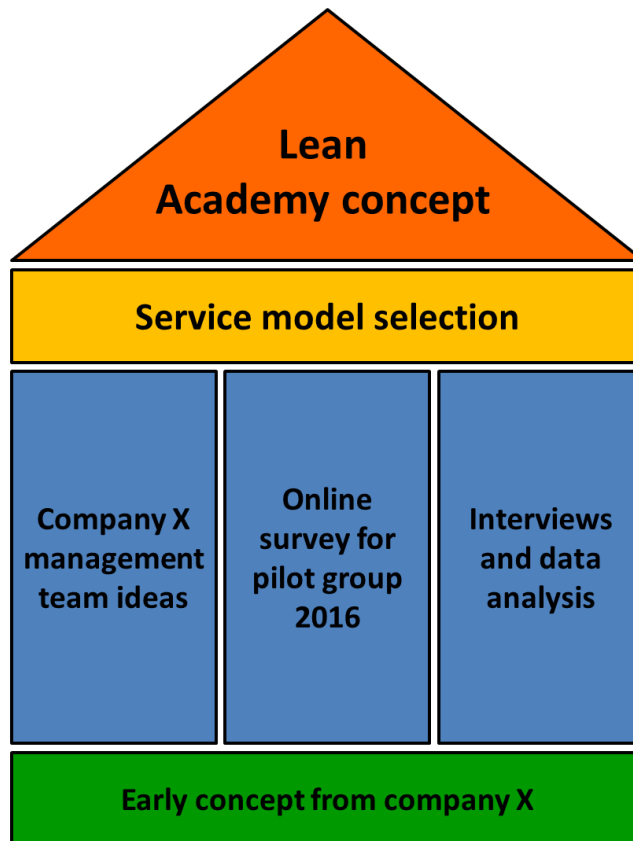


Figure 15. Lean academy concept data collection areas (Kotirinta, 2017)

My first part was to understand the Company X original idea and what they would like to achieve when this service development is ready for Lean Academy concept. Company X comments were valuable and their long experience with their customers give already some initial guideline to this new service development. The approach was to collect qualitative data from Company X management team.

Second area was to focus the online survey user group feedback which were collected right after the pilot sessions of Lean Academy during 2016. Totally it consist fifteen people, which participate this first Lean Academy concept session. There were totally eight questions tailored to this this pilot group of people. There were some multi selection questions and open questions where users could write openly their comments how they feel about this pilot session. This survey was named as a lean education survey. Data collection from the pilot group was most

valuable information. This part has some elements which we can approach by using quantitative research method.

Then this final part is the interview part which was made for four selected person how joined this pilot session. Interviews were selected based on the Company X experience with their customer base and secondly based on those online survey answers what they sent to us. Main target was to find out a person's how could really give valuable input to us when developing service concept for future business.

All the collected data has be analysed critically, when it has been asked since it will be a foundation to build-up a Lean Academy concept. This Lean academy concept consist the management team feedback, online survey feedback and interview feedback.

Before we started this lean academy concept development there was some very draft ideas from Company X management team. They had already some ideas how this service could look like in the future. Still the main idea was to be open-minded and listen to the user feedback what they could bring in when developing this new service. As mentioned also on Dr. Aruna Shekar and Davies studies, the user or the consumer feedback and a strong interaction during the development phase with users is critical. Additionally very important to have when we want to develop a successful service concept. When I now analyse these different service methods, this Ian Alam's method does not take an account this user group feedback on same level which Davies and Dr. Shekar do on their own studies. That is a shame, since users can give very valuable information, especially when we are developing some new service concept that is new to us but also targeted to users especially. That was clearly one of the major disadvantages on Ian Alam's method when comparing these three service development methods and tries to find those most valuable advantages. Like on Davies study this User Dairy chapter part of the Tools and Methods is to collect user feedback. There was targets like, gather information about real user needs and get sense of a user life over a longer period of time. Approach like this gives us valuable outputs and ideas.

User data help identify important user needs and insights and provide inspiration to design team.

Company X management ideas

Before I started to work with this next phase of this Lean Academy service development there was evaluate process. I wanted to evaluate this early concept idea from Company X. I spend some time with this initial idea what Company X has generated back in 2013 and 2014 .Surely it was developed quite many years ago and so some of those ideas and methods where not taken account or at least analysed critically under this new service concept when we selected this final concept model. During these years some of these ideas have been drop-out due that those are not anymore relevant of does not support this lean academy as such or those have been integrated to their current service offering. Especially this on-line offering is not included at this point. The main reason was that, to setup on-line environment is expensive and secondly there are on-line lean trainings available which you can quite easily join and get the basic lean learning.

