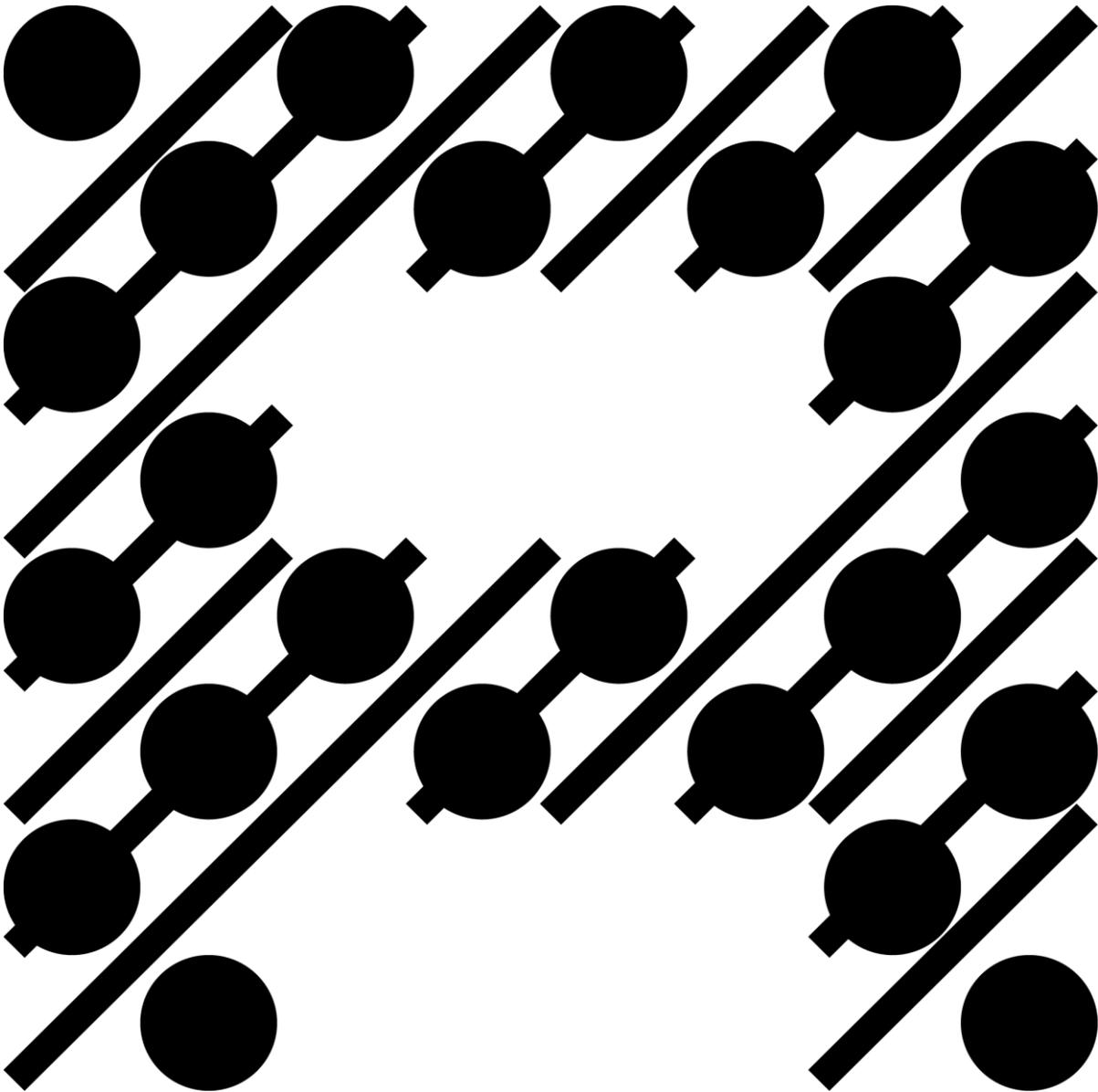


Life Storybook

Towards Narrative-based
Social Documentation

R.19-
01



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Preface

The report that you are about to read is the result of a creative and in some ways chaotic project, where students from different disciplines and universities worked with challenges that Stockholm, as a county and a city, is facing.

The city is our lab! - is the motto for Openlab. Students worked with challenges provided by Stockholm City and Stockholm Council in a wide range of areas. Within the framework of a 15 credits master-course, students worked in project-groups of 6-8 persons for one semester. To develop an understanding of the issue at hand, students engaged with the set challenges through the use of various research methods such as interviews and observations, as well as literature studies. Students then developed a number of proposals for solutions, one of which has then been pursued to create a more concrete solution that is tested within real-world situations.

Whilst working together at Openlab, students from different disciplines met and interacted with each other – not always without

complications. However, in these meetings something new and exciting can emerge. Students carry with them experiences of interdisciplinary discussions and solutions - a very important competence for meeting challenges of the future.

The result of all discussions, analysis, and synthesis is here documented in the report. Of course the report can only cover some parts of this dynamic and creative process. We who have worked as teachers in this course have our main function as coaches, providing tools during different phases of the project. The students work according to a process model based on *Design Thinking* and *SCRUM*. Creative ideas and systematic thinking merge together to a final project.

For us this is learning at its best – Freedom, Creativity, Social interaction, Engagement and FUN! But it is also based on real challenges in society – the idea is that Openlab's project should contribute to a better Stockholm for its inhabitants. **The city is our lab!**

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The Openlab Master's Course Report Series

13:01

Hitta rätt i vården
Ett värdigt åldrande

13:02

Vårdombud och Vårdagram
Rätt bil i rätt ruta
Hem & Vision

14:01

Levande stadsrum
LivsLabbet
Alla kan falla

14:02

Spira
Södersken
Zon 164

15:01 (English)

Increasing Patient Involvement in
the Healthcare System
Stockholm in Motion
Green Power of the Ecoflower

15:02 (English)

Grassroots Movements & Stockholms Stad:
Bridging the Gap
BikeMeSTHLM
The Step-Up! Planning Tool

16:01 (English)

Inside out
Elderly people & warmth
EduAction

16:02 (English)

Jobbtorg
Helping Hearts
Inspiring the Youth of Husby

17:01 (English)

The process wheel
Childish solutions
MindTrip-Making nursing homes more like
homes

17:02 (English)

Cykelbanan+
Finns I Sjön
Culturama
Stockholm Water Tap

18:01 (English)

The Dinner Dome
The Magic Button

18:02 (English)

Revival
SpiderWoman 2:0
Fireplace
Smart Square
DiContrast

Abstract in English

This report is a summary of the work done by a group of students (team *AiDoc*) at *OpenLab Stockholm* solving a challenge presented by the *City of Stockholm* in collaboration with *Stureby Nursing Home* and *Reality Lab*. The challenge involved coming up with alternative solutions that would **improve social documentation in elderly care** through two iterations of the *Design Thinking* process. The report starts by describing the process of gathering insights from observations and interaction with the users in order to identify their actual needs. The original challenge is then reformulated based on the new points of views. Various concepts are generated during the ideate-phase and are thereafter brought into the prototyping phase and tested. The second part of the report describes how the final concept is selected and fine-tuned to form what is now Life Storybook, a re-envisioned social documentation system that would overcome the challenges of the previous one through the use of aiding tools; and introduces new, comprehensive and innovative ways of documenting different aspects of the residents' daily lives in nursing homes.

Sammanfattning på svenska

Denna rapport är en sammanfattning av det arbete som gjorts av en grupp studenter (team *AiDoc*) på *OpenLab Stockholm*, som fått ett uppdrag av *Stockholm Stad* i samarbete med *Stureby vård & omsorgsboende* och *Verklighetslabbet*. Uppdraget var att designa fram alternativa lösningar som skulle förbättra den sociala dokumentationen inom äldreomsorgen. Uppdraget gjordes i två iterationer av *Design Thinking*-processen. Rapporten börjar med att beskriva processen som följdes för att samla in insikter från interaktion med användarna och identifiera deras aktuella behov. En ny formulering av uppdraget togs fram baserat på en ny synvinkel och beskriver också de olika begrepp som utvecklades under prototyp-fasen av den första iterationen. Endast ett av koncepten valdes ut för att vidareutvecklas och finjusteras. Slutprodukten av projektet är Life Storybook, ett socialt dokumentationssystem som skulle kunna övervinna utmaningarna från det tidigare systemet genom hjälpmedel och introduktion av nya, inkluderande och innovativa sätt att dokumentera olika aspekter av boendes vardagsliv i vårdhem.

