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Perceptions and factors in innovation in Danish healthcare

A Techno-Anthropological case study at the Innovation Clinic

Master Thesis

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Abstract:

This Master's Thesis examines how innovation in healthcare is perceived by actors in The Innovation Clinics Monitor of Change Project and what factors that constitute in innovation. The thesis explores the topic through ethnographic methods, including interviews and participatory observation during fieldwork at the Innovation Clinic, as well as workshops and events. With the use of Actor-Network Theory and Erik Riiskjærs Controlling Logics the empirical material is processed and unfolded. The thesis concludes that the actors involved in the innovation project shape the innovation through their perceptions and values. From these perspectives, fourteen factors constitute the key elements that must be considered for innovation to succeed. It is essential to understand the need and value that the innovation addresses and to be aware of the actors and factors' effects and agendas. The Innovation Clinic is, in this process, mediating between the different actors, needs, perspectives, and factors in order to obtain successful innovation.

Preface

This master's thesis was completed by BSc Techno-anthropologist Zelina Rabjerg Bjerre, a master's student in Techno-Anthropology at Aalborg University.

I want to thank the Innovation Clinic and its employees for the collaboration and their openness. A thank you to Jacob Ravn, Carina Østervig Byskov, and Bente Koch Pedersen for participating in the interviews. And a special thanks to Maria Brændstrup Kristensen for engaging in an interview and allowing me to gain insight into an innovation project by participating in the Monitor of Change project.

Additionally, a thank you to my supervisor, Jeppe Eriksen, for engaging in the thesis and for good supervision, and to the different actors that I met during events, interviews, and meetings.

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Chapter 1

Introduction

The healthcare system in Denmark is strong but is under increasing pressure due to demographic development, which increases the number of elderly and provides fewer healthcare workers. To help address the challenges of inequality in health and access to the healthcare system, the government released in 2024 a new healthcare reform. It presents the necessary changes to increase the quality of care and treatment. One of the new initiatives is to establish a national center for healthcare innovation by 2026. This center has the purpose of developing and spreading innovative healthcare solutions throughout the system (Indenrigs- og sundhedsministeriet (2024)). Innovation is thereby the solution to the challenges in the healthcare system, as it has be mentioned on the political scene for years (Fredskild and Dalkjær (2017)).

In that context, this master thesis is a techno-anthropological exploitative case study that showcases the actors' perspectives on innovation and the factors that affect innovation processes and projects. The case revolves around the innovation project, Monitor of Change, at the Innovation Clinic. An innovation unit that is part of the North Denmark Region (Innovationsklinikken (n.d.c)). The project works on developing a health monitor that can detect changes in the vital signs of elderly people and, with that, reduce the number of preventable admissions. This will improve the health and quality of life of elderly people and will also release resources if preventable admissions are reduced (Danske Regioner (2023)). Research has addressed the factors affecting innovation, but this thesis shares a perspective on the topic from a Danish point of view and contributes with factors specific to the case, as well as a description of the logic and reasons behind the factors and actors' views on innovation.

Chapter 2

Problem analysis

This chapter describes the problem area within which the thesis is placed, as well as showcasing the case and what is at stake in the Monitor of Change project at the Innovation Clinic.

2.1 Problem Area

New healthcare reform (Indenrigs- og sundhedsministeriet (2024)) and demographics in Denmark open up to innovation as a means to increase the quality of care and help solve challenges. Innovation in healthcare is complex. Many factors play a part and need to be considered if innovation is to be successful (Fredskild and Dalkjær (2017)). The following sections elaborate on innovation in Danish Healthcare.

2.1.1 Innovation in Danish Healthcare

Because of the demographic development in Denmark, we are seeing an increasing number of elderly people and people with chronic diseases. This creates pressure on the healthcare system derived from technological and medical progress to the ability to treat steadily more diseases. In order to maintain quality and effectiveness with the resources, innovation is presented as necessary to the healthcare system. Politically, the governments of Denmark focused on innovation in the healthcare system as a means to ensure our welfare and also growth. The government platforms from both 2007 and 2011 present a strategy to improve research, innovation, welfare technological solutions, and collaboration between public and private companies, as well as focus on competitiveness. All is to create solutions in order to improve the public service (Fredskild and Dalkjær (2017)). The same focus has been carried into today's healthcare reform. In November of 2024, the government entered into a broad political agreement on a new healthcare reform. The purpose of the reform is to reduce the inequality in health as there is often missing coherence in the patient treatment course between the sectors of hospitals, general practice, and municipalities. They want to bring better and closer treatment to the homes of citizens and, thereby, improve local healthcare. In order to achieve this change, the reform has initiatives

such as having more doctors and creating extra room for students in medical school, creating health packages for people with conical diseases, and having home treatment teams in the entire country. This requires national collaboration in innovation and digitization (Indenrigs- og sundhedsministeriet (2024)).

The Danish healthcare system is divided into two sectors: the primary sector and the secondary sector. The primary sector consists of general practice doctors, specialist doctors such as dentists, nursing homes, home care, both private and through municipalities, and rehabilitation, among others. This sector has the primary contact with the population and involves health care outside the hospital. The secondary sector includes the hospitals, both public and private. The regions have control over the hospitals, and the hospitals are generally not close to the homes of the patients as the specializations are gathered in larger hospitals (Gyldendal (2017)). The new healthcare reform wants to create greater collaboration between the region and the municipalities and, therefore, between the sectors, as more treatment will occur at the general practitioner and in the patients' home (Indenrigs- og sundhedsministeriet (2024)).

2.1.2 Views on innovation

In accordance with the above the Danish Regions also see innovation as a way to meet the challenges facing the healthcare system. They see innovative solutions as contributing to a more effective public sector, better treatments, and more economically productive. The Danish Regions describe innovation as something new creating value. This can be something new or developed by others and then only new for the specific unit where it gets implemented. The reuse of ideas will ensure the expansion of good solutions and will be cost effective as already made mistakes and money can be saved. This requires uniting actors with different skill sets and can be a public-private collaboration. Additionally, research is seen as a foundation for development and innovation (Danske Regioner (n.d.)).

Generally speaking, innovation can be viewed as different types by categories and dimensions. Four categories in which innovation can be defined are:

- process innovation: new ways or changes within how services or products are delivered or created.
- position innovation: new context or changes within the introduction to the services or products.
- product innovation: new services or products or changes in what is offered.

- paradigm innovation: new ways or changes in the mental models underlying the frame of what the organization, service, or product does (Tidd *et al.* (2005)).

For example is a new design for a technology part of product innovation and a new method to a procedure or when producing something is process innovation. Despite the categories, some innovations can blur the lines between them and fit in more than one. Secondly, innovations can be seen as part of two different dimensions: incremental and radical innovation. These show the involvement of novelty. Incremental innovation is "doing what we do better", and on the other end of the scale is radical changes that are "new to the world" with radical innovation (Tidd *et al.* (2005)). The novelty, therefore, spans from smaller incremental improvements to radical transformations in use and view. Depending on the innovation project, this too can be one or the other, or in between. It is estimated that only six to ten percent of all innovation projects are "new to the world". This means that most projects try to solve imperfections and optimize already known services or products. Despite this, the effectiveness and learning curve can, over time, show greatness compared to that of radical changes. Furthermore, when innovation moves within the space of the categories and dimensions, it requires knowledge brought together from different fields in order to succeed (ibid.). Innovation within the healthcare system, as a large player, can then be viewed as complex and challenging.

2.2 Presentation of the case

During my ninth semester internship at the Innovation Clinic, I gained insight into the complexities of innovation projects in healthcare. Because of this, it was planned that I would write this master thesis on one of their projects. However, because of the complexities of the project with different actors and time frames, I had to change course. And what better way than to then write about what changed my plans- the different perspectives and factors in innovation, with the Innovation Clinic and their project as a case.

The following sections describe The Innovation Clinic, the 'Monitor of Change' project to which I am connected, and unfold what is at stake within the project.

