

Using Service Design to optimize the onboarding service of the Incubator at Aalborg University, Copenhagen

Masters in Service Systems Design



Simon Emil Reumert Refn

PROCESS REPORT

19/12-2019



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# SERVICE SYSTEMS DESIGN AALBORG UNIVERSITY COPENHAGEN

## **MASTER THESIS**

TITLE: Using Service Design to optimize the onboarding service of the Incubator at Aalborg University, Copenhagen.

**SEMESTER: 10th** 

PROJECT PERIOD: September 2019 - December 2019

COLLABORATOR: AAU Inkubator AC Meyers Vænge 15 2450 København SV

CONTACT PERSON: Jacob Lundberg, jalu@adm.aau.dk

**PAGES: 108** 

SUPERVISOR: Luca Simeone, lsi@create.aau.dk

HAND IN DATE: 19/12-19

AUTHOR: Simon Emil Reumert Refn, student no.20177414

"You can't have an experience without experiencing it" - Bill Moggridge, IDEO

#### Abstract

Throughout the past decade or so, universities have increased their interest in supporting their students' entrepreneurial ideas. In this context, it has become common for universities around the world to create startup incubators. These incubators have various programs that support students when they want to bring their business ideas to life.

The Copenhagen campus of Aalborg University is in the process of creating an incubator that supports student-driven entrepreneurial projects. Currently, this incubator is operating in a way where twice a year, a group of students are enrolled in the program. However, since it is in its infancy stage, some of the processes of this incubator still need to be defined and optimized.

The aim of this thesis is to analyze the current user journey that the students go through while interacting with the incubator and then to optimize this journey by using service design tools and methods. From a more theoretical perspective, the thesis intends to explore a methodology that can potentially be replicated in other contexts.

Keywords: User Journey, Service Design, Services offered by university incubators

#### Acknowledgements.

Thank you to my supervisor Luca Simeone, the business developers of Aalborg University Lasse Jensen, Heidi Nørgaard Jensen and Student assistent Alexander Bentzen from Aalborg University Campus Aalborg and especially business developer Jacob Lundberg from the incubator at Aalborg University Campus Copenhagen. Christian Scully, fellow student, and friend, thanks for the feedback and tips when writing a thesis, during the first part of the process and sparring partly during the development process. Furthermore, thanks to the students of the AAU Inkubator that participated in the interviews. Thanks to the representatives from other incubators, Pål Simon Fernvall - Skylab and Martin Bonke Justesen - Sund Hub / Health Hub, UC and also Frederik Nygaard from Science and Innovation Hub at the University of Copenhagen. Then also a thank you to my girlfriend and our 2 kids, for supporting me through this process. Last but not least, a thank you to my sister Céleste who proofread my thesis and corrected the grammar.

#### **Thesis Author**

The writer of this thesis is an MSc student in Service Systems Design at Aalborg University, Copenhagen.

Simon Emil Reumert Refn Bachelor Degree in Digital Concept Development from Copenhagen School of Technology and Design (KEA)

#### Terminology:

- Definitions - Incubator, Accelerator, Innovation Hub, etc., see chapter 03

#### Abbreviations

- AAU Aalborg: Aalborg University in Aalborg
- AAU Cph: Aalborg University in Copenhagen
- UC: University of Copenhagen
- DTU: Technical University of Denmark
- SEA: Supporting Entrepreneurship at Aalborg University
- ITU: IT University of Copenhagen
- CBS: Copenhagen Business School
- CSE: Copenhagen School of Entrepreneurship (Part of CBS)
- M.I.T: Massachusetts Institute of Technology
- SUP: The startup program

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## **1. INTRODUCTION**

This chapter contains a historical perspective of a paradigm shift in the modern western societies of business exchange, from a production of goods to the dominance of services. Which is done in order to provide an insight into the emerging need for service design. This is then followed by the aims of this masters thesis, the official learning objectives, that are defined by Aalborg University and can be found in the curriculum of the Service Systems Design masters study and then some personal learning objectives, that I as the author has defined. In the last part of the chapter, there is an overview of the thesis structure.

### **1.1 CONTEXTUAL PERSPECTIVE**

Over the past 20 years, there has been a notable development in the way that societies are structured, mainly in the western world. There has been a transition from a focus upon mainly producing and trading tangible goods to a focus upon the intangible nature of services. This is what Vargo and Lusch refer to as, the change from a goods dominant logic to a service-dominant logic (*Vargo & Lusch, 2004*). In the ages of the goods dominant logic, the majority of all business as the term implies was centred around producing tangible goods. Something that was produced in large inventoriable, standardized quantities and away from the consciousness of the customer.

Those products came from sources that were e.g. harvested or extracted, such as wood for furniture or oil for plastics which was then processed during manufacturing and then given a certain value. This good dominant logic also had an intangible aspect of service to some extent, that came with the trading of the aforementioned goods. Though nothing in comparison to the new logic that emerged over the following decades with the development of technology, which included the spreading of the internet in the mid-nineties. The main characteristic of the service-dominant logic is that service is viewed as a process, *in which"the locus of value creation[...] moves from the "producer" to a collaborative process of co-creation between parties" (Vargo & Lusch, 2008, p.256).* In some cases goods are also represented in this service-dominant context, but not as a key object.

A primary example of a company that has been through a radical transformation is IBM. They went from a leading role in the computer hardware industry during the goods dominant logic era to having a key role now in the era of the service-dominant logic. IBM went roughly, from having in house scientists and producing hardware to only providing several cloud-based services and counselling *(Chesbrough, 2003)*. In addition to this, Pine and Gilmore argue that it is not sufficient for a company just to provide a service. The companies should utilize their services in

order to stage experiences. Though not with the aim of entertaining the customer but to create customer loyalty and in terms of making the company stand out (*Pine & Gilmore, 2011*).

Further to the era of the service-dominant logic, came the tendency of businesses that are based on providing services that are referred to as startup companies. Because these are new and young companies with a different approach to doing business which is most often based on technology. These companies are often fostered in an incubator and continue their further path in a startup community. This is after the first year or after reaching a certain size, in terms of value, from growth. One of the most well-known examples of this is Silicon Valley in the U.S that has a close collaboration with amongst others Stanford University This and many other universities around the world have seen a need to support the entrepreneurial ideas of their students. This can bring value to both parties, students, and universities, in terms of learnings and attention of the media if the startups become successful. It can also bring financial resources to the universities as the incubators in the U.S in some cases require equity in the student startups (*Feld.B, 2012*). This trend has also reached Denmark. Where most universities have created one or more incubators each (*"The Danish", 2017*). Though here in this country, the universities do not require any equity of the startup companies.

Upon the rise of companies based on providing service and their utilization of cross channel ecosystems, there is an increased need for mapping the user's interactions with these services. It is in this context that companies, especially throughout the past decade have faced a need to map the service interactions, of the user both before, during and after the service experience (*Lindenfalk & Resmini, 2016*). This mapping of the interactions is carried out by creating a user journey map and is done to create an overview of the user's complete experience with a service and also reveal gaps in this service journey and then explore potential solutions (*Stickdorn et. al, 2018*).

## **1.2 AIMS**

Throughout this thesis, I will focus upon the use of the user journey map, as a tool, in relation to the students, hereafter mentioned as the users, that are enrolled in the incubator program at Aalborg University Copenhagen. The user journey maps are utilized in order to visualize the experience of a user while interacting with a service over time (Marguez et. al, 2015). The incubator at AAU is both referred to as SEA - Supporting Entrepreneurship at Aalborg University and AAU Inkubator which is the same for the incubators at AAU Aalborg, because it has no official name. I will throughout this thesis, refer to these as the AAU Incubator, and then specify with either Cph. or Aalborg after the name. The approach of this project will be to analyze the current user journey and touchpoints of the AAU Incubator Cph. and research upon similar incubators at other Universities in Copenhagen and then compare these. This is in order to discover the differences and similarities between the university incubators, and also to use it as an inspirational aspect for the end product of this thesis. Though I'm aware that there are potentially several similarities, as these incubators are collaborating to a certain extent and furthermore the one at AAU Cph was the last to become established. Because of that, the similarities between the latter mentioned and the other university incubators could be more pronounced (Lundberg.J, 2019, August 12. Personal interview. Link to the audio in the web. refs. list).

Upon the comparison of the university incubators, then through a service design lens, the aim is to optimize the user journey of the AAU incubator, by utilizing proper service design tools and methods. In order to do this, each of the touchpoints, channels, and procedures in relation to the user journey needs to be identified and analyzed in order to highlight potential pitfalls. This is just as Pullman and Gross argue, "The delivery of experience-centric services requires the systematic management and design of customer experiences through the careful planning of tangible and intangible service elements in the service delivery system" (*Pullman and Gross 2004*), *as found in (Zomerdijk & Voss, 2010, p. 67*). The aim and outcome of this entire process is to develop an optimized user journey of the AAU Incubator in Copenhagen. This is to enhance the service experience and to ensure a frictionless process of the onboarding of new students to the startup program provided by the AAU Incubator.

## **1.3 LEARNING OBJECTIVES**

Throughout the master study, Service Systems Design at Aalborg University Copenhagen, I have acquired relevant skills, knowledge, and competencies in relation to the discipline of service design. This has been attained through lectures, group projects, workshops and an internship. This section contains a presentation of the official learning goals provided by the University and then also a number of personal learning goals, defined by the author of this masters thesis.

This is a representation of the official learning objectives as found in the curriculum for the Service Systems Design Masters at Aalborg University, Copenhagen (AAU.dk, 2017).

#### Knowledge

- Has knowledge about the fundamental elements of programming, how and when those are relevant and should be used in the development of services.
- Understands user-oriented methods and the way this knowledge can be used to approach, segment and profile users in order to define value and business proposition in a design project.
- Understands issues related to interaction in relation to given products, context of use and characteristics of users.
- Understands the characteristics of services and the way they are organised, developed and represented.
- Can understand, reflect upon, and explain the properties of complex distributed systems and the concepts of modularisation and product/service architectures.
- Has knowledge about methodological approaches to the analysis and interpretation of users, as well as about methods and tools to support users' participation.
- Has knowledge about multimodal methods to represent non-functional and non-material characteristics of services in order to support users' involvement and participation in services.
- Can understand and reflect upon the main theoretical issues related to the construction of a service organization.
- Understands and is able to critically reflect upon theories on innovation and business models.
- Has knowledge about relevant issues in research or practice of service design.

#### Skills

- Can design users' interface to services, with a focus on technological, human and context related aspects (synthesis).
- Is able to apply user and market research and segmentation methods to establish specifications and success criteria.
- Is an expert in conceptualising and sketching a product or service, emphasising the values and including principles of aesthetics, experience, use, technology and organisation (synthesis).
- Has a high capability to analyse and address relevant conditions for the interaction between users and the service,
- taking into account technologies, users and context of use.
- Excels in the application of design tools and representation techniques to the development of new services and the organisation of the interactions in a service.
- Masters user centred service development and can identify modular elements in service system (synthesis).
- Has high capabilities to engage with users and support their participation and involvement in service systems (synthesis).
- Understands and applies experience-related aspects of services that can support users' participation and co-creation of a service.
- Masters and applies appropriate methods and tools to support innovation and change in organisations.
- Must be able to interpret, understand and properly address (synthesis) the need and the opportunities for design-driven change within an organisation

#### Competencies

- Understands the development and organization of aspects related to programming, interaction, design and user participation and co-creation in a service.
- Understands and applies appropriate methods for organising functional as well as experiential aspects of design.
- Masters the organisation of complex service architectures, defining roles, rules, organisation and user-related aspects (synthesis)
- Understands strategic issues related to change and innovation in organisations, and is able to evaluate the opportunities offered by a design-driven approach.
- Understands the strategic, organisational and business-related aspects of service design and is able to evaluate (synthesis) their relevance in complex organisations.
- Can manage work and development situations that are complex, unpredictable and require new solutions (synthesis).

- Can independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility (synthesis).
- Can independently take responsibility for own professional development and specialisation (synthesis).

#### Personal learning objectives

- Learning from the process of collaborating with an organization through a design process.
- Gain experience from how to use appropriate tools and methods of service design in a real project context.
- Improve the ability to conduct research and synthesize the data to solve a given problem.
- Master knowledge and skills upon utilizing the user journey in relation to different purposes throughout an entire service design project.

During this masters project, the aim is to reach these learning objectives, in order to develop and strengthen my personal profile as a service designer upon this project. This will also be reflected upon when the project is completed.

## **1.4 STRUCTURE OF THE THESIS**

**Chapter 2** describes the chosen case of this Master's thesis and gives a short introduction of Aalborg University (AAU) and AAU innovation. Then it also introduces SEA at AAU in Aalborg and SEA at AAU in Copenhagen. The latter mentioned is also my collaborator, which is also referred to as the AAU Inkubator. The final part of this chapter is dedicated to the presentation of my problem statement.

**Chapter 3** contains a literature review where the relevant topics and theoretical context is examined in relation to the problem statement and then concluded upon with the research question.

**Chapter 4** introduces and describes the chosen methodological framework and approach of this project process.

**Chapter 5** is a description and analysis of the design process, throughout the four phases of the Double Diamond framework. Discover is providing an overview of how the project context has been explored and the approach of gathering data, to reveal the assets and pitfalls. Define is an analysis of gathered data and provides the direction of this project. Develop is a representation of how the gathered data has been used to develop a relevant and concrete service concept. Then last but not least the Deliver is the outcome of the three previous phases, a description of the end product in a product report that is handed over to the AAU Inkubator.

**Chapter 6** provides reflections and discussions of the entire process, the research question, and the learning goals

Chapter 7 is the final chapter and provides some final remarks.

## 2. THE CASE

In this chapter, there is a representation of the chosen case and collaboration partner for this masters thesis, which is the incubator of AAU Copenhagen. Furthermore a contextual perspective of the AAU incubator Cph in relation to the main division of AAU Aalborg and the two incubators at that campus and in relation to SEA and AAU Innovation. This is to give an understanding of the environment in which the incubator at AAU Cph operates. Then in the final part of the chapter, there is a presentation of the initial problem statement.

## 2.1 OVERVIEW OF THE CASE

## 2.1.1 INTRO TO AALBORG UNIVERSITY

Aalborg University (AAU) has existed since 1974 and during the past 45 years has been developing individuals with excellent academic skills and cultural engagement. The institution offers a wide variety of studies and research within a variety of fields, such as natural sciences, social sciences, humanities, technical and health sciences. Aalborg University consists of three campuses, the main division in Aalborg, one Copenhagen and one in Esbjerg. There are currently more than 17.000 students in total at the 3 divisions and consists of both Danish and international students (*AAU.dk, n.d*).

