

Prototyping Competence Software Using Service Design Methods and Tools

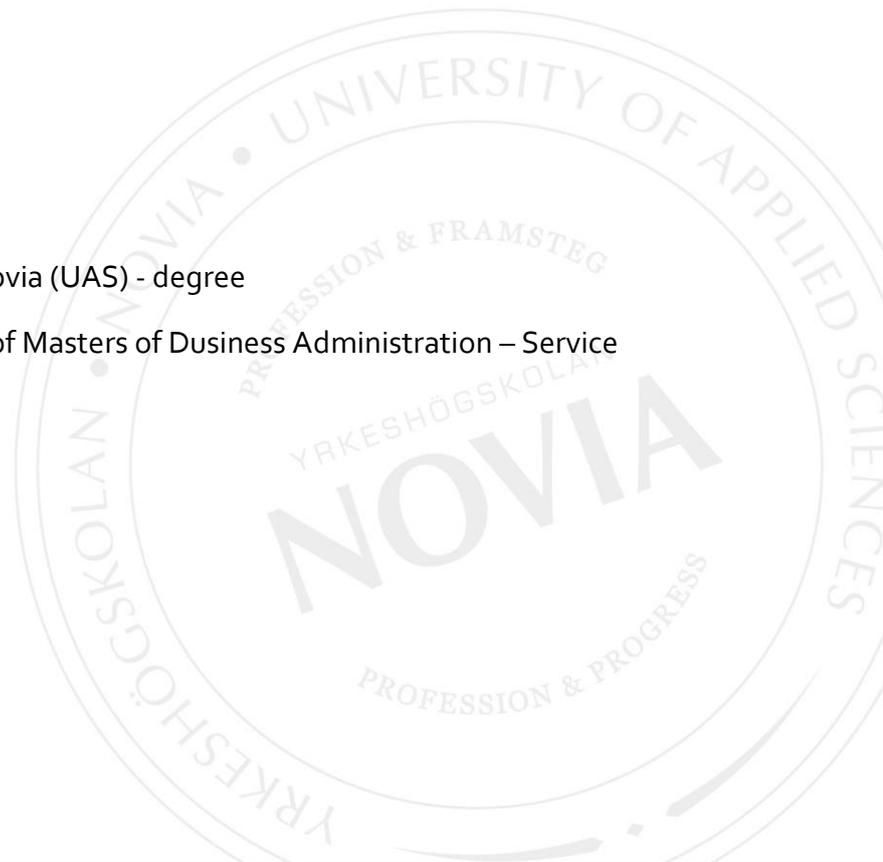
Service Design Programme

Moa Mattjus

Thesis plan paper for a Novia (UAS) - degree

The Degree Programme of Masters of Business Administration – Service
Design

Turku, 2024



DEGREE THESIS

Author: Moa Mattjus

Degree Programme: Master of Business Administration

Specialization: Service Design

Supervisor(s): Elina Vartama, Reija Anckar

Title:

Date 07.5.2024 Number of pages 40

Appendices 6

Abstract

Creating software as a start-up and evaluating the user friendliness in the first stages is an obstacle hard to overcome. Developing software together with the end-users could increase the possibility of user satisfaction and reduce the risk of the start-up failing. The aim for this thesis is to explore the benefits of incorporating service design methods and values in the testing phase of software development, and how service design can be incorporated in a pilot project. The study resulted in a pilot project based on research and service design methods, such as co-designing, workshops, and interviews. A blueprint was created and a handbook for facilitating a pilot project and for generating valid results. From the research a conclusion was made that a pilot project needs to be flexible and consider variables that might affect the results based on the participants or the host organization for a pilot project.

Language: English

Key words: service design, pilot project, software development

Table of contents

1	Improving competence (awareness) with software.....	1
1.1	Commissioner Compall Oy Ab	2
1.2	What issues need to be solved.....	2
1.3	Benefits of competence management.....	3
1.3.1	Healthcare industry.....	3
1.4	Software as a tool for competence management.....	4
1.5	Research questions	4
2	Theoretical Framework	6
2.1	End-users – who are they	7
2.2	Start-up companies – what are they.....	7
2.3	Service design as a tool for start-ups	8
2.4	Pilot projects, what are they.....	10
3	Research methods.....	11
3.1	The different research methods used.....	11
3.1.1	Benchmarking	12
3.1.2	Semi-structured interviews	12
3.2	Definition of the Service Design methods and tools.....	12
3.2.1	Backcasting.....	13
3.2.2	Learning café.....	13
3.2.3	Disney method.....	13
3.2.4	Customer journey map and Service blueprint.....	13
3.2.5	Think aloud.....	14
3.2.6	PESTLE- analysis	15
4	Discover	15
4.1	Stakeholder map	15
4.2	Business model canvas	16
4.3	Results from benchmarking	17
4.4	Results from stakeholder workshop	18
4.4.1	Backcasting.....	19
4.4.2	Learning café.....	20
4.4.3	Disney method.....	21
5	Define.....	23
5.1	Interview with an expert in the healthcare-field.....	23
5.2	Interview with a project leader.....	24

5.3	Interview with a nurse.....	25
6	Develop.....	27
6.1	Pilot project blueprint.....	27
6.2	Pre-pilot work.....	28
6.3	The pilot project.....	29
6.4	Final phase.....	32
7	Testing.....	34
8	Reflection on the project	37
8.1	Comments from the Commissioner	38
9	Further development.....	38
10	Conclusions.....	39
11	References.....	41
12	Appendices.....	44
12.1	Benchmarking.....	44
12.2	Learning café	47
12.3	Disney method	48
12.4	Table of Interviews	49
12.5	Pilot project Blueprint	50
12.6	Pilot project handbook	51

1 Improving competence (awareness) with software

In today's working world many organizations require proof of competences, skillsets, and certificates from their employees. Educational organizations, internet, open universities, and workplaces are filled to the brim with competence development, competence refreshers and opportunities for competence certification. Workplace specific competences are needed to be kept up to date and refreshed from time to time. While this is all good to ensure a well-educated staff, there are struggles and the main one of these is how do the employees and employers keep up with monitoring these competences? There is a lack of software specifically designed for this purpose and there is clearly a need for a tool to follow up on competences. There is especially a big need for this to prevent accidents, to promote employee safety and to promote patient safety. One of the biggest fields where the need for competence management is clearly seen is the healthcare industry.

In the healthcare industry there is a lot of different competences to keep track of. While two nurses have the same degree, one of them might have a competence that the other one has not, as an example, an IV certificate. (Turunen, 2022). From a layman's perspective that does not seem to mean much, but this could mean the difference between life and death in certain situations.

Other industries are affected by these challenges as well. Sometimes it could mean loss of significant revenue if the production in a factory comes to a standstill or there might be fines for not having refreshed your employees' competence in the GDPR legislation. Another issue is the safety of employees are endangered if their competences and certificates are not followed up on. Keeping track of competences can ensure the safety of property and people and can also shield our environment from risks of pollution, according to the Finnish Safety and Chemicals Agency. (Agency, 2023).

At the moment there is not any prominent and all-covering software programme for this struggle, and the ones that exist are extremely local, underdeveloped, and primitive and mainly aimed towards the human resource departments. There are, however, developers working on a solution and trying to create the most advanced, user-friendly, and effective app for this exact purpose.

1.1 Commissioner Compall Oy Ab

Compall was founded in 2020, when a healthcare professional realized the issues were cross-organizational and affecting many different companies and industries. After years of experiencing first-hand how bad the staffing, scheduling and follow-up on actual competences are at most healthcare institutions, she started a company together with other frustrated people – and Compall Oy Ab was founded. (Compall OY AB, 2022) They are an up-and-coming software company following up competences for the use of companies and big industries to ensure employee safety with the promise of a straightforward way to do so.

Compall aims to create a high-functioning, easy to use and effective software to help workers and their employers to follow up the status of their competence in multiple industries. Compall started with the idea to be an application used in the healthcare industry, but they quickly figured out it can be utilized in a lot of different industries and their first prototype is set to launch in 2024 (Compall OY AB, 2022) The software is not limited to employees of certain organizations but also for people seeking employment as well as for management and corporates. The software is a competence bank, or a library, that will store the competences at hand for the corporate clients, help the management manage and schedule their teams, as well as finding specific skillsets within their teams and for the individual to highlight their competences and abilities as a form of a digital CV. Therefore, the software is multi-layered and the co-creation of such a software is challenging but rewarding. Ever since the frequency of recurring refreshers, updates in instructions and guidelines have increased for professionals in different industries, the employers and employees are left behind in trying to plan the operation smoothly. There is also a challenge in the high attrition, the shortage of healthcare professionals and the fact that a large group of healthcare professionals are retiring. (Haddad, Annamaraju, & Toney-Butler, 2023).

1.2 What issues need to be solved

Compall is now in the process of prototyping, and their idea is to test their software through a pilot project. They needed a flexible plan for the pilot project and a map on how to carry out the project. They also needed instructions how to build the pilot, what methods to use and how to implement these methods. Their goal is to ensure a human-centred approach to developing the software that will be used by humans. The developing of an MVP, or minimum viable product, of the software is in progress and service design has not actively

been implemented in their process before this point. The service design process started with this thesis and the research around it. How can one create a plan for a flexible pilot project on a service design basis, and what are the most vital components of a successful pilot project?

One of the questions the commissioner wants to know is if they are on the right way to create a market conquering app and what features needs to be enhanced, changed, and developed for the software to be a probable success. They also want to understand the needs of the end users and feelings towards the prototype of the app to be able to develop it further and have a flawless launch. They wanted to incorporate the end users in the process from the start and have real life employees, staff managers and branch managers included in the developing process through testing the software and giving direct feedback. Inputs from the end users and stakeholders at the earliest possible stage was deemed a factor that could ensure the success of their software.

During this thesis, their pilot did not start, but the commissioner wanted to have a blueprint for a pilot project in accordance with service design methods and a guide on how to use the methods during the pilot project. Therefore, the topic was researched, and a blueprint created together with the commissioner and later a handbook was added to serve as a guide for the pilot project facilitator.

1.3 Benefits of competence management

The world is going towards a future where many industries will be faced with staff shortages and difficulties managing real-time changes. (Ferguson & Hoover, 2023). This indicates the need for more tools to be more effective in our way of assessing our staff competence, staff overview and for the employees there needs to be an effective way to check up on your competences at work and when these might expire. When the staff and the management know what competences, they have it leads to less friction within the house and less attrition and can increase employee satisfaction. (Bailey, 2024).

1.3.1 Healthcare industry

As the pilot project and the software initially was targeted to the healthcare sector it is needed to take a deeper look into this sector and why it is an important industry for the commissioner. It was requested to take this industry into consideration when designing the

project since the software has been targeted mainly towards the healthcare sector and the pilot project is likely to take place in this industry.

When one looks at the state of the Finnish healthcare nowadays, one can see that there clearly is a big need for support within the healthcare system. The strikes of 2022 have left a mark on the industry and many institutions are left without enough employees and are facing difficulties managing the daily work life. One of the biggest and most important challenges is that the employees, the nurses, and healthcare professionals are overworked due to the tremendous stress and responsibility they face each day. (Turunen, 2022). In Finland the healthcare is divided into 21 different wellbeing service counties and the healthcare provided in each of them needs to be of equally high standard, (Ministry of Social Affairs and Health, 2023), and the patients themselves has a right to good care, (Social- och hälsovårdsministeriet, 2024), and to be able to do this there is a need to ensure that the competences needed to accomplish that are present. This situation is of course not sustainable, especially regarding patient safety, so there is a need to support the healthcare professionals and create tools for their safety and the patient's safety.

1.4 Software as a tool for competence management

Competence management, competence follow-up and competence fulfilment are rarely done analogically this day. There is a need to modernize the process and have a tool to organize the management seamlessly and effectively to prevent increased risk for accidents, mistakes, and decreased safety and patient safety. With the help of a tool and software, such as the one Compall is currently developing, many challenges could be overcome in various industries. To be able to get this on the market quickly and effectively, there are several challenges to take into consideration. With the help of service design, the risk of a start-up failing decreases.

1.5 Research questions

This study aims to explore what the gains are for a start-up to incorporate service design methods and tools in creating a pilot project with the aim to develop a software. Another aim for the study is to find out how a pilot project can be created, incorporating the service design principles to maximize the results, and creating a better base to develop a software. To be able to accomplish a successful pilot project a close look at the needs of the participants is needed, and this study aims to incorporate the target group for a possible pilot project. The

following questions will be researched, and the research will be done through the methods described in chapter three.