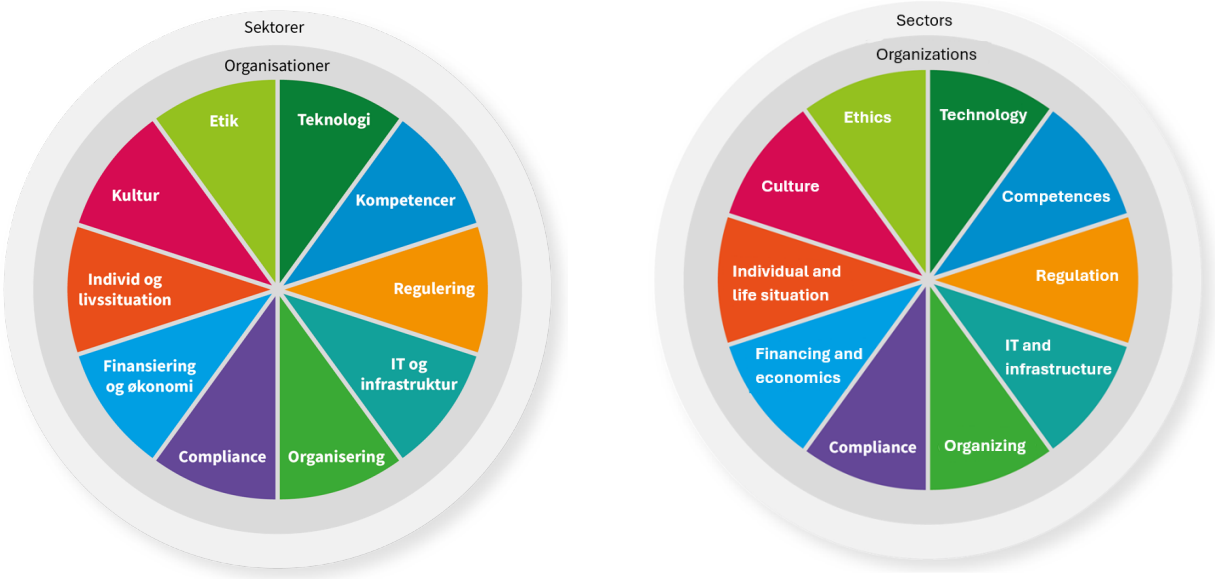
2.2.1 The Innovation Clinic

Working within the field of innovating the healthcare system is The Innovation Clinic, the company with which this master thesis is written in collaboration. The Innovation Clinic is an innovation unit part of the North Denmark Region and is locally anchored at Aalborg University Hospital in Aalborg. The Clinic was established in 2009 with the purpose of supporting the innovation process during employee driven projects, from idea to product. The projects must improve the healthcare system by creating value for employees, patients, and society. Additionally, they handle the TTO (Technology Transfer Office) function for the region, as they manage patent applications and commercial agreements in relation to the inventions (Innovationsklinikken (n.d.c)). The Clinic serves all five hospitals in the North Denmark Region, both the Region Hospital (Regionshospital Nordjylland) and the four hospitals part of Aalborg University Hospital. Furthermore, they work closely with municipalities and private companies, among others. Ten employees make up the team at the Innovation Clinic. This includes the head of innovation, one project secretary, one project administrator, a fundraiser and project developer, one project worker, and five project managers (Innovationsklinikken (n.d.b)). They all come from different backgrounds, for example, nurse, civil engineer in industrial design, master's in health informatics, health economist, politics and administration, and office assistant (Bjerre (2025)).

When they receive new ideas, they make sure it is innovative before proceeding. Innovation is, in their understanding, ideas that change something existing and add value. This can be either a new practice or technology or a new use of an existing one. The invention needs to add value to the healthcare system by, e.g., enhance the quality of treatment, create a more effective system by being resource effective and freeing labor, or improving the work environment (Innovationsklinikken (n.d.a)).

When they have an innovative idea, they work from a holistic 360-degree view. This view is created from the complexity of challenges in the healthcare system, as they can not be solved by looking at one part of a sector but rather need participation from the ecosystem of which the healthcare system consists. Figure 2.1 visualizes the 360-degree perspective by showcasing the factors that need to be considered in order to have a successful innovation project. Different organizations and sectors need to take part when looking into the fractions of the model, such as technology, finance, culture, and so forth, and must be considered to ensure a successful product that is relevant and will live on after it takes off from the Innovation Clinic (Bjerre (2025)).

When starting new projects, the Innovation Clinic receives most of the ideas from employees in the



(a) Illustration in danish by The Innovation Clinic.

(b) Illustration in english translated by Zelina Bjerre.

Figure 2.1: 360 degree perspective model, illustration by The Innovation Clinic (Bjerre (2025)).

region. This can be ideas for a specific technology or solution or a problem to which they want help finding a solution. The Clinic's process is to start with a pre-screening, where they examine if it is a problem for more than just the person who reported the idea and if something already exists that can solve the problem. If it turns out to be a problem and there is no existing technology or solution to solve it, the team at the Innovation Clinic has a meeting where they agree on how to proceed. The idea needs to be innovative, create effect and value, and have a market. If this is fulfilled, they can choose to continue the project. In the screening phase, they find out exactly what the problem is and how large it is. They also look into the potential of the values and effects, as well as the potential market for the solution and the implementability. The idea, therefore, needs to live up to the criteria set by the Clinic and the visions for the healthcare sector. The approach is for the project manager to talk to the employee behind the idea and do random samples by talking to users such as clinicians and other relevant actors, as well as reading literature and doing online searches. They take pride in involving users and relevant parties in the screening and development phases to ensure a good product and solution that will be used and provide value when the project is completed (Bjerre (2025)).

Figure 2.2 illustrates the Innovation Clinic's process of working with innovation projects. The gray circles, which represent the participation of the Innovation Clinic and external business partners in the process, should be transparent to highlight the overlap between them. Additionally, the placement of the circles may vary depending on the project and on when a company or other stakeholders take over.

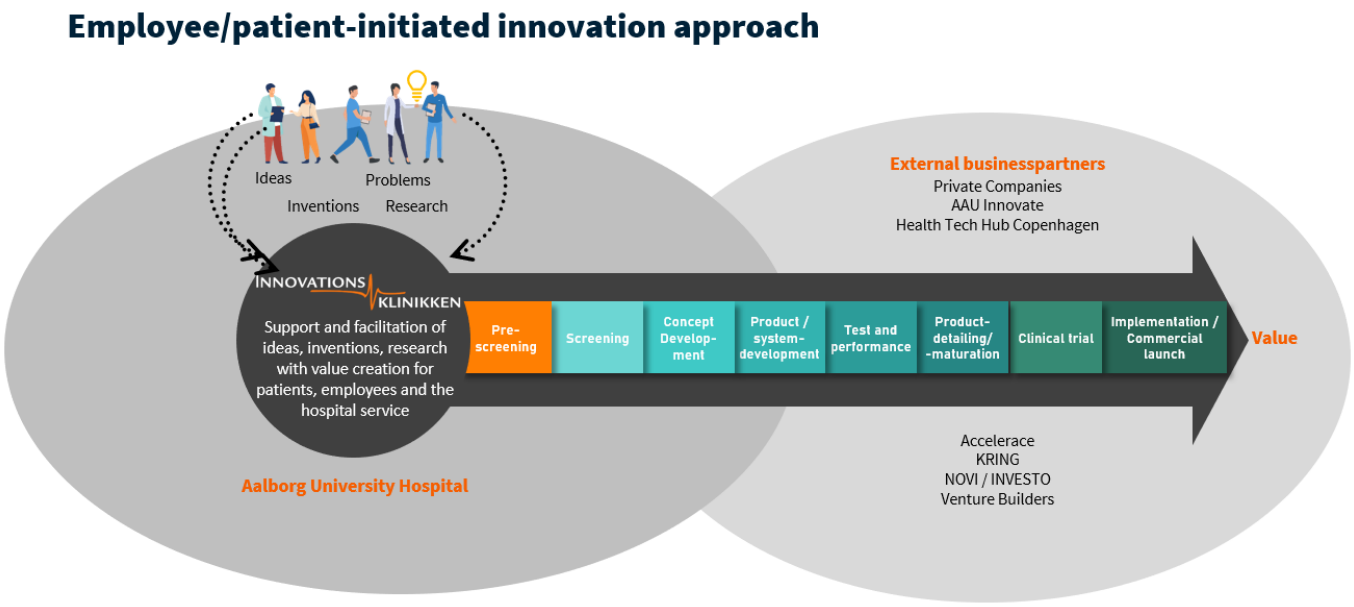


Figure 2.2: Visual illustration of the Innovation Clinics process and innovation approach, illustration by the Innovation Clinic and translated by Zelina Bjerre.

The Innovation Clinic is often part of the process from idea to development. Therefore, a company takes over the project and commercializes the product. The involvement of an external partner varies from project to project. But often, they become part during the concept-development phase and carry it to the finish line.

The Clinic works with two types of projects. Strategic projects contribute to fostering collaboration and networks in innovation. This can be both internationally and in the region. They provide information on the topic in question and how to handle commercialization projects. From strategic projects, commercialization projects spring. They are specific solutions, ideas, or needs that can be received from the region's employees. They are individual projects that start from an idea to a finished product. The finished product can be anything from a physical device to an AI or a change of practice (Bjerre (2025)). An example of a commercialization project would be this master's thesis case in focus, "Monitor of change" (ændringsmonitor).

2.2.2 Monitor of Change project

The project "monitor of change" is led by project manager Maria Brændstrup Kristensen, and is focusing on how a monitoring technology can be implemented in the healthcare system to reduce preventable admissions. This project will be referred to as "the monitoring project" throughout this thesis since that is what it is referred to on a daily basis. The project is a result of the strategic project "Prevention of Dehydration" (Forebyggelse af dehydrering). Where the focus was to find solutions to remedy dehydration, reduce preventable admissions and thereby ensure the quality of life for the elderly. During my ninth semester internship at the Innovation Clinic, I was part of this project and was tasked with talking to elderly people in nursing homes and home care in order to bring forth their voices on the matter (Bjerre (2025)). The findings were then compared with the information The Innovation Clinic had collected by facilitating workshops and interviewing doctors, nurses, home care workers, nursing home workers, and more. It was found that it was a challenge for healthcare professionals to prevent admissions. This was because the signs of early changes in the condition of older people are very subtle, and by the time the healthcare workers detected them, there were not many things to do to prevent admissions. Of course, some workers were faster at picking up signs than others, but the challenge was not helped by the fact that they often do not see the same elders every day. The monitoring technology that can detect changes in the vital signs of the elderly was then presented as a solution, reaching beyond just dehydration. The project "monitor of change" is therefore based on information conducted during the strategic project on dehydration as a preliminary project. This leaves the project with knowledge and preconceptions to build on further. The Innovation Clinic is working with a specific monitoring technology from a Danish company IMP Scandinavia, as an example of a monitor and how a technology like that can make an impact and be implemented in the Danish healthcare system. The project is in the phase of research, as they have a technology that is ready to plug and play. But first they have to understand the current practices the technology will be placed into in order to figure out where to implement first, as it can be used in multiple scenarios and find the right platform to show the data, among other aspects. The project spans across sectors, as the monitor can be used in the hospital as well as in municipal care. This creates cross-sectorial challenges when trying to implement and have a successful innovation.