Primary whole idea was to get more these contact lessons and face to face training sessions where you can really get answers to your questions. Second reason is to network other companies' people and have more interactions and learn from their experience and hear their real problems and solutions.

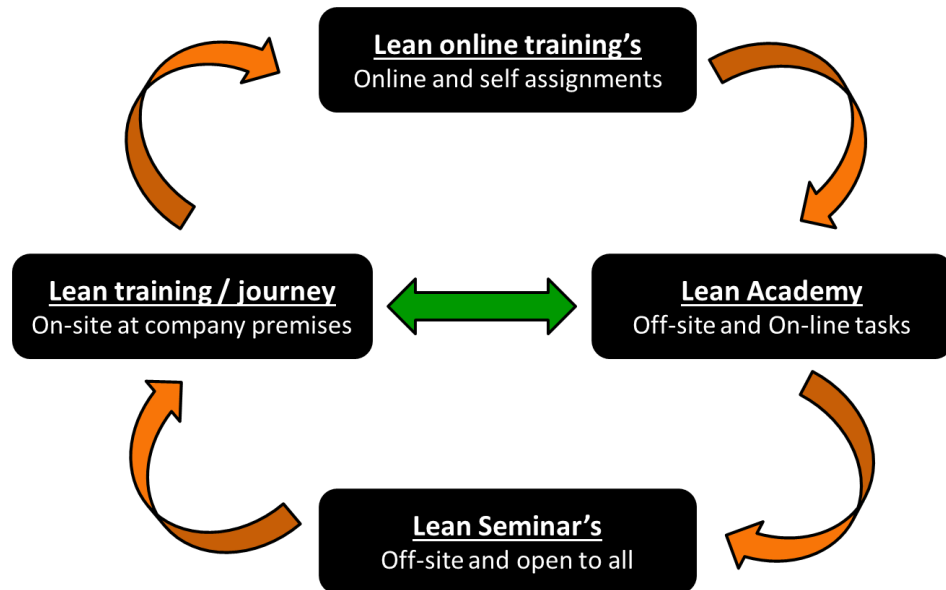


Figure 16. Company X early concept idea (Kotirinta, 2017)

It was agreed to focus this lean academy as it was described already this first version. In there of course I have to look in deeper and focus on the content and how we would implement all the ideas and user data to this new service concept. This early concept platform was created many years a back, but now we just need to update it to match current customer need. Also so that it support Company X strategy and does not overlap any existing service what they offer today. The initial platform looked like this and it has already five step learning program. All the names and content was not final even that time, so we should not focus on those. Target was more over to look at this first initial structure and the building blocks of that.

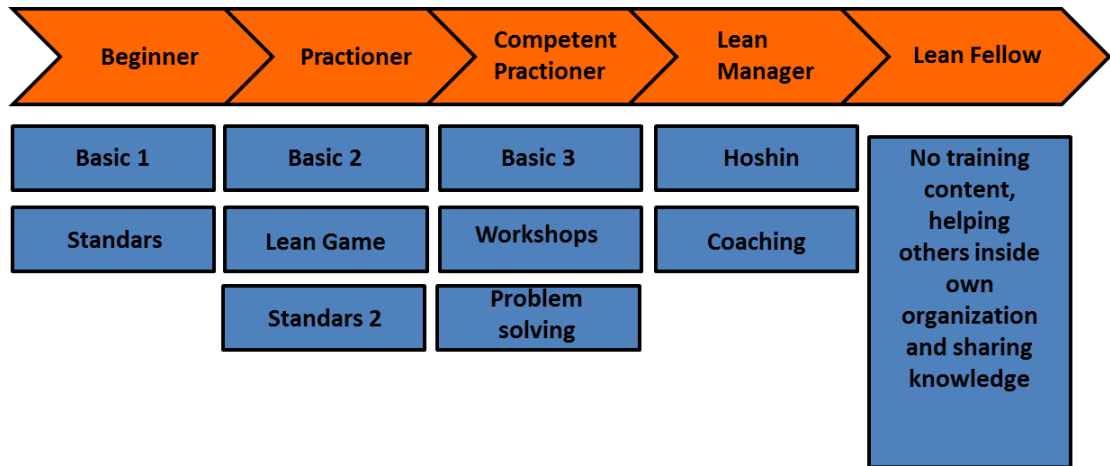


Figure 17. First lean academy concept (Kotirinta, 2017)