## 2.1.2 AAU INNOVATION

AAU Innovation is a sub-department of Aalborg University that operates from the perspective of promoting knowledge sharing and collaboration through network development and facilitation. The department also promotes other resource areas such as intellectual property rights in the sense of patenting of inventions, strategic partnerships and commercialization. Furthermore, AAU Innovation is also promoting entrepreneurship through educations and incubator programs and has an independent unit at the campus in Copenhagen to support local collaborations of innovation" (AAU innovation, 2019). Below is an organizational diagram of AAU Innovation



AALBORG UNIVERSITET

Figure 01: Organizational diagram of AAU Innovation

## 2.1.3 SEA AALBORG UNIVERSITY - AALBORG

Supporting Entrepreneurship at Aalborg University (SEA) is an integral part of AAU Innovation. SEA is a centre of knowledge that has two main purposes. Which is to support entrepreneurship and innovation as a part of the educational programs at Aalborg University (AAU). Then also to ensure that there is an ongoing communication about this to the students. SEA is operating from an agenda of 4 main areas of interest, which are:

#### • Entrepreneurship in educational programs

This is the sense of doing lessons, fundraising, assisting with process management in relation to when new entrepreneurial courses are being initiated across AAU.

#### • Creating a culture and an awareness of entrepreneurship as a career path

This is done through hosting events, doing marketing initiatives and communication in collaboration with relevant partners. These events focus on the actual startup of an entrepreneurial venture from an idea initiated through an educational situation. Another example is a focus on how the students can utilize their skills as innovators or business developers in already existing companies.

#### • Entrepreneurship and Incubators

SEA was established in 2003 and has the main responsibility of entrepreneurship at AAU and is providing extracurricular educational programs, access to resources and physical spaces that support entrepreneurship. Furthermore, SEA works to develop the entrepreneurial environment in Denmark, through the organization: Venture Cup. This is done in collaboration with other Danish universities.

#### Multidisciplinary initiatives

SEA supports and facilitates the collaboration of 70 white-collar workers at AAU, through the AAU Entrepreneurship Faculty, with studies, schools and faculties. See Appendix 01

#### 2.1.4 Other Services of SEA Aalborg

Apart from this, SEA provides several offers, that are listed on their website, for students who want to become entrepreneurs, such as incubators with associated startup programs. There are currently 2 incubators at AAU Campus Aalborg, these are referred to as the FIB Hub, the first one established, and then CREATE Hub. Which is actually located in the centre of Aalborg. These operate as innovation hubs, startup communities and with each of them is a co-working space. Where the entrepreneurial students can meet as teams or solo and work on each of their business ideas. The incubator has 12-14 employees in total. In order to support the students and give them the necessary knowledge and skills to run their startups, the incubator provides various workshops, programs, and social events. Through these initiatives, the students will learn how "to test and validate business ideas, build a strong business concept, and learn how to get their business off the ground running." The aim is to have 3 incubators/innovation hubs in Aalborg and one on the campus in Esbjerg in the coming years. (*"SEA for students", n.d*)

Furthermore, the incubators at Campus Aalborg also provides four programs for the student startup teams, AAU Startup program, Innovativ Vækst (Innovative growth), Entrepreneurial Talent Program and Business Booth. *("Tilbud til, n.d"). "*All of these programs are aimed at Masters students, Ph.D.'s and employees of Aalborg University (Lundberg, J, 2019, August 12 Personal interview)"

On the first Thursday of every month, the incubator is hosting the event Inkubator Café, this is the Danish title, which is a meetup where students can come and mingle with the entrepreneurs. The students can also obtain some information about what the incubator can offer them should they decide to become entrepreneurs. ("Come meet the", n.d)

In addition to this then SEA also provides Entrepreneurial Talent Workshops that teach the entrepreneurs new tools or even new mindsets. These workshops last 2-3 hours and are free of charge. *(Entrepreneurial talent, n.d)* 

On the website of SEA, there is besides this, links to different entrepreneurial courses, to the Erasmus entrepreneurial program and the Scandinavian Game Hub,

all located at AAU. All of these initiatives are provided in order to support all AAU students who want to become entrepreneurs. Then there is also a link to SEA in Copenhagen which is a startup incubator at the division of AAU Copenhagen.

#### 2.1.5 SEA COPENHAGEN

The purpose of the division of SEA Copenhagen is similar to SEA Aalborg, which is to support entrepreneurship at Aalborg University. Then as a part of SEA Copenhagen, and as a service provided to students that have an entrepreneurial idea, there is also an incubator with a startup program. This incubator has been started around a year ago, the incubator has one employee, Business developer Jacob Lundberg and he is in charge of facilitating the startup program. Then once or twice a week he is supported by a representative from the AAU incubator Aalborg. The AAU Incubator in Copenhagen is somewhat smaller yet takes in 10 entrepreneurial teams twice a year. There is an increased collaboration with external stakeholders as the overall startup community in Copenhagen is far more extensive than in Aalborg. (*Lundberg.J August 12, 2019. Personal interview*, Link to the audio in the web. refs. list).

## 2.2 PROBLEM STATEMENT

Below is the initial problem statement of this master thesis, this is created based on a request from business developer Jacob Lundberg who is the representative of the incubator at Aalborg University Copenhagen. Because the incubator is quite new and some processes had not been defined yet. Upon this then there was a need to map the journey of the users, *see Appendix 02*.

How might Service Design be utilized to explore and optimize the user journey of the Incubator at Aalborg University, Copenhagen?

## **3. LITERATURE REVIEW**

This literature review is a representation of the research in relation to the key topics of this project. Some of the selected literature sources, in particular, are going to support me in addressing the problem statement. While others are perceived as sources that provide a broader understanding and different approaches of the suggested fields.

### **3.1 SERVICE DESIGN**

The concept of service design has a long track record, throughout the past several decades. Polaine et al. state that "service design can be traced back to the tradition of industrial design." Which was defined as field throughout the 1920s (*Polaine et al. 2013, p.18*). As mentioned in the introduction there has been a paradigm shift in the economic structures of primarily western societies. From a focus upon commodities and goods to the concept of delivering services and staging experiences (*Pine & Gilmore, 2011*). Thus in this context, it is also relevant to consider, what a service is. According to G.Lynn Shostack, services are intangible products such as when a person buys the use of a hotel room or boards an airplane in order to go from one place to another. In this event, the person does not take anything with them, except the experience from the flight or the stay in the hotel room and that is the concept of services (*Shostack, 1984*).

As a consequence of that, one of the key purposes of the service designer is to make the intangibility of a service into something tangible. This can be done in order to give a company an insight into the interactions of their users and also unveil potential pitfalls in the service offering *(Polaine et al. 2013).* Lucy Kimbell provides some case examples of how this can be done by using a visualization tool such as the customer journey *(Kimbell, 2011).* Of which there will be a more thorough explanation later on in this chapter.

When defining the concept of service design further, then Holmlid and Evenson mention that it was in the '90s when service design started to evolve into a discipline. This is where the user or customer perspective is the main aspect of a given service and then through utilizing human-centred and user participatory methods, their service interactions can be enacted and optimized *(Holmlid & Evenson, 2008)*.

Further on this Stickdorn et al. states that service design goes well in hand with the servicedominant logic, which as mentioned earlier, can be used to create new services or optimize already existing service offerings provided by companies in a practical manner. Here service design is defined as an approach that is of a human-centred, collaborative, interdisciplinary and iterative nature.

This uses "research, prototypes and a set of easily understood activities and visualization tools to create and orchestrate experiences that meet the needs of the business, the user and other stakeholders." (*Stickdorn et al.,2018,p.27*)

## **3.2 USER JOURNEY**

The user journey is also referred to as the customer journey or consumer decision journey is a tool that is also used in e.g. marketing and also other design disciplines such as user experience design (UX) and customer experience design (CX). Furthermore, when doing these journeys there are several approaches to how they are created and visualized *(Bommel et. al, 2014).* 

In this thesis, it is going to be referred to as the user journey because in this context the students that are the main target audience and are defined as users as they do not buy anything. The user journey is one of the key tools that a service designer can use in order to visualize the users interactions with a given service. The initial journey can be based upon assumptions, that being said in order to revise and validate it, research needs to be conducted and data gathered. According to Stickdorn and Schneider, it is important to map out the different touchpoints, of a given journey, both digital and non-digital. These can be defined based upon the insights of the users and then be connected on a timeline. The touchpoints can then be combined with user actions and emotions and made into a visual representation. Stickdorn and Schneider argue further that the data for a journey map can either be conducted via interviews or be produced by the users via blogs and video diaries. The key insights of this data triangulation can then be used to create personas, that can be used with the user journey map. The outcome of this is that it can provide an engaging visual representation of the overall user experience *(Stickdorn & Schneider, 2011)*.

Moon et al. present an approach that is a bit different, by defining a design process for creating a user journey map. They argue that a journey map "consists of 4 basic components phases, goals, tasks and routines." Then Moon et al. present a 10 step design process model along with 10 rules that can be used for, when creating a user journey map. The aim of this is to consolidate the designer's approach when doing user journey maps (*Moon et al., 2016*).

Though the desire to unify the way designers create user journeys is also something that has been proposed by Halvorsrud et. al. since they present an approach with a customer journey analysis (CJA), that when used, has to be based on a customer journey framework (CJF) The overall aim of these is to improve the quality of service delivery. The CJF is created as a *"conceptual framework that allows for comparison of an individual journey against the planned journey and comparison across a sample of individual journeys" (Halvorsrud et. al.2015, p.03).* Halvorsrud et. al argues that by using the CJA more accurate insights are provided and an enhanced accuracy when following the formalized process steps. The outcome of this is a deeper insight into individual service experiences in comparison to planned service delivery. Then the CJA also supports an analytical view upon how *"service experiences" (Halvorsrud et. al.2015, p.20).* 

It is argued further that, based on empirical studies, this approach has come up with the aim, just as Moon et al., (2016) suggests to create a unified way of doing user journeys. Because the way

it is right now the current approach of doing user journeys *"suffers from several weaknesses because it lacks commonly agreed terminology, a visual language, and a robust methodological framework"* (Halvorsrud et. al.2015, p.18).

## 3.3 INCUBATORS, ACCELERATORS AND INNOVATION HUBS

#### **3.3.1 INCUBATORS**

Incubators have existed since the 1950s in the US and then in the late 1970s and early 1980's they spread all over the world (*Bruneel et al., 2011*). This was, as mentioned in chapter 01 when the western economies initially changed. The western economies went from being dominated by large corporations and reliability by extraction of commodities and production of goods to be based upon "newer or smaller technology-driven, service-oriented service businesses" (*Campbel 1989*) as found in (*Bøllingtoft & Ulhøi, 2005, p.271*).

According to Bøllingtoft and Ulhøi the term incubator, as found in their article, has been in several different literary resources, used to cover a variety of different concepts. These will not be explained in this context. Furthermore, they discuss the differentiation between two definitions of incubators. The business incubators, which are the traditional types and then the newer networked incubators. The main purpose of the latter mentioned is to make a profit, this is done by a collaboration of the companies that reside in this type of incubator. Collaboration is a key aspect of this type of incubator.

Whereas Business Incubators have a different approach, where the main purpose is to support young entrepreneurial companies in starting up, with the aim of becoming viable businesses. These incubators have a different operational agenda which is non-profit and they are publicly sponsored or non-profit sponsored, by e.g. private funds (*OECD*, 1999), (*Allen and McClutskey*, 1990), (*Kuratko and La Folette*, 1987) as found in (*Bøllingtoft & Ulhøi*, 2005).

For this thesis though there is not going to be a deeper analysis of the difference of these incubator types and what their role is in relation to the macro economy. The term incubator is going to be used as a reference to the business incubator as this is what is most similar to the type of incubator at Aalborg University Copenhagen.

Incubators are organizations that are offering a supportive environment enhancing the development of entrepreneurial ideas. This is done by offering office or coworking space of somewhat low cost and providing a variety of administrative services. *(Ibid, 2005)* According to Mian, shared incubator services range from support in business planning, expansion of the business network, mail sorting, business assistance, accounting, and marketing. Then it also involves services in a shared office space such as a fax machine,

photocopier, a phone, and a personal computer (*Mian*, 1997). It is important to notice that this was services that brought value to incubator users in the nineties. Although there are some similarities to a study presented by W.-H. Lai and C.-C. Lin from 2015, here they state that incubators provide services such as an affordable office space, support of business, professional business advisory, peer to peer networking, expansion of external network and knowledge on how to develop a viable business (Bergek, Jacobsson, Carlsson, Lindmark, & Rickne, 2008; Chen, 2009) in (*W.-H. Lai and C.-C. Lin, 2015*).

Furthermore W.-H. Lai and C.-C. Lin also present a long list of services that business incubators provide to entrepreneurs in what the authors refer to as the post-entrepreneurial phase. This phase is not further defined however I assume that it is approximately after the first 6-12 months. The list of services is based upon a literature review and also on a number of expert interviews that have been carried out to confirm the validity of the list. This includes topics of Human Resources, Intellectual Property, Capital, Networking, Space and Equipment, Business Planning, Executive Strategy, and Institutionalization. *(Ibid, 2015)* 

In addition to that Bergek and Norman present an approach to develop an Incubator best practice framework. Which is defined as "a process that is better at delivering a particular result than any other process" and with a focus upon effectiveness and performance (Mosselmann et al. 2004) in (*Bergek and Norrman, 2008. p.22*).

They argue that in order to create this framework, a holistic perspective is crucial and where incubators have to be related to their operating models in order to analyze their performance. This has to be combined with a consideration of the overall goals of the incubators. The framework that is presented consists of three main components: selection, business support, and mediation.



Fig.02: Source Bergek and Norman - Incubator best practice - A framework

Bergek and Norrman further discuss two overall approaches as to how incubators can operate when choosing teams to be part of their programs. Either the Selection approach with a focus upon the team and the idea of that given team. Or the entrepreneur focused approach, where the skills, experiences, personalities are taken into consideration, combined with an evaluation of general business development.

Furthermore according to a research study conducted by Bergek and Norrman, for the majority of the incubators that they have investigated the most important aspect prior to the incubation

process, is selection. This aspect is then divided into two approaches "picking the winners" and "survival of the fittest." These approaches are then combined and turned into 4 selection strategies. All of which is presented in a four-field matrix *(fig. below)* and combined with both the idea and entrepreneur aspect. On this is also a suggestion of differentiation of the level of business support of the incubator teams, that varies on a scale from "strong intervention" to "laissez-faire."