My contribution to the project is participating in interviews with relevant actors and collecting relevant literature. My position and role in the project have changed during the time frame for working on this master thesis (see section 6.1).

2.2.3 Preventable admissions

Preventable admissions play an essential role in the projects described, as the challenge it poses in the healthcare system could release resources and create an improved quality of life and health for elders if solved. Some of the preventable admission causes are dehydration, constipation, cystitis, and pneumonia. Those diseases could have been treated before admission to the hospital was necessary, which would prevent admission and serious illness. It is often people over 65 years of age that get admitted acutely, which could have been prevented if treated in time (Danske Regioner (2023)). The Danish Regions talk about thousands of times where the admission of a citizen above the age of 64 could have been prevented in 2022. The numbers are equivalent to billions of Danish kroner. One of the reasons that the number of elders who became acutely sick could have been prevented may be the fact that there are no national requirements for the quality of treatment in municipalities. There is a 72-hours responsibility for treatment in the primary sector of the healthcare system. This means that hospital employees can visit the patient and provide treatment at their own home. Additionally, the law can create complications when wanting to establish a closer collaboration between the different parts and sectors of the healthcare system. If the number of admissions that are preventable were to be brought down, it would release resources in the form of working hours for the nurses at the hospitals, and therefore also money (ibid). Elders in nursing homes and home care prefer to receive treatment at home and find it hard and tiring to be hospitalized. Therefore, the quality of life for elderly would be improved with a decrease of preventable admissions (Knowledge from the Prevention of Dehydration project, see section 4.2.2).

2.2.4 Telehealth

Telehealth, also known as telemedicine, is one way to reduce the number of preventable admissions. It is healthcare services that replace the physical consultation between healthcare professionals and patients with the help of communication and information technologies. The digital healthcare services make it possible for the patient to be treated and consulted in their own home, and prevent the patient visiting the hospital when not necessary. This empowers the patient, as they play a part in their treatment, and at the same time, healthcare professionals can follow the patient's vitals from the hospital (Region Midtjylland (n.d.)). Telehealth monitoring at home will become widespread throughout the country as a way to contribute to closer collaboration within the healthcare system (Sundhedsdatastyrelsen (n.d.)). An example of this is TeleCare Nord in the North Denmark Region. This collaboration involves all eleven municipalities and provides telehealth services to patients with heart failure

and chronic obstructive pulmonary disease (COPD). The kit includes a weighing scale, blood pressure monitor, tablet, and pulse oximeter that enables the patients to monitor their health at home. Patients measure their vitals once or twice a week, as well as answer a questionnaire on their symptoms. The data is then electronically available for the healthcare professional to provide interventions and advice if needed. As an outcome, they see patients with improved quality of life, well-being, and empowerment. Additionally, the number of hospital admissions is reduced, which is cost-effective. Patients are referred by a general practitioner or hospital physician in order to receive the kit (Region Nordjylland (2024)).

In home care, they use early detection (in Danish; tidlig opsporing) in order to detect a change in the elder's health condition and be able to intervene in due time. Home care professionals can use a change form (in Danish; ændringsskema) to observe and note changes, use triage to assign colors to the elderly showing the level of attention needed, and measure vital signs with TOBS, Early Detection of Incipient Disease (in Danish; Tidlig Opsporing af Begyndende Sygdom). Here, they measure blood pressure, consciousness, temperature, pulse, and respiratory rate. It is this practice, that telehealth and a monitor will be part of, and even more so in the future (Juul and Madsen (2019)).

2.2.5 Monitoring Technologies

As a solution to reduce the number of preventable admissions and a part of telehealth is monitoring technologies. They can monitor the vital values of the elderly at their home, among other. Today, many people wear a type of monitor as they use a smartwatch. Both Apple and Garmin make smartwatches that can detect heart rate, number of steps, sleep pattern, and more (Apple (n.d.), Garmin (n.d.)). It can be presumed that this might be the future, as the younger generations have higher tech-literacy than the elders today and follow their health when wearing devices like this. The technology is valid in measurements, but when using technology in the healthcare system, it must be classified as medical equipment to ensure precision and accuracy (Agency (2023)).

Monitoring the elderly raises challenges with measuring their vital signs, having easy use, and making sure that they wear it and use it. In an article from Portugal by Teixeira, E. et. al (2021) it is made clear that there can be an "acceptance challenge", which makes it important that the wearable device is comfortable to wear and easy to use. This is backed up by a review by Gokalp, H. et. al (2018) on Telehealth and Telecare, where it is said that monitoring of the elderly should be simple, made for the elderly, and easy 'plug and play' use. When it comes to a wearable device and monitoring, it is important to think about the technology's ability in relation to elderly citizens and use. In the article

on 'wearable devices' by Teixeira, E. et. al (2021), they focus on the importance of the technology being adapted to the elderly. Older people may have other vital values, as they generally walk slower than young people, for whom technology is most often created. The activity must then be measured and assessed differently. However, it is made clear that most wrist-worn wearable devices measure accurate heart rate readings in the elderly, despite the fact that there is a difference between the devices depending on the brand behind it. During a monitoring app project at a nursing home in England by Steven *et al.* (2019), it became clear that during implementation, there were challenges in terms of integration into employees' everyday tasks, Wi-Fi, and delays. Thus, there are several parameters that must be considered and taken into account when successfully monitoring the elderly.

IMP Scandinavia

The Innovation Clinic has, in their search for a monitor that can live up to the criteria and parameters, found some. The Monitoring project is currently using the technology from the Danish company IMP Scandinavia as an example when talking to relevant actors within the project. The monitor from IMP Scandinavia is a biocompatible patch with an electronic unit with sensors that is placed on the elder's arm. The monitor is connected to a beacon that is placed in an outlet close to where the monitor is being used to create a wireless network. The relevant personnel can then view the vial signs on a computer or tablet (IMP Scandinavia (n.d.c)). The monitor can, with the help of sensor technology and algorithms, measure activity level, respiratory rate, blood pressure, oxygen level, temperature, and pulse (IMP Scandinavia (n.d.b)). The purpose of the monitor is to enhance the quality of life in the elderly by replacing frequent checks of the vital signs, and thereby provide more resources for care. The technology can give notifications if the selected limit values are exceeded so that personnel can provide the needed care with timely intervention. Thus, it has the purpose of creating value for patients and healthcare professionals (IMP Scandinavia (n.d.a)). The technology is currently receiving the CE mark and is being classified as medical equipment in Class II A and B (Fieldnotes, see Appendix 7, (9.1.7)). The risk classes are divided into class I to class IIII and class A to class D. There are different requirements for safety and performance, depending on the class. Class I and A are low risk and Class III and D are high risk (Agency (2023)). The classifications are important for technologies to be used in the health care system. The monitor from IMP Scandinavia will possibly receive the classification in September of this year (Fieldnotes, see Appendix 7, (9.1.7)).

Chapter 3

Problem statement

To understand what is at stake in innovation in healthcare, I am using the Monitor of Change project at the Innovation Clinic. And pose the problem statement that reads as follows:

> *How are innovation in healthcare perceived by actors and what factors does that constitute in the Innovation Clinic's Monitor of Change Project?*

The question addresses how actors such as clinicians, companies, municipalities, elders, and the Innovation Clinic perceive innovation. And in what way these perceptions constitute factors in the enactment of innovation by the Innovation Clinic. To show this, I include a case study of the Monitor of Change project at The Innovation Clinic, illustrating how innovation projects are affected by perceptions and factors that represent the key parts of innovation in healthcare.

The question will be answered through fieldwork and empirical data collection, as well as the theories of Actor-Network Theory and Erik Risskjærs Controlling Logics to understand the actors and the logics they hold and thereby find the factors in innovation.

3.1 Theory of Science

To explore and answer the problem statement, this master thesis science-theoretical viewpoint is post-phenomenology, which means that human beings and technology shape the world together. Technologies are instrumental and functional objects that function as mediators of human practices and experiences. Technology is seen as the relations between technological artifacts and human beings, focusing on how technologies shape the relation between the world and human beings (Rosenberger and Verbeek (2015)). Therefore, technology is, in this thesis, the monitoring technology and the innovation process and models, as they are objects that in relation to the actors mediate their practices and experiences within innovation.

Additionally, this thesis accounts for the term innovation as something new. It can be something that has never existed before or a change in existing materialistic technologies, procedures, and pro-

cesses, among others. This is based upon the different views on innovation described in the problem analysis (see Chapter 2), which I also discovered during fieldwork, and is meant to embrace them all. The innovation process is in focus as a whole, with close attention to the first phases of the monitoring project when uncovering the factors in innovation. Furthermore, the possibility of the implementation phase is discussed in the discussion (see Chapter 7). The thesis also uses the word factors. The word is defined as "a fact or situation that influences the result of something" (Cambridge dictionary (n.d.)). In this thesis, it can be specific actors, the law, time, e.g., that affect the innovation and process in a positive or negative way.

Chapter 4

Method

This Master's Thesis is based on ethnographical methods used in my fieldwork at the Innovation Clinic, starting during my ninth semester internship in October 2024 and running into this tenth semester, ending in April 2025. This chapter describes my chosen methods and reflections on them.