The research questions for this thesis are:

- How can we involve the end users in prototyping through a pilot program?
- How can we ensure a successful pilot project?
- How can a start-up company benefit from incorporating service design methods?

The results will be based on the analysis of the research and based on the commissioner's feedback on the study. For this software, the end user will both be individuals, employees as well as corporate clients and managers. The aim is to successfully co-create a software that serves all of the end-users' need to broaden the commissioner's profitability and to ensure the software is competitive.

2 Theoretical Framework

The theoretical framework presented in this chapter presents the theoretical scope, the background and what the aim is. The aim is to create a plan, a blueprint, of the pilot project and a guide for the commissioner to use. The background theory we will need are different elements of service design, that will create a frame for the theoretical part. The theoretical part can be explained through a ‘who, how and what’ questioning.

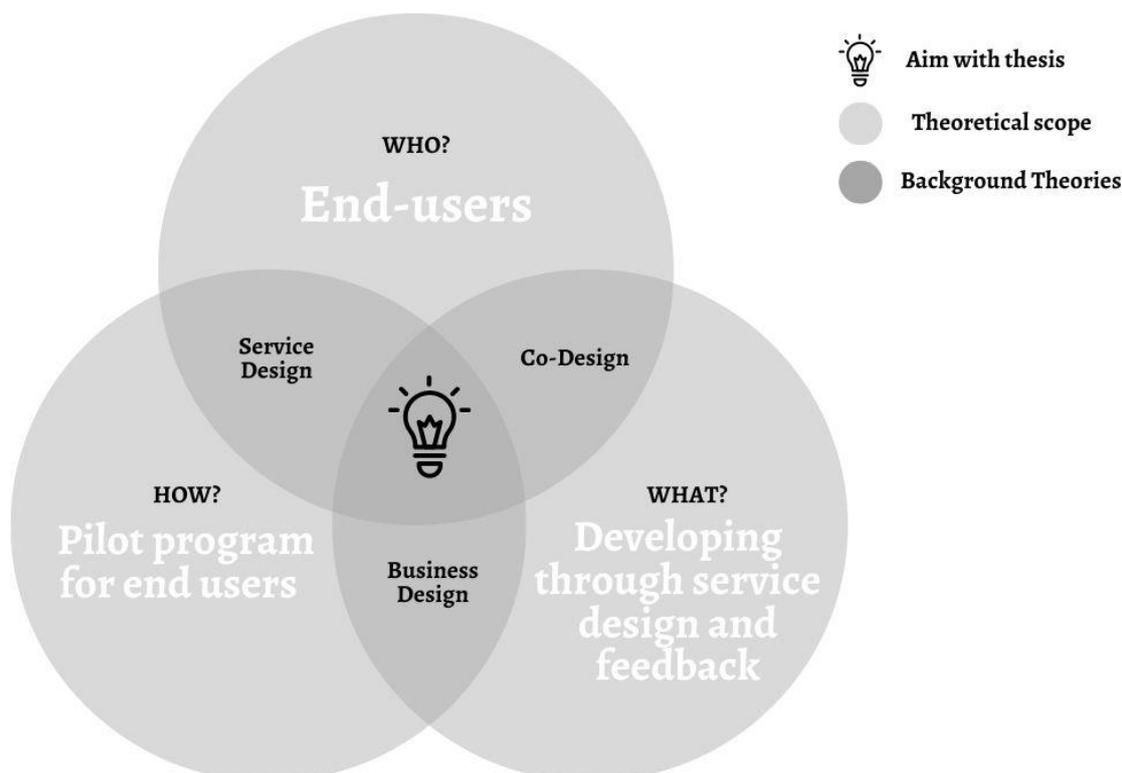


Figure 1 Theoretical framework

The theoretical framework is visualised in the figure above. The figure pictures how the theoretical framework overlaps and how the research is planned. In this thesis service design and service design thinking are at the core, other strategies are needed as well to be able to conduct the research and co-design, and business design is a part of the theoretical scope. The background theories needed to be able to dive deeper into each category. They can be seen above described as end-users, pilot programs and developing through service design and feedback.

2.1 End-users – who are they

The end-users play a vital role in service design. Service design, by definition, is human-centred and as such it was crucial to define the end-users for this thesis project and for the software that was prototyped.

As this thesis has an aim to aid in prototyping a software together with end-users, it could be argued that the end-users are the pilot group, but at a deeper dive into the project one can see that the end-user is, in fact, the commissioner. The commissioner needs to be able to access information and the research, they also take part in the progress along the way. They are also the ones who in the end will be using the material presented in this thesis and the ones who are going the benefit from the thesis.

The pilot project itself and the software have another target group, the pilot project participants, and the end-users of the software. The software is still a prototype, but the end-users are a large group ranging from management to grass-root workers. In this study the focus lies on management and grass-root workers to be able to set a frame for the research and development, although the software is also going to have recruiters, teachers, and lecturers as a target group as the software develops.

2.2 Start-up companies – what are they

As the commissioner can be labelled a start-up company, it is vital to define what a start-up is as they are a cornerstone of the thesis. A start-up was defined prior to the 1980s as the early stages of all firms, the start of the firm. By the 1980's the term became more closely related to a certain kind of business, a firm that grew fast and particularly in financing and technology. More recently, the start-up label is attributed to large firms such as Facebook, Google, and Airbnb, and while it might be true that they started out as start-ups, they can no longer be called start-ups due to their scale. (Cockayne, 2019, pp. 9-11).

Start-up as a concept is hard to define, (Cockayne, 2019, p. 26) as Dr. Daniel Cockayne says, due to the difference in definitions geographically. One might point out that a start-up is defined by its revenue, and some might define start-ups by the amount of people working at the organization. There is an important notion that Dr. Cockayne points out in his research and that is that a start-up can be more an empirical definition, a feeling, or a vibe that an organization exudes. (Cockayne, 2019, pp. 14-15).

From the insights it can be determined that a small firm with little revenue, such as Compall, can be defined as a start-up and should be viewed as such in this thesis.

2.3 Service design as a tool for start-ups

All start-ups struggle in the beginning to find their path, most of the start-ups end up in failure, around 90% in fact are considered a failure (Pantazis & Otrók, 2020, p. 11). The idea that service design could be a useful tool to help the number of failing start-ups decrease is not a new idea, but a largely overlooked one (Pantazis & Otrók, 2020, p. 12). The fact that many new companies give up, is because the process is not linear and that re-thinking, re-designing, and prototyping again and again is a part of the process. What differs from the service design thinking and the conventional way of thinking is that with service design, having to re-ideate and re-define the problems are going forward not a setback.

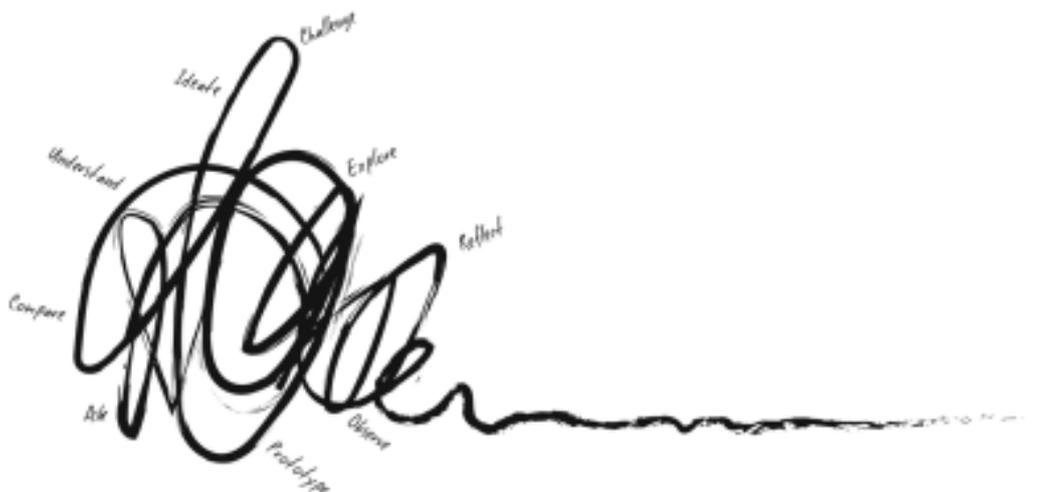


Figure 2 Service Design Thinking (Stickdorn , Schneider, & Andrews, This is service design thinking: basics-tools-cases, 2011, p. 74)

For the theory of this part, the research led us to a few different cases that points towards the theory being correct, but not excluding a different outcome. This study would like to prove that service design is a great tool to be utilized by start-ups to have a realistic and healthy beginning.

The process for this project can be described with the Double Diamond by the Design Council. The Double Diamond was created to describe a Service Design process through visualisation in 2003. (Design Council, 2024). The Double Diamond consists of two

different segments, and within them also two. The first diamond contains the phases discover and define, and that could be said to be the understanding of the problem at hand. As for the second diamond we have the solution for the problem, the develop and deliver phases, as seen below in figure 3. The Double Diamond is something of a staple in Service Design projects, as this model can be used to easily describe the process to anyone involved, regardless of their prior knowledge of Service Design. The Double Diamond framework is versatile as it can visualise more abstract processes and guides the user through the user through the process via the diamonds.

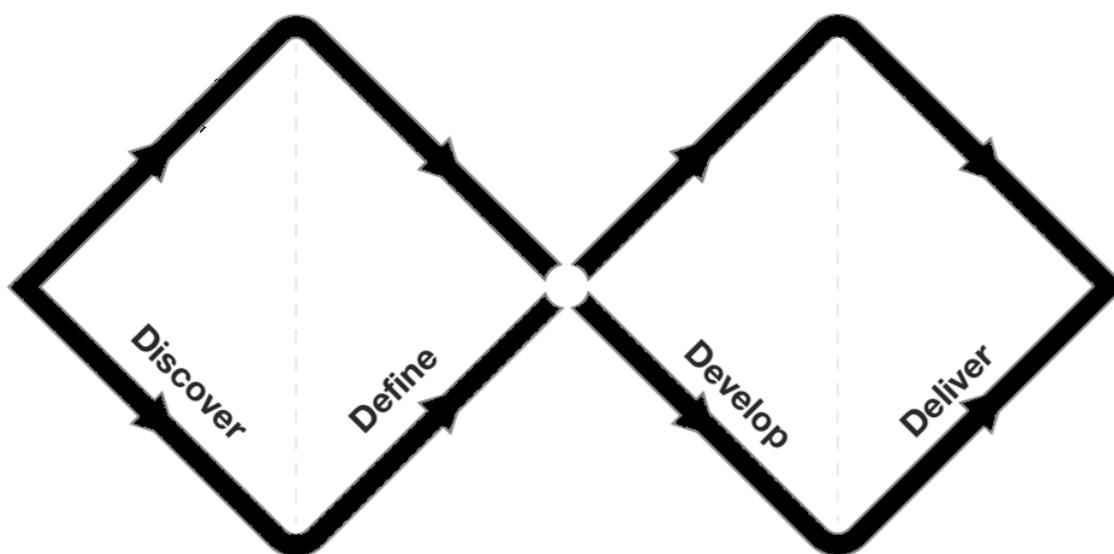


Figure 3 The Double Diamond (Design Council, 2024)

The Double Diamond mindset was also used in this project, and we can see the A process flowchart was created to give a better understanding of the thesis and how it is built up. This was done to be able to define the different segments of the project and to be able to have a clear vision of the process and to have a layout of the project's timeline. A visualisation of the process can be seen below in figure 4.