The conclusion to this study and upon creating this framework is that only incubators that have the same overall goal should be compared "and that outcome indicators should be chosen carefully so as to correspond to these goals." *(Ibid.p.26)* 



Fig.03: The four-field matrix by Bergek and Norman (Bergek and Norman, 2008)

In chapter 05 of this masters thesis, there will be a presentation of a desk research study that has been carried out with a selected part of the Danish University incubator environment and three significant University incubators in the US. This has been done in order to explore, what their approach is to operate an incubator in terms of what services and events are provided to the students, and then compare this to the incubator at Aalborg University Copenhagen. In the personal study of the Danish incubators, it is important then to notice that some of the included subjects are referred to as innovation hubs. Furthermore, there is a limited number of the incubators of the aforementioned study, which also provides an accelerator program. This is not only for their users but for the students of the university, in general, if they have an entrepreneurial idea. Apart from that, there are also numerous other accelerators and incubators in the Danish entrepreneurial environment, which are not going to be dealt with here (*The Danish startup, 2017*).

#### 3.3.2 ACCELERATORS

Accelerators have some similarities to incubators, where the primary is an aim to support startup companies. There is also focus upon mentoring, education and networking in relation to the participants in their programs. Though there are also some significant differences because the accelerators do not provide office spaces or any other physical resources. Furthermore, unlike the incubators, the programs of the accelerators are of a much shorter duration (3-6 months). In addition, the accelerators also tend to, upon acquisition of equity, offer investments at an early stage of the implied startup companies (*Pauwels et al., 2015*).

Another significant difference between accelerators and incubators is that the accelerators are most often targeted startups that have been developed to a certain level and not like incubators that support entrepreneurs from their very early business idea (Bliemel et al. 2019) in (*Brown, R et al. 2019*). Furthermore, politicians across Europe can see the need for accelerators, in terms of creating new jobs in the long run and as a consequence of this, they are all publicly funded (Bone et al., 2017; Bliemel et al. 2019; Hathaway, 2016) in (*Brown, R et al. 2019*).

#### 3.3.3 INNOVATION HUBS

Innovation hubs are physical facilities that can be described as a combination of an accelerator and an incubator, as both are offered to the users. There is more to an innovation hub though than just that, as services such as hackathons, open innovation challenges, and design sprints are also provided. It is a kind of co-working space for "technologists, computer scientists, hackers, web developers and programmers to congregate and they can network, share programs, and design to bring their ideas to fruition" (*Gathege & Moraa, 2013*) as found in (*Jimenez & Zheng, 2017, p.01*).

#### 3.3.4 HOW I USE THESE TERMS IN MY THESIS

These terms incubators, accelerators, and innovation hubs are described in order to get an understanding of the differences between them, since this in some cases can be challenging. However also because some of the Danish ones, that have been researched upon for this project are both referred to as incubators and innovation hubs. The ones in America are all referred to as accelerators. While acknowledging these differences, for the design and research trajectory of the thesis, I do not make use of such a fine-grained distinction and will use the term incubator as a broad term in relation to all of them.

## **3.4 THE RESEARCH QUESTION**

All my design work will be an occasion to make some considerations in relation to service design. Particularly, the theoretical focus of this thesis is to reflect upon potentials and shortcomings of using service design to optimize the user journey of the incubator at Aalborg University. More specifically, the thesis is concerned with how these findings can be generalized and used in other contexts than the particular chosen.

## 4. METHODOLOGY

## 4.1 METHODS USED FOR THE DESIGN PROCESS: DOUBLE DIAMOND

In order to have a guideline for the overall process of this Masters thesis within the discipline of Service Design, I have chosen to work with the Double Diamond framework that is developed by the British Design Council (*Design Council 2015*). This is in order to keep a structure throughout the design process. This framework consists of the four phases Discover, Define, Develop and Deliver where both the approaches of divergent and convergent thinking are applied. This is illustrated in the model below. **The Discover** phase marks the beginning of the project process, this is where research is conducted and insights are gathered. Furthermore, user needs can be identified and potential hypotheses can be proved or dismissed. During this phase, a divergent approach is applied in order to view the given focus area from a broad perspective.

**The Define** phase is where all the gathered insights and data are synthesized and analyzed in order to understand the problem and by that create a revised and clear design brief that will make a frame for the given design challenge.

**The Develop** phase is the third quarter of the framework and consists of brainstorming, ideation upon the knowledge from the previous phases. This is done in order to prototype and test a series of idea solutions, with an iterative approach until one is developed into a final service solution.

**The Deliver** phase is the fourth and final quadrant of the framework and this is where the solution is finalized and in this case probably handed over to the AAU Innovation. In order for them to consider whether to implement the solution.

The double diamond framework is visualized as a linear process which makes it easy for any spectator to get an overview of how the process has been carried out. Though it is important to notice that when this framework is used in practice, then the process is going to be, as mentioned above, of an iterative nature. This allows me, as the designer, to move back and forth through iterations of the divergent and convergent thinking approaches, in order to make sure

that the most ideal solution is developed. Because service design is not about creating a solution right away, it is about finding the real problem first (*Stickdorn and Schneider, 2011*). When using the Double Diamond framework, various tools are suggested for each of the phases. As a service designer it is important though to be able to choose the proper tools in relation to the given design challenge.

Furthermore, another perspective, as described by Hegeman is that it is key to be critical towards any design framework and not just see it "as a how-to guide." (*Hegeman,p.19,2008*) He argues further that there is not one framework when carrying out a design process, but in this case, the Double Diamond was chosen because it is familiar to me from previous project work at Aalborg University. In addition to this, it can be a challenge when being alone to keep track of when to go from one phase to another and when to iterate during the project phase.



#### THE DOUBLE DIAMOND FRAMEWORK

Fig.04 The double diamond design framework, (design council, 2015)

## 4.2 APPROACH USED FOR THE RESEARCH DIMENSION

I am using the design process, thus the double diamond, to analyze the potential of service design to support the operations of incubators. In particular, I believe, hence the research question, see 3.4 that my observations and the outcomes of the design process can help not only the AAU incubator but also other incubators. My assumption is that some other incubators can use service design and the approach that I used to improve their journeys. In order to validate my results, then what I did was that I set some interviews with coordinators at various incubators. Then I asked them whether they thought that the process that I followed also could be adopted in other contexts than AAU. Findings and reflections upon this perspective is found in chapter 06.

## **5. ANALYTICAL DESCRIPTION**

In this chapter, there is a presentation of the entire design process through the 4 phases of the Double Diamond as presented in the previous chapter. This chapter also contains an analytical description of the entire design process along with findings, insights, a presentation of the methods and tools chosen and then reflections in relation to this.

## **5.1 DISCOVER**

#### **5.1.1 DESK RESEARCH**

Desk research was conducted during the first part of the Discover phase, this was carried out in order to get an understanding of the context of the AAU Incubator and to find relevant academic sources to build a foundation of the project on. Prior to this project process, some knowledge about the incubator had been acquired from 3 meetings and a few email correspondences. When the project started and then 2 more meetings were carried out with a specific focus upon various aspects of the incubator. This is what Stickdorn et al. refer to as preparatory and secondary research. During this process the researcher should identify the right questions, instead of answers, to ask in the qualitative research. This is also "to avoid reinventing the wheel and stand on the shoulders of giants" when the primary research is initiated. *(Stickdorn et al., 2018, p.118)* 

Furthermore, the desk research was also utilized to explore and gain insight into, as mentioned in chapter 03, a selected part of the Danish University Incubator environment and three significant University Incubators in the US.

#### 5.1.2. RESEARCH STUDY UPON OTHER UNIVERSITY INCUBATORS (DANISH / FOREIGN)

In order to broaden the perspective of the incubator concept, and then during the desk research process, as mentioned, efforts were made to gain insights into other selected incubators, 7 of these in Denmark and 5 in the U.S. The research included incubators at DTU, ITU, CBS, University of Copenhagen (UC), AAU (Aalborg), Harvard, Stanford, and M.I.T. Appendix 03 6 of these incubators are provided by 2 Universities, as the University of Copenhagen provides 3 incubators with different programs and Harvard provides 3 with different programs. In regards to Aalborg University, the aim is, during the coming months a goal for Aalborg University, to provide 5 incubators in total, at 3 university campuses Aalborg, Copenhagen, and Esbjerg,

though all of these are going to provide similar programs (*Jensen, L 2019, September 09. Personal Interview. - Link to the audio folder in the refs. list*)

#### 5.1.3 DESK RESEARCH – FINDINGS

The starting point however, of this research was to include all of the aforementioned incubators to figure out whether there was a difference between them. The overall findings of this research study were that even though these incubators, accelerators and innovation hubs offer different startup programs aimed at various types of university students. They actually have more similarities than differences overall. *See appendix 03.* 

In the sense that all the incubators provide similar offerings to their users such as legal consulting, accounting, mentoring, coaching, etc. This is consistent in relation to how Hacket & Dilts define the general characteristics of an incubator: "an enterprise that facilitates the early-stage development of firms by providing office space, shared services, and business assistance" (Hacket & Dilts, 2004).

Further to this comparison of these selected incubators was that all of the programs, both Danish and International, are equity-free. This is quite contradictory to a study done in the U.S by Kolympiris and Klein in 2017. Here it is stated that the aim of the University incubators is to "generate income for the university, which often holds equity positions in the incubator's tenant firms" (*Kolympiris & Klein, 2017.p.145*).

In Denmark though there are strict legal rules in relation to this matter and according to Jacob Lundberg it would be very difficult if AAU were going to have equity in several different small companies and furthermore, what makes it even more complicated is the fact that most of these companies are early-stage startups, that does not even have a CVR number yet as they do not make any money. Furthermore, the AAU also wants to work with the principle of arm's length to all the student startups, *see Appendix 04*.

#### 5.1.4 STAKEHOLDER MAP

Stakeholders are defined as different individuals, users, groups or organizations that have a stake or an interest in a given project (*Newcombe, 2003*) These can both be internal or external and be directly or indirectly involved. The stakeholder map is a visual representation of the stakeholders that provides an overview of their prioritization and level of influence in relation to the projects. Then in some cases, the interrelated interactions of the involved stakeholders can also be added (*Stickdorn et. al, 2018*). For this project, I have used the stakeholder map contextually to make sure that I mapped all the relevant touchpoints of the user journey. The incubator is placed in the middle and then the map consists of two levels of stakeholders. The primary stakeholders are the ones that have the most influence or closest relationship to the incubator. These are all internal stakeholders of Aalborg University, then in the second circle it

consists of mainly external stakeholders that also possess a certain level of influence, as it contains two private Danish Foundations that amongst other supports the incubator. Though the relation to the incubator is more distant among the secondary stakeholders.



Fig.05: Stakeholder map of the AAU Incubator CPH

#### 5.1.5 FIELD RESEARCH

In addition to the desk research, field research was also conducted, this was done through 2 knowledge exchange meetings with Jacob Lundberg of the incubator at AAU Cph and then through semi-structured interviews with 2 business developers and a student assistant of the AAU incubator in Aalborg.

While one of these interviews was conducted in Copenhagen the other 2 was done at the incubator at AAU Campus Aalborg. In addition 2 interviews were conducted with Project manager Pål Simon Fernvall from DTU Skylab, and Hub Manager, Martin Bonke Justesen from SUND Hub (Health Hub) at the University of Copenhagen. These two interviews were carried

out at Skylab in Lyngby and at TechBBQ in Copenhagen. In order to clarify then these 5 interviews are referred to as the expert interviews onwards in this masters thesis.

The main purpose of these interviews were that I wanted to draw into focus the user journey of the students of those different incubators and the whether there was any insights of this. Furthermore it was also found relevant to gain further insights, thus the desk research study, upon the services they provide. This was found relevant in order to figure out whether they had a different approach to the discipline of operating a university incubator. The process and key points of this are described in the following.

#### **5.1.6 KNOWLEDGE EXCHANGE MEETINGS**

At the beginning of the project process, as mentioned earlier, two meetings of knowledge exchange with Business Developer Jacob Lundberg from the AAU Incubator were carried out. These meetings were a combination of interviews and conversations and were utilized to exchange insights, knowledge, and feedback.

#### 5.1.7 FINDINGS

#### 5.1.7.1 Navigation Map - AAU.dk

Prior to the first knowledge exchange meeting with business developer Jacob Lundberg, I had in order to empathize with the user, tried to navigate through AAU.dk with the aim of finding information about the incubator and where to sign up for the sup. It was done from the perspective of being a student with an entrepreneurial mind who wants to apply to study at AAU in the near future and also with the assumption that this would be a key starting point in the journey of the users when signing up for the startup program (*Pruit and Adlin, 2006, chapter 08*). Navigating through the website, turned out to be quite complicated, so it was decided to map that "journey" and then present it at the meeting. (*Appendix 05*)

Feedback on it was based on current knowledge, that no users find information about the incubator via AAU.dk. and as Jacob Lundberg replied "Though there could be a reason for that." The general problem of the website is that too many people have access to it and can edit, add or remove links or pages from it. The result is that it gives a confusing and negative user experience. (Lundberg, J. 2019, August 12.08). Personal interview)

Further in relation to this subject is that, according to business developer Heidi Nørgaard Jensen, AAU, there are some strict rules when the university creates a website. Which in this context means that it is not possible to have direct links and content about the incubator and the entrepreneurial offerings on the front page of the website. – (*Jensen, H.N, 2019, October 10. Personal Interview*) The latter mentioned insights is something that I became aware of much later in the project process as the interview with Heidi Nørgaard was conducted in October. Though it was found relevant to place this information in this chapter anyway.

#### 5.1.7.2 Business Model Canvas

In order to get a further understanding of how the incubator is operating then a Business Model Canvas was done in collaboration with Jacob Lundberg (*Appendix 06*). This provided valuable insights upon the various fields of this model e.g. how the incubator is supported and financed by the University so that the program can be provided free of charge to students, PhD's and employees. Because it is possible for all of the aforementioned to start a business, as a an extracurricular activity via the startup program. (*Lundberg, J, 2019, August 22. Personal Interview*) There is also an important insight into the value proposition: Support of starting a business, bonus teaching in business and an expanded network for the participants.


#### 5.1.7.3 The Initial User Journey Visualization

Furthermore as preparation for the first knowledge exchange meeting, and then a visualization of a rough user journey with only touchpoints and user actions included of the incubator was created entirely based on assumptions (Appendix 07). The journey was created with the approach, as described by Stickdorn & Schneider, to visualize an end to end experience and divided into three phases before, during and after (*Stickdorn & Schneider, 2011*). In this case, the period of when the users become aware of the program applies for the program and are accepted. This was defined as the before phase. The during phase was then defined as when the users have become part of the startup program, which can be a phase of 6-18 months. According to how long the given team is a part of the program. The after phase was perceived as being when the teams leave the program. Though from the knowledge exchange meetings, it was found that there were no activities or any follow up in the after phase. This was partly due to the fact, that none of the student startup teams had been through the startup program and furthermore the official startup program had not been launched. This is the reason why Jacob Lundberg had taken over as Business Developer in January 2019.