The field

The field spans from the Clinic's position within the North Denmark Region and the healthcare system to the Clinic's office, where I was part of a project and participating in events with the Innovation Clinic. My role at the Clinic has changed during the time frame of the project. To begin with, the intention was that I would help with potential planning and brainstorming, as well as conduct interviews for the monitoring project. The changes do to different factors will be described in the analysis (see section 6.1). This left me to observe, listen in, and participate in meetings and events as a way to gather empirical data on factors in innovation. I was given a desk at the office, a regional computer, and a regional email, allowing me to share documents and have a place to be part of the office. Being present at the Innovation Clinic's office made me able to ask the project managers and the head of the Clinic to partake in my thesis and participate in interviews. Gathering informants was thus uncomplicated as informants from the Clinic, at workshops, and events were just a conversation away.

4.1 Fieldwork

The following sections elaborate on the methods used to gather empirical data during fieldwork. Methods such as participant observation, interviews, and processing of the material will be described.

4.1.1 Participant observation

Having a desk and computer at the Innovation Clinic allowed me to experience how they work with innovation projects and be part of meetings and conversations in the office. Using Spradley's categories of participation, my presence at the meetings and the office can be described as *active participation* (DeWalt and DeWalt (2011)). This means that the ethnographer is seeking to learn how to behave based on the cultural rules by participating in nearly everything that the others are engaging in. When sitting at the office, I would participate in the conversations as employees entered, and sometimes, they would also have questions for me, just as they would for everyone else. Every Monday morning, all employees would come together to eat a roll and update each other on the previous week's endeavors and the following week's plan. At these meetings, I would eat the rolls, drink coffee, and get to talk about my updates and plans, the same as all the others. In this way, I was actively participating in the meeting and doing almost everything the others were doing, as they would discuss work tasks and I my thesis. Different from the examples just described are my participation in their commercialization meetings (Bjerre (2025)). During my internship on the ninth semester I would partake in a few of the meetings, where they would discuss new ideas for projects received from employees in the region and pick the projects to continue to work on. At these meetings, I used *moderate participation*, where the ethnographer is identified as a researcher and is present, but only interacts with people sometimes and therefore does not actively participate (DeWalt and DeWalt (2011)). I would sit at the conference table and listen to the others presenting ideas and thoughts but not say anything my self. Participating in the meetings and being present at the office, gave me insight into the tacit knowledge and everyday parts of working with innovation projects in healthcare.

Being participant observing means that I have been reacting to what was going on around me, unable to control the course of events as in, e.g., an interview (DeWalt and DeWalt (2011)). This exploration of the events I was participating in made it a personal experience and enabled me to gain insights into tacit knowledge and practices not only at the office but also at events.

Events

I participated in two events on innovation: a workshop arranged by the Innovation Clinic and an event organized by various public parties.

"When is enough, enough?"

The workshop called "Hvornår er nok, nok?" (in English, "When is enough, enough?" gathered companies to talk about innovation and when they would like to be a part of the innovation process and projects, as well as what they would like of information on those projects. The event was held at Forskningens Hus (in English, "House of Research") at Aalborg University Hospital. The introduction by the Innovation Clinic consisted of a welcome and description of the innovation processes and legislation the Clinic works with, as well as a presentation of some of their projects as examples. There would then be a debate at the three tables, where the fourteen companies were distributed, with an employee from the Innovation Clinic facilitating the conversation and taking notes. A break with coffee, croissants, and fruit available was followed by a presentation on Beta Health 2.0, a national innovation platform where clinicians can apply for funding (Fieldnotes HNN, Appendix 6 (9.1.6)). A new debate took place, and everything was rounded up. During this event, I sat in the back of the room with people from Danish Life Science Cluster, the Regional House, the Contract Unit, and the Innovation Clinic. I was writing notes, listening, and observing. As I did not actively participate in the debates, but talked to a few of the participants and explained why I was there, I used *moderate participation*. During the first debate, I moved to one of the tables where the companies were seated, so my presence as an observer was more prominent, however I still used *moderate participation* (DeWalt and DeWalt (2011)). The field notes I wrote were afterward corrected and elaborated on, and shared with the project manager, who collected all notes from the event in order to gain knowledge of what the Innovation Clinic should take from it (see 4.1.2). Previous to the event, I spoke to some of the project managers at the Clinic, so I knew what to expect and how to behave. The event gave me insight into different companies views on innovation.

"When innovation succeeds - across 2025"

The second event I participated in was "Når innovation lykkes - på tværs 2025" (in English, "When innovation succeeds - across 2025") at UCN Aalborg (Danish Life Science Cluster (2025)). This was organized by Aalborg Municipality, Danish Life Science Cluster, Professionshøjskolen UCN, and the North Denmark Region, among others. The focus was on successful implementation in the healthcare system and consisted of various stands where companies presented their technologies, presentations and debates in the auditorium, and more. Present were public organizations, private companies, healthcare employees, and politicians, among others. I paid for my on ticket and was therefore not bound to participate in a certain way by the Innovation Clinic. Upon arrival, I went to the Innovation Clinics stand and tried to help with an issue. Throughout the day, I went back to the stand between attending debates and presentations in the auditorium and walking around the event, talking to a couple of the companies present. Standing at the Clinic's stand, I was able to listen in on the conversations they had with business partners and guests. This description indicates that I used *active participation* (DeWalt and DeWalt (2011)), as I nearly engaged in what all the other participants were doing. The differences were based on the fact that my conversations were about factors of innovation with my thesis in mind, and other participants seemed to network and learn about each other's businesses and technologies. Previous to the event, I had prepared to observe what the participants were talking about, the different factors in innovation and views on innovation, as well as what was not mentioned. Additionally, I practiced a short and precise pitch about myself and my master's thesis that I could use when asked and when asking companies questions. The questions were also written down beforehand as a way to start the casual conversation and then ask follow-up questions afterward. The questions related to the name of the event: "What do you see as important for successful innovation?" and "Is there any factors or perspectives that are important when innovating?". I wrote down fieldnotes with the answers to the questions, as well as to everything else i experienced at the event. The day helped me gain insight into the different perspectives on innovation from companies, politicians, and municipalities, which led to the discovery of important factors in innovation.

4.1.2 Fieldnotes

During the fieldwork at the Innovation Clinic and events, I wrote fieldnotes. The fieldnotes were first mental notes, *Headnotes* (Emerson *et al.* (1995)) and words and phrases quickly written down, *jottings* ((Emerson *et al.* (1995))). That later enabled me to remember the details and became *thick descriptions* (Emerson *et al.* (2011)), as they were described in further detail. The fieldnotes constitute empirical data on my experiences during fieldwork and are a way to write down understandings, let alone knowledge observed and heard in passing and conversation.

4.1.3 Interviews

In relation to different factors and views on innovation, I interviewed three project managers and the head of innovation at the Innovation Clinic. To set up the interviews, I just asked them at the office and scheduled a time in their calender as I have a regional computer and email. They were all happy to talk to me and find the topic of interest. The interviews were semi-structured and allowed the informants to talk upon the questions asked and other themes and perspectives they may have, while the questions would lead the conversation in a certain direction (Rytter and Olwig (2018)). This allowed me to lead the interview in the desired direction and still have space for follow-up questions to the informants' answers and other aspects. The interview guide for the semi-structured interviews initiated with an explanation of the interview format and getting oral consent to audio record the interview and work with the data later in my project (see Appendix 8, (9.1.8)). The questions were *Descriptive questions* where the informant, with their own words, could describe how they see innovation and innovation projects and processes (Spradley (1979)). The questions were open, e.g., "What do you think makes innovation succeed?" to enable their views to come forth without a narrow lead. The interviews focused on innovation succeeding and not succeeding, factors for innovation, and the 360-degree perspective model they have at the Innovation Clinic. The way I asked the questions changed throughout the four interviews, as I took notes from the previous interviews and used them to change the order of the questions to make the conversation flow better.

The informants are:

- Head of the Innovation Clinic, Jacob Ravn, who has been at the Clinic for two years and drew up the first draft of the 360-degree perspective model.
- Project manager at the Innovation Clinic, Maria Brændstrup Kristensen, who has worked there for seven years and is the project manager on the "Monitor of change" project, among others.

- Project manager at the Innovation Clinic, Carina Østervig Byskov, who has worked there for three years and is the head of operation on the EU project CAIDX (Clinical Artificial Intelligence-based Diagnostics) (Bjerre (2025)).
- Project manager at the Innovation Clinic, Bente Koch Pedersen, who has worked there for nearly fifteen years and is the project manager on several projects.

All informants possess extensive knowledge of working with innovation projects and have given insight into the Innovation Clinic's perspectives, and additionally, other actors as well, as the Clinic works with doctors, nurses, and companies, among others. The interviews were audio recorded, and I also took fieldnotes.

4.1.4 Processing of empirical material

In order to work with the empirical material and be able to analyze it later on, I transcribed the audio and coded the transcriptions and fieldnotes. This is described below.

Transcribing

The audio files from the interviews were transcribed with the help of Good Tape, an AI created by a Danish company to transcribe audio safely and securely. They follow the EU legislation and, therefore, GDPR. The uploaded files will never be used to train AI models etc (Jensen and Svendsen (n.n.)). I corrected the transcription afterward by listening and reading through using my own rules. My rules are based upon the standard questions as to write word for word, keep pauses and interjections, and whether to keep repetitions or not, among others (Brinkmann and Kvale (2019)). My codes are:

- The first letter of the informant and interviewer marks who says what.
- Words or sentences that are repeated more than twice after each other are deleted.
- Interruptions e.g. others looking in, as well as small talk when rounding off, are deleted and marked with [ ], with a description.
- The order of words is kept as is.