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INTRODUCTION

This report summarizes AIDOC's insights and working process of the master course *Challenges for Emerging Cities* at OpenLab in spring 2019. The method used for this project has been the *Stanford Design Thinking Model*, which is illustrated in the figure below. It consists of five parts. Empathize phase where you open up and gather information; define phase where you take the information that has been gathered and make sense of it by gathering insights, ideate phase when you use those insights to create solutions, prototype phase where you make prototypes of the different solution concepts and lastly the test phase when the solutions are being tested to gather feedback to further improve the concepts.

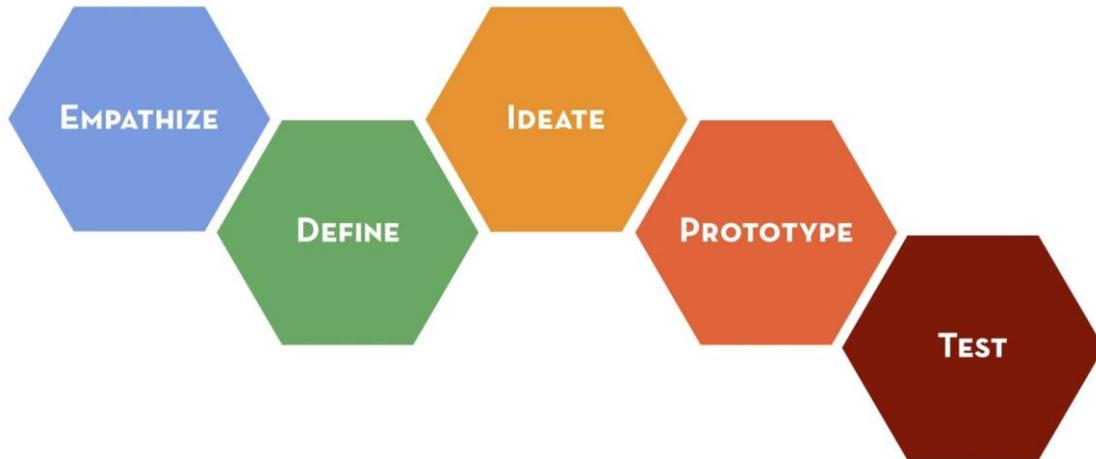


Figure 1. The design process that was used in the course and its different phases.

Background

Our assigned challenge is based on the systemic problems with Social Documentation. Chapter 11, paragraph 5 of the SoL Act or *social services act* (Socialtjänstlagen) states that all cases that involves a single individual that is supplied care support is required to be documented. Today, many Caregivers are not writing social documentation despite the fact that it is required by the SoL Act. The authorities have addressed the issues with training and mentoring initiatives, but with little results. If the SoL Act should be upheld there must therefore be a modernization of the Social Documentation process.

Social documentation in elderly care is particularly pressing issues since this age group is projected to significantly increase, which put higher demands social care to be well function. By 2050 the number of people with dementia is likely to have doubled (Socialstyrelsen, 2018). This is a particularly vulnerable group within elderly care as they have limited capability of documenting and expressing their own needs and wellbeing directly.

Original challenge

Based on the current insufficient and non-motivational social documenting system, our challenge giver (*Stureby Nursing Home*), originally tasked us with the following challenge:

“How can we create trustworthy, adequate and user-friendly way for social documentation within nursery homes that promote daily care and social interaction between caregiver and caretaker.”



Furthermore, some of the keywords that we brought with us from the first meeting were *accessibility, innovation, trust, transparency, meaningfulness* and *soft values*. We were also encouraged to embrace a long-term perspective and think beyond financial and practical limits.

Stureby Nursing home

Stureby nursing home is located in Enskede and is one of many of Stockholm municipality's nursing homes. It has 197 residents, 160 of whom have dementia and the rest, most of whom are sickly. The residents live in hallways of 8 rooms with an average of 3 staff members working at all times. Stureby nursing home is also the home of Reality Lab, an innovative initiative to develop better elderly care. Through co-creation and need analysis with the staff and residents, reality lab both develops new ideas and uses Stureby as a testbed for projects.



Figure 2. Pictures from Stureby Nursing Home.

Social Documentation

Social Documentation comprises of important social events in the life of caretakers and is required by the Social Services Act, *Socialtjänstlagen* (SoL). The social documentation we were working with is also parallel to medical journals by doctors and nurses and that these are separate from the social documentation.

In our understanding this adds to the complexity of the problem.

Social documentation should fulfill multiple purposes:

- To ensure quality care and professional practices are followed
- For caregivers it should serve as an important tool for individual healthcare planning
- For the relatives it should serve as a source of information on the care given to the resident.

Our main focus in this project are the Daily notes which describe the daily activities of the resident. Daily notes are however only one part of the Social Documentation process. The process is briefly visualized in the figure below.



Figure 3. Different types of documentation.

The implementation plan serves as the guide for the care that the residents should be given. It lays out the resident's individual healthcare goals, approximately 10 - 20, which adds up to 7-8 pages. The input from the Social journal and the Daily notes then feeds into the follow up and update of the implementation plan.

An important difference between Social Journaling and Daily notes is that Daily notes should include more information than just deviations from the implementation plan or instances that disrupts the care goals. Daily notes include positive events and provide a clearer picture of the resident's everyday life at the Nursing home. They also function as continuous quality checks that make sure that right care is given to the resident.

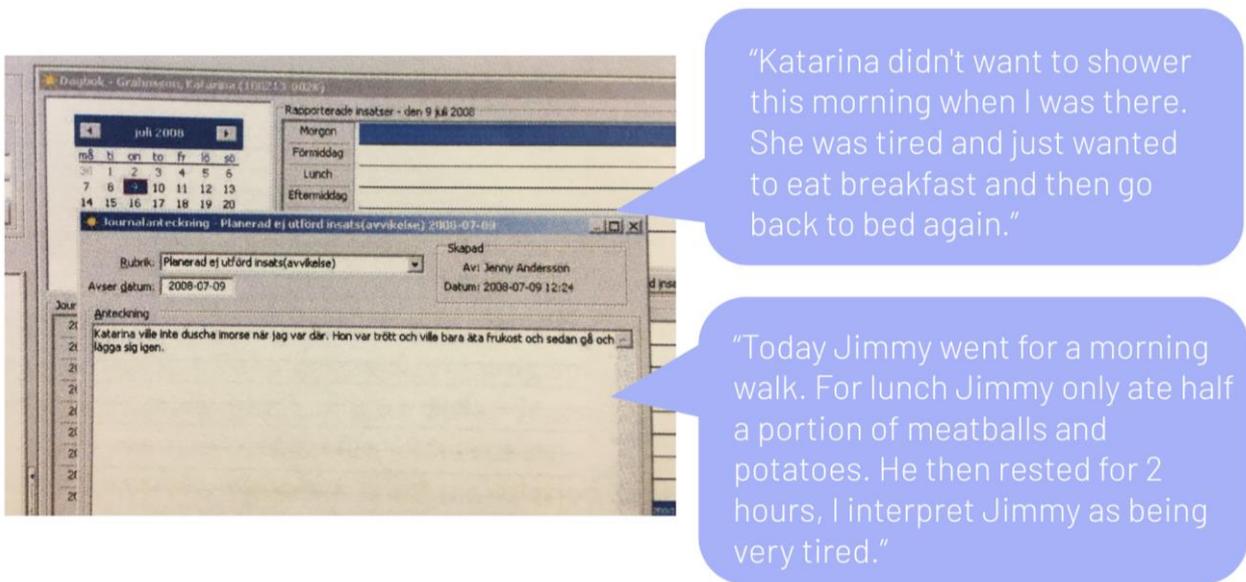


Figure 4. Parasol with the old looking design.

Daily notes should be written with respect to the resident’s integrity and the caregiver should make it clear that is written according to their interpretation of the residents’ feelings and not necessarily reflective of the elderly’s actual experience. Two examples are illustrated in the picture above. Daily notes are today written in the computer system ParaSoL which is an old system with many technical problems which makes it difficult to use for some groups of people.

Person-centered care

National Board of Health and Welfare, socialstyrelsen, has adopted a person-centered care approach and is looking to developing it further (socialstyrelsen, 2017). Person-centered care focuses on the understanding the perspective of the person with dementia. It emphasizes on treating the individual with respect and dignity by considering their history, lifestyle, preferences, hobbies and interests.

