



Arkitektur- og designhøgskolen i Oslo
The Oslo School of Architecture and Design

DIPLOMA PROGRAM FALL 2017

Diploma candidate(s):

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Institute:

Institute of Design

Main supervisor:

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Second supervisor:

Jonathan Room

Company cooperation:

Sunnaas Sykehus

Title of project:

"Designing for recovery: Exploring how the rehabilitation process could enhance the lived experience of spinal cord injury patients"

Type of project:

Product design

Service design

Interaction design



Designing for recovery

*Exploring how the rehabilitation process
could enhance the lived experience of
spinal cord injury patients*

A service and systemic design diploma project at
The Oslo School of Architecture and Design.
In collaboration with Sunnaas hospital.
AUTUMN 2017

DIPLOMA CANDIDATE

Simón Sandoval Guzmán

SUPERVISORS

Natalia Agudelo & Jonathan Room

Context *Rehabilitation at Sunnaas hospital*

ABOUT REHABILITATION

Rehabilitation rather than being an isolated medical intervention it is a process that happens through a time frame wherein different caregivers assist individuals who have (or are likely to) experience disability to achieve optimal functioning when interacting with the environment (World Health Organization, 2011), such as persons that have experienced severe or minor accidents, people that have congenital/chronic conditions, among others. In summary, anyone who has a health condition that limits functioning (World Health Organization, 2016a).

ABOUT SUNNAAS HOSPITAL

In Norway, Sunnaas hospital is the largest specialist hospital in the field of rehabilitation, offering primary care, follow-up and assessment rehabilitation, among other services. It provides therapy for complex illnesses or injuries, covering patients with spinal cord injury, severe multitrauma, acquired brain injuries, severe burn injuries, neurological illnesses and rare diagnoses. All them are treated through multidisciplinary teams of caregivers.



SUNNAAS PROJECT SPRING 2017

During the spring semester of 2016, during the “Service Design 2” course at The Oslo School of Architecture and Design a project was developed at Sunnaas hospital with focus on discovering what were their needs, problems and opportunities to improve their services in order to inform the procurement process of new facilities.

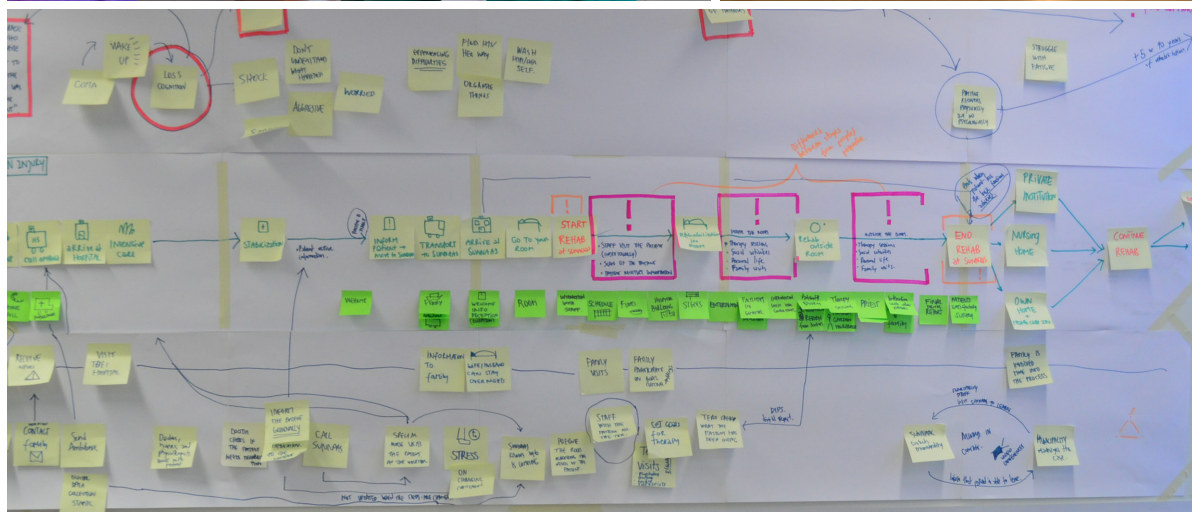
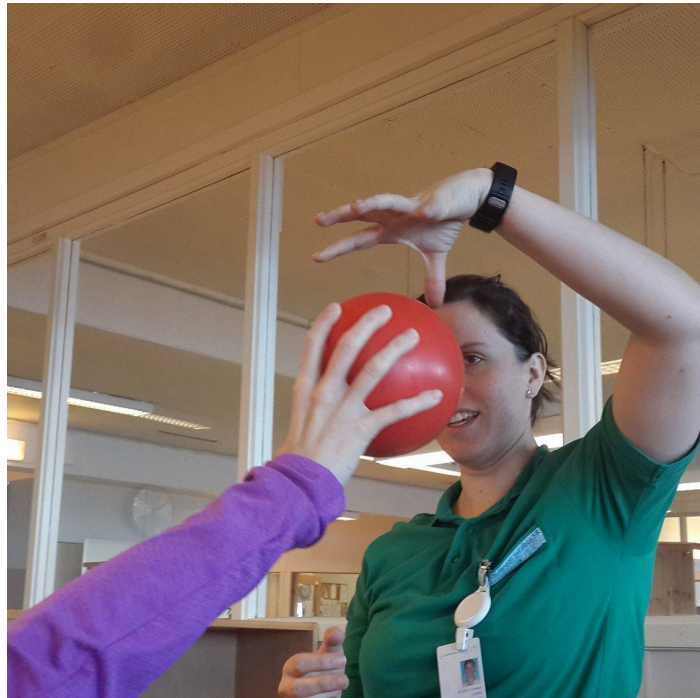
By researching patients experiences, flows/activities of caregivers and how the rehabilitation process worked it was identified a design opportunity to work with further.