The feedback on the initial user journey visualization was somewhat positive, this journey seemed valid, in terms of the users interactions with 4-5 touchpoints before signing up for the sup, according to Jacob Lundberg. *(Lundberg, J, 2019, August 12. Personal interview)* I then realized, upon feedback from my supervisor that some key processes were missing. *Simeone, L. (2019, September 02). Personal communication* This was then refined during a second meeting and then instead of a premade linear journey, a matrix was then created with touchpoints, user actions and 5 other aspects, motivations, questions, pain points, the user's experience and ideas for improvement. Which was then going to be used when interviewing the users of the AAU incubator.

Refore

			Delote				
Device used							
Touchpoints	Face to face in class (Jacob pitches)	Incubator flyers	Info at infoscreens about the incubator	AAU Inkubator CPH Facebook page	SEA Website	SEA Website	E-mail (Confirm of application
Actions	Listen	Pick up and look at	Look at	Check for info	Look at, for more info	Apply for SUP	Open and read
Motivations							
Questions							
Pain points							
The user's experience							
Ideas for Improvement							

SUP = Startup programme

Before

During



Fig.07: Visualization of the User journey matrix part 02.

## 5.1.8 QUALITATIVE RESEARCH

For this masters thesis, a qualitative research approach was chosen in order to gather relevant user and expert insight. This in relation to the journey experience of the users and to gain insights into how the chosen university incubators are operated, as this potentially could be of inspiration for the solution that are going to be the outcome of this design process. The purpose of utilizing this research approach is, as Creswell describes it, this is an exploratory study. Furthermore *"This usually means that not much has been written about the topic or the population being studied (..)." (Cresswell, 2016, p.61).* That is not quite the case though in this context as there are numerous literary sources about the role and necessity of university incubators in relation to student entrepreneurship *(Stal et. al., 2016; Mian 1996 & 1997).* These articles mentioned, just as an example, may potentially be relevant to substantiate important points and perspectives found in the qualitative research. Nevertheless, none of the sources found through systematic literary research was set in a Danish or Scandinavian context. Furthermore, there was also a need to understand the complexity of human interactions and decision patterns.

#### 5.1.8.1 INTERVIEW METHODS

The interviews with the users and business developers were conducted between the 22'nd of August and the 10th of October, 2019. When these interviews were carried out, then two different approaches were employed.

The interviews with the business developers were conducted with interview guides of a semistructured nature. This was chosen as these were in-depth interviews where the respondents were asked a number of preconstructed questions, though the aforementioned approach allowed me to add additional questions during the interview and also ask elaborating questions upon some of the answers. Furthermore, when doing the interviews with the two business developers of AAU Aalborg, these were conducted on the 9th of September and 10th of October 2019, the interview guide was adjusted and partially changed for the second of these, because new aspects had occurred during the project process (*Bjørner, 2015*).

#### 5.1.8.2 Expert Interview Findings

From the expert interviews, it was found that there were not any of the incubators that had any exact insights into the journeys of the users and which touchpoints they interact with in relation to this. Though the business developers at AAU Aalborg do try to get the users to tell them where and how they became aware of the incubator and the startup program. This information is not documented in any way and that is why there are not any concrete insights into this. Furthermore, in response to this, it was found that it is important for the incubators to be as visible as possible on campus. In the coming months, SUND Hub of UC is going to work specifically with their touchpoints and the journey of the users, as they find it is a very important aspect to map this.

In the sense of visibility, at DTU this means that similar to AAU, the business developers make pitches to as many of the studies as possible. Also that the headmaster is attending the introductory trips of the freshmen at first semester to tell them about Skylab.

With regard to how the different university incubators in Denmark differ from one another is, according to Heidi Nørgaard Jensen in relation to the business developers. This in the sense of each of their core competences and the network that they provide. (*Jensen, H.N 2019, October 10, personal interview.*)

Then a quite remarkable finding, from the interview with a Skylab representative, compared to the other incubators, was that the business developer's main task is to kill the ideas of the student startups. This is done by always asking them very critical questions in relation to all aspects of their business. The purpose of this is to ensure that the concepts are resilient and that the users are ambitious and dedicated to pushing the company further towards success. In addition, the business developers of Skylab are also encouraged to employ their skills and be part of a startup team, in the sense of having a specific role e.g. as a fundraiser or the like.

The overall goal of all the incubators interviewed is that they exist for the users and that the educational and learning experience is the key aspect. Another important aspect is, as, in other startup communities, that failure is a potential outcome when running a startup. When or if that happens then the users are encouraged to come up with another business concept and then start again. In the failure, a very important aspect is seen, as a learning mechanism and at AAU Aalborg there is a monthly event that is referred to as "Fuck-up nights" where teams that have failed show up and share their experiences. This is in order for other teams to learn from that, and also for users that are considering starting up a business so that they learn that starting up a business is not just equal to success and earning vast amounts of money. (*Justesen, M.B 2019, September 17. Personal Interview*), (Jensen, L. 2019 September 09, Personal interview,) (Fernvall, P.S 2019 September 20. Personal interview,) (Jensen, H.N, 2019, October 10. Personal Interview,) (Bentzen, A. 2019, October 10. Personal Interview. Link to the audio in the web. refs. list)

#### 5.1.8.3 User Interviews

During the discover phase, it was found to be necessary to conduct interviews with some of the student startup teams of the incubator. This was in order to get an understanding of their journey experience in relation to the incubator and to identify the pains and gains in this context. Furthermore, this also provided an insight upon the touchpoint interactions of their journeys. Though as the incubator of Aalborg University Copenhagen is relatively new, it was started during the autumn of 2018 and the workspace was available to the teams from July / August 2019. In relation to this, then the main part of the teams interviewed had not yet started the actual startup program. Which as mentioned earlier, is viewed as the during phase of the user journey. The reason for this was that some of the respondents had just started internships in their own companies, in September, as part of the study and then some teams had been incorporated in the incubator in April – (Lundberg, J, 2019, June 12. Personal interview).

Device used Touchpoints Actions Actions LigTEN Metivations Questions Pain points The user's Apprence Device The user's Actions Device The user's Actions Device Device Device The user's Actions Device The user's Actions Device Devic	TALK FALS TO INFO M FALS TO INFO M FALS TO INFO M FALS TO INFO M FALS TO INFO M TALL MEETIN MUSE TO BO TO ADDIE STUDY THE TO BO TO ADDIE STUDY TH	Ore JANS D JANAS D	Nore motion More motion	DA CITED	WORR SHOP MEET THE STHERS GET FEED MEET THE STHERS GET FEED MEAPECTED PITCH POSITIVE
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#### 5.1.8.4 User Journey as a Tool

In order to conduct user interviews, the initial approach was then to do semi-structured interviews. Upon a short sparring session with a fellow student, it was decided to combine the interviews with a visualization exercise of the user journey at the company of the users. The purpose of doing this exercise was to activate the senses of the users and make it easier for them to remember their journey. The purpose was also to gain valuable insights and potentially be able to explore touchpoints that were not already mapped out *(Groes, 2015).* 

Upon conducting the user interviews, the process was associated with a couple of iterations, which means that when the first interview was carried out then I had a short interview guide and then the prefilled user journey matrix, *see fig.6*&7

Although it was realized after this interview was conducted, that in terms of mapping the journey of the user, I then had to cross out some of the touchpoints and then write others instead. Further insights in relation to this exercise were that it was found irrelevant to use the semi-

structured interview guide, because it was found to be more manageable to keep a loosely structured dialogue, than being obliged to use an interview guide.

Then prior to conducting the rest of the interviews, this approach was revised in order to map out the journeys properly. The user journey matrix was changed so that all the touchpoints and user actions were deleted and then it only had 8 horizontal fields prefilled on the left side. With this, all the touchpoints were created with different icons and simple text was added to them. These were then printed and cut out and glued onto cardboard, in such a way that I had touchpoints that could be added to the journey, and also moved around if needed. This provided a more flexible way of creating the user journey when interviewing the respondents. In addition, after the first interview was conducted, more thorough desk research then was carried out and through this, some additional touchpoints were discovered. These were some additional social media channels, such as Instagram and LinkedIn and also the AAU Innovation website. The latter mentioned, through which the users can also get access to the SEA website, that has information about the startup program. Another touchpoint is when the users send an email to the incubator. These were then added as touchpoints that could be interacted upon through the user journey. Even though sending an email is an action, I claim that an email address is a touchpoint.

With regard to the interview method, an unstructured approach was chosen instead of the initial semi-structured. Although there was a clear goal on what knowledge/insights that were needed from the respondents.

The unstructured method was chosen in order to give room for a more free-flowing conversation and with the purpose of creating a relaxed atmosphere (*Berg and Lune, 2014*) in (*Bjørner, 2015*). The interviews were mainly carried out at the workspace of the incubator, in order to meet the respondents, in the environment in which they operate.

#### 5.1.8.5 User Interview Findings

From the user interviews, it was found that the initial user journey was completely inaccurate, as this was based upon assumptions and knowledge exchange with Business Developer Jacob Lundberg. That is precisely defined by Stickdorn et. al. as the reason why research is a crucial aspect in service design because "it helps a design team to move beyond assumptions." Furthermore, it was found that out of the 19 touchpoints of the incubator, 7 of the touchpoints were irrelevant in relation to the given journeys of the 8 teams that were interviewed for this project.

These turned out mainly to be various social media channels and when the users were asked about these touchpoints the response was either that they seemed irrelevant or that the respondents did not know they existed. Another aspect of the user interviews was that the users all had different perspectives of what had made them join the incubator. There were some that had joined the incubator at the very beginning when there was no workspace. These users joined because they thought that this, when it would become available, would be of the highest value. Though after the first 3-4 months the users found that the workshops and personal sparring meetings with Jacob Lundberg provided the main value aspect because that supported them in developing their businesses faster and better. In general, all the teams either replied that it was the workspace and the peer-to-peer knowledge sharing was the primary factor or the workshop and personal sparring meetings that brought them the main value aspect. These findings are similar to the findings of a literature study by Mian, which was carried out in the US (Mian. 1996. p.327). In conclusion to this, it seems as if these needs of the users overall have not changed then throughout the past 20+ years. Additionally, in relation to the journey, a general tendency was also found in the interviews that a majority of the teams experience a certain degree of friction. In the sense of when the teams either search for information about the startup program or want to contact the incubator. With this the teams experiences and challenges when visiting e.g. either the website of the university or the website of the incubator. As soon as the contact was established though then the remaining part of the user journey was frictionless. (User interviews, Link to the audio in the web. refs. list).

#### **5.1.9 PRELIMINARY REFLECTIONS**

In relation to the interview method, it can be discussed whether this could have been engaging the respondents further, in the sense that several of the questions asked, were of a repetitive nature. The approach was to make respondents talk about how they became aware of the incubator and then upon reflection of that make them mention the touchpoints of the interactions. When a couple of the touchpoints were mapped during the interviews then followed the repetitive questions, in relation to the given categories of the user journey matrix. In a few cases, this seemed to annoy the respondents to a certain degree and this led to the fact that some of the questions in these cases were not asked in a proper open-ended manner. Furthermore multiple times it was also a challenge not to bias the respondents or make the answer on their behalf. In order to overcome the potential challenge of the users being annoyed. Later in the research process, the approach was changed and then the respondents were informed about the repetitive questions just prior to the interviews unstructured nature. They were unstructured from the point of view that no interview guide was created beforehand, yet the main approach was to get the respondents to speak as much as possible.

## 5.2 DEFINE

#### **5.2.1 EXAMINING THE DATA**

Through the discover phase then 8 interviews were conducted with teams of users of the incubator, which were recorded on audio. Then each of these was transcribed as notes or in key sentences, this was done in order to make sure that all the important details were included. This was also done in terms of ensuring the validity of the data gathered (*Bjørner, 2015*), (*Creswell, 2014*). All the transcripts were gathered in one document that ended up being 20 pages long. Though in order to achieve a more comprehensible overview of the data, a decision was then made to cluster all the data, onto a whiteboard. This was done, by putting all the touchpoints of the current journey of the users on to the whiteboard. All the key findings were then written on post-it notes in different colors for each category of the user journey matrix. (*See picture below*) All of the findings on the post-it notes were then clustered by each of the touchpoints, which then provided a much clearer overview. Upon this it was easier to map the current user journey.



#### **5.2.2 CURRENT USER JOURNEY**

In this context, it was also found to be relevant to visualize a representative user journey of 4 the respondents, with this an emotional layer and quotes of the respondents were added. Although I'm aware that this is not the only possible journey. There are several other journey opportunities that bring students in touch with the incubator. An example of this is the students that do an internship in their own company, because they have to get an approval of their application from the Study board at AAU. But this visualization was done as a generalization and in order to make it more explicit and also in order to elucidate an empathy aspect in relation to the user. Then in addition in relation to the user journey matrix that I have used, the actual journey was not visualized, which made it seem rigid, because it just showed the journey through the sequenced touchpoints, instead of a sequence of user interactions of the different touchpoints. Even though the clustering exercise also led to another perspective of creating a journey map of a different zoom level, in the sense of splitting this part of the journey into a before during and after phase, so that the onboarding process of the incubator becomes a user journey in itself, that consists of a before, during and after phase (*Stickdorn et. al, 2018*). An example of this can be seen in *fig.08 below*.



Fig.08: The current user journey

#### 5.2.3 TARGET GROUP

This paragraph provides a description of the target group of the incubator which is mainly all the students and teachers/professors of Aalborg University. The reason for this is that all teams need to have a current student or recent graduate of AAU on their team. It could be argued that this target group is too broad because a percentage of students does not have any intentions of becoming entrepreneurs. Though as found in interview 06 (*Link to the audio in the web. refs. list*). some students need a "push" before they realize that they have the potential for starting an innovative business. The users of the research study for this masters thesis was between 25-35 years old, and mainly from Denmark, yet also from Portugal and Cuba but all living in the Copenhagen Metropolitan Area. Furthermore, the startup program is also aimed at the professors of AAU, that want to become entrepreneurs, though this is not clear as this information can not be found anywhere.