Online survey feedback from pilot group

Purpose of the online survey was to find out the initial feedback after the first pilot session of Lean academy at 2016. Normally the perfect survey starts with knowing what you want to ask customers. There are several benefits of online survey method; firstly it is easy and cost efficiency way to collect data from pilot users. Secondly their answers are stored to cloud service or server, so others can also see and analyse those answers. Additionally we can save time when do the surveys like this. At this Lean Academy pilot survey we used Google Forms service. That provides free of charge survey tools and platform to collect data. With this platform we can customize the look and feel of this survey and additionally get the answers stored on Google Drive. There is also option to view all responses and import those to excel format. This helps when we want to analyse and make a graphs form replies. Pilot group had two weeks' time to give their feedback on this pilot training. This was enough for fifteen people pilot group user survey.

Company X - Online survey questions for pilot group	
1.	What are your company Lean training needs for the years 2016 and 2017? a) <i>Lean basic training and walkthrough those</i> b) <i>Advanced Lean studies and courses</i> c) <i>Lean degree and certificate of studies</i>
2.	What themes of Lean training interest your company most? a) <i>Lean Basics</i> b) <i>Lean tools</i> c) <i>Lean management</i> d) <i>Creating a Lean production system</i> e) <i>Other :</i>
3.	What Lean skills your staff should be in addition, to get better results and reach the current targets faster? > <i>free text field</i>
4.	Which of the specific areas of expertise in your company will be need in the future? > <i>free text field</i>
5.	Eligible total duration of the future Lean training? a) <i>6 moths</i> b) <i>8 moths</i> c) <i>10 months</i>
6.	How often your employees have the opportunity to participate Lean course? a) <i>Once a week</i> b) <i>Once a month</i> c) <i>Other, please specify :</i>
7.	Interest to participate in future Lean training sessions? a) <i>YES</i> b) <i>NO</i>
8.	Wishes to course organizers (e.g. first Lean year of the course topics) > <i>free text field</i>

Table 1. Online survey questions overview (Kotirinta, 2017)

There were totally eight questions which we send out this pilot group. Overall this pilot group has totally fifteen persons from various companies which Company X knows already and is doing business with them. Main focus was to get overview of the current needs of companies' Lean training willingness and their possibilities to join future training courses and even go more deep in Lean topics. Company X is having customers at various business segments, so there are a great variety of different training needs also in future. This survey was a success for us, since

we got thirteen responses of totally fifteen send survey email. Biggest reason for that was that Company X teams has work with these people before and they even some cases call these people and ask they to reply. This was the reason that we could get enough responses to this survey.

Face-to-face interviews with selected users

Main purpose of the interviews was to find out those kinds of comments that could help us to develop this service for next level and additionally to give new fresh ideas to our lean academy concept. Second target was to collect critical comments and feedback towards our own ideas. Since could be that we are totally on wrong track what we try to achieve on this lean academy. This interviewee's pilot group contained totally four person, three customers and one Company X team member which has participate this pilot group training and additionally he is doing these corporate in-house trainings all the time. All four persons have some level experience to work with lean methods. The interviewees have a different work background, but they know Company X service concept and they have make business together before. In our case it was big benefit, since we did not have to explain Company X business concept and how they work and operate currently. We could only focus on this pilot training content and what was their feedback towards Company X training course and how management team has succeed with that.

Face to face interview situation

All these three customers were selected from the pilot group after this Lean academy training 2016. All these face to face interviews where done about three weeks after this Lean academy training. All the interviewed persons has a some time to analyse and consider if this Lean academy training content was worth a money and time and was the overall offering comprehensive to all the different companies. There was three males and one female taken a part this interview group. All have been worked previously with lean methods and have several years' experience of lean methods and way of working.

#	Name	Gender	Age	Previous lean knowledge	Total years with Lean methods
1	KA	Male	32	Yes	4
2	SV	Male	48	Yes	11
3	MT	Female	39	Yes	7
4	TE	Male	42	Yes	15

Table 2. Face to Face interview group profile (Kotirinta, 2017)

This table above shows the interview group profile and have they worked with lean method before. Language for interviews was done at Finnish language and time was spent about 30 minute per each person. All the customer persons where interviewed by the phone due distance and to save time. Company X person was interviewed on their office premises. All these interview situations where very relaxed and there was no specific formula or format how person should act or reply. Additionally there was some flexibility allowed to get best user input. This interview consist totally seventeen questions. There were four background questions and thirteen main questions.