After analyzing the design opportunity together with Sunnaas hospital, a partnership was made to develop the project in the autumn of 2017.

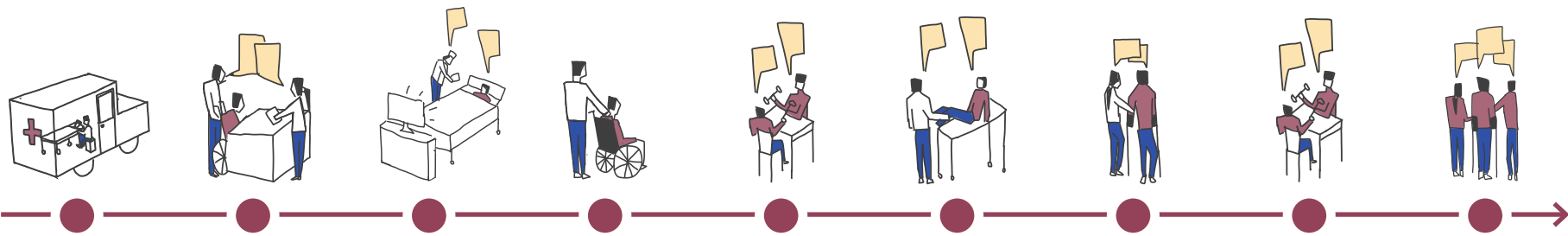


THE CONNECTION WITH THE CENTRE FOR CONNECTED CARE

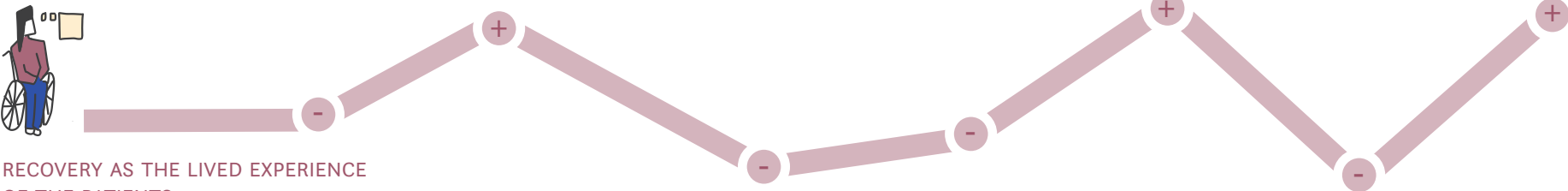
Together with the collaboration with Sunnaas hospital the project also took shape by having a link and being supported for the Centre for Connected Care, which is a research initiative that aims to accelerate adoption and diffusion of patient-centric innovations within the health sector.



Pictures of the research process during the project done at Sunnaas in the spring of 2017.



REHABILITATION AS THE SERVICE PROVIDED TO ASSIST PATIENTS



RECOVERY AS THE LIVED EXPERIENCE OF THE PATIENTS

**THE DESIGN OPPORTUNITY:
REHABILITATION AND RECOVERY**

Specially during the primary care rehabilitation at the hospital, some disconnections were identified between how the rehabilitation process worked and how the patients were experiencing the process.