#### 5.2.4 PERSONAS

In terms of creating personas that are identifiable, beyond the stereotypical and whose lives, I as a designer could actively relate to. The engaging perspective as defined by Lene Nielsen has been chosen. This approach was selected in order to create a realistic description of fictitious characters and also with the aim to have some relatable characters to design for in the development phase. This perspective is based on how involvement and insights can be generated from storytelling (Nielsen, 2004) as found in (Nielsen, 2019). This method has similarities to that of the character descriptions that are used in film manuscripts. The aim of this is to make these characters more relatable and avoid stereotypes or one-dimensional characters. Furthermore, in relation to the engaging perspective, Lene Nielsen argues that "We see others as both identical to and different from ourselves. Also, we experience relationships that are not specific and where someone we meet is anonymous and represents a type" (Nielsen, 2019.p.14). Though it can be argued whether the amount of data gathered for this masters thesis project is sufficient, in order to create proper engaging persona descriptions, as it is stipulated that to create engaging personas then thorough insights about the users are needed. It is important that the data covers the following aspects, the psychological characteristics and social backgrounds of the users. Furthermore, it is then key that the emotional relationship of the focus area is also included (Nielsen, 2019).



Fig.09: Persona 01 graphic

#### Scenario 01

One day Christina and her teammates listened to a short presentation, by their teacher, about the new incubator and startup program at AAU. Afterwards, they spoke to the teacher and got a flyer with information about this and the very same day they saw the new information roll ups about the incubator at campus.

The three teammates then talk to each other over lunch and decided to find more information at the new website of the incubator and to apply for the startup program. They received a confirmation email and the next day an invitation to a screening meeting for two days after. The team got a bit nervous because they are in need of support in order to develop their business concept further. With hard work, during the following two days, Christina and her teammates created a killer presentation for the screening meeting at the incubator. On the day of the meeting, they were led up to the incubator by following the new footprint stickers that took them from the main entrance at AAU to the entrance of the incubator at 1'st floor in the same building. After the screening, the team was delighted and then the next day they received a welcome to the program mail and an invitation to the launch event, 2 weeks after.



#### Fig.10: Persona 02 graphic

#### Scenario 02

Michael has graduated as a Master in Medialogy six months ago from AAU and has dedicated all his time to a startup that he has co-founded with one of his friends, Christian. They have had an office at an incubator in the centre of the city, since they graduated, and recently they needed a new office. Then via a friend that is still studying at AAU, Michael has become aware of, the fact that the University had just launched an incubator and a startup program 2 months previous. Michael and Christian decided to find some information about this and tried to find some information about this at AAU.dk but can not find any information. Somewhat frustrated, they decided to search via Google and found the website of the incubator and it is also a challenge to navigate this, though after a while the relevant contact information is found. As an outcome of some email correspondence, Michael and Christian are invited in for a screening meeting and after a week they became part of the startup program.

#### **5.2.5 PRELIMINARY REFLECTIONS**

Initially, the aim of this masters thesis was going to be focused upon the user journey of the students in relation to the incubator. As mentioned previously this was then defined as an overall experience, in the sense that the before phase was the onboarding process before the students have become a part of the startup program. The during phase was then defined as the phase of the startup program and then the after phase would be when the users leave the program. Though the key learning from the research was that the main part of the respondents had only been through the onboarding process. Furthermore, it was found that several touchpoints, mainly social media channels, of the incubator are not interacted with and that these are irrelevant to the users. Thus the reason to ignore these in this project. Then upon processing and analyzing the gathered data, it was decided to revise the scope and then only focus upon the onboarding phase and then develop a solution in relation to this. In conclusion, it was necessary to revise the initial problem statement.

#### 5.2.6 REVISED PROBLEM STATEMENT

How to utilize the user journey as a tool to improve the onboarding process of the incubator at Aalborg University, Copenhagen.

## 5.3 DEVELOP

From the findings of the define phase and the revised problem statement, a more accurate direction of this project was set. The aim was to use these insights and then develop an improved service concept. In this chapter, the ideation process is going to be introduced and then how these ideas will be implemented in order to optimize the onboarding process of the incubator. Furthermore, in order to validate the concept, it is going to be tested with Jacob Lundberg from the incubator at AAU Cph and some of the teams that were interviewed during the discover phase.

#### 5.3.1 IDEA GENERATION

The idea generation is the process of developing numerous ideas within a limited timeframe. In relation to that, a cognitive activity like reasoning can be performed in order to reframe the needs of users. Reasoning can be done from either an inductive, deductive or abductive perspective and according to Rittel, is characterized by "trains of thought, including deliberation, arguing and logical inferences." Furthermore, the reasoning can be in either a verbal and argumentative form, although there is also a considerable aspect of unconscious reasoning (*Rittel 1987*) in (*Cramer-Petersen, C.L & Kristensen S.A., 2015*).

From the same source, three different perspectives of reasoning are defined and several studies of reasoning in design and problem solving are explored. Here it is argued that abductive reasoning is dominant in design as only this introduces new ideas (*Dorst 2011*;

*Roozenburg*, *1993*). In addition, Dorst also makes a cross-reference between abductive reasoning and design thinking in which "he defines design reasoning as the generation of proposals for a 'thing' and a related working principle to achieve an aspired value" (*Dorst*, *2011*) *in (Cramer-Petersen, C.L & Kristensen S.A., 2015).* 

Even though it can be argued that service design is not design thinking (*Polaine et. al,2013*), I find this definition by Dorst (2011) in (*Cramer-Petersen, C.L & Kristensen S.A., 2015*) relevant in relation to the idea generation of this project. Because I agree with Stickdorn et. al in their point of view, that these disciplines or approaches of service design and design thinking have more similarities than differences. (*Stickdorn et. al, 2018*)

#### **Idea Generation Methods**

In order to ignite the process of developing a solution, then an ideation session was carried out. The approach employed was a combination of the methods, Ideas from Journey Mapping and Brainwriting as defined by Stickdorn et. al. *(Ibid.)* These were chosen as it can be a challenge to do traditional brainstorms when being a designer working solo. When applying the Ideas from Journey Mapping the designer views the user journey through the eyes of the user or persona in order to spot the critical steps. From this, the pain points of the current user journey were written down on post-it notes and put up on a whiteboard. Brainwriting is the opposite of brainstorming and instead of shouting out ideas, then these are written down on post-it notes and put up on a whiteboard or wall. *(Ibid.)* The aim of these methods is generating numerous ideas, though upon doing these idea generation sessions the number of ideas was limited. The total outcome was 10 different ideas which were clustered into 2 categories of digital and non-digital ideas. Upon this exercise then I chose to use three of the non-digital ideas and one of the digital ideas, which were then used in the final service concept and is describe later in this masters thesis.

DIGITAL	NON DISIGAL IDERS
- SUDATINFO VIDEO - TIDY UP THE WERSTE-MAKE IT CLEAR KILL THE SOCIAL MEDIA CHANNELS - SEENIS IRRE- MAT J 4015 AL ADD A CHATBOT PO THE WERSTE	T PROVIDE SUPERVISORS WITH INFO METERIAL AST. INCUBATOR INFO METERIAL AST. INCUBATOR INFO RELVER 1 / SUBEDECK PLAND T T PAND T PROVIDE SUPERVISORS WITH INFO METERIAL AST. INCUBATOR INFO ROLL - UPS MIAT ENTREPRENEURSHIP AND THE STARTUP PROGRAM. MANDATORY AT ALL STUDIES PANY SICA L TOUCHPOINTS INCUBATOR INFO ROLL - UPS MIAT ENTREPRENEURSHIP AND THE STARTUP PROGRAM. MANDATORY AT ALL STUDIES POTTRINT STICKERS FROM MAIN ENTRANCE TO THE INCUBATOR AND THE STARTUP PROGRAM. MANDATORY AT ALL STUDIES POTTRINT STICKERS FROM MAIN ENTRANCE TO THE INCUBATOR AT 1'ST FLOOR

Picture 03: Idea generation on post-its

#### 5.3.2 ECOSYSTEM MAP (AS THINKING TOOL)

The term ecosystem originates from biological environments and the concept of an ecosystem and ecosystem theory was defined by botanist Arthur Tansley around 1935. (Tansley 1935), Tansley claimed that interactions are performed by all living organisms that interact with each other independently as existing objects "over time and space" (*Yoo et.al.2014*) & (*Lusch, Vargo and Gustafsson, 2016, p.2958*). This corresponds with the definition of a service ecosystem by Vargo and Lusch, who argues that an ecosystem is a constellation where mutual value is generated through service exchanges. This is done by individuals that are "connected by shared institutional arrangements" that integrate their resources into a somewhat self-contained and self-adjusting system (*Vargo and Lusch, 2016*) *in (Ibid*).

In relation to the case of the AAU incubator, the approach has been slightly different as the aim was not to create an entire service ecosystem. Instead, the aim was to utilize the ecosystem as a thinking tool, in order to map out the institutional social systems of the students of AAU, where the value in context is enabled (*Vink et. al, 2017*) & (*Forlizzi, 2008*) in (*Forlizzi, 2013*). See fig.11 Upon inputs from a supervision session this ecosystem mapping exercise was carried out as a combination of brainstorming and research to determine all the aspects of this system. Brainstorming in the sense of thinking, from personal experience and observations, about all the points at the university of which the students can interact with each other and generate mutual value by creating domestic and intercultural connections. The research in relation to creating this ecosystem map was carried out as a quick desk research session, where digital platforms such as Facebook and AAU.dk were the primary targets of attention. This was in order to gain an overview of which student organizations and social events are available at the campus of AAU Cph. During this mapping session then a few new ideas were also generated. These ideas are described in the chapter concerning additional ideas, see chapter 5.4.3.

The overall goal of this was to expand the perspective of what aspects that could be included in a future state of the incubator user journey. The new ideas generated through this exercise are not implemented in the redesigned user journey that is proposed in this master thesis. The reason for this is not to make the user journey too long and complex. Then also in relation to the tendencies/insights of the current user journey that was exposed through the qualitative research. *See chapter 5.1.* Still these new aforementioned ideas are included in the included in the additional ideas chapter as they can be of inspiration for the incubator onwards and then these touchpoints can potentially be alternative points of interaction for future user journeys. The icons has been added during a second iteration, in order to provide an understanding of what happens between the different points on the map.



Fig.11: The ecosystem of the students at AAU Copenhagen



Human interaction - Networking



Knowledge exchange



Money flow

പ്പ

Student resource

#### 5.3.3 THE REDESIGNED USER JOURNEY

Based on the knowledge of the research and the ideas from the idea generation session, an improved user journey was then created. In the sense that a part of the current user journey was re-used and then one touchpoint was removed, the pre-meeting with an incubator representative. This was done as it seemed redundant, because later on in the onboarding process there is a screening meeting, where the majority of the respondents of the research study, mentioned as the main source of having all their questions answered. Some touchpoints have then been added and especially one touchpoint that caused frustration in the current journey has been optimized, which is the website of the incubator (*User interviews, link to the audio folder is in the refs. list*). The other touchpoints that have been changed or added are that the steps of the journey which is a talk given by a teacher, instead of Jacob Lundberg, in class at any given line of study and in addition this is a handout of flyers related to the incubator to all the students. Roll-up banners and footprint stickers as wayfinding have also been added to the journey. *See fig.12, below.* 

#### **REDESIGNED USER JOURNEY**



User journey of the AAU inkubator Created by Simon Refn



Fig.12: The redesigned user journey

#### What Has Been Changed?

On the next page there is an overview of the different touchpoints that have been changed or optimized for the redesigned user journey. These changes are based on the insights from interviews of the users that were conducted during the discover phase. Some steps of the current journey are kept, as there was no need to change or redesign these. I have added this overview in order to make the changes clear and also the intentional outcome of this.

# Touchpoints that has been changed or redesigned for the new user journey



Step 01: Talk by a teacher instead of Jacob Lundberg

Step 03: Roll-up banner Placed at all entrances of AAU More students get info about the sup and incubator

The incubator is more visible at campus

S R ir

Step 04 +05: Redesigned incubator website Improved navigation Easy contact to incubator

Step 08: Wayfinding from main entrance to the incubator

Easier to locate the incubator

Fig.13: The changed, added or redesigned touchpoints

## 5.3.4 EXPERIENCE PROTOTYPING - PAPER PROTOTYPE

In order to make a quick test of the solution, a paper prototype was created. This method is mainly used to test interfaces and instead of creating a digital prototype everything is then printed on paper. As the user interacts with the interfaces the designer or team then simulates operations by moving the paper "screens" just as if it was a digital prototype. *(Stickdorn et. al, 2018)* In this case, the new user journey was printed on A3 paper and then each of the new or improved touchpoints was also printed on paper.

#### 5.3.5 TESTING

Two user tests of the solution were carried out in the workspace of the incubator, the first test was done with Jacob Lundberg and two interns who work for the incubator. The second test was with a startup team of three that had been interviewed during the discover phase.

The test was managed in the following way: I as the designer showed the testees the user journey and then for each of the steps explained about the actions and the touchpoints. The touchpoints that had been improved or changed these were then shown on paper to the users. E.g. in relation to the re-designed website then the "interfaces" and operations of this was tested separately, but still as a part of the journey.

The feedback for the solution was in both cases overall very positive and during both tests then feedback upon the redesign of the website was mentioned as being an important factor. Furthermore, Jacob Lundberg expressed that it was appreciated that there was a focus on several non-digital aspects in the solution, "because we know that face to face interaction works very well, in terms of getting more students into the startup program." (*Lundberg, J November 14, 2019. Personal interview.*)

## 5.4 DELIVER

The deliver is the last part of the second diamond in the Double Diamond framework. In this section, there is a presentation of the new user journey experience that has been created for the incubator of Aalborg University Copenhagen. This in the sense of a service experience blueprint, a description of the product report that can be found in the appendix and then there is a paragraph about additional ideas that potentially could become part of this service experience in the future.

### 5.4.1 PRODUCT REPORT

The product report can be found in appendix 08 and it is created as a delivery for the incubator at Aalborg University Copenhagen to use as inspiration for further development of the onboarding process to the startup program. The product report contains a presentation of the key findings of the research conducted during this project, a persona profile and a detailed overview of the service solution. The content of the product report has been created to provide a concise insight into the findings and perspectives for developing the final service concept.