Thesis Process Chart

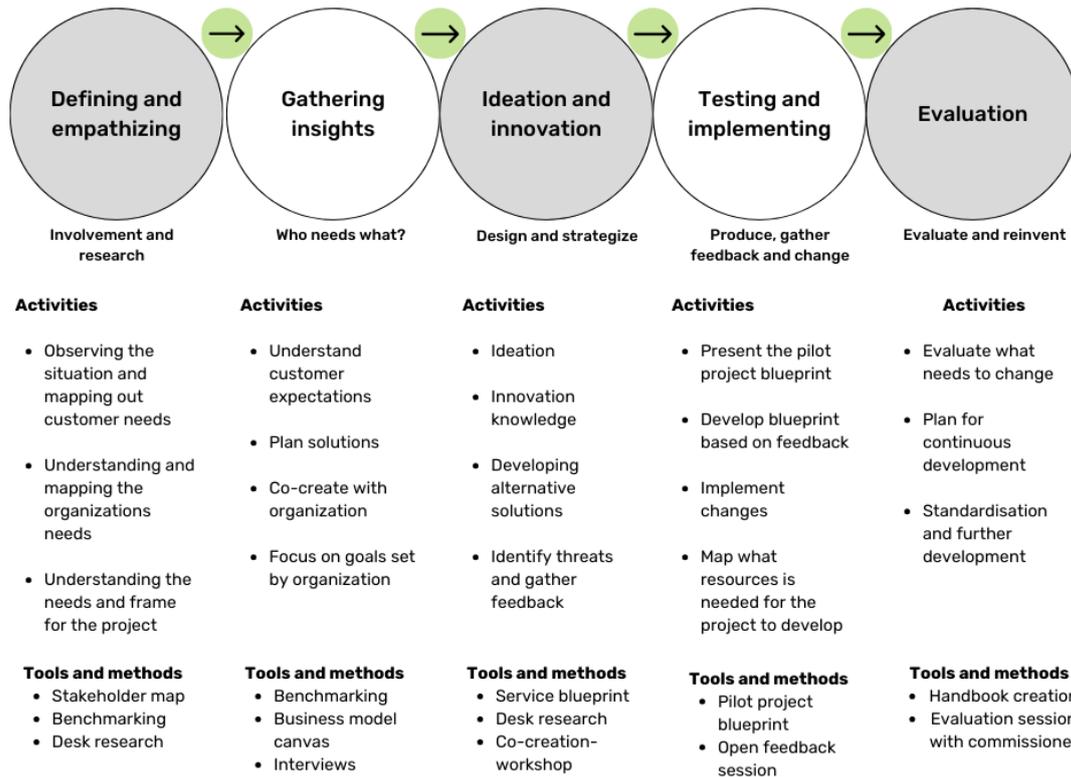


Figure 4 Thesis project design process

2.4 Pilot projects, what are they

To develop and test an idea, pilot projects can be used. To define a pilot project, it can be stated that it is part of a bigger project and scheme, it is undertaken to improve understanding of an innovation or a change for example, and to manage the risks that come with an innovation or a change within an organisation. There is not a lot of academic papers written on pilot projects and how to conduct them, since the academic world has deemed the pilot project results to have no academic value, according to Rodney Turner. (Turner, 2005). It is an ongoing debate and without further comments on whether it is true or not, there is truth in that there are not a lot of academic papers regarding how to conduct pilot projects. Researching pilot projects is not a new concept, nor is conducting pilot projects. The nature of the pilot projects varies so much that there are multiple ways of conducting them. Another factor might also be that the term is used interchangeably with a standard project.

3 Research methods

For this study there were discussions with the commissioner to be able to determine which research methods would work the best for the purpose. Because this is an in-practice study, an extensive arsenal of methods was needed. During the thesis process the methods were discussed and they were chosen in alignment with the commissioner. Listed below, in figure 5, are the research methods, and the service design tools utilized in this thesis. We can also see clear references to the Double Diamond as presented in Figure 3.

Research methods and Service Design methods

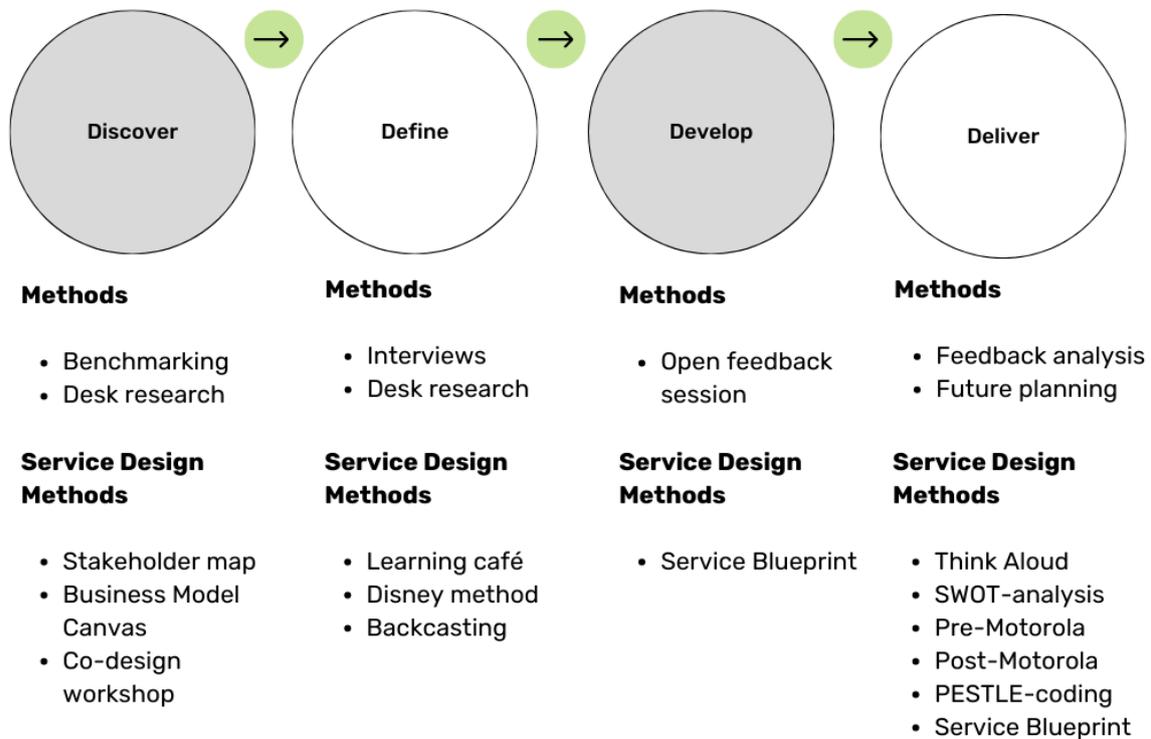


Figure 5 List of methods used

3.1 The different research methods used

For the desk research ethical sources were used, so that our thesis is legitimate and can be used for publications and that the result of the thesis is as correct as can be. To ensure

validity, the methodology was based on the needs of the thesis, which in turn was defined through desk research.

3.1.1 Benchmarking

Benchmarking is a great tool and since the company's idea has multiple factors of novelty and the applications closest are not often free of charge, it was insightful. Benchmarking is important for setting goals and creating a vision of a standard for the product being developed and what the pilot group might expect from the pilot program. According to Harper (2019), benchmarking can be described as gathering and comparing qualitative information about how an activity is conducted through people, processes, and technology. This is also how the companies in the benchmarking were assessed.

3.1.2 Semi-structured interviews

To be able to gather in-depth information from valid key users in the field it was considered important to conduct interviews. Interviews is a great tool to be able to gather the fine details of the target groups' emotions and human issues, according to Virginia Wilson. (Wilson, 2012). For this method to be successful in research there must be a structure in the planning before the interview takes place. Identifying your participants, type of interview (structured, semi-structured and unstructured) and how you are conducting the interview are essential, but also details that are easily overlooked should be considered, like facility, designing an interview schedule and deciding on what type of equipment you want. (Wilson, 2012, pp. 96-98). For this study semi-structured interviews were ideal, since they have a structure, but also leaves room for flexibility. (Wilson, 2012, p. 96) This gave us room to explore ideas and topics brought to attention during the interviews.

3.2 Definition of the Service Design methods and tools

For a service design study to have a complete set of methods with an accurate result, there is a need to research what tools and methods to use. Each of these tools and methods serve a purpose that works towards the goal of the thesis.

To use a workshop as a research method, the goal must serve a clear purpose for the researcher according to Rikke Ørngreen and Karin Levinsen. (Levinsen & Ørngreen, 2017, p. 72). The purpose in this case is to be able to use different service design methods and

involve the end user in the process to prove the theory that start-ups can benefit from service design methods.

3.2.1 Backcasting

The backcasting method is a sort of brainstorming in which you define a specific goal before using dialogue to retrace the steps that brought it about. (Laakso, 2016, pp. 10-12) This is a great way to incorporate the necessary steps so you can keep track of what happens before you accomplish the goal. It is also a way to foresee the future and a way to assess the risks to the idea you are developing. (Nicolussi, 2020)

3.2.2 Learning café

Learning café as a strategy is frequently used, according to Löhr (Löhr, Weinhardt, & Sieber, 2020, pp. 2-3), to encourage discussions and subject exploration among a large heterogeneous group. This strategy involves audience engagement and has the potential to produce a lot of novel discoveries. On each paper, a problem is provided, and each participant is given a set amount of time to produce three viable solutions. When that time is up, they go to the next page, and so on, until they reach the paper they began with. You will need a few different statements for this task, as well as to put people into groups. The top three choices from each category must now be chosen.

3.2.3 Disney method

The Disney method involves presenting the participants with an idea and then taking on distinct roles to voice opinions and solutions about them, usually there are three core personalities to adopt in this method: Dreamer, Realist, and Critic. The participants take turns discussing the subject from the perspective of their assigned roles before moving on to the next problem and role. (Tausch, Stenberger, & Hußmann, 2015)

3.2.4 Customer journey map and Service blueprint

A great tool to building a good, solid foundation for any company is a customer journey map. This is a great way to see where our touchpoints are, to be able to efficiently analyse the gathered feedback and to prevent any initial major setbacks. (Interaction Design Foundation, 2016). This will also be useful in the prototyping stage because to succeed, all the various stages need to be clear, invoke positive reaction and be designed from the end

user's perspective. One of the major reasons for start-ups to fail is that they are centred around their product from their perspective and not the customers' perspective (Pantazis & Otrók, 2020, p. 11), this argues that creating a customer journey map to visualise the customers' pain points would help to reduce the setbacks that might occur.

For this study a service blueprint is useful, it visualises the process of the service, between the people who use it, the software, the technology, and the process itself. (Li & Lu, 2021, pp. 1363-1372) It visualises what is going on in front of the customer, in the backstage and what supporting interactions there are to be taken into consideration. The fact that the Service blueprint is a great tool for start-ups (Pantazis & Otrók, 2020, p. 28) was the reason for choosing this method and the method will be used in collaboration with the commissioner, to be able to see where they were at, what they were doing in reality and what they needed to focus on in order to have a better overview over their process.

While in the general process of prototyping, it is good to create a business model canvas. This method, first introduced by Alexander Osterwalder, is a great tool that builds upon the customer journey map and the service blueprint. (Stickdorn, Edgar Horness, Lawrence, & Schneider, 2018, p. 944). In this study a business model canvas was created, both as an introduction exercise for the commissioner but also as an observation on how they relate to this type of model.

3.2.5 Think aloud

For the pilot project it was decided that think-aloud will come in handy. According to Elizabeth Charters, this method has its roots in cognitive psychology and is used nowadays as a research method when trying to define the first thought that come to mind while performing a task or using a service (Charters, 2003, p. 69). It is important to define the difficulty of the task and plan the research task beforehand to be able to provide a reliable and viable conclusion about the results (Charters, 2003, p. 71). Using this method will provide the facilitator access to the thought process of a pilot group to be able to assess what they feel, think and experience while using the MVP. This is to define what the main problem areas are with the software and how to go further with the development. For the pilot project, co-designing the software together with the end-users is necessary and ideating and collecting feedback are needed. Tools such as learning-café's will be useful in the engagement of the pilot group. For the activity of bringing together these ideas there will

also be a consensus formed from them, while all findings will be presented to the commissioner.

3.2.6 PESTLE- analysis

To analyse feedback and to categorize the feedback the PESTLE- analysing method can be used. For this project it was decided that the PESTLE-analysis would be most suitable, due to the method being easy to use and understand. It was created as a business analysis tool that separates the information gathered into six different categories, Political, Economic, Sociocultural, Technological, Legal, and Environmental. If you categorize a business into these 6 categories you gain a deeper understanding of the business, this also works well on countries as an example. (Bush, 2019). In this study there will be a modified version of the PESTLE-model presented. The modification is necessary to gain a deeper understanding of the feedback gathered in the pilot project. The modified version will be presented in later chapters.

4 Discover

To gain deeper knowledge of our challenge we need to analyse the results of the methods used, we also need to gain a deeper understanding of the organization and the business model the commissioner uses in their work. To go further and develop the pilot program and have a base of theory surrounding the pilot project it was needed to actively research and test the ideas of it.

4.1 Stakeholder map

To start the design process and research needed for this project it is needed to define our stakeholders (Tristancho, 2023). For our commissioner Compall this is an opportunity to have their partners, effects on society and own contribution mapped out. In the figure below we can see the stakeholder map that has been created. The map is divided into three categories. In the centre we have the core team, which is the commissioner, Compall. In the next category we have the directly affected partners and entities, and the third and outermost circle is the indirectly affected entities.