Interview questions and reliability

All these interviews where done by me, together with Company X representative. We got feeling that all customer persons had a genuine interest to develop together this service and that's why we believe that the feedback was as good as it can be this kind of situation. Building up a new service concept is challenging and there we have to be open mind and leave space for new ideas, but not forgetting the core business idea. There are always some answers which reveal the person own or company personal interest more than just the generic feedback towards the service concept itself. This table 3 has summary of the main questions to this interview group.

Question		Answer summaries:
Lean Academy feedback after pilot training :		
Q1	How was pilot training organized and did you had any problems?	Very well Good support material Professional trainers
Q2	How well did we understand your and your company needs during this period?	Quite well Many more background details needed
Q3	Does this add value and develop your skills ? To compared your current lean knowledge ?	Yes and surely this is valuable Not sure yet, but so far look promising
Q4	What are your biggest everyday challenges and why?	Lean Management To busy and so little time
Q5	Was the duration of the event OK and why ?	Yes and one whole day is better
Q6	What where the biggest difference compared to internal Lean trainings ?	Being out of office Off-site No disturbance Networking
Q7	Do you and your company feels that this is a many years development process ?	Yes
Q8	What were your greatest take-aways from the event ?	Not just a one time course Longer term plans for lean learning
Service development questions for future :		
Q9	What's the one big thing we're missing right now?	More interaction needed
Q10	Please tell us what we should do to improve the quality of the documentation delivered during the training days ?	Support material OK, but literary tips needed
Q11	Do you find this service concept compelling toward your current needs and why ?	Sure and is perfect to us Partly, if the content can be adapted to our needs
Q12	Net Promoter Score ? (Could you recoment this to others)	8, 9, 9,9
Q13	Do you have any suggestions for improvement?	You shold add more interaction for future sessions Tools for Lean management Check that study group knowleadge level is similar

Table 3. Interview summary (Kotirinta, 2017)

Interview observations

All interviews where done quite soon after this pilot group training and that was a big benefit to get a valuable feedback from customers. When doing the interview over the phone, we can miss the person expressions and body language so we have to relay what we can hear over the phone and try to interpret person tone of voice.

Firstly all persons valued this kind of additional service which helps them to develop their lean knowledge skills and this is one way also to their own company

develop their processes to gain better results using lean methods. Of course all interviewed recognized that this Lean Academy is a longer process and they don't see the results after the first year. Although some people might have already longer experience of lean methods which may lead to situation that topic is known already.

Secondly people valued this idea of being out of their normal working environment. This way people feel that they have a better focus to the topics what was trained and there were no interruptions by colleague from the own office. This kind off-site training has been piloted during this study and it was overall very promising for Company X management team. Surely there was some feedback also that few longer breaks are needed for future, to make a few important calls to customers or colleagues. This is an issue which can be fixed for future training by adjusting the agenda and schedule a bit, since anyway all people are out of the office.

Lean academy concept gets overall good feedback, which was valuable information. This concept content need still some improvements with the topics and the agenda inside those few training days, but nothing major which prevent the Company X to continue this concept for future years. There are surely some risks lack of interest for future training classes if Company X stop the interactions with people and does not collect actively service feedback from those people whom have taken a part these Lean academy trainings. This could be avoid by being active with current and new customers and additionally developing this service concept by the needs of users groups and following the future trends. Like all business concepts needs follow trends and listen to users is key of success.

4.2 Data collection

Data collection was conducted as an online survey after this first lean academy course during 2016. We gave two weeks' time to all people to answer this user survey. All this survey data where analysed together with Company X management team members. We got very good data from this Google Forms summary

of response page. Actually all this data were on format which we can directly use on this study and use those answers. This feature is extremely valuable for this kind of survey and we can additionally share access rights easily to several people who need access to this data.

4.3 Data analysis

When doing a pilot survey there is a need to have extra attention to firstly all questions that we plan to publish online. All the questions need to be clear and easy to understand to all people who have joined this survey pilot. Secondly we can't have too many questions in this survey and people are not willing to spend too much time on these questions. By having these two points covered we are already on the right track.