This is in contrast to reality-based approach, which is that people intuitively correct others if they stray from reality or fact. However, this is not very helpful when it comes to dementia. Though there understanding of the present might be variable, they’re sense of self and emotional needs remains intact. If an individual with dementia says she wants to visit her mother, despite the fact she has been dead for many years. The Caregiver should not confront her with the fact that her mother is dead, but rather the sentiment. According to occupational therapist and dementia expert Dagny Vikström, the caregiver should instead focus on that she expresses that she misses her mother and talk about that (von Garrelts, 2019,) This way the individual emotional needs is meet rather than upsets them. This approach can improve an individual’s quality of life and be a effective way to manage behavioral and psychological symptoms of dementia (Svenskt Demenscentrum, 2015).

METHOD

Design thinking is a process of creatively solving problems using elements from the designer's toolkit such as empathy and experimentation. It follows the following phases empathy, define, ideate, prototype, test.

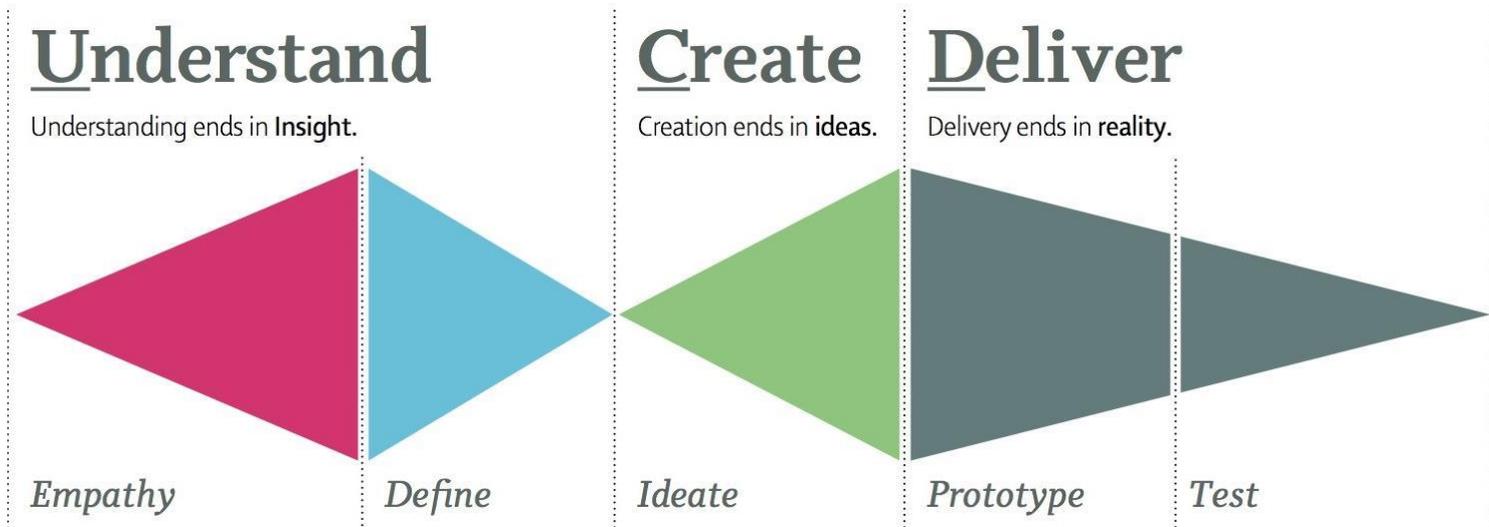


Figure 5. The double diamond model used in this project.

- **Empathize:** Before coming up with solutions, challenges need to be analyzed to identify any underlying and unobvious problems which may also need to be tackled. This involves observing the view of the users and their behavior, engaging and interacting with the users through intercept encounters; and the designers immersing and experiencing the situations for themselves to understand the users better.
- **Define:** This is where the user unpacks by sharing the stories captured and putting findings together into compelling insights and needs. Moreover, under this phase you need to scope a meaningful and specific challenge, and it is a mode of focus. If empathizing was about opening up, defining is about closing back in and trying to get concrete on the problems.
- **Ideate:** It involves 'branching out' and exploring different possibilities, after real issues have been identified, rather than focusing on a concept, which ensures that teams can come up with a vast repository of ideas that can be built into prototypes to test with users. All ideas are good, even the impossible ones. Finding the optimal ones may come from impossible ideas made possible through different means.
- **Prototype:** This is where the ideas and explorations are carried out by making them tangible to the physical world. Anything which takes a physical form is a prototype, be it role play activity, a space, a wall of post-it notes, an interface, an object, or even a storyboard. For a prototype you need to make it rough and rapid to quickly learn and investigate the different possibilities. This means it may not have all the functionalities of the final product but just contain a part of it or just the visuals.
- **Test:** This is whereby ideas are evaluated to refine and make them better. It is done iteratively in the appropriate context of users' lives. "Prototype as if you know you're right, but test as if you know you're wrong."

Once the process has reached this point, past testing, but the concept is not really done yet, the process can be "rebooted" and empathize phase restarted. This means it is time to open up again and try and find further information now that the testing has been done and new insights been made. It may have shown some lack of information within certain fields and thus may be worth revisiting.

PHASE ONE

EMPATHIZE

Personas

In this episode we present our personas, which are fictional characters based on real life experiences following interviews and observations and other data collected during the empathize phase. Based on the following personas we decided to mainly focus on the perspective of Laura, the caregiver. This followed because we found her to be the main user of the current and future system and the user that has to carry out the actual documentation. The perspective of the caregiver is also one that we perceived as frequently being overlooked.



Laura

- ☒ Caregiver
- ☒ 32 years old
- ☒ Swedish 2nd language
- ☒ 2 years' experience

Starting with Laura, a caregiver at Stureby, we were amazed to realize that she had not documented for a period of 7 months. We wondered if this meant that Laura lacked the knowledge or felt uncomfortable with the documenting system or that she felt as if there was a lack of purpose in social documenting.



Sol

- ☒ Supervisor
- ☒ 52 years old
- ☒ Swedish 1st language
- ☒ 10 years' experience

We also met Sol, a supervisor that works in one of the units at Stureby, and we were amazed to realize that she did not prioritize documentation either seeing that social documentation is not scheduled or appropriate resources provided. Further, there are no consequences implemented if documentation is not being done. We wondered if this meant that Sol doesn't understand the full importance of social documentation or that she feels powerless and misses the right tools.



Carl

- ☒ Relative
- ☒ 52 years old
- ☒ Swedish
- ☒ Mom has dementia

Finally, we met Carl whose mom lives at Stureby. We were amazed to realize that Carl did not check the information about his mother on the available platforms such as ParaSoL. We wondered if this meant that he lacks knowledge on how to use the system or that the available information about his mother is poor and serves no purpose.

A common factor that we encountered in all of our personas was a general lack of purpose or meaning with the existing social documentation system. The added value component was missing, which we believe resulted in the current poor or nonexistent documentation. This is an interesting insight since the people we interviewed mainly blamed resources (e.g. time, computers & language) for causing the problem but did not talk a lot about *why* it is important that social documentation exists in the first place, other than that it is required by the law. In the next part of the process we therefore spent a lot of time discussing what the true value of tomorrow's social documentation should be.

DEFINE

Insights

Insights were needed in order to fully understand the needs of all stakeholders involved in the challenge. These insights have been discovered and defined through:

1. Observations, in which users and their behavior are viewed
2. Engagement, in which interactions with users is created through scheduled and 'intercept' encounters
3. Immersing, in which the experience of the user is experienced.

The assistant nurses have been observed, in order to create a good picture of their workday, tasks and responsibilities. Furthermore, engagement with the assistant nurses, managers and challenge givers has been realized through interviews. Lastly, the Aidoc team has immersed themselves into the processes and activities of Stureby Nursing home by joining several activities e.g. the dance cafe. This process has led to several surprising insights, some of these insights have been highlighted below.

Firstly, in the interviews with the challenge givers language came forward as the "biggest challenge". Furthermore, it was said that:

"Transparency towards relatives of residents is key"

"Assistant nurses are not trained for documentation".

"Not known if assistant nurses take language courses"

It was surprising since the biggest challenge was said to be language. Surprising insights from observing assistant nurses were the fact that:

"Some have not documented in 7 months"

"Shortage on staff leads to more busy day, which gives even less time to document".