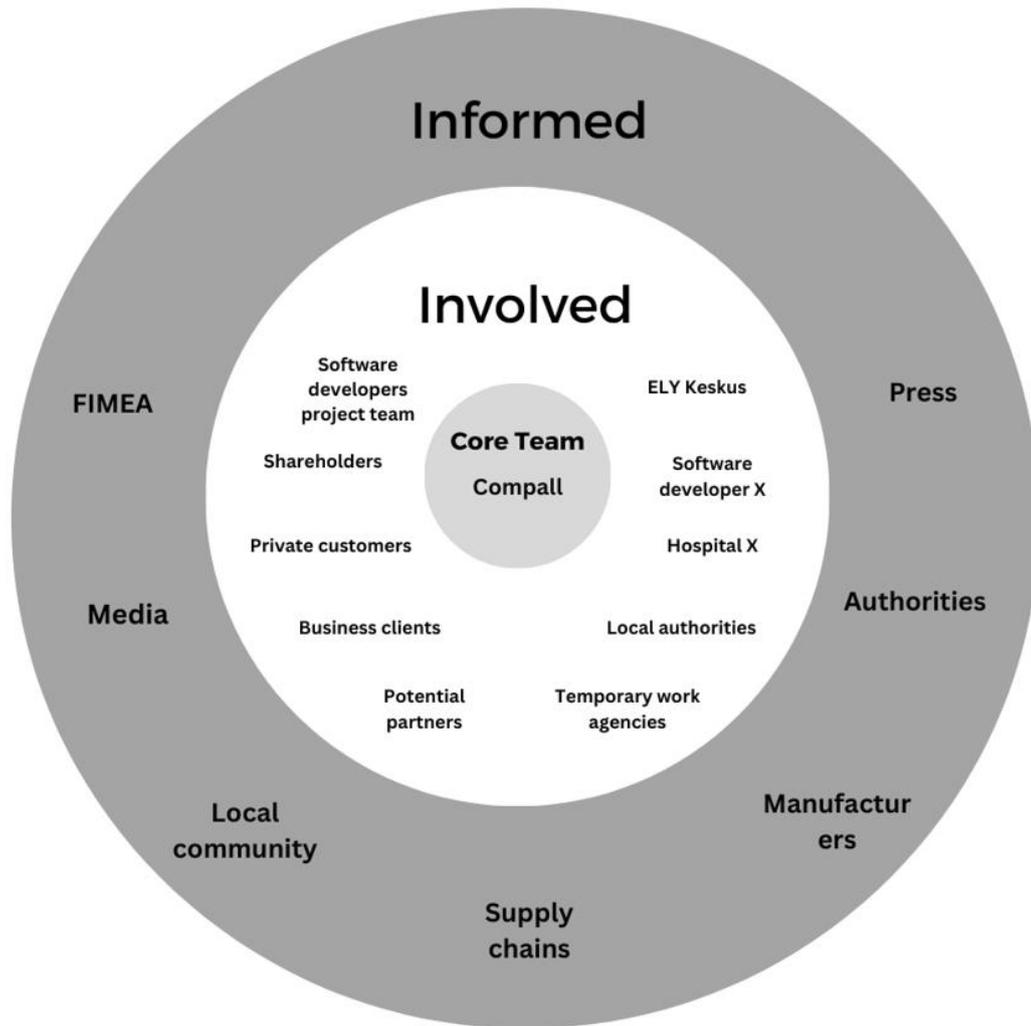


Figure 6 Stakeholder map

4.2 Business model canvas

The next step in our define phase was to make a business model canvas for the company. This is to add everything that is known and what is possible to map out at this stage. This gave an overall better view of the product under development and what it can offer. The business model canvas can also be used to base a marketing pitch on and to see where threats and opportunities lie.

The Business Model Canvas

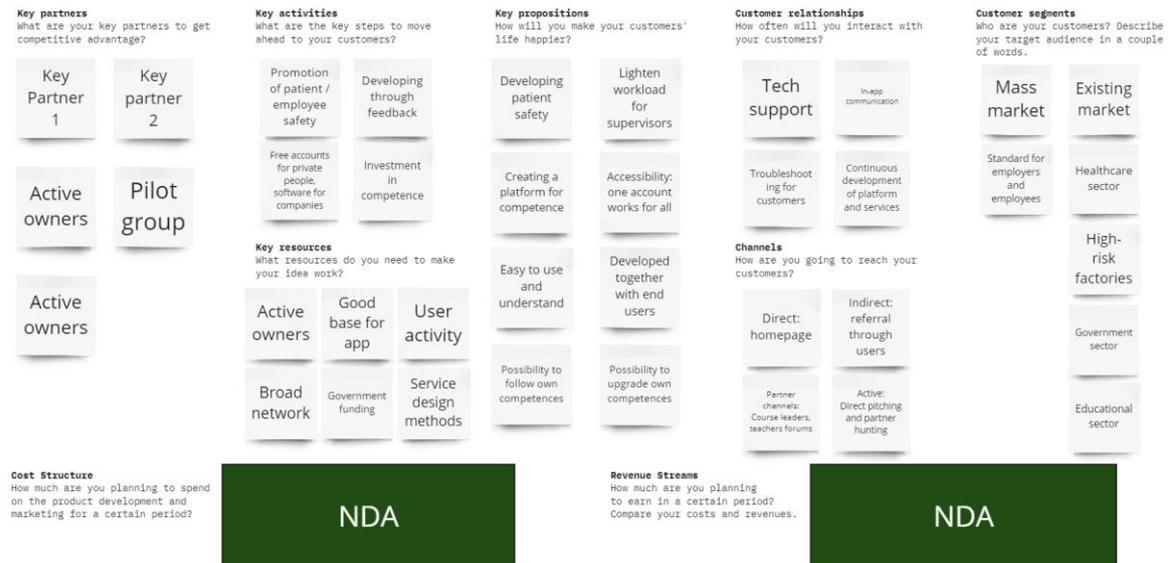


Figure 7 Business model canvas exempt

From the business model canvas in figure 7 above, it can be concluded that the company has come a long way with a homepage and their developing their MVP. They also have business partners, and they are a registered company. However, they need to get more partners at this point and, most importantly, a test group for the pilot program.

4.3 Results from benchmarking

In the beginning four different companies were selected to benchmark from. This was done to research what paths other companies have taken, as the commissioner had not done benchmarking before for their company. The benchmarking can be found in appendix 12.1. The results were used as a part of the co-design workshop and to see what the future for the commissioner can be. Suggestions were given based on the benchmarking.

Benchmarking	Business type + Customer segment				Website + Infrastrucutre		
Company A	Technology, creating and managing tech skills	Main fields: Public Sector, Finance, Healthcare Insurance	Major businesses as clients	Offers courses for private persons	Chaotic, but professional	Not easy to find what they specialize in no "this is us"	Monthly rates: 26e/39e per month
Company B	Employee development	Internal Employee development	Major businesses as clients	Focused on HR, leadership, productivity, client management, etc	Great website, easy to follow, user friendly	Well explained business	
Company C	Team development	Engineering and HR	Provided by e.g. Pluralsight	High range of fields	Minimalist website, easy to use	Transparent how it works	
Company D	Inhouse development and skill bank	Major clients	Skill marketplace for recruitment and partnerships	Employers can post their skillsets	Easy website, free trial	Visual aids to help understand their business	Pricing available, free option available

Figure 8 Exempt from the benchmarking

As the research went further, it was determined that the difference between these companies and Compall is tangible. The results were that Compall does have a unique product and can use their unique market value in their marketing. The suggestions were based on what the research found useful at the other sites and what could be taken into consideration as the software development unfolds.

4.4 Results from stakeholder workshop

A workshop for the commissioner and other stakeholders was held to discuss the topics covered in the pilot program and to generate new and novel ideas how to co-create the software with the pilot group. The intent of this workshop was to arrange it with representatives from Compall to generate ideas, gather first-hand feedback and strengthen the connection to the brand and to empathize with the end user. The plan is to jointly design the pilot program to accommodate everyone's needs and create the service as effectively as possible. There was a will to determine the next steps and determine whether there are any unrecognized problems. The primary objectives are listed below in brief:

- Being able to control participant and stakeholder expectations.
- Co-create the pilot program's content
- Set new objectives for the pilot program.

Since Sanders & Stappers (2013, p. 6) argue that it is crucial for the workshop to have a physical component, there was a need to include think-by-making activities as the research on various workshop types and methodologies went on. This was undoubtedly beneficial for the results. Furthermore, the need for a low threshold to participate was desired, since the commissioner deemed the stakeholders likely to be absent due to hectic schedules. The platforms Teams and Miro were used to facilitate the workshop, and the commissioner can continue to add to it afterwards and go back to review the results since the Miro was open until the study was finished. This was successful in achieving our objective and in igniting conversation about the activities.

Three distinct methods were used during the course of the workshop: back casting, learning café and the Disney method.

4.4.1 Backcasting

At the workshop the participation level was low, and it did not generate major results. However, one can conclude that the back casting served its purpose since the workshop stood as a base for discussion and opened a new way of looking at their progress as a company. For the commissioner the workshop was a success, they concluded that they got a better focus on their goals and what the next steps are for them as a company from the workshop. Below in figure 9 there is a snapshot of the results.

Backcasting with Compall OY AB



Figure 9 Results of backcasting

At the time of the workshop, they were in the phases between the “start” and the “road to outcome”. Since they have struggles with the funding due to force majeure, they are focusing on building a foundation and a base for their coming steps, to make the most out of the funds they do have. Another finding was that the funding part and the contract with a pilot group is the most important next steps at this point.

4.4.2 Learning café

This method proved to be important mental work for the participants. The results were deemed useful for a later stage in the project. In appendix 12.2 the results can be seen in full as well. Each participant in this project finished this task independently, everyone developed three answers to the issues presented and they were discussed and how the project can move forward.

How can we manage expectations of the pilot group and future client?

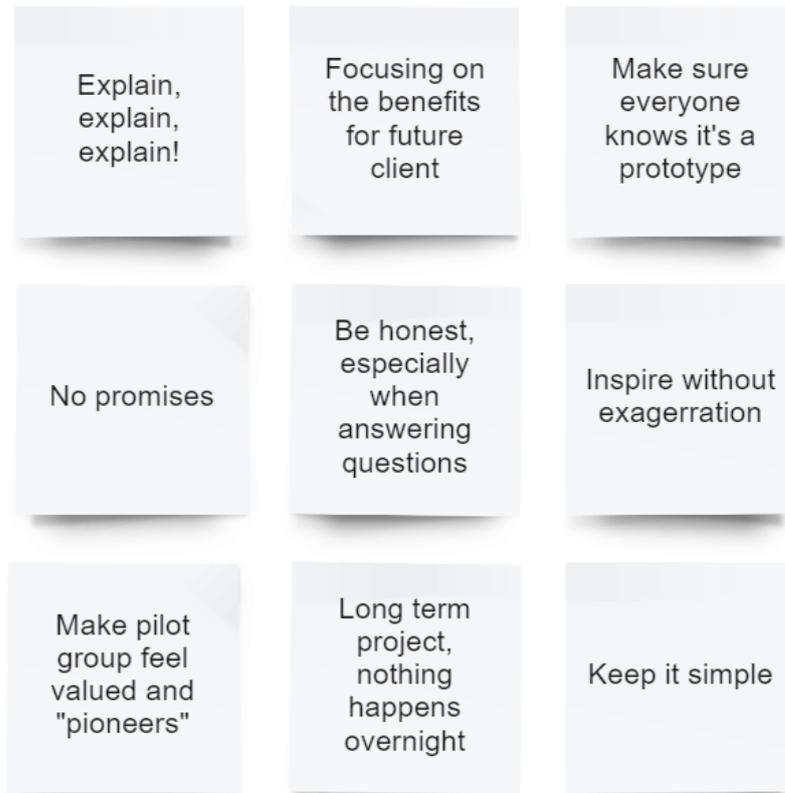


Figure 10 Learning café in action

4.4.3 Disney method

For the final part of the stakeholder workshop the Disney method was used, however, it was decided to take in a fourth personality, the Innovator, as an addition to the usually used three personalities. This method resulted in clever ideas and raised issues concerning an upcoming pilot program. The participants were switching between the different personas to generate answers to the questions based on that personas stereotype. Afterwards, the results were discussed, new inputs came up and there was a lot that were not anticipated before, so the method served its purpose. The results in full can also be seen in appendix 12.3. The most important findings were that in order to succeed, it is needed to have a basis and be realistic about what can be done by the commissioner and the author and what needs to be outsourced. The results also showed that a focus on the pilot group is necessary to build an emotional connection and to have an impact on the software's development in a positive direction.