There are several books about survey methods and what are the different ways of measuring a pilot group. One recent is this Customer Satisfaction Evaluation from Evangelos Grigoroudis and Yannis Siskos, they say the following. The pilot survey is the final step in the planning process of a customer satisfaction survey, aiming at testing the effectiveness of research methodology. Usually this pretesting is focused on the questionnaire (or interview process), which is the main survey instrument. In general there are two different types of pilot testing (Grigoroudis and Siskos, 2009,).

- *Declared pretest:* In this case the participating customer is told that the survey is a pretest. Usually this pretest has the form of personal interviews, where participants are asked to comment on particular aspects of the questionnaire.
- *Undeclared pretest:* In this case the respondent is not informed that he/she is participating in a pilot survey. The whole survey can be done on real-world conditions.

In our case we follow a bit modified way of this undeclared method and we send this online survey to all who participate in this pilot training. Of course we mention

that we will send some questions to collect feedback. This way we only wanted to ensure that we have enough answers to make data analysis.

Below are collected the main points as data analysis points of view which are collected from Google forms online survey. Couple of interesting point, but otherwise this data was quite similar what we think already right after the Lean academy pilot session.

Desired total duration of the Lean training period

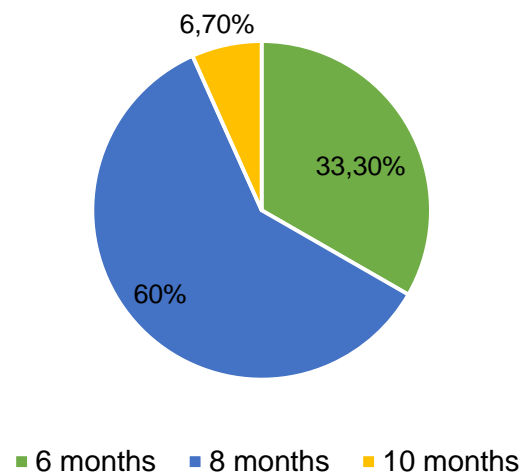


Figure 18. Desired length of training course per year (Kotirinta, 2017)

So this collected data indicated quite well what was also our own initial idea was for this one year course length of the lean academy. Majority of persons would like to have eight months as a one year training period. This is actually logical since people would like quieten down during the summer period and additionally on the Christmas time.

The interest to participate in future Lean Training Session ?

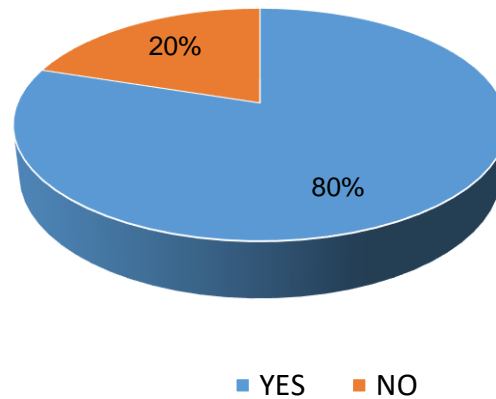


Figure 19. Willingness to join Lean academy training (Kotirinta, 2017)

Which Lean themes Lean interest your company the most?

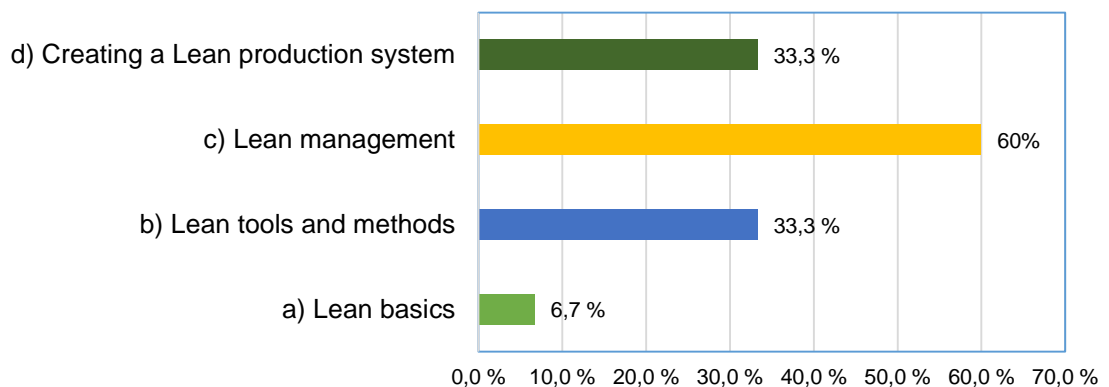


Figure 20. Lean theme interest on Lean academy (Kotirinta, 2017)

This Lean theme interest question was targeted to find out the most interesting lean themes what would this course bring and what would topics is and where we should focus most. There was option that people could select more than one option, those are called multi selection question. We can see clearly that this Lean Management question that 60% of people answers and they are interested from Lean management, which correlated actually very well this Company

X own plan also. Since the target group is people how work daily basis with lean topics and would use these lean management tools for improve their productivity. This group of interest is so called middle management managers and team leaders how are interested Lean Management tools.