The rules allow for the transcriptions to be true to the audio and easy to read and compare.

Coding

To be able to analyze the empirical material, both fieldnotes and transcriptions have been coded. The codes are found inductively in the empirical material and are therefore *ethnographic codes* (Bundgaard and Mogensen (2018)).

The codes are as follows:

- The 360 degree model
- Economy
- Politics and legislation
- Companies views
- Doctors and nurses' views
- Public view (including municipalities)
- Organization and management
- Goals, needs, and values
- Other

The codes have been marked with colors designated to each code in the material, in order to make themes and correlations more clear and, furthermore, to give an overview of the empirical material. Therefore, the central themes and statements stand out.

4.2 Being part of the monitoring project

As part of the fieldwork, I was part of the monitoring project and used the experience as a case for working with innovation in healthcare. The following describes the methods used when participating in the monitoring project.

4.2.1 Participant observation

The project manager, Maria B. Kristensen, invited me to brainstorm on the monitoring project. Here, we talked about what we knew about the potential scenarios of use for the monitor and, therefore, the course of the patients. Maria started a Value Stream Mapping, and we came up with two rough personas for patients who could use the monitor. We tried to map out the stream of events in the use, and Maria wrote on a whiteboard and attached sticky notes with notes accordingly. Participating in the brainstorming means I used *active participation* (DeWalt and DeWalt (2011)), as I did almost everything she did, with the difference of her controlling the process and I observing and learning from her methods and perspectives. We quickly found that the scenario with a patient receiving the monitor in the hospital and continuing to wear it at home is not realistic at the moment due to the responsibility for treatment belonging to the general practitioner when the patient is at home. The other scenario with a patient in home care was more realistic, but we found gaps in our knowledge, e.g., when the monitor should give an alarm. The brainstorming and meeting had the purpose of identifying where the monitor could be used to prevent admissions and where to intervene and to find gaps in our knowledge that would become questions for doctors and nurses, among others. This was achieved, and we used the questions in our interview with a geriatrician (see section 4.2.3).

During my ninth semester internship, I participated in a workshop held by Maria B. Kristensen on finding the best solutions to prevent dehydration. In the workshop were nursing home workers, nurses, and home care workers, ten participants in total, presented with thirteen technologies, some thought of and others already existing. The participants were then introduced to each technology as a solution and were asked to discuss it and place it in a matrix of effectiveness and how easy it would be to realize (Bjerre (2025)). The technologies chosen to have the best perspective for further development would then go on to become their own commercialization projects, the monitoring project being one. I used *moderate participation* (DeWalt and DeWalt (2011)) as I was sitting in the back of the room observing and taking notes. The workshop gave insight into the perspectives of nurses on the monitor, which is being used in the monitoring project, as well as showcasing nurses' thoughts on technologies and innovation that are relevant to my master's thesis.

4.2.2 Working with data

In order to understand the field within which the monitoring project works, I searched for relevant literature. The literature on the topic was gathered, with relevant articles found during the "prevention of dehydration" project, as well. I was asked by project manager Maria B. Kristensen to find articles showcasing monitoring technologies used on elders. The literature was shared in a document with a link and notes on the key points as a way to gain an easy understanding for those reading the collected knowledge from the literature. See section 4.4 on the thoughts behind collecting literature.

In addition to finding relevant literature, I was asked to read though the data, consisting of notes from interviews with home care nurses and nursing homes in different municipalities collected by the Innovation Clinic during the "Prevention of Dehydration" project, and to save notes relevant to the monitoring project in a shared document. This could be direct thoughts and comments on monitoring of the elderly or their daily practices with, e.g., triage in which the monitor would be part when implemented. Notes on the monitor of change from the workshop described in section 4.2.1 above was also included in the document. In the same document, notes on elders perspectives and thoughts on a monitoring technology were added. I read the analysis I wrote during my internship, which was based on interviews I had with the elderly in activity centers and nursing homes on the topic of prevention of dehydration and possible technologies as solutions. I conducted semi-structured interviews (Rytter and Olwig (2018)) that included scenarios on technologies, with twenty-five elderly and three employees at two activity centers in Aalborg in order to reach elderly people in home care. As well as with seven elderly people and one caretaker in two nursing homes also in Aalborg. Some of their perspectives were for the monitor to be comfortable to wear. Furthermore, some were open to using such technology, and others were not (Bjerre (2025)).

Reading through the data from the "Prevention of Dehydration" project to collect relevant notes for the monitoring project gave me insight into the Innovations Clinic's methods and an understanding of elderly people, home care, and nursing home nurses' perspectives on the monitoring technology and therefore viewpoints and factors that play a part in innovation projects.

4.2.3 Interview and fieldnotes

With the aim of obtaining answers to the questions discovered during the brainstorming with project manager Maria B. Kristensen (see section 4.2.1), we had a meeting with a geriatrician. Maria knew the geriatrician from previous projects, which is why she was in charge of the contact and the interview. Prior to the interview, Maria and I had a meeting to discuss the questions to ask and make a plan. Previously, I had written down preliminary thoughts and possible questions, which I mentioned at the meeting. The rough interview guide ended up outlining a semi-structured interview (Rytter and Olwig (2018)), with an introduction to the results of the "Prevention of Dehydration" project and to this current monitoring project. I used *active participation* (DeWalt and DeWalt (2011)) as I wrote notes and asked follow-up questions. In this experience, I gained insight into the perspectives of a geriatrician on the monitoring technology and how his views affect the innovation project and process, as we found new important aspects in need of further research. All of this knowledge and experience from the interview and above mentioned partaking in the monitoring project was added to my fieldnotes as empirical data for later analysis.

4.3 Empirical data

The following table 4.1 illustrates and describes the empirical data collected using the above methods. The data consists of fieldnotes and transcriptions of interviews, which is the basis for the analysis (see Chapter 6). All the empirical material is in Danish, and quotes in this thesis are translated into English.

Collected for project	Empirical data	Description of method	Reference
Master Thesis	Interview with the head of the Innovation Clinic, Jacob Ravn	Semi-structured interview at the Innovation Clinic	Appendix 1
Master Thesis	Interview with project manager at the Innovation Clinic, Maria Brændstrup Kristensen	Semi-structured interview at the Innovation Clinic	Appendix 2
Master Thesis	Interview with project manager at the Innovation Clinic, Carina Østervig Byskov	Semi-structured interview at the Innovation Clinic	Appendix 3
Master Thesis	Interview with project manager at the Innovation Clinic, Bente Koch Pedersen	Semi-structured interview at the Innovation Clinic	Appendix 4
Master Thesis	Fieldnotes from event "Når innovation lykkes - på tværs 2025" (in English "When innovation succeeds - across 2025") at UCN Aalborg	Active observation	Appendix 5 Quotes will be labled with the letters "NIL"
Master Thesis	Fieldnotes from event for companies "Hvornår er nok, nok?" (in English, "When is enough, enough?" arranged by the Innovation Clinic	Moderate observation	Appendix 6 Quotes will be labled with the letters "HNN"
Monitor of change	Interview with a geriatrician	Semi-structured interview at the Innovation Clinic lead by Maria B. Kristensen	Original material not shared because of NDA
Prevention of dehydration (internship)	Interviews with twenty-five elderly and three employees in two activity centers, and interviews with seven elderly and one caretaker in two nursing homes	Semi-structured interviews	Original material not shared because of NDA
Prevention of dehydration (internship)	Data from interviews with nursing home and home care nurses gathered by the Innovation Clinic	Analyzing the material for the Monitor of change project and my Master Thesis	Original material not shared because of NDA
Prevention of dehydration (internship)	Workshop on prevention of dehydration with ten participants from nursing homes, home care and hospital, arranged by the Innovation Clinic	Moderate observation	Original material not shared because of NDA
All projects	Fieldnotes from participating in meetings and talk at the Innovation Clinics office	Active observation	Appendix 7

Table 4.1: Table showcasing my empirical data and description thereof

4.4 Literature search

When collecting literature, it is important to be critical of the source to make decisions about what to include. To find relevant literature, I have used PubMed, Google Scholar, books, and websites while being aware of the possible agendas and biases. The literature included is in Danish or English. The database PubMed, which includes biomedical literature from MEDLINE, life science journal, and books (PubMed.gov (n.d.)), was chosen when searching for articles and reviews for the monitoring projects as described above and for this thesis. The database enabled me to find literature on medicine and science relevant to the projects. The keywords used to find the article and reviews used in the discussion (see chapter 7) were "Innovation in Healthcare", as these are the most precise words for the field in which the thesis is placed.

4.5 Ethical considerations

In relation to my fieldwork and further work with the empirical data in my master's thesis, several ethical considerations have been taken into account.