## 5.4.2 SERVICE EXPERIENCE BLUEPRINT

The concept of a service blueprint was defined by G. Lynn Shostack. The tool is utilized to provide a functional overview of all the steps and experiences of the user journey along with the interactions of the user. As well as the frontstage and the invisible backstage processes throughout the different time phases (*Shostack*, 1982). This blueprint, *see fig.14*, was developed with inspiration from Polaine et. al., here the user is at the top and then all the channels of touchpoints in the middle, with the relevant IT systems and databases below the line of visibility. The blueprint is created in relation to the new user journey that is an optimization of the onboarding process of the startup program: from the moment when the user becomes aware of this possibility and until they become a part of the program. Though as a point of difference from the examples of blueprints by Polaine et. al the one developed for this project only has 3 overall phases, which are aware, join and use (*Polaine et. al*, 2013). This is done from the perspective of the research that showed that the respondents interviewed, had not started the actual startup program or had left it afterwards. Which in this case is considered similar to the develop and leave phases that are defined by Polaine et. al (*Polaine et. al*, 2013, p.94)

Service Experience Blueprint		BEFO	BEFORE / AWARE			DURING / JOIN				AFTER / USE		
e	Step	Teacher provides info+ flyer about SUP	Look at flyer	Walking from class to canteen	During lunch break	During lunch break	During lunch break	The day after	2 days later	5 min later	3 days later	2 weeks later
USE	Expe- rience	Christina & her team receives info + flyer	Christina & her team check out flyer	Notices roll-up banner	Search for further info about SUP	Find apply form, fill out & send appl. for SUP	Confirmation mail received	Screening invite received	Arrive at cam- pus and follow wayfinding to incubator	Attend screening meeting	Team offered a spot in SUP	Attend launch event
	Face to face	Pitch in class								Screening meeting		Launch event
ANNELS	Print		Flyer	Roll-up banner					Footprint stickers			
£	Mobile				Incubator website	Incubator website	Confirmation mail	Screening invite			Welcome mail	
	Location											
	Line of	visibility			<b></b>	<u> </u>		<b></b>				
PROCESSES	IT system				Search inquiry through the IT System	1.Search inqui- ry through IT system. 2. Appl. sent through system	Automated mail response	Mail sent by Jacob Lundberg			Mail sent by Jacob Lundberg	
BACKSTAGE	3'rd party/ database				Response from data base. Requested info sent	Resp. from data base. Requested info sent. Application Registered	Mail sent from database/ mailserver	Mail form activated from database			Mail form activated from database	

Fig.14: The Service Experience Blueprint

#### 5.4.3 ADDITIONAL IDEAS

This paragraph is a short description of several additional service concepts that could be considered for future development. These are created from the perspective of allocating the resources of Jacob Lundberg so that he can focus mainly upon working and sparring with the different teams and develop the startup program. This was something that was expressed on one of the pre-meetings, that was held before this project was started.

- A 2-4 day workshop about entrepreneurship and the startup program, this should be mandatory for all studies at Aalborg University Copenhagen. Then in some cases after the workshop, Jacob could show up and present himself and answer questions about the startup program or the like.
- A chatbot could then be added to the website so that in case some of the users have some questions then it might be able to answer these. The aim of this should be that Jacob Lundberg has to answer fewer mails and is able to spend even more time with the

teams and only reply to applications from students or teachers that want to become a part of the SUP

- Ø
- As a sort of follow up when the teams have been through the entire startup program and have operated as (a successful) company for 1-3 years. Then some of these teams could be invited to an event at the incubator where they could talk about their experiences and then inspire the teams that are currently a part of the startup program at that time.
- N<sub>PS</sub> ·
  - NPS: Net promoter score is a tool that is used by numerous companies to measure satisfaction among the users and whether they would recommend something like the startup program.

#### The additional ideas from the ecosystem map are described below

- Feedback Fridays, this is a concept which exists in the startup community of Copenhagen and this could very well be converted to the surroundings of Aalborg University Copenhagen. Feedback Friday is a monthly event where startups can in front of an audience get feedback upon an aspect of their business, e.g. if they have created a new website or have improved their product or service or something else The point of the event is that the team gets constructive feedback in a non-judgmental atmosphere.
- Incubator Networking events could be, similar to the events at AAU Aalborg, mentioned in chapter 2.1.3, open events at the campus in Copenhagen, where interested students can come and mingle with the users of the incubator. This could be with the aim of networking, finding internships or for students that have an interest in entrepreneurship. The opportunities of such an event are numerous.
- Incubator pop by booth, this could be an event e.g. every second month where a small booth could be placed in the main canteen at the campus, with representatives of the incubator present and then the students could pop by and chat and ask questions or the like.

# 6. DISCUSSION / REFLECTIONS

## 6.1 OVERVIEW

The first part of this chapter contains both reflections upon the design process of this project and then also reflections on the tools and methods that were selected and utilized.

The design process that is documented in this report is based upon an already existing service, the incubator of Aalborg University Copenhagen. In order to optimize the onboarding process of this, then I have used various service design methods and tools.

Then the second part of this chapter contains reflections and learnings in relation to the research question. In the third and the fourth part of the chapter, there is a description of the limitations and areas for further research.

# 6.1.1 REFLECTIONS UPON THE DESIGN PROCESS

Before this project was started, an overall timeline was created, containing certain deadlines of when each chapter was going to be finished. Then the Double Diamond, which consists of both diverging and converging work phases, was chosen as the process framework. Meetings with my supervisor were also agreed upon to take place every second week. In relation to the collaboration and then approx. 1,5 months before the project started then one meeting was carried out. However, there was no demand from the incubators' side related to specific meeting times. I was given free range and was able to plan meetings as the need arose. The reflection upon the approach of my supervisor is that it was beneficial in the sense that it supported me in keeping the deadlines and that the thesis report was written all along, throughout the entire process along with all other activities related to the project.

## 6.1.2 COLLABORATION

The collaboration partner throughout the design process has been the incubator of Aalborg University Copenhagen, in the form of business developer Jacob Lundberg, whom I have had 3 meetings with, one test session and some communication via email. This process has been different from previous semester projects where there was no collaboration with a company or organization and with these projects the aim was to create a new service solution. With this, there was the possibility to utilize a tool like the user journey and through that improve something that already existed. Furthermore having a partner of collaboration throughout the project and the aspect of being able to stay fully dedicated to a singular project, this provided me with a stronger affiliation to the project in the sense that when making such a collaboration.

## 6.1.3 THE CHOICE OF TOOLS AND METHODS

Throughout this project, I mainly worked with the user journey that was employed during the discover phase, in the way of mapping the first rough and assumption based user journey. This is how it was created in collaboration with Jacob Lundberg and his sparse knowledge, gained from talking to the users about how they had become aware of the sup.

The next step was to gain insights and map the current actual journey of the users, where the user journey matrix was utilized. This was created from the assumption based user journey *(Stickdorn et. al, 2018).* 

The approach of using a specific tool such as the user journey matrix in an interview session was different from previous semester projects of the study, where traditional semi-structured interviews were used to gather insights from the users (*Bjørner,2015*). Furthermore, it also made the work process somewhat faster in terms of creating a user journey that represented half of the users that were interviewed and providing valuable insights into the pitfalls in that journey. Through the first part of the second diamond, the develop phase, the user journey was used to gains insights that led to the creation of a new and improved user journey and with that also a service experience blueprint. During the entire process, the user journey has been useful in relation to the different aspects of the project.

Working with one specific tool this way, allowed me to get an in-depth knowledge of the possibilities and limitations of it. This is how the user journey and the other tools used in service design tend, in some cases, to simplify the complexity of reality, which can be both positive and negative since the simplification can result in the fact that an outsider gains a swift understanding of the general issues at hand. The negative aspect though is that the individual does not gain a deeper insight into the complexities of the aforementioned issues (*Stickdorn et. al, 2018*).

To sum it all up: the data gathered for this project was qualitative and the main challenges of this are that it is not quantifiable, compared to quantitative data and therefore it can be difficult to make any generalizations about the users. Additionally, the collection of qualitative data is also quite time-consuming when insights have to be derived. This due to the need for transcriptions, in the form of notes, in this case, are needed for each interview. This statement is based on personal experience of using quantitative data from surveys gathered during previous semester project processes. Though in those cases there is also a limited amount of respondents and because of that then these datasets are smaller than in other situations. Despite this and despite the argument by Cresswell that a combination of both guantitative and gualitative data, also referred to as mixed-method research provides deeper and more thorough insights into a given research problem (Cresswell, 2016), It was then decided to solely work with the qualitative research methods because this gives an opportunity to ask in-depth questions and if needed ask follow up questions along the way and by that get more valuable insight. Then also in relation to the limited timeframe at hand. Furthermore also for the reason that I chose to focus on the students that had already become part of the startup program. Then in terms of gaining insights from these respondents, the qualitative research method seemed to be the most relevant approach.

# 6.1.4 REFLECTIONS UPON THE RESEARCH QUESTION

The main purpose of the incubator and the startup program at Aalborg University, Copenhagen is to provide a possibility to become entrepreneurs and start their own business while studying. The incubator is partly supported/funded by all the different faculties, hence the fact that it should be of interest that as many students as possible become aware of this opportunity. Nevertheless, through the research and knowledge exchange meetings, it was found that even though there is a certain amount of admittance to the startup program, there are some challenging aspects in relation to the onboarding process of new users to the startup program. One of these challenges is making the students aware of this opportunity. In order to do this in an effective manner, it is undertaken face to face, which according to business developer Jacob Lundberg takes a lot of resources such as time and effort (*Lundberg, J Aug.22, 2019. Personal interview. Link to audio in the web refs. list*) The other challenging aspects are mainly related to the before phase in the user journey of the onboarding process, in the sense that several of the teams experienced that it was somewhat difficult to find proper information about the startup program and also contacting the right business developer.

In terms of solving these challenges and in relation to the research question, I chose relevant tools and methods of service design, that were taught throughout the service systems design master at AAU and made use of these. The potential of applying this approach is that it is a useful way to gain insights into the behaviors, emotions, and experiences of the users when

interacting with a service and to envision and develop a service by granularly mapping the interactions of the involved stakeholders. (*Stickdorn et. al*, 2018)

The service design approach was put to use in relation to conducting the knowledge exchange meetings, getting insights upon the users and mapping each of their journey experiences. This led to the next step, which was the mapping of the current user journey, which revealed the weaknesses and the pitfalls of this. Then this led to the development of a new service solution, in the sense of a new user journey with the different improved or redesigned touchpoints. Furthermore, several of the tools, e.g. user journeys and personas, that are used in service design has a visual aspect. These tools can be made avail of to make the invisible aspects of a service visible. In relation to stakeholders and other outsiders, the tools and methods of service design can provide clear and comprehensible insights of the data results that have been collected. Furthermore, they can also provide feedback on the service, suggest improvements and participate in the design process. Additionally as defined by the Service Design network, the service design approach can support teams in envisioning " solutions that do not yet exist, (..) transform them into possible service futures, and express and evaluate, in the language of experiences, the quality of design" in (Holmlid & Evenson, 2008).

#### Shortcomings of using service design

When applying methods and tools of service design, there is a potential risk of, e.g. bias when doing research this could be in the sense of cognitive biases. This is discussed by *Sechrest and Sidani*, they argue amongst other things that this type of bias can be of both the researcher and the respondent. Where the researcher asks questions that generate interesting answers and in relation to the respondent it can be difficult to "get accurate information about what is in people's minds(..)" (*Sechrest, L, and Sidani, S, 1995*). It could also be, bias in the sense of when doing interviews that the interviewer influences the answers of the respondent. In addition, it can also be argued that when doing the research for a project like this, then interviews with 8 teams does not provide a broad and deep insight into the user journey of the students. Furthermore, as mentioned in the previous chapter, then in relation to the models used in service design then as well as they can provide a comprehensible overview, then e.g. the user journey is also simplifying the complexity of reality. This was something that I experienced during the research phase where a couple of the journeys could not be used in the visualization of the current user journey, fig.08.

In addition when the interviews of the users and some of the experts were conducted then I experienced that I had to explain what service design is and also the user journey and touchpoints had to be explained. Though this was done in broad terms in, what I thought was, an understandable manner.

## 6.1.5 THE PERSONAL PERSPECTIVE

The experience of writing this thesis on my own has definitely provided personal development as a designer, as mentioned earlier, in the sense that one of my main challenges has been planning my time and keeping an overview of the entire process. This went quite well compared to a previous experience. This was at the 8th semester of my masters degree, I was faced with the challenge of not being a part of a study group, but being alone. On top of this came an enormous amount of workload pressure. To cut a long story short I ended up failing my semester project exam. So then when I had to do this project I was worried whether it would be possible to make a thorough plan and stick to this more or less. I believe that I succeeded in doing so by following a more structured way of working.

In relation to the other learning objectives then these have also been reached. The key takeaways from this project are that I learned to select relevant tools and methods and to apply these in relation to an actual case of an organization such as the AAU Incubator. The challenge was then in exploring, analyzing and developing a service concept was, in relation to this, also solved. Furthermore, my ability to conduct research and synthesize the insights was improved, this was especially evident during the process when as an epiphany I realized that the problem statement and with this the scope had to be changed. Something that has been a challenge personally of realizing in previous projects. The process of working with the user journey both through the knowledge exchange meetings, interviews and development of the final service concept, has provided me with a deeper knowledge and proficiency of this tool.

## 6.2 CAN MY FINDINGS BE GENERALIZED?

This thesis has highlighted the potential and shortcomings of using service design methods in the specific context of the case that I analyzed. Can my findings be generalized? For example, could the same service design-based approach be applied to other incubators? In order to validate the approach and method of this project, three validation interviews were carried out with business developers from the incubators at AAU Copenhagen, DTU-Skylab and Science and Innovation Hub of UC. The interviews were conducted as unstructured interviews, without any interview guide because the purpose was to keep a free-flowing dialogue (*Bjørner, 2015*). However, there were some perspectives that I wanted to discuss along the way. This was mainly in relation to the aspects of the research question and whether the approach of this project could be generalized and used in other cases. Then also I wanted the respondents to reflect upon whether this could be of any value in the case of the incubators that they represent. During each of the interviews, I showed the respondents a slide deck with a concise overview of the project. The design framework that was used, the revised problem statement and two slides of the current user journey and the redesigned user journey. Then also a bunch of slides about the

different aspects of the solution that was developed as an outcome of this master thesis. *See appendix 09* 

#### **6.2.1 FINDINGS AND REFLECTIONS**

From the validation interviews, it was found that the approach is valuable in terms of getting relevant insights that can be generalized and applied to other incubators. The first of the validation interviews carried out was with Jacob Lundberg from the incubator at AAU. Here it was found that the redesigning of the website was valuable and an important aspect in relation to the onboarding process. Though the physical aspects of the redesigned journey were also highly valued and the feedback on this was "I really like the physical aspects of this journey because we know that this is something that really works here and not something fancy digital." (*Lundberg.J, 2019, November 30. Personal interview.* Link to the audio in the web. refs. list).

In particular, I was excited with regard to the insights from the second and third interviews. Not least because these were conducted with representatives of other university incubators. During both of these interviews, there were questions in relation to the current user journey. Whether there were insights of any traction on students that "fall out of" or quits the onboarding process due to various points of friction. When the research, was conducted for this project it was not possible to get any insights into this, as the respondents pointed out from the validation interviews that this is an important aspect when mapping the journey of the users. It was also mentioned that insight into what makes the users decide to sign up to become part of an incubator. This aspect is not added to the journey visuals in this masters thesis. From the research conducted during the discovery phase, it was found that the users at AAU do sign up to the startup program based on 3 factors.