"Unsure if the managers understands/relates to their [assistant nurses'] struggles".

Surprising insights from the senior manager were that:

"Biggest problem today is time"

"Relatives are not involved"

"System is for academic people not for non-academic people"

"Assistant nurses do not have time-slot for documenting"

The System Admin gave us the insight that:

"The biggest challenges are Time, Language and Law".

"The system is not being used"

"There is a lack of computers"

"Caregivers don't want to learn about Parasol".

As can be read in these insights there were some conflicting statements from the different stakeholders. All the stakeholders thought that either time, language, the law or the system were the biggest challenges. Showing that different stakeholders experience different problems. Furthermore, it was surprising to realize that the different stakeholders have different priorities for social documentation and that social documentation is barely being done at all at the moment.

Redefined challenge and new POV

We decided to focus on the caregiver, which is the assistant nurse, since she is the main stakeholder who carries out the social documentation and spends majority of the time with the caretakers, which are the residents at the elderly home.

The new point of view we came up with is:

"How do we make social documentation more accessible and integrated into the daily routine of the caregiver, and reflect their meaningful work?"

As mentioned earlier, we agree that the work that the caregivers do is very important and meaningful but that it is not reflected in the social documentation. During social documentation, the part of the purpose and the meaningfulness falls away somewhere in the process. The insights we got from different stakeholders mentioned and emphasized that there is lack of time and staff, and the accessibility is poor too, in terms of e.g. computers to work on. The time to social document isn't integrated into the work schedule of the assistant nurses either.

As a group we lifted various keywords such as meaningfulness, purposefulness, integration, accessibility and more that we felt was needed in the new POV. The process of redefining the original challenge was challenging. We had to question every word we used in the new POV since we wanted to immerse and really think what we are trying to tell with it. We questioned our new POV with many

“why’s” for example why are we using this word instead of that one? or what is the purpose behind this meaning?

We focused a lot on the last part of our new POV where we wrote “reflect their meaningful work”. At first our way of thinking was “how do we make social documenting meaningful”, but as the discussions continued, we realized that instead of making social documentation meaningful, we should focus on reflecting the assistant nurses meaningful work *into* social documentation. It adds value into the social documentation and adds a form of motivation to use it as a form of reflection and validation.

I D E A T E

Now that the new POV had been set it was time to dig into the ideas that will bring solutions to the problems in question. From a lot of brainstorming, visualizations, and discussions there were a lot of ideas that was brought forth. The ideas were focused on specific problems with a hope of finding a very specific solution which would be optimal for solving the problem with a hope of being able to combine some of them later to have an overall solution. The different concepts that were brought up were the following.

Concept 1: Care Aware

Based on the research that we conducted on dementia care methods such as *Dementia care mapping* and the *Marte meo* system. After reading about the benefits of these concepts we came up with an idea to integrate these methods into the social documentation system to add value and promote better care for the residents at nursing homes.



Behaviour		
Interacting with others verbally or otherwise (with no obvious accompanying activity)		
Eating or drinking		
Sleeping or dozing		
Being engaged but passively (watching)		
Leisure, fun and recreational activities		
Receiving practical, physical or personal care		
Self care		
Being disengaged, withdrawn		
Attempting to communicate without receiving a response		
Episodes relating to urinary excretion or bowel movement		
Walking, standing or moving independently		

Marte meo is based on using different tools and media, such as videos and photos, to observe and analyze the resident’s behavior. This should then preferably be discussed between different relevant parties to develop better treatment for caretakers as well as increased self-awareness for caregivers.

Dementia care mapping uses preset models (see the figure 7 as an example) to analyze important social events and interactions in the elderly’s daily life and thus creating a sort of “map” of their behavior and development prospects.

Figure 7. Behavior checklist based on Dementia care mapping.

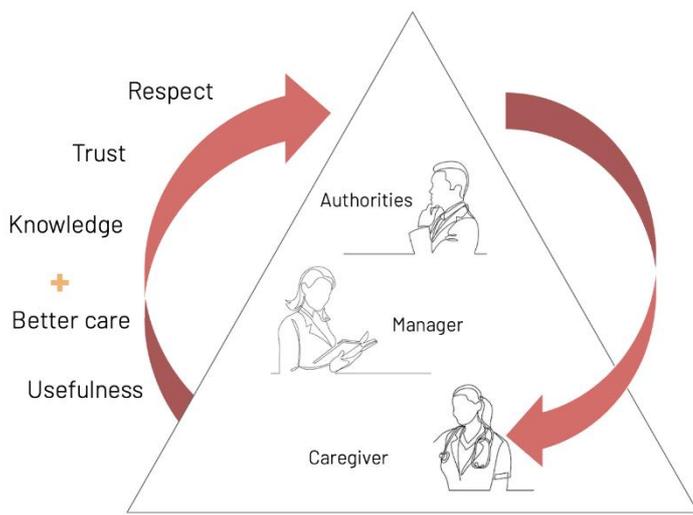


Figure 8. The triangle of trust.

This concept could fulfill the objectives of our POV as we believe there would be increased value in the documentation as well as daily integration through more standardized procedures. Furthermore, it would promote a more efficient and trustful communication system between different stakeholders, which is illustrated in the figure to the right.

Concept 2: RecDoc.

Recdoc. is an app or device which aims to improve accessibility for caregivers and act as a communication platform for caregivers, managers and relatives. The app records and convert languages to the users' desire, which will battle the language barrier problem. We came up with this app, to answer one of the challenges we got from the insights connected to caregivers. To help solve the issue of caregivers that are not from Sweden and help them understand the language better seeing that the app would translate the audio to another language and store in the app as text. By providing a mobile solution we also believe that accessibility measures would increase, and documenting would be further integrated into the daily habits of caregivers. The caregivers will use small headsets which have a microphone to record to the Recdoc app, while there are working at the same time.



The idea of the app is furthermore to include an easily accessible overview for nurses to create awareness of their own documentation and hopefully make them reflect upon it. This would hopefully increase the meaningfulness component of social documentation.

Figure 9. Record and the device translates.

Recdoc could also act as a potential communication platform between different stakeholders with a clear and realistic overlook. Moreover, the app could possibly include a rewarding system to motivate increased usage, but this is dependent on further discussions on whether motivation to document should be external or internal.

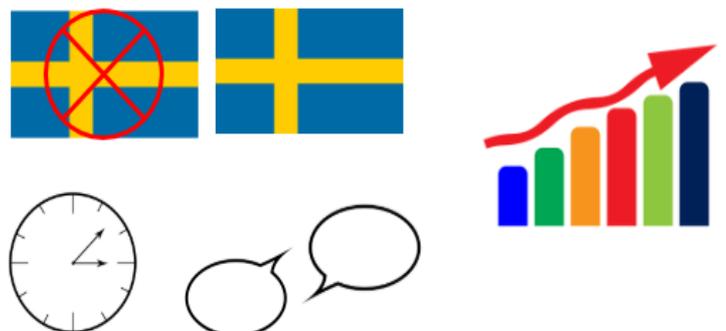


Figure 10. The increased efficiency when the language barrier is removed.

Concept 3: Face 2 Face (F2F)

The idea of our third concept *Face to Face* is to bring caregivers and relatives (and elderly if they are able to attend) together every few months for a general catch up. We do not want it to have the feel of just “another meeting” but rather an informal event where perhaps fika is being served and discussions have the main purpose of building trust between parties and comprehension of each other’s perspectives. It is supposed to be a moment for reflection and an opportunity to further enhance the caretaking of the resident, as well as a joyful and flexible time to look forward to.



Figure 11. Social meetings to let the conversations more casual.

We believe that a meeting like this would be a good incentive to document continuously (on a daily basis) for caregivers. By creating an overview of the elderly’s past few months it ensures that the social documentation is being used for a further purpose and could also introduce creative elements into the documentation process. The direct contact also enables direct feedback which could be valuable for caregivers.

One main challenge with this concept consists in whether all relatives are interested and engaged enough in the caretaking of their loved ones to attend these meetings. Some residents might receive better care based on their relationship with their relatives which should not be the aim of social documentation.