The results from this online survey and face to face interview was promising on that way that we could get confirmations to some questions which we were not 100% sure.

5 ANALYSIS

Company X wanted that they have a good starting point for future business development and this Lean Academy is one big part of that journey. This final model is based on the current understanding of user needs and business environment needs. Finland economy has been these last year's moderate if we compare other countries like Sweden or Estonia. So this service concept has built against those needs and current business situation.

5.1 Business model canvas for Lean Academy

In this Master's Thesis I have used the Business Model Canvas to support this lean academy service concept development. The Business Model Canvas (BMC) is a strategic management and lean start-up template for developing new or documenting existing business models. It is a visual chart with elements describing a firm's value proposition, infrastructure, customers, and finances. It can be used many ways in the organizations and companies. It is very powerful and fairly easy to use tool for companies and different organizations. The Business Model Canvas was initially proposed by Alexander Osterwalder based on his earlier work on Business Model Ontology. Quite often the business model canvas is made in chart mode and when there are total nine different business areas analyses which are filled. When using this chart mode it is fairly easy to compare companies and also it gives quickly the main idea of the company profile. Additionally it brings up the company weakest points that otherwise would not recognize during this process.

Based on all the data analysis and meetings with Company X the final Business Model Canvas was created. Company X can do changes this BMC model when they notice some distortion at this current version. This moment we all have agreed that this current version will be released.

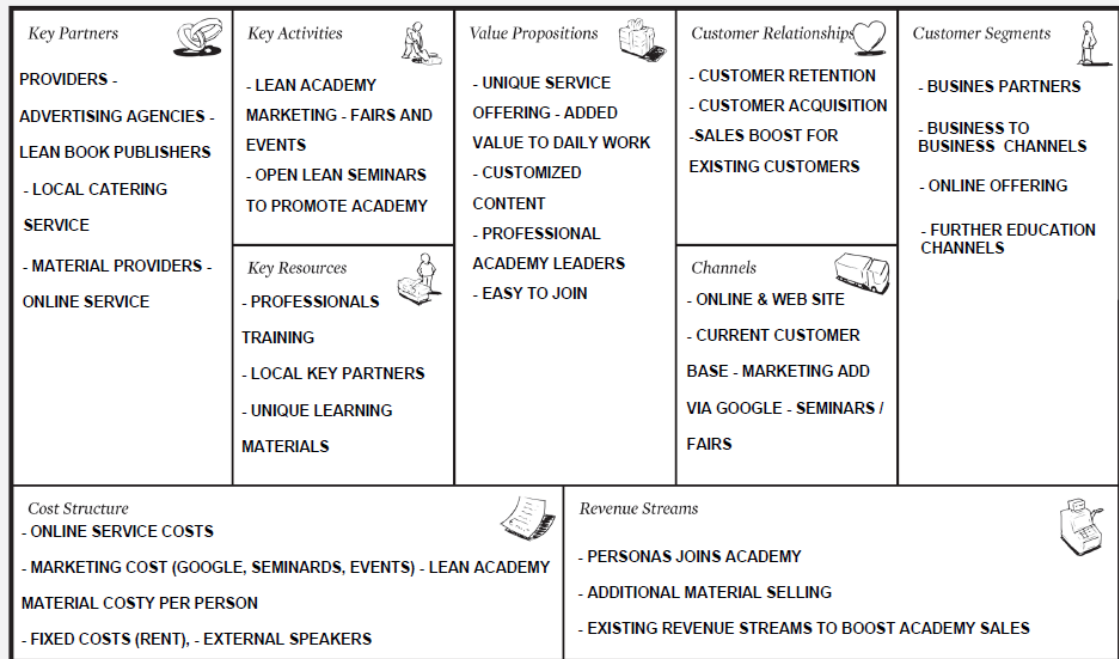


Figure 21. Lean academy business model canvas (Kotirinta, 2017)

This BMC model is what Company X was asking during this study. They were highly interest to see how this BMC model looks from Lean Academy point of view. The Revenue Streams assumes that this persons or companies buy this service as a primary their company key people. Second Revenue Stream is this additional material selling during this lean academy courses. Cost Structure comes directly from the costs what Company X puts these courses and additionally there is the normal fixed cost like rent, salaries, material costs. Plan is also offer some extra download materials with additional cost top of these normal academy materials.