Starting the internship in my ninth semester at the Innovation Clinic, I signed a non-disclosure agreement and declaration of waiver of co-ownership, which were renewed for the master's thesis. This means that there are some things that I am not allowed to say and discuss in dept, due to the possibility of distortion of competition within the market (Bjerre (2025)). Additionally, the co-ownership means that I am obligated to share my findings with the Innovation Clinic, as I have done by sharing literature and notes, and they will also receive this master's thesis. This, and the fact that I have attended workshops, interviews, and events with the Innovation Clinic, signifies my positioning. At the Clinic and during interviews with the project managers and the head of innovation, I positioned myself as a master's student from Aalborg University, ready to observe and learn. At workshops and interviews with actors in innovation projects, I positioned myself as a master's student and collaborator with the Innovation Clinic, as I navigated two roles with agendas of my thesis and the Clinic. I was sill eager to observe and learn and tried to get this across to the other participants. This was also the case when participating in events, although at "When innovation succeeds - across 2025" I positioned myself as a master's student and even when standing at the Clinic's stand. Talking to the companies present, I was accommodating, receptive, and interested in their knowledge and views. Throughout my fieldwork, I have reflected on my positioning, and what it means for my thesis. Moreover, this leaves me with a bias in regard to the Innovation Clinic's processes and perspectives, as well as their

360-degree model. I am aware of this and the beliefs that it entails, as I try to be critical of it. Because of the above mentioned, transparency is important, and therefore, I describe my methods and attach fieldnotes, interview guide, and transcriptions in the appendix. The transparency extends to when approaching informants asking questions about innovation. Here, I always described that I am a master's student writing about factors in innovation and that their comments would be used in my thesis. But due to the information I have collected through observation and listening to presentations and more, I have chosen to pseudonymize everyone except for the head of innovation and project managers at the Innovation Clinic. This means, that the information can not lead back to the informant without further intel (Datatilsynet (2023)). Thereby, the informants will be addressed as their profession or group, such as geriatrician, home care nurses, companies, politicians, and elderly people. The pseudonymization still allows the perspectives and important aspects to come forth, while protecting the identity of the informants.

Chapter 5

Theory

This chapter describes the theories of Actor-Network Theory and Erik Riiskjærs Controlling Logics and the terms within theses that will be utilized in the analysis to unfold the empirical data and bring forth insights.

5.1 Actor-Network Theory

Actor-Network Theory (ANT) is part of Science-Technology-Society studies (STS) that focus on interdisciplinary and heterogenetic aspects in technological and scientific development. ANT started in the 1980s and employs a heterogenetic network of actors, both human and non-human with agency, and their connections. The constitution of the network is based on the actors that are part of expanding and maintaining the network and the intertwining of their connections. Furthermore, vast differences between the actors are removed (Olesen and Kroustrup (2007)). The problem analysis and the empirical material collected show that multiple actors are part of innovation. The theory will, therefore, be used to demonstrate the actors involved in innovation and how their connections are intertwined and affect each other, as well as the development and process of innovation. There are several terms within ANT, and the ones chosen as relevant to this thesis are described below:

5.1.1 Translation

When the actors interact, *translation* happens as part of the process (Olesen and Kroustrup (2007)). The term is defined in three dimensions:

1. A translation begins with inequality about interests as well as language games and ends when there is created equality between two judgments or statements. Here, translation is both deception, ambiguity, and urges.

2. A translation can be marking a point of passage when defined with a strategic meaning. This point of passage promotes the actors' interests as they all have to cross it.

3. A translation can create order and uniqueness in the world when it has a linguistic meaning. Here, language games translate other language games by using the topic's actual meaning. (Olesen and Kroustrup (2007))

When the different translations are at play, the different actors are negotiating the scope of action. In this process, there need to be moments where *obligatory points of passage* and *spokespersons* are chosen. When one actor is allowed to speak on behalf of the others, is when that actor is picked to be the spokesperson. This spokesperson represents both human and non-human actors who cannot speak for themselves, and when speaking on behalf of others, it is strong and needs to be listened to (Olesen and Kroustrup (2007)). The spokesperson is important, and alignment between the actors happens through translation as they get more uniform when talking about what they want as a whole. This means that the spokesperson becomes an obligatory point of passage, as all actors must go to the spokesperson in order to get what they want (ibid.) Translations are relevant in this thesis, as they happen in the connections and communication between actors in innovation.

5.1.2 Micro- and Macro-actors

The power and size of an actor in the network can be described using the terms *micro-actors and macro-actors*. All actors should be investigated equally, but an actor can, through translation, become a macro-actor when it has more power relations, and micro-actors give it more responsibility as well (Olesen and Kroustrup (2007)). These concepts are relevant to the thesis when understanding which actors and factors play a role in innovation.

5.1.3 Blackbox

A *blackbox* is a frame of several elements that are working as one and are esoteric and, therefore, it is not questioned. The things a blackbox holds are the things taken for granted, but actors can add to it and take from it, as it is not closed. Although macro-actors do view it as closed forever, as less complications occur when there is an obviousness, and no discussions are needed. If the macro-actor succeeds, a more simple world has been created where it can grow, and no one will ask questions (Olesen and Kroustrup (2007)). This concept is relevant for the thesis, as it holds the knowledge of facts and processes for specific parts of innovation.

5.2 Controlling Logics

The healthcare system consists of different actors with a competitive understanding of reality and the world. Erik Riiskjær has created four *controlling logics* (styringslogikker) in order to understand the meeting between the actors in healthcare (Riiskjær (2014)). The four logics are: the public governance logic (den offentlige styringslogik), the market logic (markedslogikken), the medical profession logic (lægeprofessionslogikken), and the care profession logic (plejeprofessionslogikken). The term logic means a view on the world and how the actor understands their place in it. This can be practices, technologies, and values that, as a cultural and knowledge system, are taken for granted. The logics are through actions, used technologies, and tools carried out by individuals, as they reproduce their worldview. Therefore, institutions and ideas make up the logics (ibid.). The four controlling logics are described in figure 5.1 and the following sections.

Characteristics of four logics in the field of healthcare

	Public governance logic	Market logic	Medical profession logic	Care profession logic
Field	Law, Public Administration and Political Science	Economy	Medicine	Nursing
Main focus	Legitimacy Distribution of values	Productivity Efficiency Fragmentation Competition	Cure Disease Best professional treatment	The whole person Good care Quality of life
Decision premise	Compliance Compromise	Pay-off	Evidence and professional judgement	Evidence and professional judgement
Caricature	Bureaucracy	Cynicism	Device Failure Model	Obscurity
Reference model	Welfare model	Business model	Biomedical model	Biomedical model
Loyalty to	Society	The economy	Best treatment	Patient's quality of life

Figure 5.1: Table showing the characteristics of the four logics in the field of healthcare from Riiskjær (2014), page 22, and translated by Zelina Bjerre.

5.2.1 The public governance logic

The public governance logic focuses on the distribution of value in society through a democratic process to accommodate different interests. The logic takes compromises and considerations between conflicting areas. The central elements are democracy, rule-following, equality, rational planning, and social benefit. Elected politicians take the part of focusing at the broad values of society and healthcare, as well as the rules, structures, and how people view them. Additionally, there are bureaucrats and administrators who carry out the tasks (Riiskjær (2014)).

5.2.2 The market logic

The market logic is through interest groups, agencies, ministries, international economic organizations, the research community, and think tanks, an institutional value system for implementation in the healthcare system. This logic focuses on what can be described and measured with numbers, as the market is responsible for the best possible welfare. Provided that the actors act rationally and have information on the effects of their decisions, competition is important for efficient practices in organizations. Economic and technical considerations are central, as the healthcare system should be based on the transparency and value of reward systems and production. Politics and the public governance logic can work together with the market logic but are seen as an enemy of the medical profession logic (Riiskjær (2014)).

5.2.3 The medical profession logic

The medical profession logic deals with health and diseases and is spread across sectors, national borders, and hospitals. As an institutional value system, the logic is part of medical professional societies, the pharmaceutical industry, international health organizations, the research community, scientific journals, staff organizations, and conference systems. The doctor can, because of its scientific objectivity, be seen as the patient's lawyer. Furthermore, the logic works towards securing professional development in the profession and making sure the patients receive the best treatment possible. Here, patients trust in the professional is key (Riiskjær (2014)).

5.2.4 The care profession logic

The care profession logic focuses on caring for the whole human being. Loyalty and service to the patients is therefore important. The logic of nurses can be described as a holistic human view that, traditionally speaking, can be difficult to define and measure. Just as the medical profession logic, is the care profession logic based on a specialized subject area, but the care of patients is most important. This involves tasks in coordinating treatment courses in order for the patient to experience continuity in their treatment (Riiskjær (2014)).

5.2.5 Working with the logics

The four controlling logics are in competition over which perspectives to apply to the practices in healthcare, both at the community level and local level. Even though they have different perspectives, there are common grounds on which they can collaborate, especially through common goals. The different logics are more visible on a community level, as individuals can take part in elements from more than one logic when considering an organizational level (Riiskjær (2014)).

The four logics are relevant to this thesis when trying to understand the actors and their perspectives on innovation in healthcare. Additionally, it can bring forth factors in innovation and give insight as to why some actors find factors more important than others.

Chapter 6

Analysis

This analysis opens up the factors that are part of innovation in healthcare, with the help of actor-network theory and Riiskjærs controlling logics. The analysis seeks to unravel and present how the different factors partake in innovation, as well as how the actors perceive innovation and the influence of these factors. This is unfolded in three sections. The first section focuses on the case of the monitoring project at the Innovation Clinic. With the help of ANT are the actors and factors in the case found, as well as how they affect the innovation process of the project. The second section describes the controlling logics behind the actors in innovation as a way to understand the perception of innovation and the importance and views of the factors. The third and last section collects the factors in innovation found in the previous two sections and compares them with the 360-degree model from the Innovation Clinic. The analysis is thereby displaying what factors contribute to innovation in Danish healthcare.

6.1 The case of the monitoring project

This section describes the actors as well as factors at stake in the monitoring project at the Innovation Clinic. ANT will be used to understand the dynamics and effects of actors and factors on the innovation process. In this way, the case shows important aspects of innovation and the innovation process.