Figure 11 Exempt from Learning Café: Dreamer role

5 Define

As a product or service is being developed and prototyped it is of utter importance that the end-users are heard and taken into consideration – for service design is human centred and the end users must be incorporated in the development. To be able to go further in the process and define the problem and develop a pilot program there were interviews held to be able to gather data and information on pilot projects and the different fields the software is intended for. A total of three interviews were held with experts from all over the field to generate an understanding of pilot projects, the healthcare industry and from a management point of view. For the sake of GDPR the interview subjects are not going to be named in this study. All interviews were held online using Microsoft Teams and recorded. In appendix 12.4 there is a table of the interviews held.

5.1 Interview with an expert in the healthcare-field

To acquire in-depth knowledge about the healthcare field and the structure of healthcare fields an interview was held with a healthcare professional that has been working many decades in the field, both as a nurse and as head of department. (X M. , 2023)The interview was semi-structured, and the aim of the interview was to gain knowledge about how a pilot project could work in the healthcare sector.

One of the first things established was that the healthcare sector is undergoing a digital transformation, updating patient journals from paper to a digital format as an example. This has proved to be difficult since the personnel often has various levels of technical knowledge. This is important since the pilot project is to develop a software, an application, which the users need to operate independently. Another significant thing was the resistance to change from the workers in other projects held by our interviewee, there is always going to be resistance to change but how to manage the resistance is the key. An emphasis was put on informing why and how to the participants. (X M. , 2023)

” I think it is very important to actually communicate why we are doing this and how we are doing this. –Manager X” (X M. , 2023)

It is important for a group, in whatever context, to know the why and how, and this was confirmed by them as well. A pilot project could also be threatened by the lack of a project model, or structure. The organisation where our interviewee works does not generally have a plan for conducting projects and there is a worry this could affect the efficiency of a pilot,

and while the conversation was mainly about this specific organisation, there was concern that other organisations does not have an implemented process for projects in whatever form. What also could bring about a pilot project to never begin or bring along bumps on the road is the budgeting according to them.

Another point brought up, was that it would be good for a diverse group when starting a pilot project so the data collected would be more diverse and the results would be more truthful, Manager X mentions that it is also important to limit the project to be able to process the results. Manager X also said that the participants at her organisation would probably get handpicked amongst willing participants if they would start a pilot concerning software. That would not stop the fact that some participants might not fully commit to a pilot, however, it is also useful data to know what leads to the resistance. (X M. , 2023)

From the interview it was determined that most of the pilot should be done on site, this is due to various technical skills and due to the fact that it could lead to frustration misplaced on the product due to connection issues, lack of understanding technical terms and an overall lack of hands-on learning. (X M. , 2023)

5.2 Interview with a project leader

As a part of deepening the knowledge about pilot projects another subject was interviewed. Project manager X was the project leader for a pilot project between universities and employers that revolved around developing competence. Participants in this project were scarce, only 9 participants were recorded. The project's aim was to develop people's competence who are already in the work life and doing this by combining work and studies. This encompassed an agreement with the employers that the employees, or participants, reduced working hours to develop their competences at the universities. The employers in turn would get more educated employees with skills that would be useful in the organisation, a cooperation between the industry and the universities. The criteria for the participants were that they needed to have an academic degree, although one participant did not have a degree but had taken some academic courses. (X P. m., 2023)

The project was built on the participants' individual goals, and they had individual tutors for their goals. This also meant that what they did during the project varied. Some participants were reading theory, and some were using the lab equipment.

What made this project successful was that they had a warm welcome from the principals, and that they met with the academic world on equal terms. According to Project manager X the fact that they had time to go through everyone individually and set valid goals for everyone contributed to the success. (X P. m., 2023)

During the interview it was established that it is important to note that the project is in line with current laws, such as insurance policies and labour market laws. There is also a need to establish what the results may be and have the capacity to handle the results.

“You need to know what the conditions are and that we can deliver on those conditions.

– Project manager X” (X P. m., 2023)

In this project the studies were done mostly online due to the covid-19 pandemic, and according to Project manager X pilot projects should be done on site to strengthen the community and the learning. On the other hand, the interviewee continues, the networking possibilities will be broader in case of online projects. (X P. m., 2023)

5.3 Interview with a nurse

To strengthen the Service Design approach for this thesis it was necessary to interview a nurse about what possible challenges there might be for a pilot project. Nurse X has been working many years as a nurse and in different Nordic countries. They have worked for multiple organizations and has a broad experience as an employee in different organizations and healthcare departments both in the private and public sector. As a healthcare professional there are many challenges at the workplace and one of the findings were that there is a need to focus on the right department and the right organization. A smaller department, such as an elderly people’s home, might not be the best institution since the resources are not great according to Nurse X. What more is that the patient safety always needs to be secured. This means defining who is responsible should anything go wrong. (X N. , 2023)

From the interview it was concluded that a pilot project should at least be six months and it needs to be quite flexible, since one can never know what the day is going to look like for the employee. There is also a high turnover at most departments and that could be a challenge for a shorter pilot project according to Nurse X. Another point brought up is that the manager needs to be motivated and take initiative and that there is a need for support from co-workers as well. Nurse X stated that even though there might be some differences between the public and private sector even though resources and employee situations are quite the same. The

interviewee stated that a pilot project would, however, be possible to conduct in both sectors. Another point discussed was that the biggest challenge is most likely motivation for conducting and participating in a pilot project.

” It is the grass-root workers who contribute most to new changes, it is not the managers who says that we are now changing this, but it is those who actually make the change who push it through. – Nurse X” (X N. , 2023)

It was concluded that a manager who is driven and willing to make a pilot happen will be successful rather than a manager who is indifferent towards the project. It was also said that a motivated host, or employee manager, can make a pilot project succeed and bring valid results to a commissioner.

For a pilot project there should be some contact meetings with the group according to Nurse X, to establish trust and to build connection to the participants. There should be at least 8 meetings either online or on site for a six-month project and the more onsite the better according to Nurse X. From the interview it was established that on-site meetings, as far as possible, would be better and would work as an opportunity to raise any potential issues. (X N. , 2023)

6 Develop

As far as methods go, pilot projects are a great way to develop and build upon a service or product to be able to ensure that the components are right and that the developing side has taken into consideration the end users pain points of the service and products in a real-world testing (Turner, 2005). It can be used in both the first testing stages as well as testing new functions, but also further along in the process. To be able to maximize positive reception of a service or product, the potential issues need to be addressed before reaching the general market. (Turner, 2005).

6.1 Pilot project blueprint

This thesis project is based around prototyping through a pilot project and due to the authenticity of the project the time management was impossible to handle, so instead of conducting the pilot project, as part of the thesis, a blueprint for the pilot project was created. The blueprint was divided into eight phases: pre-pilot work, six months of project and a finalizing stage. The blueprint in full can be seen in appendix 12.5.

The first steps were to assess what parts are important as a base for a pilot project. From the interviews it was concluded that the timeline should be suitable, and a minimum of six months is recommended, and that flexibility is needed to ensure a good pilot project. The issue of legality of the pilot project was raised as an important topic before starting and to check current labour laws is essential, which also is something that needs to be controlled. For the pilot to have authenticity the group itself needs to be diverse, there is no point in only having yes-men and women within the group. Sceptics and reluctant participants are needed to voice the concerns and flaws in the system. From the organization that host the pilot program there needs to be involvement and support, a good deal of motivation is going to be crucial for the pilot program since there is already trust in the place of work, and if the organization is on board, the pilot group is more likely to actively participate in the pilot. To raise motivation and participation levels the pilot should be held on site, at least a couple of times during the program to be able to establish trust and instil a positive attitude towards the program. A light snack with coffee or tea goes a long way to show appreciation according to Nurse X. (X N. , 2023).

With these parameters a blueprint for the pilot program was created. This was presented to the commissioner on the 17.1.2024 online. The feedback from the commissioner included the blueprint being easy to follow and that it will help tremendously while organizing a pilot

project. Details that they had not thought about were brought up and an especially positive remark was made about the methods, as they previously had done no groundwork for a pilot project.

One constructive feedback item was made about explaining and defining the methods, since they had no previous experience. Based on the feedback it was decided that the author will make an additional guide on how to implement these methods.

6.2 Pre-pilot work

The first phase of the pilot project is to prepare a good base and understanding on what is to come, as this is essential. To begin the pilot, the company negotiates with the organization hosting the pilot project about what their expectations and goals are. There needs to be a legal basis for the pilot, a contract needs to be drafted and goals set.

For the best possible outcome, the commissioner is suggested to make use of the Pre-Motorola and SWOT-analysis methods internally. The Pre-Motorola and Post-Motorola analysis are two separate methods used in projects and usually used before and after a project. (Cavero, 2023). The Pre-Motorola analysis consists of five different questions and the post-Motorola consist of four different questions, the questions can be seen in appendix 12.6. The SWOT analysis on the other hand explores the threats and opportunities in a project. (White & Bottorff, 2022). These methods grant the means to map out where threats are to be able to follow-up in the later stages of the pilot. Continuous development within this project is essential and the pilot project needs to be flexible to cater to the groups' needs to ensure useful results. The SWOT-analysis and Pre-Motorola templates were pre-made for the commissioner as a part of this thesis project.

In the blueprint, a presentation for the hosts is needed, the commissioner needs to align where they can be flexible and where they draw their limits. Preparation for hard and uncomfortable questions are essential to this phase. After an agreement is reached the host needs to choose their participants, since they have better knowledge about and experience with their employees. In the plan it is not mentioned what the recommended number of participants in the pilot is, since this largely is decided by the organization hosting the pilot and what the available resources are. The documentation of feedback by the group given to the commissioner and transmitted to the developers needs to be discussed with the developing team. How the documentation is made is going to be decided together with the developers to efficiently get the feedback to the developers.

Another topic that needs to be addressed is the support for the pilot group during the project. A support hotline is recommended to ensure that the group has better motivation and that they actively participate in the project.

The next step in this phase is to send out an informative email to the participants inviting them to the kick-off session.

6.3 The pilot project

The project starts with a kick off. This is recommended to be an on-site event, where representatives are present to build trust with the group and make a positive atmosphere for the group. Findings from the interviews suggest that offering a light snack for this kick-off would be a method to create trust and establish a positive atmosphere. In the kick-off a representative from the host organization should be present to assist in matters the participants are concerned of, like higher workload, working hours and so forth.

The first kick-off will also include a crash-course on how to use the software since this it is not recommended to do so online, since it was determined that the technical skills of different individuals may vary a lot. It must be taken into consideration to reserve a proper amount of time for the crash-course in order to have time to address everyone's concerns and thoughts. Patience is going to be needed in this stage and resources in form of teaching the software's basics. Documentation of the feedback on the software is an important topic and needs to be addressed at this occasion to ensure that the feedback is uniform, and the documentation is logical. The focal points in the blueprint can be seen below in figure 12.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Set goals • Set hard and soft criteria • Prepare for questions • Educate representative • Presentation is key • Info email to participants need to be formulated in a non demanding way • Legality | <ul style="list-style-type: none"> • Create positive atmosphere, have fun while educating • Prepare for the session • Be ready for resistance and hard questions • Focus on gain for the participants • Small serving will relax and show gratitude towards group • Hear out everyone! • Resolve fears and anxiety • Work with and for the group, low hierarchy can increase productivity • Take note on personal preferences with coffee/tea and snacks |
|--|--|

Figure 12 Focal points for the pre-pilot work and the kick-off of the project

For the crash-course, it would be of utmost importance that the first impressions are documented, the speak aloud method would be appropriate for this. The first impressions would be recorded and analysed to understand the pain points at first glance. This gives the commissioner, and the developers, a glance into what the first impressions are, where the first problems lie and what should be changed.

As the project develops into a more independent phase for the participants, it is important to have the support up and running. Another focal point is to give the group a chance to work with the software independently and that the check-ins are not too intrusive and too frequent. At this stage, the commissioner should expect a lot of contact for the support and a lot of questions. At the end of the month the first feedback is in, and it will be the deciding point if the project needs to be further developed, if all the methods of documentation, support and general outline is good or needs to be changed. How the feedback is documented needs to be agreed together with both the software developers and the host organisation as the possible channels may vary depending on the internal structure. However, an easy and low

effort way would be to set up a common inbox with the developers for a quick PESTLE-coding and access to the actual feedback.

As the project unfolds, the need from the pilot group is to use the software and report back, this could lead to a drop in motivation and an incentive for the participants should be present. In the blueprint a mid-project workshop should be held to further add on the value of the pilot program, and to motivate and activate the group. The commissioner needs to offer support to maximize the outcome and to report to the developers with the feedback received.