Concept 4: One Life/”Ett Liv” (storybook)

Our final concept relies on the idea of a “last chapter” book which contains a summarized profile of the resident. The book would include daily and long-term activities, relationships and visual representations. It would also be used for documenting special moments and activities by the means of writing, photos and crafting. This could be an interactive activity that the caregiver does in collaboration with the resident. Additionally, the book would be made available for the relatives when the elderly passes away, showing them the last years of their loved ones. If this is not a wish of the relatives, we also believe that it could be valuable for the caregivers to keep the book at the residence as a memory of the people they have been taking care of for perhaps multiple years.

We believe this solution mainly connects to the meaningfulness component of our POV. *One Life* would ensure that the documentation would be used for a further purpose and live on. There are also both analog and digital solutions with this concept which makes it flexible and creates a lot of opportunities both today and in the future.



Figure 12. Different ways to look at the storybook concept.

PROTOTYPE

For some of the concepts, prototypes were made. Their purpose where to get a better picture of the solution itself, to be able to show it to others and to ask them for their opinion thus gather feedback in order to improve the concept.

In the Face2Face concept, a simple board was made where the interaction is shown and with the empathies on the mood that it is kept jolly and have a pleasant atmosphere to discuss in.



Figure 13. A prototype model of the social meeting.

The concept of One Life (life story book), some example pages were made to give an example of what it could contain. It does not show a real picture of how it would look like but titles are set and some quick sketches of potential content were drawn.



Figure 14. A prototype that shows the different chapters that the book could contain.

TESTING

The 21st of Mars there was a mid-term presentation of the work so far and all the concepts that had been realized. At this presentation were a lot of different stakeholders, such as Stureby Reality lab (the challenge givers) and many other engaged people who had good questions and remarks. It gave a lot of good feedback. From this feedback new perspectives had to be made and it built a ground for phase two of the project. What it said was that the focus had been too much on the caregiver when the end result should be focused on the resident, the work in the end is for the resident and thus the focus should be on improving the life of the resident and their needs through well done documentation and use of it. An insight from this feedback was also that more focus should be on the good relationship the caregivers have with the resident and how this can be used and shown in the documentation.

PHASE TWO

Now that the different concepts have been presented and the midterm has been reached, some people were finishing their part of the course so there had to be group changes. Some people left and some new people got into the group. The new group got to keep three old members (Gloria, Simran & Tabaka), and three new members (Castrol, Edwin & Sujoy). With some new blood in the group, there was new energy and new ideas popping up. When you work on a project for a long time it may happen that you get snowed in to one point of view, so with new people new perspectives could be brought in and things that had been lost could be re-found. The new members went to Stureby and participated in different activities to get a on hands experience and to better understand the situation better. This is important to really get close to the people who are going to be the end users as the human factor can easily be lost when sitting at an office working without meeting the users. The process of design thinking used was to go through the different steps, Empathize, Define, Ideate, Prototype & Test, and this had now been done. So now it was time to rethink and go back to opening up and looking at everything with new eyes. The process is iterative, and it was time to go back to the empathize phase.

RE-EMPHASISE

Social Documentation in the expanded field

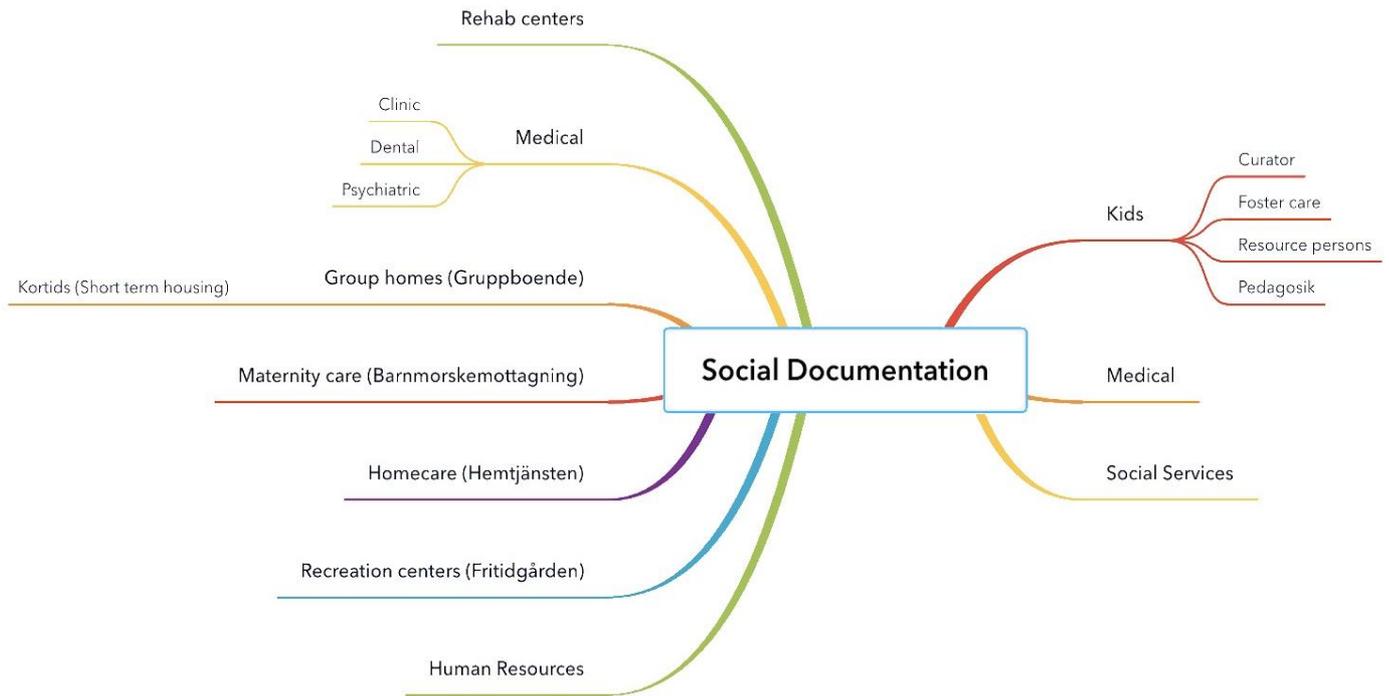


Figure 15. A mind map of different actors that perform social documentation.

As part of our reboot process, we went into looking at how other organizations perform social documentation in their areas of influence. We came up with the mind map shown above, that includes some of the organizations that we believed would be important to our project as they would give us more insights on social documentation. We were interested in finding out how and how often they do their documentation and what motivates them into doing the documentation as part of their work. We contacted a number of organizations that fall under the categories in the mind map and also made an effort to reach out to our social networks who fall in the same line of work. We were however only able to get a handful of responses, as contacting these organizations and our social networks proved to be more difficult than we had initially anticipated. We still believe that it would be interesting to find out how organizations in these areas of work do their documentation and how they ensure that it is constantly done as part of their operational procedures to further improve on our concept in future.

RE-DEFINE

Re-defined focus



Figure 16. Image to show the caring relationship between residents and caregivers.

Towards co-creation: sharing agency and authorship

Social documentation in elderly care involves multiple stakeholders: residents, caregivers, managers, administrators, relatives, researchers, controllers and policymakers etc. The current documentation system reflects or presumes a linear interaction in documentation process in which there are 1. the ones who are being documented; 2. the ones who document; 3. the ones who read, in which case caregivers are the ones with sole responsibility for documentation.

The observations and insights we gathered so far point us to the main challenge for these 'lonely agents': the documenting activity within given working conditions (e.g. there is no pre-assigned time slot for documentation) are often felt to be a burdensome task, while all other stakeholders rely on them for there to be any form of documentation around residents' life in their collective residence.

What if, we shift our perspectives and consider caregivers' responsibility to be *agency*, a granted right to engage and make difference; and what if this agency is considered as something to be shared with the very stakeholder, supposedly at the center of care system in question, namely, the residents themselves?

Towards process-based approach: documentation as an activity

Despite the fact that the word "social" gives the impression that 'social interaction' should be the main focus of documentation, the current content structure consists of observational notes such as daily notes, work notes, Implementation plan, journal notes - which serve primarily as means to communicate among staff members and relatives.

The observations and insights we gathered so far also point us to the challenge for such instrumental approach: the documenting activity are often felt to be a subsidiary task for caregivers, while the actual social interaction with the residents being the primary one. The lack of incentive also attributes to the feeling that the contents they are producing do not reflect their meaningful work.

What if, we shift our perspectives and consider social documentation as a meaningful activity in its own right, rather than 'means to an end'; and what if it can furthermore provide a platform for facilitated social interaction among residents and caregivers?