Deegan (1988) recognizes this two situations as rehabilitation and recovery, considering rehabilitation as the service that support disabled persons and recovery as the lived experience of the people throughout the process of getting better. Today, the rehabilitation service at Sunnaas is offered through

multiple touchpoints since the moment the patients are admitted at the hospital (sometimes before) until they are discharged (sometimes after).

But through the research, it was observed that the way how touchpoints worked, how they were organized over time and the time frames in which they occur were not necessarily aligned with what people were experiencing. Patients were living a process of recovery, where they were trying to accept and overcome the challenge of living in a condition

of disability, which is an aspect that the rehabilitation process could support better.

MOTIVATION

This subject was found interesting and challenging for me as a designer because it is human, it could have a big social impact, and because it is complex as a process, which gives me the possibility to use my skills as a designer by approaching the issue through a service and systemic design perspective.

The project

Rehabilitation as a service that enables the patient's recovery experiences

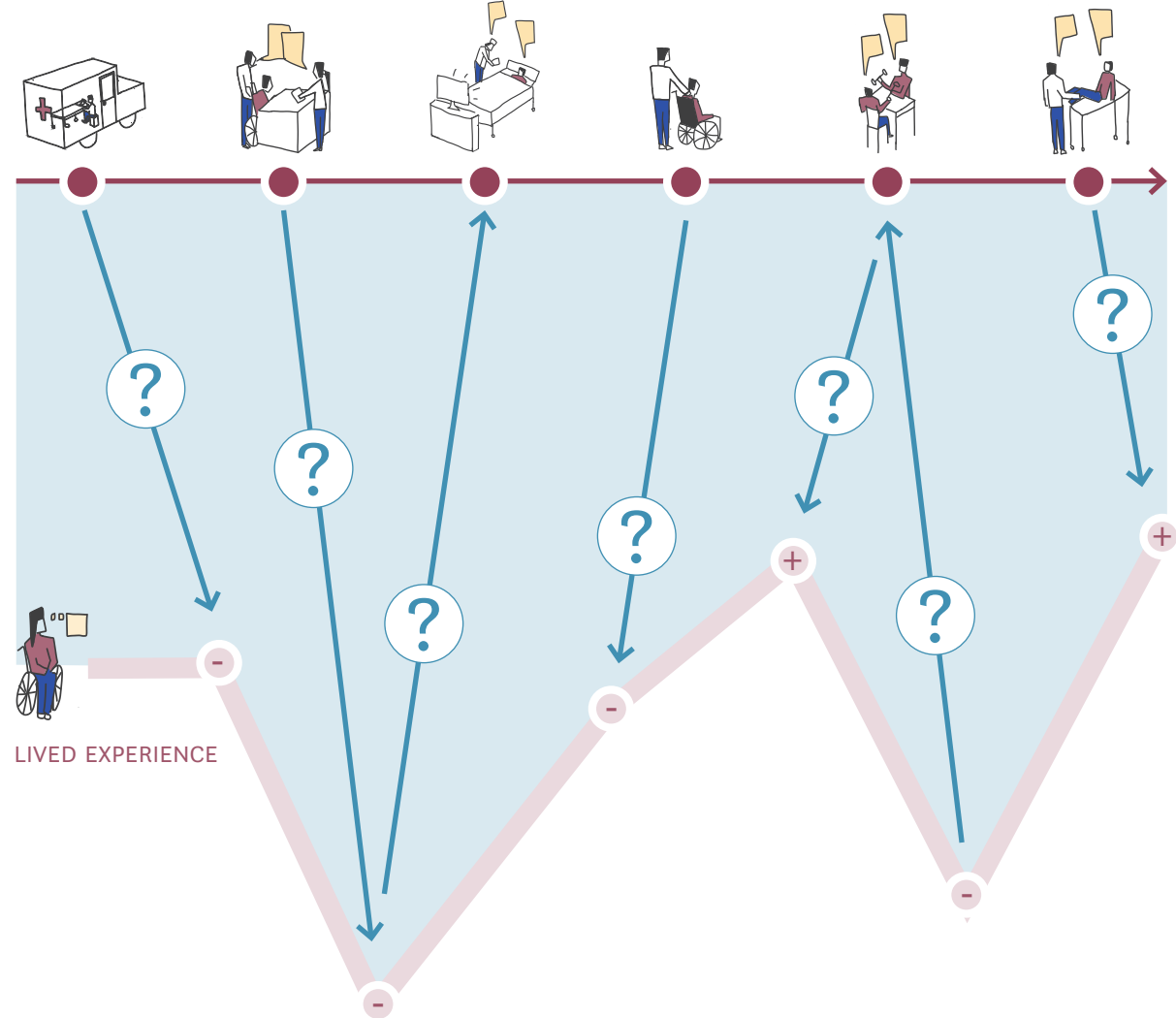
How to enhance rehabilitation as a service that enables the recovery experience of spinal cord injury patients at Sunnaas hospital?