<ul style="list-style-type: none"> • Offer support to pilot group, it determines the outcome, make sure it runs smoothly • Document feedback logically • At end of first month, developer feedback would be good • Patience is key • Board decides if Pilot Program is going in the right direction - implement possible changes • What are the needs of the programmers? 	<ul style="list-style-type: none"> • Prepare workshop according to needs of pilot group • Prepare what issues they found and what will be resolved, important to show the fruit of their labour • Developer greetings could be good • Coffee/Tea offered • Important that representatives are present
--	---

Figure 13 Focal points for month two and three – the green text are topics included in the handbook-made for the commissioner

At the workshop, the suggestion is to use a few different methods, to create a good atmosphere and get some direct feedback from the participants. Learning café is one of the methods and the questions should be determined based on feedback from the first two months of the pilot project and the commissioners' own interests. There should also be a Motorola analysis made with the pilot group, since this would encourage the participants to look at the pilot project from another perspective. A focal point for the workshop is to show

the participants that their feedback makes a difference, since it will work as an incentive as well as being important for the commissioner.

As the project enters month four the feedback from the previous months, as well as the feedback gathered at the workshop, needs to be analyzed. An analysis of this gives the commissioner an opportunity to see what the pilot project needs to focus on in the last months. A modified PESTLE-analysis would be a great start and, if needed, other analysis tools could be used to get to the data's core.

<ul style="list-style-type: none"> • Support up and running and questions/issues resolved smoothly. • Feedback analyzed • What does the programmer need for further development? 	<ul style="list-style-type: none"> • Support running smoothly. • Feedback analyzed - is there persistent issues? • Last push - email
--	---

Figure 14 Focal points for month four and five

During the project it is also good for the commissioner to remember that the support to the participants needs to be of a certain quality level, and that the developers' needs are kept in mind.

An email to the participants is suggested to be used as a call for the last push for the last two months during month five, this is to remind the participants that the commissioner needs their feedback and that they should not forget to report all pain points while using the software. If something persistent was found in the feedback analysis this too should be addressed in the last push e-mail.

6.4 Final phase

When the pilot project ends the feedback from the whole period needs to be analysed and compiled, the developers need to get the last feedback and it would be recommendable if

they also could share their experience on the pilot, since the data could be proven valuable further along for the commissioner. For the participants it is suggested that they get a form with a post-Motorola as this too is valuable information for the commissioner and the answers can be presented at the final session.

<ul style="list-style-type: none"> • Last updates coming for pilot group • Feedback from whole period analyzed • Prepare for last workshop • Send out a Post-Motorola form for the participants 	<ul style="list-style-type: none"> • Thank everyone • CEO speech • Prepare for all • Developers joining? • Post-motorola internally
---	--

Figure 15 Focal points for the final stage of the pilot project

To bring closure to the pilot project one last workshop should be held. This workshop would be more of a conclusion to the project and not demand active participation from the group. The commissioner should hold a speech and it would be preferable if the developers also could join. One suggestion is that small trinkets are given out as a combination of a thank you and to build an emotional bond towards the commissioner's brand. Mentimeter is a tool that could be used as last feedback from the group, but the main point is to thank the pilot group and bring the project to an end. For the commissioner, a post-Motorola should be made internally to assess their own skills within the project and what needs to be done differently if there is a next time.

7 Testing

For this thesis, a pilot program was constructed for the commissioner to be able to conduct testing and further developing of their software. The blueprint for a pilot program was presented to the commissioner and the blueprint was deemed feasible and in line with what the commissioner had envisioned. After the presentation and feedback, it was concluded that a handbook for conducting the pilot program and the methods used in the pilot program was going to be of use for the commissioner. To further develop the blueprint and what to expect a handbook to the pilot project were created.

The handbook that was created first was a preparatory document on what methods to use and how to use them, what points the facilitator should focus on during the workshops. The handbook is also a tool to ensure the elements of change management are present and that the facilitator and commissioner can easily plan and execute the pilot according to service design methods. Change can be hard to implement, especially as an outside organization and therefore it is needed to ensure psychological safety for the pilot group.

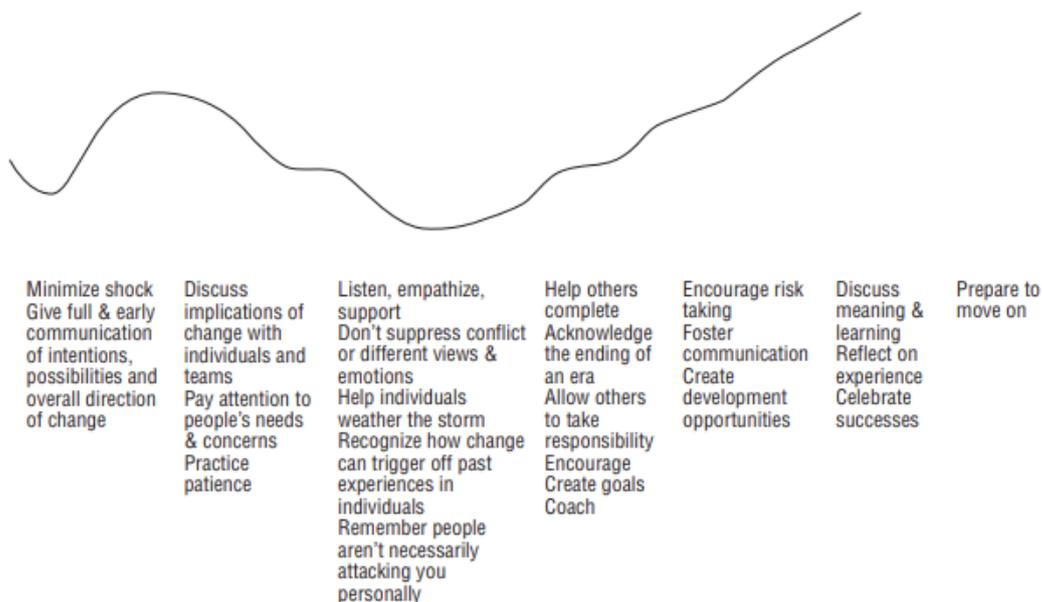


Figure 16 Change management process (Cameron & Green, 2009, p. 60)

As figure 16 shows, the role of the commissioner in the pilot project is a patient one. Full disclosure, discussing of intentions and support the group. The conflicts, or resistance, should not be suppressed, the commissioner need to take it on and guide the resistant ones

through the process, in appendix 12.5, the most important focal points for the first session in the pilot program can be seen. The host organization needs to understand that change often leads to a temporary loss in performance of their employees. (Cameron & Green, 2009, p. 60).

Continuous development is key to success – also for the pilot program itself. During the pilot program the commissioner will need to evaluate and re-develop the program to fit the pilot groups and host organization's needs. A suggestion would be to use the Motorola- and SWOT methods to analyse the situation throughout the program as seen in appendix 12.6.

In month three of the pilot program, it is recommended to have a workshop, this workshop will work as a motivator for the pilot group and as a channel for direct feedback to the commissioner. It will also ensure the psychological safety within the group and energize the participants. Psychological safety is crucial for this pilot program as the group needs to be comfortable to express their genuine thoughts without negative consequences and, as a group, they need to feel comfortable to share their ideas without humiliation. (Edmondson & Lei, 2014, p. 23). The methods suggested are learning café, (post) Motorola, and a direct feedback session. To ensure a relaxed and (psychologically) safe environment there needs to be a level of playfulness, but at the same time, the workshop needs to be goal oriented as to avoid causing frustration within the pilot group. A guide for the workshop and instructions for the recommended methods have been created and compiled into a handbook that can be seen in full in appendix 12.6.

There needs to be a way of analysing the feedback, and as a focal point for month four it is suggested that all the feedback is analysed using a modified version of the PESTLE-coding technique. PESTLE stands for *political, economic, social, technological, legal, and environmental*, and a need to modify this technique to suit the needs was identified. A suggestion would be to use personal (preference), organizational, legal, user friendliness, technological and aesthetic, creating a POLUTA-analysis. The analysis is to assess and deep dive into what actions the commissioner can take to create a better software. The analysis needs to be based on feedback gathered from the previous months as well as from the workshop.

Personal (preference)

Organizational

Legal

User Friendliness

Technological

Aesthetic

Figure 17 POLUTA-analysis

At the end of the pilot project, a suggestion would be to send out a post-Motorola to all participants to evaluate the pilot project. This data can be used in the last workshop and for future projects. Another POLUTA-analysis on the gathered feedback from the project should be done and be presented at the last meeting as well. This also will give the commissioner a guide to further development. The post-Motorola is suggested to use internally for the commissioner as well to be able to ensure further development within the organization and to evaluate their efforts.

What

The final meeting for the group, this time without having activities for the participants. This is to mark the end of the pilot and to thank everyone for their participation. The goal for this session is to say thank you to the group and present the results.

Figure 18 Exempt from the handbook

8 Reflection on the project

Based on the findings from the initial research a blueprint for a pilot project was created. The model was presented to the commissioner and the commissioner was given time to give feedback, however, the commissioner concluded they want templates and instructions for the pilot program as they were unfamiliar with some of the methods suggested and how to logically conduct the meetings with the pilot project group. On the request of the commissioner, the handbook was created.

For the commissioner it was crucial that the pilot program is flexible and customisable for different host organisations since the pilot project group does not necessarily have the same resources and time at every place and the commissioner is yet to determine a host organisation. This thesis also did not take into consideration the developers need and wants.

Issues caused by funding, the start-up aspect of the commissioner and the fact that things do not always go according to plan, created a situation where the execution of the pilot project could not be included in the thesis, and therefore a blueprint and handbook was created to assist the commissioner with the pilot project and prepare the commissioner to conduct a pilot without a service designer involved in the project. The handbook and blueprint were presented and got a positive reception.

8.1 Comments from the Commissioner

As a part of the finalisation of the project some comments from the Commissioner came. They were content with the amount of work and detail that has gone in to both the blueprint and the handbook. The board also concluded it is good to have an extensive blueprint and guide for a pilot project since they realized that a pilot project takes time and effort to conduct. They also said that everything might not fit for all pilot groups, but that they will pick out the methods they deem to be most useful to get genuine results. It was positive feedback and the amount of work lived up to the expectations of the commissioner.

9 Further development

A good plan and a detailed agenda are the base for the pilot project created, but even so the blueprint and plan must be viewed as flexible due to the many variable factors that can impact the blueprint in this instance. Major variables such as host organization, field of work and engagement are going to play a significant role in how the layout of the final pilot project is set. Minor variables such as minor changes in length of the project and number of participants will play a role, but the pilot project will still be viable and the results valid.

Based on the findings and the research it would be vital for the commissioner to ensure that there is a level of psychosocial safety within the pilot project group as the results will be positively impacted from this. The host organisation should be chosen carefully and the valued of psychosocial safety should be genuinely shared by the host organisation as well as the commissioner. The pilot project facilitator not only need to be somewhat educated on psychosocial safety, but they also need to notice the nuances of the pilot group and tailor the project to fit the pilot group without compromising the results.

True to the spirit of service design, it would be recommendable that the commissioner would co-design the pilot project with the host organisation to customize it to fit best with the participant the host and the developers. This could be done through different methods, such as an ideating workshop, but this is also not necessarily needed to create a successful pilot project. It is also recommended that during the mid-pilot workshop that they ask feedback about the pilot project so it can be developed and tailored even more to the group and participants, since the results will also factor in the frustrations possibly caused by participating in the pilot as well.

The consensus is that the commissioner needs to factor in a lot of different variables, and make sure to tailor the pilot project to the host organization and to put time and effort into making the pilot succeed.

10 Conclusions

This study was done to create a pilot project for the commissioner Compall Oy Ab. The Pilot project did not take place during the study and consequently a blueprint was created instead of facilitating the pilot project. The methods used were valid and logical for the project, however, a co-creation workshop together with end-users and the commissioner would have generated results that could possibly have had an impact on the final product. However, the workshop with the commissioner and stakeholder proved to be useful even though the participation rate was low. The Business Model Canvas was useful as it served as a base for the study and gave an insight in what is feasible for the pilot project. As the blueprint was created it served as the backbone of the study, the insights gathered, and the further development was based on the blueprint. Furthermore, the benchmarking did not contribute much to the study and served more as an indicator directly to the commissioner. Another method mentioned that did not unfortunately produce any academic value was the customer journey map, as this was not created per se, since the MVP of the software was still under development during the study. The author can draw a conclusion that the end-users can be involved in many various ways when prototyping a software. In this study it was found that a pilot project is the most logical method for involving the end users. To ensure a successful pilot project, preparations are needed since there are many variables for each distinct pilot group that can factor into the success rate. A blueprint of a pilot project is supporting the process and having a handbook will help as well. Using service design methods for a start-up can be considered important, especially in the process of developing. Having the end-users' input right at the prototyping phase will ensure a less costly and a more user-friendly software, this study also shows that service design methods are not commonly known and a guide to how to use them is good.