Towards narrative-based contents: finding the common language

As mentioned above, current social documentation consists of various kinds of information derived from data around residents' conditions and daily lives. They are mostly factual description of personal experiences in a third person's point of view, intended to further generate data to be feedbacked into the care system.

The observations we gathered from our visits in Stureby points us to the insight that **stories are stronger than facts** in everyday reality. Conversations with the residents, many of whom have dementia, revolve oftentimes around memories of places, people or things. 'Whether their accounts may be true or not' is a non-issue when social interaction means to be weaving new stories in real-time through their past-time stories.

What if, we shift our perspectives and think stories (not only "data"), contents (not only "information") and description (not only "prescription") - while documenting these *everyday stories of sharing stories*? And what if even all the data-based information, which the current system requires to be documented and reported, could be woven into narrative-based contents?

Evaluation and concept selection

From the different concepts that were brought up in the first section of the course, the time to narrow it down to one, to "*kill our darlings*", had come. The method used was the one which was brought up in the course, a certain quality matrix where the different concepts are measured against each other to be able to see which one seems the best to continue working with. This matrix was filled with criteria that are all weighed after the level of importance from 1 to 10. Then each concept is graded for each criterion, here also between 1 and 10, then the weight times the grade of each criteria is summed up to get the concepts total grade. The matrix can be seen below.

Table 1. Criteria Matrix that was used in order to choose the concept to continue with.

		Buzzing Concepts, so far:			
		Care Aware	Rec Doc	F2F	Lifestory book
May it (be)...?	Weight (1-10)	Average Evaluation Score (1-10)			
Improve care	10	7.5	5.7	6	8
Meaningful	8	6	5.3	6.7	9.2
Accessible	8	3.8	9	5.5	8.2
Useful	6	6.7	7.3	6	7.7
Motivating	6	4.3	6.2	6	8.2
Implementable	4	5	7.3	6.2	8
Revolutionary	2	3.5	6	3	6.8
Total (sums of weight x score)		246.4	293.6	260.4	360.2

From the results seen in the table # above, the clear winner was the Life Storybook. It was not unexpected as during the discussions that had been going around, it seemed that everyone had it as a clear favorite from the start, this outcome just reinforced the idea to continue with the Life Storybook.

From this, the chosen concept was clear, but now the question about what the concept actually contained was raised and seem to have no real answer. The original idea was to have a physical book, sort of a diary. But taking a step back and widening the view of the concept it was realized that it could be more than just paper in a folder. The idea to take in a digital point of view can help a lot with the utilization of the documentation and help in many other ways, like making premade forms and automatically analyzing and comparing data to get instant results and direction to take the care to make it more effective for this individual. With continued discussions about the topic it became more and more clear what has to be the focus in order for this project to bring any useful fruit to the challenge giver. From the insights that have been drawn it is clear that the problem with time and meaningfulness is always brought up. If time is put on it, it has to be meaningful to improve care otherwise the time which there is so little of has to be put on actual care for the resident. But these two things are only important for one reason, because it takes away from the actual care, because in the end the most important thing is the wellbeing of the resident. So how to convert documentation to actual care and doing this in a time efficient was brings meaningfulness to the documentation. So, the Life Storybook idea is to facilitate the work of the caregiver by both facilitating the process of documenting, “saving time” by including the resident in the documentation themselves.

To make it more personal it is telling the story of the person through both the documentation that the resident themselves made in different events and workshops, but also the story that the facts tell. Turnings the stale data of facts to the story of a person's journey through life is giving the boring data a meaning and life.

Re-analysis of user needs

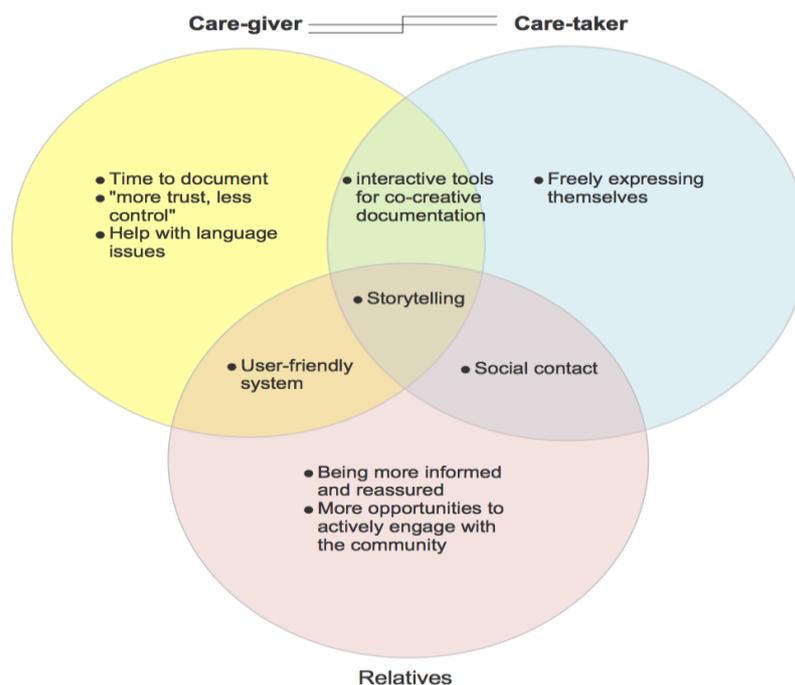


Figure 17. Venn diagram with main stakeholders and our focus needs

Reassessing values and functions

To be sure that the group work stayed objective and that the implementations that are planned all have a purpose the main values were discussed. Through brainstorming, discussions and grouping of opinions the following table was brought forward. Once a number of values had been agreed upon, a number of functions were brought up to figure out how the values should be brought into action, talking about values is nice and all but a plan to make it more tangible is important so it is not just a list of fancy words. The main links between the important function and the values they bring can be seen in the table 2 below but all connections can be observed in the figure 18.

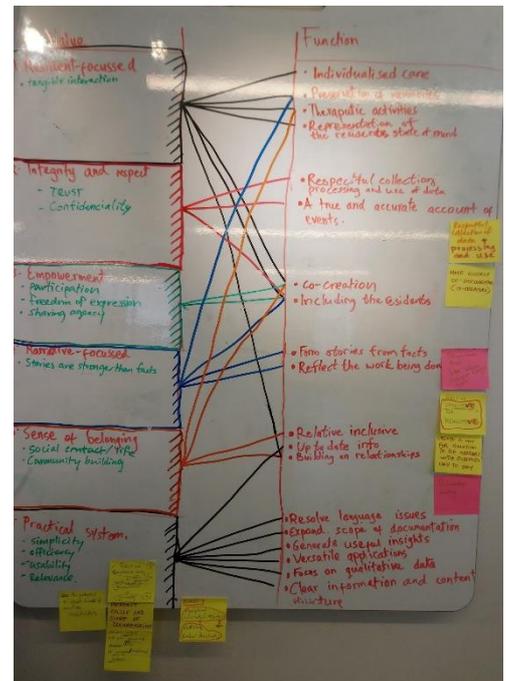


Figure 18. The grouping of project values and functions.

Table 2. The values that define the project.

	Value	Function
1	Resident-focused <ul style="list-style-type: none"> Tangible interaction 	<ul style="list-style-type: none"> Individualized care Preservation of memories Therapeutic activities Representation of the residents' state of mind
2	Integrity and respect <ul style="list-style-type: none"> Trust Confidentiality 	<ul style="list-style-type: none"> Respectful collection processing and use of data A true and accurate account of events
3	Empowerment <ul style="list-style-type: none"> Participation Freedom of expression Sharing agency 	<ul style="list-style-type: none"> Co-creation Include the residents
4	Narrative-focused <ul style="list-style-type: none"> Stories are stronger than facts 	<ul style="list-style-type: none"> Create stories from facts Reflect the work being done
5	Sense of belonging <ul style="list-style-type: none"> Social contract / life Community building 	<ul style="list-style-type: none"> Relative inclusive Up to date info Building on relationships
6	Practical System <ul style="list-style-type: none"> Simplicity Efficiency Usability Relevance 	<ul style="list-style-type: none"> Resolve language issues Expand scope of documentation Generate useful insights Versatile application Focus on qualitative data Clear information and control structure

RE-IDEATE

After selecting the Life story book concept and analyzing it, we started to look at how we would develop the concept further. We realized that we wanted to create a comprehensive social documentation system that would include both formal and informal content. The informal content is about our original life story book idea, where the caregiver and resident together document the mood and social activities that residents are doing at the nursing home. Whilst the formal content is all the additional content that is needed to make a complete social documentation system.