This project will be linked to the Centre for Connected Care and it will be developed in partnership with Sunnaas hospital. It will be about exploring how the rehabilitation process could enhance the lived experience of spinal cord injury patients throughout their journey of getting better, focusing specifically into the primary care rehabilitation (when patients come directly from the hospital after an accident) This group of patients represent one of the most challenging scenarios for rehabilitation. They have suffered a severe accident which suddenly have changed their lives drastically and they present physical problems rather than cognition issues, which implies that they are able to experience the journey in a conscious way. They are aware of their recovery experience while they get physical therapy.

MAIN GOAL

The project's main goal is to develop concepts, interventions or future possibilities with the purpose of improving the rehabilitation service that Sunnaas hospital offers today by enhancing it as a process that provides better experiences for its patients and that support them better through their recovery journey.

REHABILITATION PROCESS



Approach

A service and systemic design project for healthcare innovation

This is a service and systemic design project that will work with rehabilitation as a service and as a system, so it will use both Service and Systems Oriented Design methods, mindsets and approaches.

SERVICE DESIGN APPROACH

Approaching this subject from a service perspective has big potentials considering that service design is having a growing role in healthcare innovation by working within organizations to introduce design methods and suggest new service configurations (Freire & Sangiorgi, 2010). So, this project will use Service Design mainly to explore how is the relation between the rehabilitation process offered by Sunnaas and the experiences of the spinal cord injury patients while being at the hospital.

This project will be developed under the 5 service design principles described by Stickdorn, M., Schneider, J., Andrews, K. & Lawrence, A. (2011):

- **Human-centered:** the project will be focused on the human experiences and needs inside the hospital. It will explore the everyday situations of rehabilitation by looking at the patients experiences and lives and how the multidisciplinary teams of caregivers and staff work. How patients are actually living their process

of getting better? How does rehabilitation looks like in a day to day basis? How do the caregivers interact with patients?

- **Co-creative:** by working and bringing together different actors within the hospital, the project aims to involve different stakeholders to co-create together future possibilities to improve the rehabilitation service at Sunnaas, and through this challenge the hospital to think forward.

- **Sequenced:** the project will look at how the rehabilitation works as a process over time, focusing on touchpoints and interactions with the patients and how all of them are related with each other and how they all build the overall experience that patients have.

- **Visual:** representations, diagrams, maps and more will be used to represent situations, convey concepts or findings within the project.

- **Holistic:** understanding holistically the rehabilitation process today will be key in the project. What is the journey of the patients? What are the stages of the service? What are the backstage processes that make rehabilitation possible?

SYSTEMS ORIENTED DESIGN APPROACH

Besides this, the project will also use Systems oriented design methods, which aim to create holistic overviews of complex problems and align valuable insights from different stakeholders and users within a project (Paulsen, Romm, & Sevaldson, 2014).

This methods will be used in order to develop an understanding of the rehabilitation service as a system as well, looking at how its parts are related with each other and how they are articulated building the overall service experience.

By mapping and visualizing together with different stakeholders inside the hospital a rich understanding of how Sunnaas works today as a rehabilitation institution could be generated.