As a result of this thesis, it is concluded that end-users can be involved in the prototyping of a new product through a pilot program. By actively engaging them through workshops, motivating the end-user to send honest feedback and to have end-users test the prototype as it develops, we can maximize the results of the involvement. To ensure a successful pilot

project, the facilitator needs to have good evaluating skills and be able to gather feedback from all stakeholders in the pilot program. Skills such as multi-tasking, rigour and charisma are desired in the facilitator as well. A start-up company can benefit from using service design methods in several ways. In this thesis using service design as the base for a pilot program will help the company to develop their product. Although not proven in this study, evidence would suggest that the product will be more viable through these methods than without service design, as the end-users have been co-designing the product.

- Haddad, L. M., Annamaraju, P., & Toney-Butler, T. J. (2023, 2 13). Nursing Shortage. (N. L. Medicine, Compiler) Retrieved 12 10, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK493175/>
- Harper, M. (2019, 11 13). What are the Four Types of Benchmarking? Retrieved 1 1, 2023, from <https://www.apqc.org/blog/what-are-four-types-benchmarking>
- Interaction Design Foundation. (2016, 5 16). What are Customer Journey Maps? Retrieved 11 17, 2022, from <https://www.interaction-design.org/literature/topics/customer-journey-map>
- Laakso, A. (2016, 11 22). TULEVAISUUTTA TEKEMÄÄN. 10-12. Retrieved 2 2, 2023
- Levinsen, K., & Ørngreen, R. (2017). Workshops as a Research Methodology. Copenhagen, Denmark, Denmark. Retrieved 11 16, 2022, from <https://files.eric.ed.gov/fulltext/EJ1140102.pdf>
- Li, F., & Lu, Y. (den 27 7 2021). ENGAGING END USERS IN AN AI-ENABLED SMART SERVICE DESIGN - THE APPLICATION OF THE SMART SERVICE BLUEPRINT SCAPE (SSBS) FRAMEWORK. *Cambridge University Press*, 1, ss. 1363-1372. doi:<https://doi.org/10.1017/pds.2021.136>
- Löhr, K., Weinhardt, M., & Sieber, S. (den 24 4 2020). The “World Cafe” as a Participatory ´. *International Journal of Qualitative Methods*, 2-3. doi:[doi/10.1177/1609406920916976](https://doi.org/10.1177/1609406920916976)
- Ministry of Social Affairs and Health. (2023, 11 10). *Wellbeing services counties will be responsible for organising health, social and rescue services*. Retrieved 12 17, 2023, from Ministry of Social Affairs and Health: <https://stm.fi/en/wellbeing-services-counties>
- Nicolussi, R. (2020, 11 28). *Backcasting: Creating a Strategic Roadmap from the Future*. Retrieved 2 2, 2023, from Big Picture Roxi: <https://bigpictureroxi.medium.com/backcasting-creating-a-strategic-roadmap-from-the-future-dcc06f118592>
- Pantazis, V., & Otrók, M. (6 2020). The Role of Service Design in Startups, Exploring Potential Benefits and Challenges from Service Designers' Perspectives. doi:10.13140/RG.2.2.11888.69122
- Sanders, E. B.-N., & Stappers, P. J. (den 20 12 2013). Probes, toolkits and prototypes: three approaches to making in codesigning. Ohio: Taylor & Francis Group. doi:<http://dx.doi.org/10.1080/15710882.2014.888183>
- Social- och hälsovårdsministeriet. (2024). *Patientens ställning och rättigheter*. Retrieved 12 17, 2023, from Social- och hälsovårdsministeriet: <https://stm.fi/sv/patientens-rattigheter>
- Stickdorn, M., Schneider, J., & Andrews, K. (2011). *This is service design thinking: basics-tools-cases*. Amsterdam: BIS Publishers. Retrieved 10 25, 2022
- Stickdorn, M., Edgar Hormess, M., Lawrence, A., & Schneider, J. (2018). *This Is Service Design Doing : Applying Service Design Thinking in the Real World* (1 ed.). O'Reilly Media, Incorporated.

- Tausch, S., Stenberger, F., & Hußmann, H. (2015). Thinking Like Disney: Supporting the Disney Method Using Ambient Feedback Based on Group Performance. Cham Springer. doi:https://doi.org/10.1007/978-3-319-22698-9_42
- Tristancho, C. (2023, 5 10). Stakeholder Mapping 101: A Quick Guide to Stakeholder Maps. Austin, Texas: ProjectManager.com, Inc. Retrieved 05 18, 2023, from <https://www.projectmanager.com/blog/stakeholder-mapping-guide>
- Turner, R. (1 2005). The role of pilot studies in reducing risk on projects and programmes. *International Journal of Project Management*, 23(1), 1-6. doi:<https://doi.org/10.1016/j.ijproman.2004.01.003>
- Turunen, V. (2022, 10 7). Jonot kiirettömään erikoissairaanhoidon kasvatat edelleen. Finland. Retrieved 11 15, 2022, from <https://www.tehylehti.fi/fi/uutiset/jonot-kiireettomaan-erikoissairaanhoidon-kasvatat-edelleen>
- White, J., & Bottorff, C. (den 25 3 2022). What Is A SWOT Analysis? Download Our Free Template. Hämtat från <https://www.forbes.com/advisor/business/what-is-swot-analysis/> den 10 4 2024
- Wilson, V. (2012). Research Methods: Interviews. *Evidence Based Library and Information Practice*, 96-98. Retrieved 11 16, 2022, from <file:///C:/Users/moosi/Downloads/ojsadmin,+Journal+manager,+EBL101.pdf>
- X, M. (2023, 10 16). Pilot project within the healthcare industry. (M. Mattjus, Interviewer)
- X, N. (2023, 10 26). Pilot projects in different healthcare institutions. (M. Mattjus, Interviewer)
- X, P. m. (2023, 10 23). Pilot projects. (M. Mattjus, Interviewer)

12 Appendices

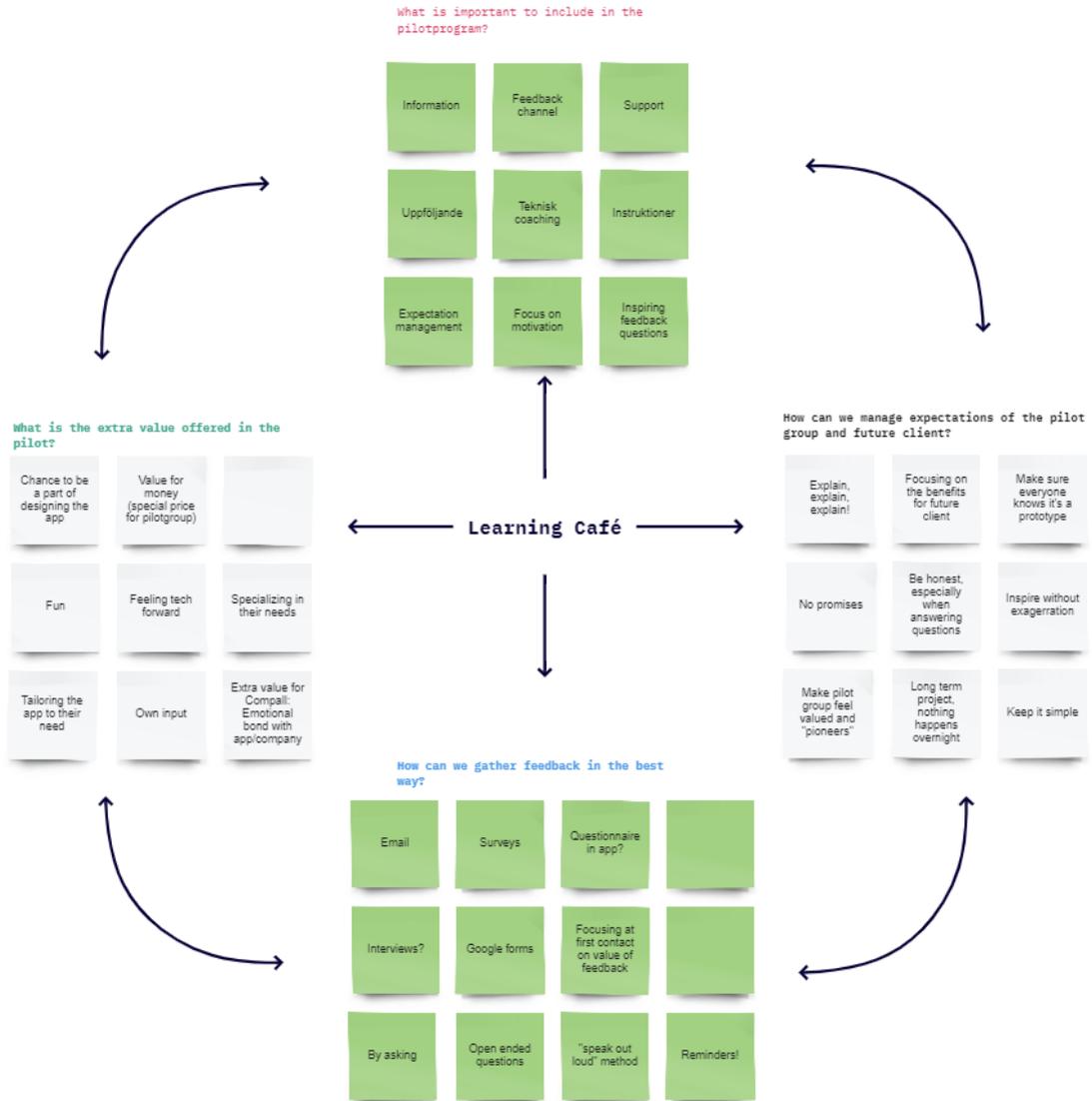
12.1 Benchmarking

Benchmarking	Business type + Customer segment				Website + Infrastructre		
Company A	Technology, creating and managing tech skills	Main fields: Public Sector, Finance, Healthcare Insurance	Major businesses as clients	Offers courses for private persons	Chaotic, but professional	Not easy to find what they specialize in no "this is us"	Monthly rates: 26e/39e per month
Company B	Employee development	Internal Employee development	Major businesses as clients	Focused on HR, leadership, productivity, client management etc	Great website, easy to follow, user friendly	Well explained business	
Company C	Team development	Engineering and HR	Provided by e.g. Pluralsight	High range of fields	Minimalist website, easy to use	Transparent how it works	
Company D	Inhouse development and skill bank	Major clients	Skill marketplace for recruitment and partnerships	Employers can post their skillsets	Easy website, free trial	Visual aids to help understand their business	Pricing available, free option available

Special features + What adds value?				Pros		
Personal courses, focusing on building career and maintaining knowledge	Respect clients	Offers solutions to fix shortage of competence	Highly rated online	Only focused on technical skills, Software Engineers/Developers	Website has no clear overview on what you get for your money	
Focused on employee L&D	Measurable results (not internal interpretation)	Tech forward company (AI matching)	Focused on personal and team development	Focused on internal growth		
Focused on employee L&D	Personalized budgets	Oversight of employees	Full service	Run through partnerships		
Focused on being a network	Free of charge, with add ons	Showcase both company's and personal skill set	Great for recruitment and partnership building	Not focusing on developing skills	Unclear if it benefits individuals	More about showcasing not fixing necessary lackings in skills

Cons		Take aways and suggestions		
Appreciated company worldwide	Professional courses	Career development for individuals	Guidance for next step	Course suggestions
Offers 1-1 coachings	Business growth to developing employees	Team developing, measurable results for business		
Good customer service	Requests from users can be done	Requests from users, e.g. requests for courses	Good tech/CU support for users	
Individuals can add skills themselves	Good concept, mol.fi and FRANK vibes	Printable competence page for job application	Free trial for individuals without special features?	

12.2 Learning café



12.3 Disney method

What will be the outcome of the pilot program?

How can we make sure the pilot project is a success?