Either they have a startup that they want to develop further, this can be done as an internship in their own company or as an extracurricular activity. Or users have an idea and want to start a business based on this or on a course of innovation during their study and during this has developed a concept that they realize has the potential of being developed into a business.

Furthermore, the feedback on the current and new journey was that if these had been done in relation to the other incubators mentioned in the previous chapter then the onboarding would have been more complex. In the sense that the respondents of the validation interviews have experienced that it is necessary to make their users aware of their incubators several times before they consider signing up to be part of a startup program. This was specifically in relation to the entry point of both the current and new user journeys that were mapped in relation to my project. This entry point, in the current journey, is a pitch in class about the incubator given by Jacob Lundberg and in the new journey, it is an informational talk by a teacher of the given line of study. In addition, the respondents of the second and third interview also mentioned that it would be necessary to map the entire journey of the users, in their cases. This means not only the onboarding process and when the users are involved as entrepreneurs in the incubator and

also when they leave it again, the entire end to end experience. In relation to the case of this project and the incubator at AAU Copenhagen, I opted for, as mentioned previously to focus solely upon the onboarding process because when the users become part of the startup program, then the rest of it is unified for all the users and then when they exit the program then they receive a survey in order to give feedback on their experience. Further in relation to this since none of the users of the AAU incubator had been through the startup program yet, because it was officially launched for the first time in September 2019, then it made the most sense to only focus on the onboarding process.

Moreover one of the respondents declared that this, the mapping of the user journey of the students, was something that the specific incubator, he represented, would consider doing in the near future. In this context, I was asked to send my slides to this representative after the handin. I'm aware though that this has to be cleared with the AAU incubator and potentially also other representatives of the university.

One more perspective in relation to the current user journey and the new user journey is that I'm aware that these seem simplified and that all social media channels of the AAU Incubator have been ignored completely as potential touchpoints. This decision was based upon the insights of the conducted research for this project. Here it was found that the social media channels seemed irrelevant and not some that they would interact with.

Lastly, it is important to state that if the service design approach and the mapping the journeys of the users in relation to other incubators. It is then important that this is carried out by someone with a deeper knowledge of service design in order to get the proper insights and also in terms of using the tools and methods correctly. (*Nygaard. F & Fernvall. PS 2019, December 5. Personal interview.* Link to the audio in the web. refs. list).

## **6.3 LIMITATIONS**

In this project process, there have been some elements of limitation. It is important to point out that only 8 student interviews were conducted due to the limited time schedule. Also due to the fact that at the beginning of the process, this was in August 2019, it was somewhat difficult to get a hold of students of the incubator in order to conduct the interviews with them. I'm aware that a larger amount of qualitative data would have been beneficial in terms of a deeper insight into the user journey of the students.

Furthermore, a decision was made only to interview representatives from 3 of the incubators that are included in the comparative study of the other Danish and international incubators. *See appendix 03* This choice was based upon the following reasons. The incubator, the FIB Hub in Aalborg was chosen as seemed natural to choose the incubator that was established first at Aalborg University in Aalborg. The SUND Hub at Copenhagen University was chosen because they are collaborating with the incubator at AAU in Copenhagen to some extent, this is according to Business Developer Jacob Lundberg Link to the audio in the web. refs. list). Last but not least

Skylab at DTU was chosen due to their program being rather different from the other incubators presented in the desk research study in Chapter 05, as they provide 3 different programs, including an accelerator program. These 3 incubators were also, as well as the number of interviews, chosen due to the limited time frame.

## 6.4 AREAS FOR FURTHER RESEARCH

During the discover phase several aspects or topics were considered to be explored further. Some of these aspects could potentially have been relevant and might also have broadened the research and scope of this thesis further and yet other aspects could be relevant if this project was carried out by an anthropologist or the like. Though in relation to the chosen scope of the thesis and also the timeframe I decided not to delve into these topics further. Instead, the areas/topics are added in this paragraph in order to serve as inspiration for additional research in the future.

This could be a research study based upon the general knowledge about the incubator among the students at AAU, due to the fact that the incubator and startup program is relatively new and not that visible at the campus in Copenhagen. A cultural analysis as to why students sign up to the startup program, why they do not and also an analytical study on the cultural differences between AAU in Aalborg and Copenhagen might then be relevant to conduct as well.

# 7. CONCLUSION

Through this thesis, I have explored the potential of optimizing the onboarding process of the incubator at AAU Copenhagen. This has been done through the approach of service design and with the use of relevant tools, such as the user journey, and methods from this discipline. During the entire process, I have worked according to the design framework, the Double Diamond, this supported the planning of the work that was carried out. Firstly through the discover phase where knowledge exchange meetings, desk research, and qualitative research was carried out.

This was to get a contextual understanding of the incubator and also in order to scope the thesis. Then through the define phase, the findings were clustered and amongst others, in order to be able to empathize further with the users, it was necessary to create personas. The current user journey was also mapped at this point which led to a revision of the problem statement, *see* p.40. This also changed the scope from focusing upon optimization of the user journey as an end to end experience, in the sense of before the users become part of the startup program to being a part of the program, as the during phase and then leaving the program as the after phase.

That was changed to a focus upon optimization of the onboarding process and then this was split into a before, when the users become aware of the startup program, the during phase is then when the users get in contact with and apply for the program and then the after phase is when the users become a part of the program as mentioned several times in the masters thesis itself. Then through the last two phases of the Double Diamond, the develop and deliver phase, I came up with a potential service solution, a redesigned user journey that spans across both physical and digital touchpoints. The purpose of this was to include touchpoints that could make the incubator more visible to the students at the campus of Aalborg University in Copenhagen and also make this journey more straight forward.

Then in conclusion to the initial problem statement, see page.14, of this masters thesis, is a solution to that, as the process of how service design might be opted for to explore and optimize the user journey of the Incubator at AAU Copenhagen. Additionally then in response to the research question, which is:

The theoretical focus of this thesis is to reflect upon potentials and shortcomings of using service design to optimize the user journey of the incubator at Aalborg University. Particularly, the thesis is concerned with how these findings can be generalized and used in other contexts than the particular chosen.

In relation to these research aspects, it was found that there is a considerable potential in using service design to optimize the user journey of the incubator at Aalborg University. Furthermore, there are potential, yet limited shortcomings of this approach such as the potential biases when researching or that the insights from the research are insufficient. More important than that was when the approach of service design is opted for, it then has to be carried out by someone with a certain experience and knowledge about this.

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Link to the folder with all the audio, files that has been used for this project. This folder also contains interview transcribes, consent forms of the respondents and a slide deck that was used for the validation interviews.

https://drive.google.com/open?id=1Xshl1OmS2YYZL9DjrO-R7fi7YM7q4ByO

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# **APPENDICES**

#### Appendix 01: Activities and services of SEA

#### 1.1 SEA's services og aktiviteter

SEA har til opgave at understøtte udvikling af innovation og entreprenørskab som en del af uddannelse og formidling på AAU. Kontoret har 4 overordnede opgaver der kan beskrives som:

- Entreprenørskab i uddannelserne,
  - SEA arbejder centralt som videncenter for eksempelvis undervisere, og varetager dels undervisningsforpligtelser i de enkelte studier og dels fundraising til og assistance og procesledelse i udvikling af nye entreprenørskabskurser på de enkelte studier og på tværs af AAU.
- · Kulturskabelse og awarenes omkring entreprenørskab som en karrierevej,
  - SEA udbreder generelt kendskabet omkring entreprenørskab som karrierevej, enten via opstart af egen virksomhed med basis i en idé udsprunget af studiet eller ved at bruge sin faglighed som innovatør og forretningsskaber i eksisterende virksomheder. Dette gøres via events og generel markedsføring i samspil med uddannelsesmiljøer og AAU Karriere.
- Iværksætteri og inkubatorer
  - SEA varetager den centrale universitetsfunktion for iværksætteri på AAU. Dette drives gennem udvikling af tilbud som forretningsudvikling og adgang til ressourcer, ekstracurriculære undervisningsprogrammer og fysiske miljøer der fremmer iværksætteri.
     SEA samarbejder med de øvrige universiteter i Danmark om udvikling af iværksætteri, bl.a. gennem foreningen Venture Cup.
- Tværfaglige satsninger og kurser
  - SEA varetager understøttelse af samarbejde mellem VIP på tværs af studier, skoler og fakulteter, i det der dagligt betegnes som AAU Entrepreneurship Faculty, som er 70 VIP'er på tværs af AAU.

I udførelse af kontorets opgaver, varetages en række funktioner i samarbejde med forskere, studerende og eksterne interessente, med henblik på at varetage opgaverne koordineret og med fokus på synergimuligheder på tværs af hele universitetet. Således udgør kontoret et videncenter omkring innovation og entreprenørskab hvilket blandt andet udnyttes ved at samarbejde med forskere om udvikling af nye kurser og uddannelser med fokus på entreprenørskab, understøttelse af undervisning i entreprenørskab på tværs af campus, hjemtagning af midler der understøtter universitetets arbejde med entreprenørskab, og gennem udvikling af rammer for og sparring med studerende der ønsker at realisere deres projekt som opstartsvirksomhed eller innovativt projekt i samarbejde med virksomheder.

#### Appendix 02: Mail from Jacob Lundberg 12.04.19

Emne for projekt med AAU Inkubator



Jacob Lundberg fr 12-04, 14:16 Simon Emil Reumert Refn 🛛 🖇 Ş Svar til alle | ∨

Du svarede den 13-04-2019 22:30.

Hej Simon

Jeg har talt lidt med min kollega, Tomas, om din potentielle opgave med AAU Inkubator.

Det vi talte mest om var Customer Journeys for de studerende, der er i kontakt med os – enten som en del af vores startupprogram, i praktik i deres egen virksomhed, eller noget helt tredje. Jeg ved ikke hvordan det passer præcist med dit studie, men det kunne være fedt at mappe vores "kunder", og se hvor vi kan optimere enten deres oplevelse eller vores ressourcer. Måske er der steder, hvor vi med minimal indsats kan øge antallet af ansøgere til Inkubatoren med 25% - who knows. Da vi er relativt hårdt spændt for, har vi sjældent tid til at gøre os disse refleksioner i hverdagen, så det ville være fedt at få en "outsiders" dedikerede øjne på.

"Customer journey innovation" - hvis det er et begreb.

Kunne dette give mening i forhold til hvad der kræves fra dit studie?

Det er selvfølgelig åben for ændringer, men det var noget I den retning, vi havde forestillet os. Jeg er lidt presset for tiden, men kan godt sætte flere ord på alt dette efter påske, hvis det er i ok tid for dig.

Hav en god weekend!

Venlig hilsen / Best regards,

#### Jacob Lundberg

Business Developer | SEA | AAU Innovation Talafon: (+45) 60 19 96 88 | Email: jalu@adm.aau.dk | Wab: www.sea.aau.dk

#### Appendix 03 - Overview of selected Danish and international incubators

	DTU Skylab	AAU Inkubator A	CU - Science Inn	CU - SUND Hub	CU-Human and leg	ITU-Startup prog	CBS-CSE	Harvard Incubation	Harvard Launch	Pagliuca Harvard	Stanford Launch	M.I.T Delta.V
Work Space	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Mentoring		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Workshops		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	<b>~</b>
Advisory	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Events	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Funding	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Acc. prog.	$\checkmark$						$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$
Peer to peer		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Sparring		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Coaching		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Network	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Ext. partners	$\sim$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Pitching	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Matchmaking			$\checkmark$		$\checkmark$		$\checkmark$					
Internships		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$					
Competetions	$\checkmark$					$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Diff. Prog.	$\checkmark$						$\checkmark$		$\checkmark$			
Roadmap												
Membership												
Post prog. supp.											$\checkmark$	
Equity free prog.	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$
R&D Exp.						$\checkmark$						
Cloud Comp.						$\checkmark$						

#### Appendix 04 - Mail from Jacob Lundberg



Jacob Lundberg

on 09-10, 14:39 Simon Emil Reumert Refn 🛛 🛠 Svar til alle ↓ ∨

Du svarede den 11-10-2019 11:01.

Hej Simon

Ja, det er ret besværligt rent juridisk, hvis AAU skal eje dele af så mange virksomheder. Mange er også **for** early stage til det kan lade sig gøre rent praktisk. De har ikke et CVR nr. endnu. Derudover er det heller ikke noget AAU ønsker sig. Vi vil gerne holde en vis afstand til vores startups, og det vil forringe deres oplevelse, hvis de havde en ekstern faktor, der kunne bestemme over deres virksomhed.

Der er helt klart forskel på de teams, der kommer med i programmet. Nogle har arbejdet på deres idé i et år, og andre har først lige fået idéen et par uger før de starter.

Generelt set – jo længere et team er, desto mindre hjælp har de brug for. Det er mere at gennemlæse ansøgninger til fonde osv. Et mere etableret team har ofte også fastere rammer for deres møder med mig og mine kolleger – de har selv foreslået disse faste rammer.

De tidlige hold er lidt mere kaotiske og deres proces er meget forksellig fra team til team.

Jeg håber det gav lidt svar :)

Mht. din tidligere mail om at vende det hele med kollegerne i Aalborg, så skal jeg derop i morgen og håber på at få mulighed for at vende det med dem.

#### Appendix 05 - Navigation diagram

Danish version of AAU.dk







#### Appendix 07 - The rough user journey of the AAU incubator Cph.

#### summit 2 after phases finish / drop out Mentor: Before During After This phase is Pitch customized for each team 2 1 3 Workshops Workshops 6 Months 6 Months 6 Months Evaluation mail SEA CPH / AAU Inkubator Info about the incubator SEA YouTube Incubator flyers SEA Website at the infoscreens SEA Facebook page AAU Incubator FB group Channel A presentation video of Christina's business idea She sees / picks one or two Leaves canteen Christina opens Christina joins the incubator to dev. Christina She enters her classroom Joins the after lunch and Facebook on smartphone and Leaves the enters the opens computer to look at SEA website for more of the flyers of the incubator Facebook program after 9 months notices canteen a business idea group checks the Facebook info is uploaded to the YouTube Channel page with a thriving business AAU SEA Website AAU AAU Launch Work-Sparring Business Mentor E-mail E-mail E-mail shops panel Summit event meetings Touchpoints **User actions** First 3 On Demand After "speed-dating she finds She pitches She applies for for the SUP Receive Receive Accepted Meets month bi-weekly her idea the other confirmation screening and offered to a panel of CEO's / a mentor\* and fills out a spot in the SUP mail invite teams the web form Potential investors

#### Rough User Journey of the AAU Incubator / SEA Cph

Appendix 08: The Product Report



Using Service Design to optimize the onboarding service of the Incubator at Aalborg University, Copenhagen

Master in Service Systems Design



Simon Emil Reumert Refn

#### **PRODUCT REPORT**

19/12-2019



# 

# SERVICE SYSTEMS DESIGN AALBORG UNIVERSITY COPENHAGEN

# **MASTERS THESIS**

TITLE: Using Service Design to optimize the onboarding service of the Incubator at Aalborg University, Copenhagen.