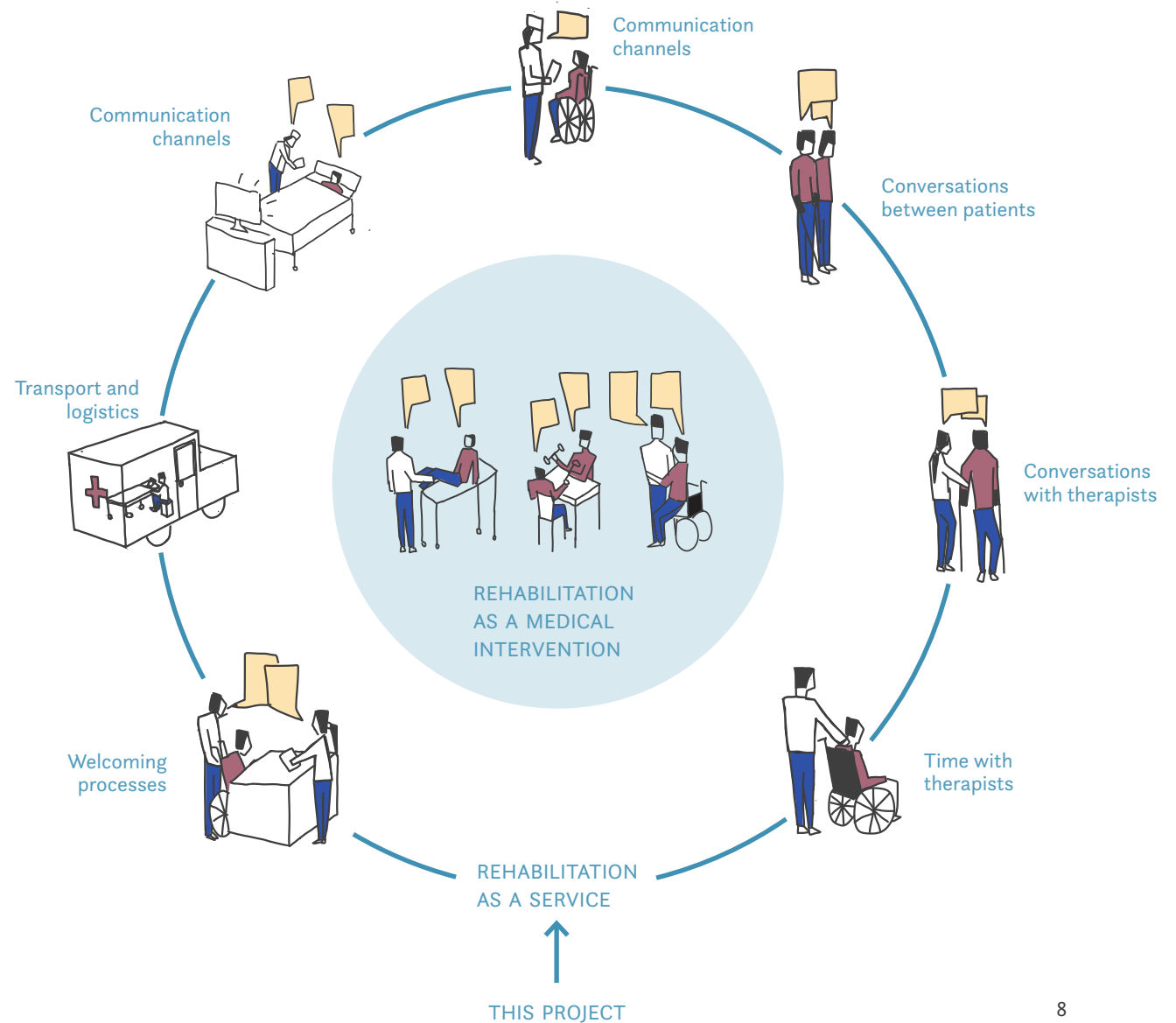
Contributions

Patient-centered vision into the healthcare context

Rehabilitation brings benefits for the people that are in need of it, but also to their families and to the health, social, educational and labour sectors (World Health Organization, 2016b). In this context, it is important to work both increasing the coverage and the quantity of the services that provide rehabilitation but is also needed to improve the quality of this services.

This project aims to strengthen the quality of rehabilitation as a service by:

- Giving a new perspective on rehabilitation from a service point of view, covering aspects such as the process itself, the patients experiences and backstage processes. The project aims to contribute to what is already being done by the healthcare disciplines, which are mainly focused on the therapy itself, medical interventions, methods, training programs and so forth.
- Creating concepts that enhance patients experiences and envision future possibilities for rehabilitation to happen. Making changes and improvements in highly specialized institutions such as Sunnaas might have a big systemic impact into the healthcare context. Introducing patient-centered innovations in rehabilitation might be a potential starting point for other hospitals and for the health sector in general.