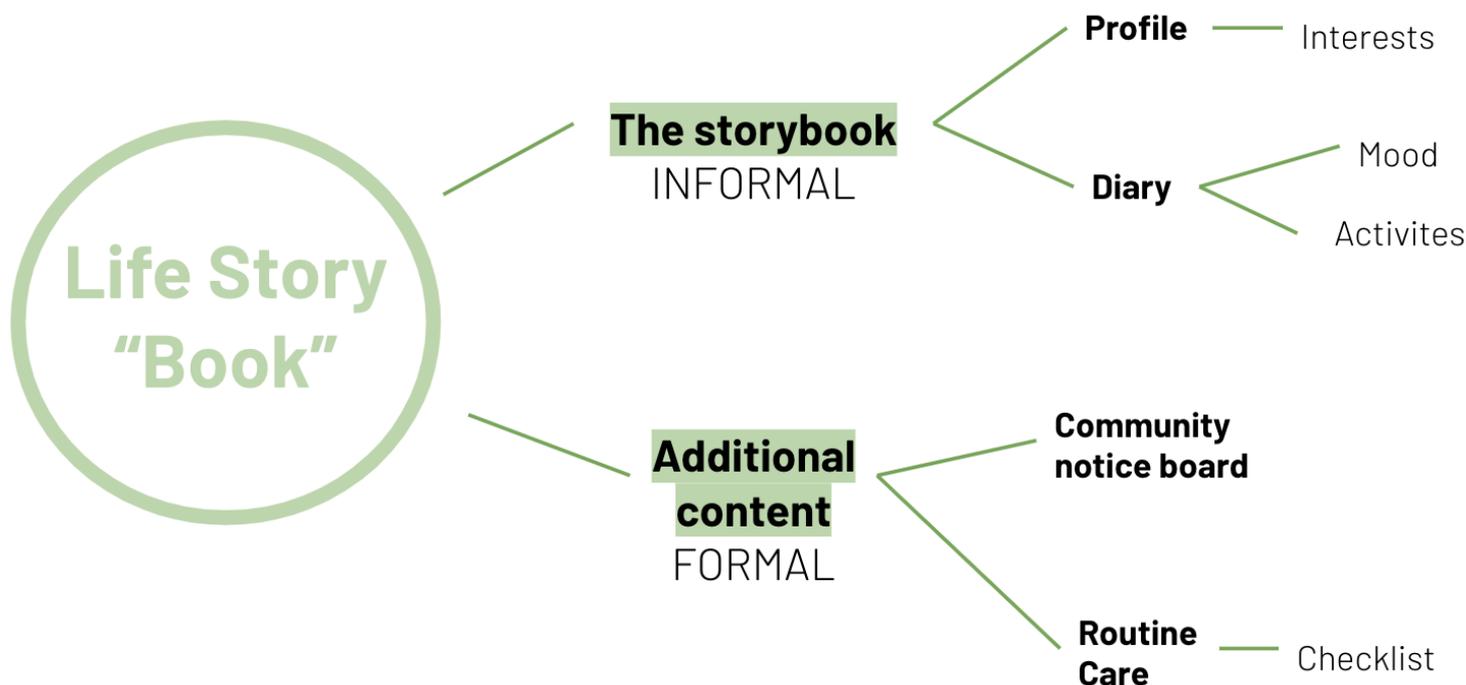


Figure 19. Life story book division of content.

Concept features

Once the values had been set the work to make the talked about features of the concept more concrete began. Listing them in the table 3 also naming its mechanics of how it is going to work and what function it fulfills, these functions are in turn connected to values as already explained in the last segment. These features are all set up with a purpose to fulfill to both help in the care for the resident, help the caregiver have more time to do their job and much more. The first priority is always the resident and how to facilitate the caregivers work, lower stress levels connected to documentation and make documentation count for something, making it meaningful for both resident, caregivers, relatives and managers.

Table 3. Features from the project solution.

Features (What)	Mechanics (How)	Function/Value (Why)
Book R** C*	<ul style="list-style-type: none"> • Profile • Diary 	<ul style="list-style-type: none"> • Story building • Individual expression
Digital Platform R C	<ul style="list-style-type: none"> • Multiplatform (Computer, Phones) • Accessible 	<ul style="list-style-type: none"> • Accessible • Automatic classification and analysis
Activity/Routine R C	<ul style="list-style-type: none"> • Time Schedule • Document activity (Take photos etc) 	<ul style="list-style-type: none"> • Relationship
Timeline R C	<ul style="list-style-type: none"> • Digital recorder • Puts documentation into a easy to follow timeline 	<ul style="list-style-type: none"> • Story from fact • Preserves memories • Personalized
Checklist R C	<ul style="list-style-type: none"> • Premade forms for different occasions 	<ul style="list-style-type: none"> • Quick documentation • Easy to summarize
Community notice board R C	<ul style="list-style-type: none"> • Events • Volunteer • Gallery 	<ul style="list-style-type: none"> • Community building • Engagement • Relationship building
Summary tools C	<ul style="list-style-type: none"> • Charts • Overview 	<ul style="list-style-type: none"> • Story building • Easy to read documentation
Analysis tools C	<ul style="list-style-type: none"> • Solutions • Implementation plan 	<ul style="list-style-type: none"> • Improves care • Integrity
Speech to text C	<ul style="list-style-type: none"> • To add comments to checklist 	<ul style="list-style-type: none"> • Facilitates documentation
Social documentation System C	<ul style="list-style-type: none"> • Comprehensive system of Book+ Digital Platform 	<ul style="list-style-type: none"> • Good accessibility for resident, Relative, Authorities, Nurse • Easy to use • Informative • Reflects nurses' meaningful work and the residence story

*C » Caregiver **R » Resident

In Depth feature discussion

Social Documentation system

This involves incorporating the elements that need to be documented as dictated by law (ParaSoL) into our redesigned documentation system. It will incorporate new features to overcome the hindrances to documentation that came with the previous system such as: a simplified login process to prevent having to login in several times within the same application, a unified directory system that will simplify navigation to different sections of the application and assistive text input technologies such as checklists to hasten the process and voice input (dictation) and translation to make the process more efficient and to overcome the challenges brought about by language barriers as expressed by the caretakers.

Book

The physical book is something to add personal notes, like a diary if you want, and keep crafts made from activities or photos of family. It can keep a lot more and act like a descriptive profile of the resident for new caregivers. In the end after the person passes, it can act like a memory describing the last chapter of their life and be given to a close relative. All in the book can also be scanned into digital form for increased accessibility.

Digital Platform

To make information more accessible going digital is a clear choice. To be able to access the documented information without physically being there to look at the papers is a needed necessity. With this digital platform a lot of bonuses come outside of just the accessibility. Using computer and software programs a lot of work can be done fast, precise and with less of the human error factor. The information put into the system can be automatically sorted, analyzed and put into comparison with different previously documented scenarios and implementation plans given out in response. This joins the minds of thousands of people and stories of others so that past experiences and discoveries and help future ones.

Activity/Routine

This is an account of the day to day activities that the residents participate in, individually or in a group. It could include photos and videos of the elderly as they take part in these activities and short texts describing these events and activities that the residents participate in while at the elderly home. It will especially be a helpful way of tracking the mood of the residents and a way to refresh their memories especially for residents that may also be affected by dementia. It will also be a good tool for the caregivers to gain more insights on the residents which will help them connect better with the residents as they will be able to keep track of their interests and likes and use this to start conversations and engage the residents as they care for them.

Timeline

This (the timeline) is a digital presentation of all the documentation that is being done. Showing different things depending on who is accessing the timeline to not break any confidentiality it will add all documentation and the time it is being done, to then add it to a long timeline that can be scrolled through from the start to the end of the residents stay, maybe even able to add former memories from before the start of documentation. This would then be an easy way to follow your relative or for a manager to follow the care to be sure it is being done. It would contain everything from daily events like medication being administered to the big events like the occasional concert they went to.

Checklist

The idea of a checklist is to have premade checklists for different events so that documentation can be done faster and be sure it includes all relevant information independent of who is documenting. If there is a clear structure it is easier to document, it goes faster as you know what you need to look for and you don't risk forgetting some important parts of the documentation. With keeping it structured it is also easier to compare between different occasions to then see patterns and know what to avoid and what to improve to keep the resident in the best of moods.