At a meeting with project manager Maria Kristensen at the Innovation Clinic, I was introduced to the monitoring project. Because of my internship in the project prior to this project, I was familiar with it. Maria explained that she was planning the project and trying to set up a team of relevant actors to be part of the project. We talked about what I could contribute in relation to my master's thesis, and we brainstormed on whether I could make a playbook on the implementation, using implementation models and considering the 360-degree model and cross-sectoral aspects, or a playbook on the target group, hereby finding the criteria needed for patients and elderly, by considering their condition, disease, quality of life, and ethics. Additionally, we thought about working with motivating and nudging the users in relation to the activity level of elders and how the monitoring technology can affect this. I had free range to write my thesis on what I wanted, but these ideas could contribute to the monitoring

project at the Clinic. But it turned out that innovation projects are ever-changing and the process too. As I wrote in my fieldnotes:

> *"Visitation criteria are important. At first, we thought I should make a playbook for the visitation criteria, but there is not enough time for that, we don't think. So that's why I'm going to: Compare their practices now with the changes that are going to happen with the technology."* Daily fieldnotes, see Appendix 7 page 3, (9.1.7).

The plan changed ones again, now to evolve around understanding the nursing home and home care nurses practices and how the technology would be a part of that and change it. The reason I give is time. The time frame to establish the right team, get municipalities on board, apply for funding, and be able to pilot test the technology changed time and time again. Therefore, my thesis plan changed one last time to focus on the factors in innovation, as the monitoring technology in question would not be done with classifications before September 2025. A factor in the process of innovation is, therefore, time.

6.1.1 Actors in the monitoring project

To understand the actors in the team of the monitoring project, I have made a network (see figure 6.1).

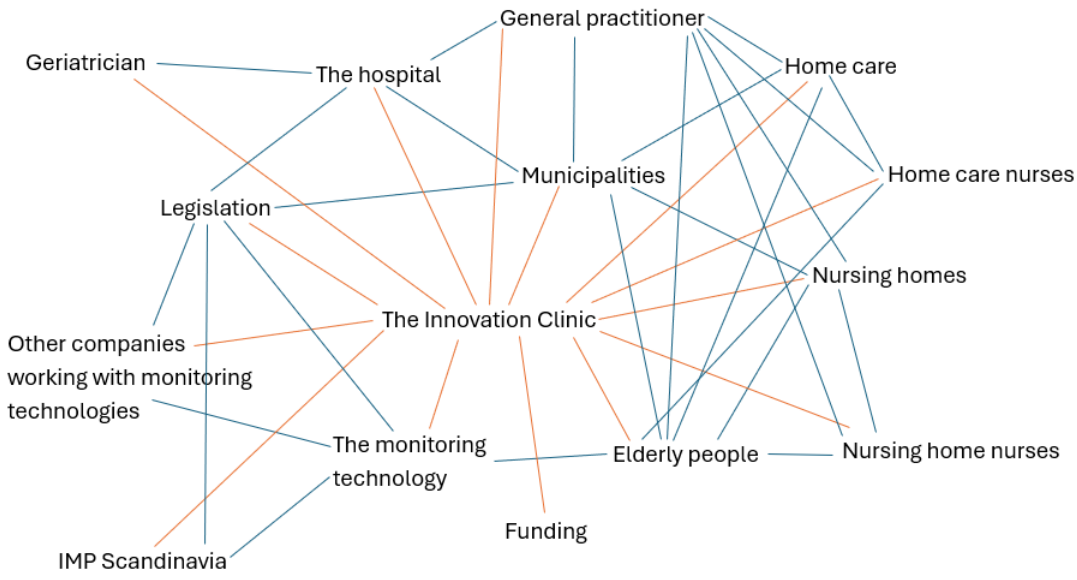


Figure 6.1: Actor-Network of the actors part of the monitoring project at the Innovation Clinic, illustration by Zelina Bjerre.

The network consists of actors who are part of the monitoring project at the time of writing. The lines between the actors visualizes connections between the parties. Since the Innovation Clinic has

connections to all actors in the network, are the lines between the Innovation Clinic and other actors orange, as a way to easily distinguish them from the other blue connections among the actors. Focusing on the actors and how they are part of the monitoring project, it is evident to understand that the Innovation Clinic has brought them in, in order to understand the needs and the practices that the technology will be part of, and make the technology sustainable to a successful implementation.

Putting our attention on the monitoring technology as an actor, the technology monitors the elderly and collects data in the process. It is important to understand what type of data, how much, and when the monitor should give an alarm due to changes in the vital signs. Here the actors who will be working with the data have different wishes. The doctors wish to have as much data from the device as possible to help them understand the situation and make the right decision. On the other hand, are the nurses in the municipality, at nursing homes and home care, who do not want much data since they do not have time to view and understand it. Maria describes it as a clash between the actors:

> *"There's actually a bit of a clash right now between doctors and nurses because the doctors want to get an insane amount of data from this device that we are about to start creating. And the municipalities do not want much data."* Maria B. Kristensen, see Appendix 2 page 5, (9.1.2).

Discovering this, she focuses on what the context and problem are and what the device needs to solve. Thereby it is clear that the users of the technology need to be a part of developing the technology further and to understand the practices surrounding the technology when in use. In addition, the company IMP Scandinavia is an actor who needs to be on board with this. Maria Kristensen explains that companies focus on supply and demand and that they need to be ready to adapt their technology, as this is often required for it to be implemented in the healthcare sector. She describes how the monitor can measure very precise, but the company needs to be ready to develop the rest together. This can be the amount of data collected, when the alarm should sound, and the overall functionalities, based on the doctor's and nurses' comments, among others. Making the decision in the project in general and on this matter is something they do together. Maria Kristensen explains:

> *"I simply trust that we will do it together. Because I can't make such a decision for them. Nor can doctors make a decision from other people's perspectives. We have to do that together. And then we have to find out, why is it that they want so much data? And why is it that they don't want as much data? Because it's not in it whether they want to or not. It lies in something behind."* Maria B. Kristensen, see Appendix 2 page 6, (9.1.2).

To unravel what is behind the actors' whishes and perspectives, the Clinic seeks to open the blackboxes belonging to the nurses and doctors to understand their practices. Often, parts of a practice, such as a visit to an elderly in home care, can be taken for granted and first come to light when asked about it in an interview or workshop or seen during fieldwork. When the reasons behind the actors' perspectives are found, the Innovation Clinic and the actors can together find a solution and the best way to move forward in the innovation process. This can be described as a translation. Then the actors interact, the first way of translation is taking place as different interests are presented, and they end with an understanding and equality created between the statements on the technology. In this example, with the amount of data needed, and how to move forward. This translation can, for example, happen at a workshop at the Innovation Clinic, where the Clinic serves as a mediator and translates between the actors.

Shifting focus to another actor, legislation. This affected the time frame, as the monitor needs to be classified as medical equipment, and it also dictates who has the responsibility for treatment. The latter correlates with the organization of the healthcare system and shows the gap between the two sectors which the monitoring technology moves within. Maria Kristensen describes this complexity:

> *"You do not exceed the responsibility of treatment. I can't go out and initiate something with the municipalities in relation to something that requires something medical if I don't have general practitioners on board because they have the responsibility for treatment. Then I go beyond what is organizationally okay."* Maria B. Kristensen, see Appendix 2 page 13, (9.1.2).

It is expressed that the legislative aspects dictate what is possible, as well as the organizational structure. This is also clear in hospitalization at home in relation to the local healthcare strategy (det nære sundhedsvæsen). Maria Kristensen explains that the hospital uses codes to register the patients, but they do not have a code for patients who get treated at home. It does not exist in the system, even though they pay for the treatment and have the responsibility for treatment. This is problematic and something that needs to be resolved on a political level if technologies, such as the monitor, should be used by the hospital as part of the local healthcare strategy. Additionally, the differences in the procedures in health care in the municipalities also show challenges in implementing technologies in that sector. Maria Kristensen states:

> *"It is a huge barrier in relation to this with the local health care we have to go into. Because we're looking into 98 different ways of doing it, and not even 98, because in each municipality there are also many different ways of dealing with it, depending on districts and things like that."* Maria B.

Kristensen, see Appendix 2 page 13, (9.1.2).

The structure in the organization of the municipalities' many different ways reveals that the technologies need to be scalable and work in many different settings. Thereby, it can be said that the Innovation Clinic and the actors are not able to solve this challenge through the translation of interests but have to work around it in order for the monitoring technology to get implemented and add value in more than one municipality. Decisions on the technology will need to enhance scalability and not so much accommodate the specific needs and interests of the actors. With this being said, it is still evident to understand the actors' perspectives, to find the best common ground for the technology to be used in many settings and achieve a successful implementation.

A last aspect of this case is the ethics of data and who should use the monitor. Maria Kristensen, explains that nurses have expressed, that the technology should only be used on people where it can better their quality of life, and if not, they should let nature take its course. This leaves questions as to who and when the technology should be used. Ethics is, therefore, also a factor in innovation, alongside goals and values, organization, funding, and legislation. Viewing the above and figure 6.1, it can be said that the Innovation Clinic is translating between the actors and becomes an obligatory point of passage for the actors, as the Clinic helps to negotiate and promote the actors' interests and translate views between the parties, so they find common ground in the innovation. This happens when the Clinic facilitates the innovation process and creates a room where the actors are part of the team and are being seen and heard. At workshops or through meetings and interviews, are the Clinic learning about the actors' needs and interests. They then act as translators explaining to different actors what the other parties mean and value. For example, the company was informed that the elders wish for the monitor not to irritate their skin. Every time questions are answered, and the actors make decisions towards the technology and innovation, the innovation process changes and evolves.