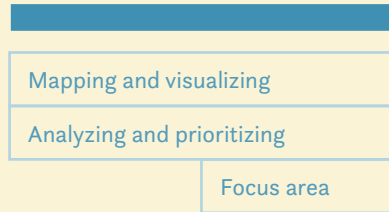
Project plan *A collaborative process with patients, caregivers and staff*

JULY 2017 AUGUST 2017 SEPTEMBER 2017 OCTOBER 2017 NOVEMBER 2017 DECEMBER 2017 JANUARY 2018

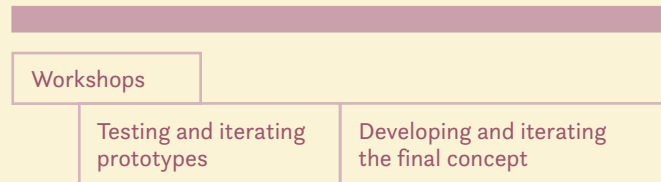
A. RESEARCHING



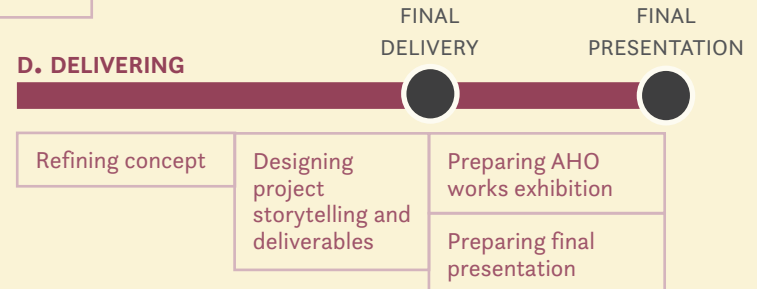
B. ANALYZING AND DEFINING



C. PROTOTYPING AND CONCEPTUALIZING



D. DELIVERING



First, the project will build a holistic picture of the rehabilitation process today in order to identify afterwards what will be the project's focus/intervention area. Together with this, it aims to build a collaboration with the team of caregivers and patients, involving them in the different parts of the process. Considering this, the project will be developed into four main stages:

- A. Researching
- B. Analyzing and defining
- C. Prototyping and conceptualizing
- D. Delivering

A. RESEARCHING

In this stage the work will be done mostly in the hospital and closely to the caregivers and patients. The project aims to spend quality time into the rehabilitation environment and also aims to have an space inside the hospital where to develop the research (hopefully an space to document, work and share). Also, one of the goals is to build relations with the caregivers and staff in the spinal cord injury unit in order to involve them into the project and ideally count with their participation in further steps.

- Understanding the field by **secondary research** and **conversations with experts**, in order to have a good understanding of the area where the project is going to work on.
- Developing a **workshop with caregivers** and staff to map out the rehabilitation proces.
- **Shadowing/observation and conversations** with some of the caregivers at the spinal cord injury unit, and with strong focus on the multidisciplinary teams which are composed by nurses, physiotherapists, occupational therapists, social workers, psychologists and doctors. Also associated staff could be approached if is needed.
- **Interviews/guided conversations** with 5 patients (approximately) at the hospital with focus on understand how they have experienced their condition.

B. ANALYZING AND DEFINING

In overlap with the research, all the information gathered will be analyzed in order to build a holistic picture of the situation. Analyzing and researching activities will be in constant dialogue, so for example research might lead to the development of analysis and this one might lead to more research.

- **Mapping and visualizing** findings and insights gathered in the research activities in order to build a holistic picture of the situation.
- **Analyzing, prioritizing and defining** where are the potential areas of intervention.
- **Defining a focus area** where the project will work.

C. PROTOTYPING AND CONCEPTUALIZING

Prototypes, ideas and concepts will be tested within the hospital by:

- Workshops with caregivers/patients in order to **present or develop ideas together**. The goal is to engage the stakeholders so they can contribute in the development of concepts.
- **Testing prototypes** with patients or caregivers.
- **Shaping** a definitive design concept.
- **Iterating in the chosen design concept** and testing it further with stakeholders and patients.

D. DELIVERING

The last stage of the plan will be focused on the final design and refinement of the design concept and the preparation of the project's final deliverables.

- **Designing and refining** the design concept.
- Designing the **project's storytelling**. How the project will be told? This part of the process will be focused on structuring and giving shape to all the work done before. This will be communicated through the different deliverables.
- **Designing the deliverables**: the project's report, videos, visual presentation and material.
- **Preparing AHO works**. Designing the exhibition of the project.
- **Preparing the presentation** of the project.

References

1. Deegan, P. (1988). Recovery: The lived experience of rehabilitation. *Psychosocial Rehabilitation Journal*. 11(4), 11-19.
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4. Stickdorn, M., Schneider, J., Andrews, K. & Lawrence, A. (2011). *This is service design thinking: basics, tools, cases*. Hoboken, NJ: Wiley.
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