This Value Propositions part is something that Company X wanted differentiate to from other service providers. We trust that our service offering is unique and we can offer customized experience to all academy course participants. Channels are important for business and best way to get the touch point for future contacts. Key Activities at this short term is to go for live this service and be visible on various events and fairs. Additionally there is this kind of open seminar or breakfast seminar concept where Company X has already promoted this Lean Academy. Company X Key Resources are professionals training leaders and

unique materials what they have made over the years. There are some local key partners which allow seeing how lean processes are implemented to real life cases. This brings one more added value point to their course content.

5.2 Lean academy concept

This study main idea was to develop a new service concept that could enhance Company X business concept. This whole Lean Academy concept idea was to develop to people needs and building their competencies and knowledge.

Lean Academy target is to building-up sustainable lean path by focusing on the issues that are hidden underwater. Focus will be on leadership, management and awareness building as well aligning strategy to tangible executable activities by management by policies of lean world. Of course this kind of service development could be implemented to various service areas fairly easily.

The final version of “Lean Academy” looks like this and it has evolved during this study. Figure 22 show this process flow and the different activities what this Lean Academy can offer to companies and their key personnel.

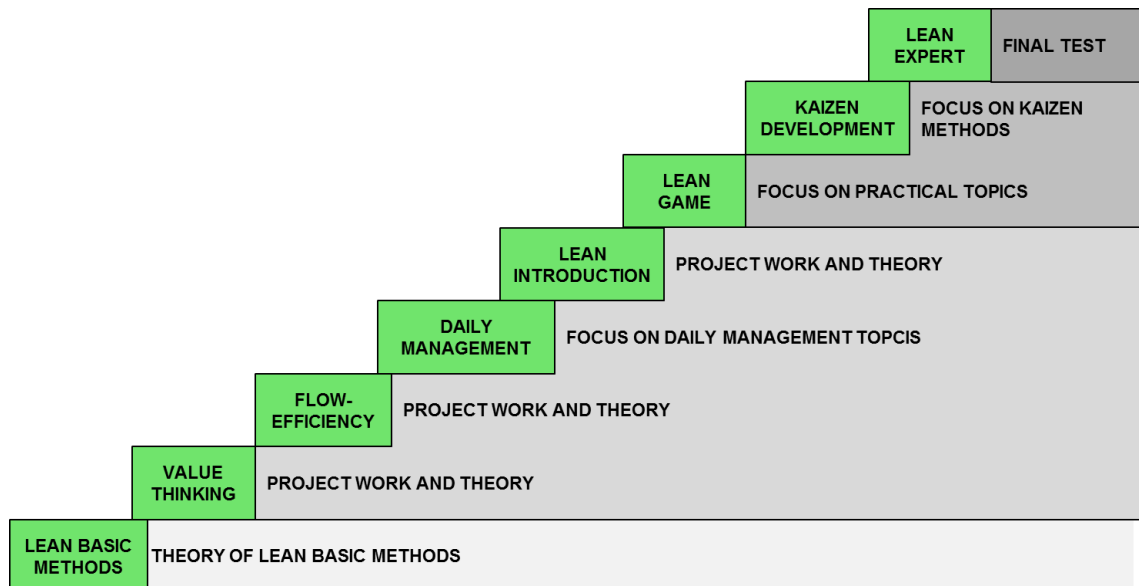


Figure 22. Lean Academy final version (Kotirinta, 2017)

This final Lean Academy concept consist totally eight steps which all have unique content and can be additionally customized per users. This first step is focusing to lean basic methods and lot of theories of lean methods and examples where it has been used successfully. Next five steps are equally focusing theory but also there is project work what all participants have to make. Additionally this part requires that all participants do some work at home. The interviews shown to us that people are looking these daily management skills to their work environment. There is one course only for this specific topic and main idea is to offer tools for daily management by using lean methods.