12.4 Table of Interviews

INTERVIEWEE	DATE	MEDIA	PLACE	EXPERTISE
MANAGER X	16.10.2023	Microsoft Teams	Turku	Management within the Healthcare Industry
PROJECT MANAGER X	23.10.2023	Microsoft Teams	Turku	Pilot Projects
NURSE X	26.10.2023	Microsoft Teams	Turku	Healthcare Industry

12.5 Pilot project Blueprint

Process	Pre-pilot work	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Final
Pilot group actions	<ul style="list-style-type: none"> Alignment session + co-design pilot Participants chosen by host company 	<ul style="list-style-type: none"> Information session, Q&A, crash course 	<ul style="list-style-type: none"> Use software and document feedback 	<ul style="list-style-type: none"> Attend support workshop + checkup Use software and document feedback 	<ul style="list-style-type: none"> Use software and document feedback 	<ul style="list-style-type: none"> Use software and document feedback 	<ul style="list-style-type: none"> Use software and document feedback Send feedback last time + suggestions 	<ul style="list-style-type: none"> Take part in last workshop + results
Frontstage interactions	<ul style="list-style-type: none"> Prepare presentation of pilot program Send informative e-mail to participants 	<ul style="list-style-type: none"> Information presentation, Q&A session and Compall workshop 	<ul style="list-style-type: none"> Support participants through support channel 	<ul style="list-style-type: none"> Present what issues/bugs are worked on through their feedback Workshop with speak aloud method 	<ul style="list-style-type: none"> Support participants through support channel 	<ul style="list-style-type: none"> Support participants through support channel 	<ul style="list-style-type: none"> Support participants through support channel 	<ul style="list-style-type: none"> Present results of the pilot program Thank you speech CEO attending tinkets
Backstage interactions	<ul style="list-style-type: none"> Prepare for questions and what criteria are flexible 	<ul style="list-style-type: none"> Arrange snacks + coffee +/tea, make presentation 	<ul style="list-style-type: none"> Feedback sent to developers, 	<ul style="list-style-type: none"> Real time feedback sent to developers 	<ul style="list-style-type: none"> Real time feedback sent to developers 	<ul style="list-style-type: none"> Real time feedback sent to developers 	<ul style="list-style-type: none"> Real time feedback sent to developers 	<ul style="list-style-type: none"> Prepare speech, tinkets Continuous development through gathered data
Support processes	<ul style="list-style-type: none"> Study the pilot and the Align goals and mission 	<ul style="list-style-type: none"> Create relaxing and positive atmosphere 	<ul style="list-style-type: none"> Support participants through support channel 	<ul style="list-style-type: none"> Compile feedback, software updated 	<ul style="list-style-type: none"> Compile feedback, software updated 	<ul style="list-style-type: none"> Compile feedback, software updated 	<ul style="list-style-type: none"> Compile feedback, software updated 	<ul style="list-style-type: none"> Compile last feedback, software updated
Focal points	<ul style="list-style-type: none"> Set goals Set hard and soft criteria Prepare for questions Educate representative Presentation is key Info email to participants need to be formulated in a non demanding way Legality 	<ul style="list-style-type: none"> Create positive atmosphere, have fun while educating Prepare for the session Be ready for resistance and hard questions Focus on gain for the participants Small serving will relax and show gratitude towards group Hear out everyone! Resolve fears and anxiety Work with and for the group, low hierarchy can increase productivity Take note on personal preferences with coffee/tea and snacks 	<ul style="list-style-type: none"> Offer support to pilot group, it determines the outcome, make sure it runs smoothly Document feedback logically At end of first month, developer feedback would be good Patience is key Board decides if Pilot Program is going in the right direction - implement possible changes What are the needs of the programmers? 	<ul style="list-style-type: none"> Prepare workshop according to needs of pilot group Prepare what issues they found and what will be resolved, important to show the fruit of their labour Developer greetings could be good Coffee/Tea offered Important that representatives are present 	<ul style="list-style-type: none"> Support up and running and questions/issues resolved smoothly Feedback analyzed What does the programmer need for further development? 	<ul style="list-style-type: none"> Support running smoothly Feedback analyzed - is there persistent issues? Last push - email 	<ul style="list-style-type: none"> Last updates coming for pilot group Feedback analyzed Prepare for last workshop Send out a Post-Motorola form for the participants 	<ul style="list-style-type: none"> Thank everyone CEO speech Prepare for all Developers joining? Post-motorola internally
Methods	<ul style="list-style-type: none"> Pre Motorola SWOT analysis 	<ul style="list-style-type: none"> Speak aloud method for first impressions 	<ul style="list-style-type: none"> Motorola SWOT analysis 	<ul style="list-style-type: none"> Learning Café Direct Feedback Motorola 	<ul style="list-style-type: none"> "PESTLE" Code analysis 		<ul style="list-style-type: none"> Mentimeter compiled from all months Post Motorola from the group 	<ul style="list-style-type: none"> Post motorola Mentimeter

Pilot project Handbook



Developing a software with a human-centered approach

Table of contents

1. Introduction
2. Pilot project plan
5. Pre-Motorola
6. SWOT-analysis
7. Information session & crash course
8. Think aloud
9. Workshop
10. Learning café
11. Post-Motorola
12. POLUTA-analysis
13. Final session



Introduction

Explanation of the handbook

Use this handbook to prototype, test and facilitate workshops - in the strive to develop in a human-centered fashion

What

This handbook is created for CompAll as a support for facilitating a workshop. The handbook is based on the research of Moa Mattjus on the subject of prototyping software using service design.

The blueprint and methods are guidelines to create a successful pilot project that is useful to for the development. If some parts don't feel logical - it's recommended not to use them.

Parts

Part one is describing the pilot project and the stages, the pilot is created to be flexible and should be modified according to the possibilities of a host organization. The methods and activities mentioned as suggestions means that there is a deeper explanation for the method or topic further in the handbook



Pilot project plan

The agenda, plan and stages of the pilot project

Pre-pilot work

Before the pilot starts, a alignment meeting together with the host organization needs to be held. Here all rules and criteria are set and Compall needs to know what hard and soft criteria they have before going into this meeting. After this meeting the host organization decides who will take part in this and an info e-mail should be sent out to the chosen participants.

Suggested methods: Pre-Motorola and SWOT-analysis

Month one

The kick-off of the pilot project should contain an information presentation, a Q&A possibility and a crash course in using the software. Remember to reserve enough time for this. Complimentary snacks and drinks is recommended to set the tone of the meeting. In the Q&Q session, remember to hear everyone out and try to resolve the fears of the group. There will most likely be some resistance and it's good to remember to not get defensive and welcome all opinions. Remember to document the first impressions while conducting the crash-course. A lot of work needs to go into getting the group on board and motivated to create good results.

Suggested activites: Information session & crash course

Suggested methods: Think aloud



Month two

The pilot group has now given their first feedback and at this point a support hotline should be up and running smoothly. If there is no support from Compall during this time there is a risk that the group becomes demotivated and the results will suffer. This is also a good time to evaluate in case the pilot project is going well. Some questions to ask are: is the pilot group happy? Is the feedback system logical? Do the developers need the feedback in any other form? Is Compall getting good results?

Suggested methods: Motorola and SWOT-analysis

Month three

It's time to meet the pilot group again to show dedication and appreciation. Facilitate a workshop so the participant can give feedback directly and to bond with the group. The workshop should be interactive and have a positive atmosphere, so complimentary snacks and drinks are recommended. Remember to send out an agenda beforehand.

Suggested activity: Workshop

Suggested methods: Learning café, Direct feedback, Motorola with the group

Month four

The pilot project should be in full bloom and it's time to analyze the feedback more in-depth. Is the issues found being resolved? Is it something continuous being reported by the group?

Suggested methods: POLUTA-analysis



Month five

The findings from the pilot are either resolved or worked on. A last push for the feedback should be sent out to the pilot group and Compall should start planning the final session.

Month six

The last month of the pilot project should be about analyzing the feedback generated through the project, a post-Motorola form should be sent out to the participants. The agenda for the final session should be sent out to the pilot group and other invitees,

Suggested methods: Post-Motorola

Final session

In the final meet-up there should be more focus on thanking the group, reminisce funny moments during the project and speeches. Ideally, the developers would also join in and if the dynamics have been right during the project, the session could be created as a soirée. Trinkets should be handed out if possible and it might be fun to try out Mentimeter with the group. The results should be presented and emphasize what the pilot group achieved.

Suggested activity: Final session

Suggested methods- Post-Motorola, Mentimeter



Pre-Motorola

Expectations, preparations and vision

Ask yourselves these questions before starting
the pilot project to achieve alignment

WHAT ARE OUR
OBJECTIVES?

WHAT SKILLS DO WE
NEED IN THIS PROJECT?

WHAT IS THE ROLE OF
THE PILOT PROJECT
PARTICIPANTS?

HOW WILL WE ACHIEVE
OUR ULTIMATE GOAL?

WHAT THEORIES DO WE
USE IN THIS PROJECT?



SWOT-ANALYSIS

Opportunities and threats

Analyse the projects strengths and weaknesses before starting the project to achieve an overview over strengths and weaknesses



Information session & crash course

Inform, answer and educate

What

Facilitate the first meeting with the group and prepare a presentation. Hold a crash course in using the software and prepare for hard questions, frustration and resistance.

How

Present the goals of the pilot through a PowerPoint or similar, have a Q&A session and reserve enough time for it. Hold a crash course in using the software and remember to reserve time for it. Serve coffee/tea and snacks to diminish frustration and to establish a good relationship from the start,

Focal points

- Body language goes a long way. Do not get defensive when faced with hard questions!
- You, as the facilitator and company, set the tone
- Hear out everyone's fears and try your best to resolve them.
- Focus on what the group can gain, but acknowledge not everyone feels the same way.
- Work with and for the group, it will increase productivity



Think Aloud

First impression of the software

Use when the pilot group is trying out the software for the first time

Why

First impressions will be a great way to get real thoughts on the software, this will also help CompAll to genuinely develop a product with great user experience

How

The pilot project participants speak aloud about their thoughts when they first use the software, the thoughts get recorded and can later be analysed.

Material needed

- Tape recorder
- Notebook
- Pen

Who

- Pilot project facilitator and/or
- Workshop facilitator



Workshop

Gather feedback on site and connect with the group

What

Create an engaging workshop for the group to gather feedback on site and to motivate the participants. Some participants might give better feedback face-to face rather than online.

How

Create a workshop agenda that works for you and the host. Include a few feedback methods and have a open feedback session at the end. recommended methods are learning café and Motorola. To increase participation, coffee, tea and snacks is good to offer.

Focal points

- Send out an agenda to the group, so they know what to expect
- Create a fun experience for the group, make the atmosphere relaxed and focus on psychosocial safety
- Coffee, tea and snacks is always appreciated
- Prepare for the workshop appropriately and address issues the group has found
- Greetings from the developers could be used as an incentive



Learning café

Interactive workshop method

Use at workshops with the pilot project group, to create a relaxed setting for feedback

Why

Small groups within the pilot group will give feedback and new ideas and thought patterns can arise. It's also a way to gather a lot of feedback in an encouraging way. This will also incorporate CompAll into the design process.

Material needed

- Papers
- Pens
- Questions prepared

Who

- Pilot project/
workshop facilitator
- Pilot project group

How

Divide participants into teams, have four (or more) questions prepared on paper, Let the teams go to separate questions and have them come up with three answers, after five minutes the time is up and they should move on to the next question. After they have gone through all questions the group discusses the best solutions/answers for every question.



Post-Motorola

Evaluate success and failure

Ask these questions to gain insight in your developing progress as well as the success of the pilot project

WHAT HAS GONE WELL?

WHAT HAS GONE WRONG?

WHAT HAVE WE LEARNED?

WHAT WILL WE CHANGE?



POLUTA-analysis

A more fitting PESTLE-analysis

Political, Economic, Social, Technological, Legal
and Environmental

Why

Helps to organize the feedback and to quickly discover where the majority of the feedback fits in. Also a quick way to analyse feedback.

Material needed

- Computer
- Word or similar

Who

- Pilot project facilitator
- CompAll

How

Gather the feedback in a Word-document (or similar). Assign a highlight color for all the topics in the POLUTA abbreviation. Highlight the feedback with the color that represent that feedback. Divide the feedback into their respective categories for an overview.

Personal (preference)

Organizational

Legal

User Friendliness

Technological

Aesthetic



Final session

Bring closure to the project and thank the group

What

The final meeting for the group, this time without having activities for the participants. This is to mark the end of the pilot and to thank everyone for their participation. The goal for this session is to say thank you to the group and present the results.

How

Plan an agenda that includes a speech, some fun comments from the participants and developers and present the result of the pilot projects hard work. If possible, give out trinkets and have a chat with everyone. Perhaps some sparkling alcohol-free wine to mark the occasion.

Focal points

- Present the results of the pilot
- There should be a speech from the CEO
- Presentation of the Post-Motorola/Mentimeter for the last feedback/greetings would be great
- A small trinket for the participants would be great to create an emotional bond
- Developers could join to make the occasion more official
- Thank everyone!