**SEMESTER: 10th** 

PROJECT PERIOD: September 2019 - December 2019

COLLABORATOR: AAU Inkubator AC Meyers Vænge 15 2450 København SV

CONTACT PERSON: Jacob Lundberg, jalu@adm.aau.dk

**PAGES: 24** 

SUPERVISOR: Luca Simeone, lsi@create.aau.dk

HAND IN DATE: 19/12-19

AUTHOR: Simon Emil Reumert Refn, student no.20177414

"You can't have an experience without experiencing it" - Bill Moggridge, IDEO

#### PRODUCT REPORT

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# **1.INTRODUCTION**

#### Introduction

This product report has been created as a concise outcome of my masters thesis. The purpose is to provide a presentation of the final service concept, which was developed through the overall research and design process. The thesis project and product report was conducted and drafted by Simon Emil Reumert Refn, from September-December, 2019. The product report is a deliverable to the incubator at Aalborg University Copenhagen, which was the collaborator of the project.

The scope of the thesis is the user journey of the students, in relation to the incubator at Aalborg University, Copenhagen. The initial approach was to view the user journey as an end-to-end experience of when the students become aware of the incubator and program, when they become a part of it and then leaving the program after 12-18 months. Though through the project process I found it was necessary to revise the scope and change it to a focus upon the onboarding process of the students on boarding process to the startup program. This product consist of a brief presentation of the project approach and the findings hereof. That led to the development of the final service concept. Below is revised problem statement, which the project is based upon.

#### Revised problem statement

How to utilize the user journey as a tool, to improve the onboarding process of the incubator at Aalborg University, Copenhagen.

# **1.1 PROJECT APPROACH**

In order to have a guideline for the overall process of this Master thesis, I chose to work with the Double Diamond framework that is developed by the British Design Council (Design Council 2007). This was in order to keep a structure throughout the design process. This framework consists of the four phases Discover, Define, Develop and Deliver where both the aspects of divergent and convergent thinking are applied. Furthermore it was chosen to work primarily with qualitative research methods such as interviews, knowledge exchange meetings and a bit of observations. The quantitative methods was left out of consideration for the reason that it was found quicker to map the journey of the users and make interviews at the same time in order to get some valuable insights and then move forward. In addition then from previous experiences of collecting quantitative data for projects of the study, can be very time consuming.



#### THE DOUBLE DIAMOND FRAMEWORK

# **1.2 PROJECT CONTEXT - USER JOURNEY** AS A TOOL

The main tool throughout the project was the user journey that was utilized when during one of the knowledge exchange meetings to map the initial rough and assumption based user journey. Then it was used during the interviews with the users to map the current journey and to develop a new service solution of the AAU Incubator. Furthermore there was also an aspect of the interviews with the representatives of the other incubators the AAU Incubator in Aalborg, DTU-Skylab and Sund Hub of University of Copenhagen that revolved around the user journey. This was in order to explore to level of insight upon the user journey of the students in relation to these incubators. Below is a visualization of the user journey throughout the project. From the rough and aasumption based journey to the redesigned user journey.



# **2.EXAMINING THE DATA**

During the research phase then interviews with 8 teams of users of the incubator were carried out, along with mapping their user journey experience. In order to achieve a comprehensible overview of the data, then a decision was made to cluster all the data, on a whiteboard. This was done by putting up all the touchpoints of the current journey of the users on a whiteboard. Then all the key findings were written on post-it notes. All of the findings on the post-it notes were then clustered by each of the touchpoints. The main outcome of this process was that the scope of the project was changed from a focus upon the user journey in relation to the AAU incubator as an end-to-end experience. (*Stickdorn et. al, 2018*). Where the onboarding process is the before phase, the startup program is the during phase and then the after phase is when the users leaves the program. Then the perspective was changed to a focus solely on the onboarding phase as a user journey and then this was split into a before, during and after phase. This decision was based on the fact that none of the respondents of the conducted interviews had started upon the actual startup program. Then also because the startup program has a unified structure for all the teams of the startup program and this could not be changed in any way.



# 2.1 CURRENT USER JOURNEY

In continuation of the conducted user interviews and the data clustering exercise it was found relevant to visualize a representative user journey of 4 out of 8 respondents, with this an emotional layer and quotes of the respondents were added. Although I'm aware that this is not the only possible journey. There are several other journey opportunities that bring students in touch with the incubator. An example of this is the students that do an internship in their own company. But this visualization was done as a generalization and in order to make it more explicit and also in order to elucidate an empathy aspect in relation to the user. Then in addition in relation to the user journey matrix that I have used, the actual journey was not visualized, which made it seem rigid, because it just showed the journey through the sequenced touchpoints, instead of a sequence of user interactions of the different touchpoints. Even though the clustering exercise also led to another perspective of creating a journey map of a different zoom level, in the sense of splitting this part of the journey into a before during and after phase, so that the onboarding process of the incubator becomes a user journey in itself, that consists of a before, during and after phase (*Stickdorn et. al, 2018*). An example of this can be seen in the figure below.



#### **CURRENT USER JOURNEY**

User journey of the AAU inkubator Created by Simon Refn



# 2.2 PERSONAS

During the design process it was found relevant to create personas based on the data conducted during the discover phase of the project. This was in order to have a character to relate to when the solution was going to be developed.

In terms of creating personas that are identifiable, beyond stereotypical and whose lives I as a designer could actively relate to. Then the engaging perspective as defined by Lene Nielsen has been chosen. This approach was chosen in order to create a realistic description of fictitious characters and also with the aim to have some relatable characters to design for in the development phase. This perspective is based on how involvement and insight can be generated from storytelling (...) (*Nielsen, 2004*) as found in (*Nielsen, 2019*).



#### Scenario 01:

One day Christina and her teammates listen to a short presentation, by their teacher, about the new incubator and startup program at AAU. Afterward, they talk to the teacher and get a flyer with info about this and the same day they see the new information roll ups about the incubator at campus.

Then the three teammates talk to each other over lunch and decide to find more info at the new website of the incubator and apply for the startup program. They receive a confirmation mail and the next day an invitation to a screening meeting three days after.

The team gets a bit nervous because they are in need of support in order to develop their business concept further. Upon hard work, during the following two days, Christina and her teammates create a killer presentation for the screening meeting at the incubator. On the day of the meeting, they are led up the incubator by following the new footprint stickers that from the main entrance at AAU to the entrance of the incubator at 1'st floor in the same building. After the screening, the team is delighted and then the next day they receive a welcome to the program mail and an invite to a launch event, to weeks after.



#### Scenario 02

Michael has graduated as a Master in Medialogy six months ago from AAU and has dedicated all his time to a startup that he has co-founded with one of his friends, Christian. They have had an office at an incubator in the centre of the city, since they graduated, and recently they needed a new office. Then via a friend that is still studying at AAU, Michael has become aware of, the fact that the University had just launched an incubator and a startup program 2 months previous. Michael and Christian decided to find some information about this and tried to find some information about this at AAU.dk but can not find any information. Somewhat frustrated, they decided to search via Google and found the website of the incubator and it is also a challenge to navigate this, though after a while the relevant contact information is found. As an outcome of some email correspondence, Michael and Christian are invited in for a screening meeting and after a week they became part of the startup program.

# 3. THE SOLUTION

In this chapter there is a presentation of the new service solution created for the incubator at Aalborg University, Copenhagen. The solution is a redesigned user journey where selected touchpoints has been improved or redesigned. On the next page there is detailed visual overview of the changes that has been made. This was created during an ideation phase where the total outcome was 10 different ideas, which were clustered into 2 categories of digital and non-digital ideas. Where 4 of these were selected and then used in the service solution that are presented in this report.

Furthermore in order to expand the perspective of what aspects that could be included in a future state of the incubator user journey then an ecosystem map was created. This was carried out in order to map out all the points at the university of which the students can interact with each other and generate mutual value by creating domestic and intercultural connections. Upon this exercise then 3 more ideas were generated. Though these are not implemented in the redesigned user journey that is proposed in this master thesis. The reason for this is not to make the user journey too long and complex. Then also in relation to the tendencies/insights of the current user journey that was exposed through the qualitative research. But the aforementioned ideas are added in chapter 5.1, additional ideas, ecosystem map. The ecosystem map can be seen below. After that is the presentation of the aforementioned service solution.



### 3.1 THE ECOSYSTEM MAP



Human interaction – Networking



Knowledge exchange



Money flow

മ്

Student resource

# 3.2 THE REDESIGNED USER JOURNEY



User journey of the AAU inkubator Created by Simon Refn



### 3.2.1 WHAT HAS BEEN CHANGED?

Below is an overview of the different touchpoints that have been changed or optimized for the redesigned user journey. These changes are based on the insights from interviews of the users that were conducted during the discover phase. Some steps of the current journey are kept, as there was no need to change or redesign these. I have added this overview in order to make the changes clear and also the intentional outcome of this.

# Touchpoints that has been changed or redesigned for the new user journey



Step 01: Talk by a teacher instead of Jacob Lundberg



Step 03: Roll-up banner Placed at all entrances of AAU More students get info about the sup and incubator

The incubator is more visible at campus

Step 04 +05: Redesigned incubator website

Improved navigation Easy contact to incubator

Step 08: Wayfinding from main entrance to the incubator Easier to find incubator

#### 3.2.2 ROLL-UP BANNER PROPOSAL

Roll-up banners like this one should be placed at all the entrances at the Campus in Copenhagen. This with the aim of making the students aware of the startup program and the incubator.



#### 3.2.3 REDESIGNED WEBSITE PROPOSAL

This proposal shows a selected part of the redesigned website for the incubator at Aalborg University. The design is created with an inspiration of the already existing website and then the interface design has been simplified and is shown in a mobile version. This is based on findings of the users that implied that they accessed the website via mobile.



Redesigned webiste for Aalborg University Inkubator Created by Simon Refn



#### 3.2.4 WAYFINDING

Here is an example of the wayfinding. Footprint stickers that should be placed either from the main entrance at campus to the incubator or from the bottom of the staircase, that leads to the incubator which is placed on the 1'st floor. The message on the left footprint is borrowed from a flyer made by the AAU incubator.



# **4. CONCEPT VALIDATION**

In order to validate the approach and method of this project, then three validation interviews were carried out with representatives from the incubators at AAU Copenhagen, DTU-Skylab and Science and Innovation Hub of UC. The interviews were conducted as unstructured interviews, without any interview guide as the purpose was to keep a free-flowing dialogue. (*Bjørner,2015*) This mainly was in relation to the aspects of the research question and whether the approach of this project could be generalized and used in other cases. Then also I wanted the respondents to reflect upon if this could be of any value in the case of the incubators that they represent. During each of the interviews, I showed the respondents a slide deck with a concise overview of the project. The design framework that was used, the revised problem statement and two slides of the current user journey and the redesigned user journey. Then also a bunch of slides about the different aspects of the solution that was developed as an outcome of this master thesis.

# **5. ADDITIONAL IDEAS**

This paragraph is a short description of four additional service concepts that could be considered for future development. The first and second idea are created from the perspective of allocating the resources of Business Developer Jacob Lundberg so that he can focus mainly upon working and sparring with the different teams and develop the startup program. This was something that was expressed on one of the knowledge exchange meeting that was held before this project was started.



A 2-4 day workshop about entrepreneurship and the startup program, this should be mandatory at all studies at Aalborg University Copenhagen. Then in some cases after the workshop, Jacob could show up and present himself and answer questions about the startup program or the like.



A chatbot could be added to the website, then if some users have some questions then it might be able to answer these. This with the aim of this should be that Jacob Lundberg has to answer fewer mails and is able to spend even more time with the teams and only reply to applications from students or teachers that want to become a part of the SUP

 As a sort of follow up when the teams have been through the entire startup program and have operated on their own for 1-3 years. Then some of these teams could be invited to an event at the incubator where they could talk about their experiences and then inspire the teams that are currently a part of the startup program at that time.

 NPS: Net promoter score is a tool that are used by numerous companies to measure satisfaction among the users and whether they would recommend something e.g. the startup program.

# 5.1 ADDITIONAL IDEAS - ECOSYSTEM MAP

- Feedback Fridays, this is a concept which exists in the startup community of Copenhagen and this could very well be converted to the surroundings of Aalborg University Copenhagen. Feedback Friday is a monthly event where startups can in front of an audience get feedback upon an aspect of their business, e.g. if they have created a new website or have improved their product or service or something else The point of the event is that the team gets constructive feedback in a non-judgmental atmosphere.
- Incubator Networking events could be, similar to the events at AAU Aalborg, mentioned in chapter 2.1.3, open events at the campus in Copenhagen, where interested students can come and mingle with the users of the incubator. This could be with the aim of networking, finding internships or for students that have an interest in entrepreneurship. The opportunities of such an event are numerous.
- Incubator pop by booth, this could be an event e.g. every second month where a small booth could be placed in the main canteen at the campus, with representatives of the incubator present and then the students could pop by and chat and ask questions or the like.

# 6. CONCLUSION

Through this thesis, I have explored the potential of optimizing the onboarding process of the incubator at AAU Copenhagen. This has been done through the approach of service design and with the use of relevant tools, e.g the user journey, and methods from this discipline. During the entire process, I have worked according to the design framework, the Double Diamond, this supported the planning of the work that was carried out (..)

Then through the last two phases of the Double Diamond, the develop and deliver phase, I came up with a potential service solution, an optimized the user journey that spans across both physical and digital touchpoints. Where the purpose was to include touchpoints that could make the incubator more visible to the students at the campus of Aalborg University Copenhagen and also make this journey more straightforward (..)

One of the key learnings of working with the user journey is that it can be, as described in the literature, viewed as a living document. In the sense that it can be used through different level of development through the design process e.g. to map a current journey and then via research and development the user journey can be improved and optimized. Then the user journey map can also be created of different zoom levels. I experienced that during this masters project as I started from the perspective of theoretically focusing upon an end-to-end user journey experience of the users in relation to the incubator. Though upon the research conducted and clustering of the insights the scope was changed to a focus upon the onboarding process and even in that process, it can be argued that the main pitfalls in that journey was in the first phase in terms of catching the students attention, to the step when the students wants to find relevant info about e.g. the startup program and then contacting the incubator and the responsible business developer on the AAU campus Copenhagen.

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