Second of last training phase will focus on Kaizen methods and how to use those all learned methods on work environment efficiently. Kaizen is Japanese and means improvement. In business language, Kaizen refers to activities that means continues improvements. This has been one of the main goals also of this Lean Academy. The last phase there will be final test or so called a skill test. There are various assignments related to all these course topics. Our main target has been from the start that we could bring forth Lean experts that will generate added value to companies where they work, but additionally gives tools for growth at these companies and even better results end of the day.

6 CONCLUSION

The research has offer lot of valuable information to Company X. There has been whole lot of user interactions and secondly this pilot phase has given the final direction to our goal. The New Service Development process takes time and effort before we finally get the end product or in this case the service. The next step is to implement this Lean Academy to Company X business plan.

Company X strategy is to grow for coming years and these Lean methods are coming more and more common for every company. Example public sector companies have engaged towards lean companies more often that previously and they want joining this lean development journeys more and more. This is something which has not seen in the past so much. For my understanding the biggest reason is that there is more knowledge to these lean methods, but also the competition against other companies is keeping this whole market situation interesting. Small companies like the Company X have to develop their own business and think out-of-the box to really find new business areas. Especially the current Finnish business economic situation pushes smaller companies into difficult positions. We have seen during the past years that big corporates purchase small Finnish companies and merge them part of the global organizations. I personally want to believe that the small and medium size companies are much more approachable than big corporates. Second thing is that quite often small and medium size companies are much flexible what comes on business process and methods.

Future developments for Lean academy concept

The Lean Academy is a ready product to use as such and it has been organized couple of times already. So far Company X has already received good customer feedback, which gives positive feeling to continue this concept also in future. Personally I believe that it will be good for Company X and they can now broaden their business segment. Next step would be that this will be part of Company X strategy and vision for coming years. Lean Academy can be developing further

and one idea could be that Company X invites external corporates to tell their own experience where they have done successfully this lean journey. Second idea what came out during this research is that there should be very strong key partners' relationship for future development. Since when you want to expand your existing business you need have to strong relationships to your partners and networks.

Companies should be brave to try new ways of working and this lean thinking is one step to that direction. Of course in some companies this kind of thinking takes much longer time than in others. Even some companies fails and they can't get the benefits what they wish for in the beginning of this Lean journey. Personally I take this as a big opportunity to be whole economy and continuous improvements will be needed to develop in the future. This kind customer focused service attitude and continues feedback collection keeps the business on growth curve.

The new service development methods are perfect tools to develop and expand current business concepts. Firstly the cost is minimal and you can start first with your own team, no need to hire expensive external consultant. Secondly to get started is fairly simple and easy, since there are lot of support material and even videos available how to make a Business Model Canvas and additionally how to do New Service Design.

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Appendix 1: Initial survey (original questions)

1. Mikä on yrityksessänne LEAN koulutustarve vuoden sisällä (2015-2016) ?

- a. Lean perusteiden koulutus ja läpikäynti? (KYLLÄ/EI)
- b. Syventävät Lean opinnot / kurssit? (KYLLÄ/EI)
- c. Lean tutkinto/sertifiointi ? (KYLLÄ/EI)

2. Mitkä Lean-koulutuksen teemat kiinnostavat yritystänne eniten?

- a. Lean perusteet
- b. Lean työkalut
- c. Lean johtaminen
- d. Lean tuotantojärjestelmän luonti
- e. Jotain muuta (VAPAA TEKSTIKENTTÄ)

3. Mitä osaamista henkilöstöllänne pitäisi olla nykyisen osaamisen lisäksi, jotta yrityksenne pääsisi paremmin ja nopeammin asetettuihin tavoitteisiin?

(vapaa kenttä vastauksille)

4. Mitkä erityisosaamisalueet yrityksessänne tulevat tulevaisuudessa korostumaan ja miten niitä pitäisi kehittää?

(Vapaa kenttä vastauksille)

5. Tulevan Lean-koulutusjakson haluttu kokonaiskesto?

- a. 6 kk
- b. 8 kk
- c. 10 kk

6. Kuinka usein työntekijällä mahdollisuus osallistua Lean kurssille (esim. 2 kerta per kk)?

- a. Kerran viikossa
- b. Kerran kuukaudessa
- c. Jotain muuta

7. Halukkuus osallistua tulevalle Lean-koulutusjaksolle

- a.KYLLÄ
- b.EI

8. Toiveita kurssinjärjestäjille (Esim. ensimmäisen Lean vuosikurssin aiheita)

(vapaa tekstikenttä johon voi kirjata toiveita ja yms. viestejä)