Community notice board

The platform could also act like a common forum for the elderly where they can organize events and find other events to feel a greater community and be able to communicate without needing to leave their rooms. Here you could find out what is happening in the building and see what is happening around to find activities to join. With increased activity and relationships people feel better, it heals both body and soul.

Summary tools

This is pointing to the digital tools that can automatically build up summaries of data and put it into easy to read and follow charts which show progression. It can also be seen in the timeline how the different events impact the different mood and wellbeing of the resident in an easy way as they are put side by side. But these summaries can be used to really build stories and make it easy to see the progression of a person in their life and help to provide help.

Analysis tool

This has also been talked about already on several occasions but the digital tools that are available should really be used to its full potential to make quick analysis from provided data and really look into patterns that can detect things that maybe not the caregiver would notice or find things that about the resident the caregiver does not know about just from symptoms.

Speech to text

This function is important to make it easier for caregivers to document when freewriting, it helps both with speed and language problems as it can could include a translator for people not comfortable with Swedish. But it could also be helpful on the community notice board as it could be used for the elderly when writing as a some elderly find it hard to type on a keyboard as the coordination may not be as good as it has been in the past they could just talk into their computer to write texts and comments to each other.

RE-PROTOTYPE

Digital Prototype

We decided to look at the future of the Storybook and came up Digital prototype. For the development of the non-digital solution we made up a prototype of the Story book which will be used on different platforms like android smart phones to improve the social documentation. Below are the screenshots of the prototype called DigiStory Book App. The DigiStory has different features and functions to perform and fulfill caregivers needs. Which answers the our POV, and this solution can be implemented for the future since nowadays technology is taking over and it easy to use.

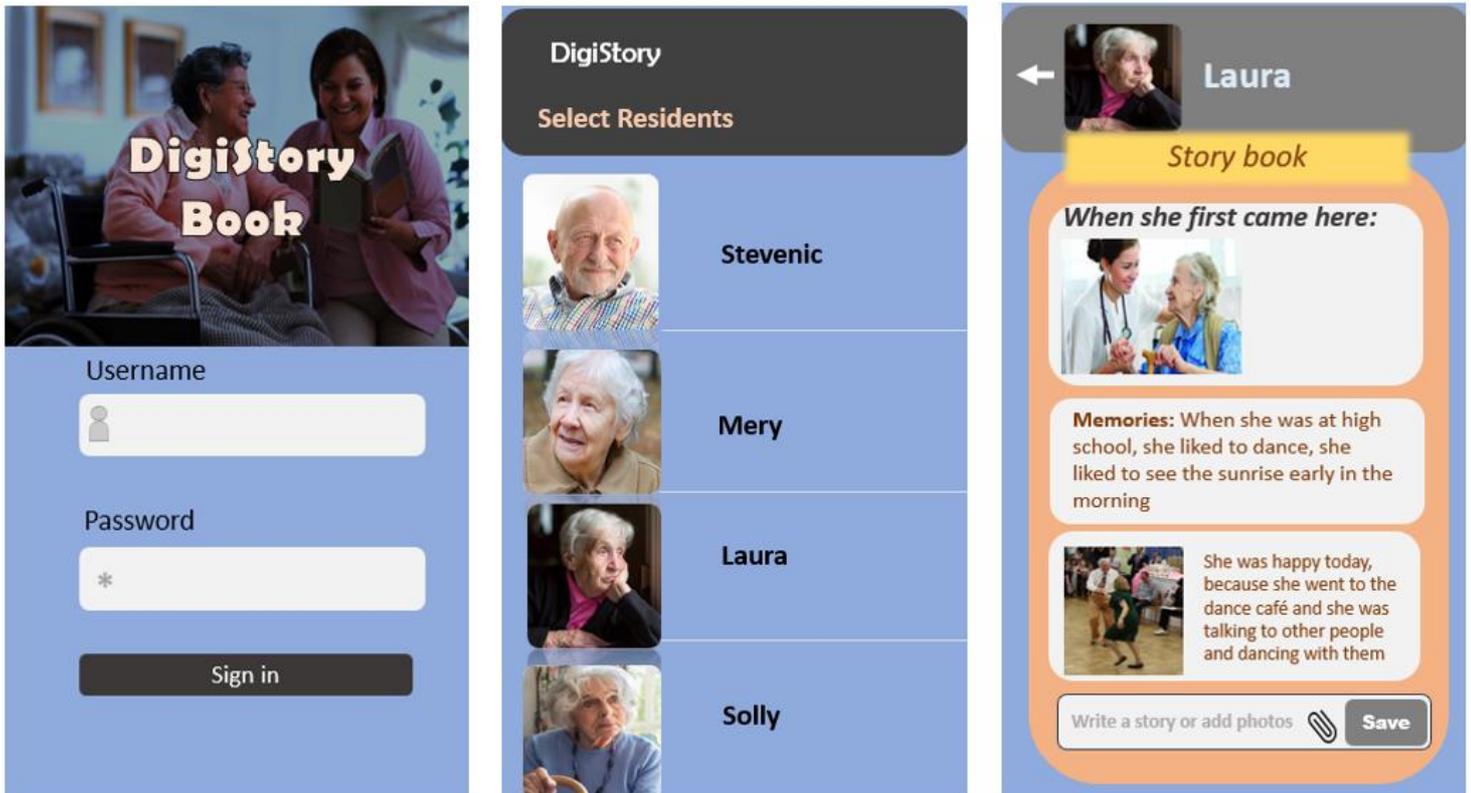


Figure 20. A digital prototype of how the storybook could be digitized.

RE-TESTING

Near the end of the process it was time to test specific things to get answers about exact thing to add, remove or keep in the book. What was chosen to be tested was the content of this life story book. As the user group is quite hard to reach on a short notice people on the street were chosen as test subjects. The aim was to see what people would like to share with themselves or others and the difference in information people were willing to give out depending on who could read it as well as the motivation to share. Some simple questions were asked the test subjects as in asking them about their day or what they would share when talking about themselves. There were some preset topics that people could look through if they felt lost in the question. There were a lot of different ways of responding to the same question, it was obvious from this test that every person is different and the need for flexibility will be required.



Figure 21. Life Storybook with its content.

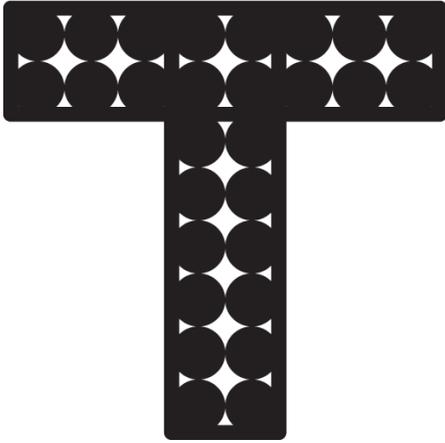
Table 3. It contains the number of mentions of each topic from the interview.

Topics	Number of mentions
MOOD	7
FAMILY	6
OCCUPATION	5
HOBBIES	5
WEATHER	3
PICTURES	2
INTERESTS	2
PETS	2

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Life Storybook



This report is a summary of the work done by a group of students at *OpenLab Stockholm (AiDoc Team)* solving a challenge that was presented to them by the *City of Stockholm* in conjunction with *Stureby Nursing Home* and *Reality Lab*. The challenge involved coming up with a solution that would improve social documentation in elderly care, it was done in two iterations of the *Design Thinking* process. The report starts by describing the process that was followed in gathering insights from interaction with the users and identifying their needs. It proceeds to present a reformulation of the challenge that was made based on a new point of view. Various concepts were developed during the ideate phase and were thereafter brought into the prototyping phase and tested. A description of the concept selection process and the fine-

tuning process for the selected concept is provided and the finalized product is the *'Life-Story "Book"'*, a re-envisioned social documentation system that overcomes the challenges of the previous system through the use of assistive tools and introduces: new, comprehensive and innovative ways of documenting different aspects of the elderlies' lives while at nursing homes.

Openlab is a creative centre that provides opportunities for finding solutions to challenges in society. In cooperation with our partners and other actors, we create proposals for innovative solutions for the Stockholm region. We do this across the lines between different disciplines and professions. The reports from Openlab are results from students interdisciplinary cooperation within the framework of a 15 ECTS master course.