6.2 The actors and controlling logics

This section explores the actor's understanding of innovation in healthcare and important factors through Erik Riiskjærs controlling logics. Understanding how the different actors view innovation and what they find important to the process is relevant to know when grasping the complexity of the innovation process. The section is divided into parts based on the four logics, with corresponding actors' views described under each of them.

6.2.1 Politics and municipalities: Public governance logic

The actors that are part of innovation with the public governance logic are the political scene and the municipalities. These will be explored here in relation to views on innovation and what they find important in the process.

When participating in the event "When innovation succeeds - across 2025" (Når innovation lykkes - på tværs 2025) at UCN Aalborg, I gained insights into the political field of innovation, as well as heard from politicians and municipalities. Standing in the enormous room, among stands of companies and organizations, together with people part of innovation in healthcare, we were welcomed by the mayor, the organizers, and the minister of senior citizens. It was explained how the North Denmark Region is ready to innovate, focusing on all aspects. The minister was shown on video, as she was not able to attend, and highlighted that innovation and new solutions are needed, especially in relation to the elderly citizens. In my fieldnotes I noted the minister saying:

> *"We must be better at sharing what works between municipalities. There must be a partnership in the dissemination of innovation. You have to think about entire value chains and the scaling of welfare technology. Scalable technology and solutions are needed."* Fieldnotes NIL, see Appendix 5 page 2, (9.1.5).

This was backed up in my interview with the head of the Innovation Clinic, Jacob Ravn, as he expresses how the healthcare reform and the expanding focus on the cross-sectoral will be more prominent and important in the future (Interview Jacob, see Appendix 1, 9.1.1). The focus on the value chains and the scaling and dissemination of the technologies shows the focus on the distribution of values and loyalty to society and the Danish welfare model, just as the controlling public governance logic describes. It is thereby clear that the politicians value innovation as something to be shared for the good of all.

Participating in the event allowed me to partake in debates and presentations on the topic of how to achieve successful innovation. I gained insight during a panel debate with a politician, chairman of the Regional Council for the North Jutland Region and Vice Chairman of the Danish Regions, directors of public organizations, UCN, Odense municipality, and the region hospital, and a company. The debate had a political view on innovation as they focused on the importance of the technologies and innovations creating value for employees and patients. It was mentioned that the solutions and ideas should come from the employees in the healthcare system in order to ensure successful implementation, and the leadership, management, and organizational structure should make this possible. The infrastructure across sectors affects innovation, and the local management and professional skills

should be in focus to implement the new successfully. The scaling across sectors was stated to evolve around politics, as this should allow the development and scaling to happen. In addition, the economy was mentioned. Innovation must be economically efficient, even though it is not everything, as the value could also be the quality of labor and not just money. In relation to this, they mention time. Time as a factor that you can gain or spend and, therefore, gain or spend money. Time is part of the labor and caretaking of the elderly and patients, as well as time that is spent on innovation and implementation (Fieldnotes NIL, see appendix 5, (9.1.5).

During a different panel debate, with other representatives from the region, companies, and a hospital, there was a focus similar to that above. Communication about successful innovation should be shared more frequently, as it was mentioned that fear of failure often stops the process. It was then encouraged to be more open to having courage and a yes-hat on when innovating with collaboration between public and private actors, as this is needed for success. The importance of cooperation between different actors was shown with a picture of an airplane being put together mid-air by multiple people, each holding a piece of the plane puzzle. Just as the theory of the controlling logics states, this shows how the actors focus on collaboration to come up with the best ideas and, therefore, enable the distribution of values to all, as the successful innovation is shared and scaled across sectors.

Considering only the municipality's perspectives, they are not so different from what is described above. Sitting in a packed auditorium I learned that the municipalities present values good communication between the management and healthcare professionals. It is important to have trust and good relations in order to successfully implement innovation. Moreover, it is important to consider the business case and compliance with the budget, as well as how much the implementation will demand of the healthcare professionals. The innovation and technology should give value to at least the citizens, employees, or economy (Fieldnotes NIL, see appendix 5, (9.1.5).

Innovating when trying to navigate the legislation, is described as a break pad by project manager Carina Byskov at the Innovation Clinic. She explains that the laws on GDPR and MDR (Medical Devices Regulation), among others, are legal and regulatory aspects that she needs to work with and around in the innovation projects. Carina also mentions that the projects need to be changed and tweaked to accommodate changes in legislation (Interview Carina, see Appendix 3, (9.1.3). In relation to this, I wrote in my fieldnotes, after a talk in the office at the Innovation Clinic about reorganization:

> *"It often changes, and it leads to new strategies, new people, etc. You must, therefore, work agilely with your projects and not make long plans but shorter plans with perspectives for the future. Some*

projects that are long and fixed can break by a reorganization." Daily fieldnotes, see Appendix 7 page 6, (9.1.7)

The agility in working in the field of the public governance logic is therefore important, and it shows compliance from the Innovation Clinic to follow the legislation and views within the logic that they can not change and are bound by.

6.2.2 Companies: Market logic

Companies are part of the market logic, as they produce technologies used in innovation in healthcare. The views on innovation by companies as actors will be presented in the following section.

When participating in the event "When innovation succeeds - across 2025", I walked around the stands and talked to a couple of the companies present. When asked what they saw as the most important factors for innovation to succeed, they had different perspectives. My fieldnotes describes that one company mentions:

> *"Politics is the most important thing. It is not the product. He also mentions that patient satisfaction and shorter hospitalization times are what have made them successful. At the same time, he mentions that it is difficult to navigate between Regions and municipalities across the board. There is a lack of adaptability."* (Fieldnotes NIL, see Appendix 5 page 2, (9.1.5)

The company thereby states that it is important to understand the politics in healthcare issued by the public governance logic to be able to gain access to the field. The organizational structure in this is also explained to be difficult to navigate, as he finds a lack of adaptability from the sectors. Additionally, the value of patient satisfaction and shorter hospitalization time, which also saves money, is the reason for their success in the healthcare system. The other company that was asked the same question also found communication and access to the healthcare system challenging. They worked in the field of recycling and found it difficult that the green transition did not seem to have yet reached the healthcare system, despite their ability to compete on price.

The challenge of navigating the organizational structure of the healthcare system was also mentioned by companies during the "When is enough, enough?" event by the Innovation Clinic. Here, companies were gathered to discuss their participation in innovation projects, when they would like to be part of the projects, and what the Innovation Clinic could help them with. The companies expressed a desire to know what parts of the healthcare system they would be part of when collaborating on a project and to understand who makes the decisions on an organizational level. Some also found it

difficult to understand the legislative parts relevant to the field in question. But the biggest factor for the companies to participate in innovation projects was finances. One said "Show me the money", as they do not want to take a big risk. The comments from one table at a debate was:

> *"Numbers are important and must be included in order for them to be able to calculate further, so clinical savings. It is not enough with patients, but also in terms of specific Danish crowns in savings. Uniqueness is important"* Fieldnotes HNN, see Appendix 6 page 2, (9.1.6.

Knowing the financial potential and scaling, not only with a focus on the number of patients affected, but the actual financial numbers of the effects of the innovation are wanted. This shows how the companies fit with the market logic, when they navigate in the field of economy and focus on efficiency and competition, as they want unique innovative ideas.

One smaller company wants to be part of the innovation projects from the beginning, so they are able to commercially see if there is a market. While a larger scale company wants to be part of an innovation project, when there is proof of concept, the data shows value is created. When being part of an innovation project, they express value in collaborating with researchers and clinicians as users to gain knowledge from them (Fieldnotes HNN, see Appendix 6, (9.1.6). When this happens during the innovation projects at the Innovation Clinic, it can be said that the Clinic helps open the blacbox of information on the researchers' knowledge and clinicians' practices and knowledge to the companies.

When the Innovation Clinic is collaborating with companies they see the same factors at stake, as mentioned above by the companies themselves. Project manager Carina Byskov mentions how companies focus on the finical bottom-line (Interview Carina, see Appendix 3, (9.1.3), and project manager Bente Pedersen describes that they often find it hard to understand the aspects of the legislation the projects are under (Interview Bente, see Appendix 4, (9.1.4). Bente also explains how the Clinic tries to help and inform the companies on the topics, as well as on the time frame of involving clinicians as users. This is necessary as she sees that some companies have trouble understanding that there is no time to rush clinical tests, as the clinicians are there to treat and take care of the patients while participating in the innovation project. Lastly, project manager Maria Kristensen states that they try to convince the companies to be open to making changes to their technology according to the healthcare system and not the other way around. This is also commented on by another project manager at the Clinic:

> *"The small companies seem more agile and ready, and the large companies look at it a little more firmly and only think about the bottom line."* Daily fieldnotes, see Appendix 7 page 8, (9.1.7)

The smaller companies are more ready to make changes to their technology to accommodate the finings during the innovation projects than the larger companies. This leads back to the comment from the first company at the "When innovation succeeds - across 2025" event, which found that there is a lack of adaptability when working with the healthcare system (Fieldnotes NIL, see Appendix 5 (9.1.5).

6.2.3 Doctors: Medical profession logic

Doctors, general practitioners, and other clinicians are part of the medical profession logic. As described above, Bente Pedersen explains that the clinicians are part of the hospital to examine, treat, and take care of the patients. Carina Byskov adds to the incentive for clinicians and researchers to participate in innovation projects. She states:

> *"There is not much incentive necessarily for our clinicians to go into this innovation, because they would like to, first of all, they are very research-minded, and then they want to write an article, and then they have a hard time understanding how it then proceeds, and then yes, it kind of stalls there"*
> Carina Østervig Byskov, see Appendix 3 page 1-2, (9.1.3)

The clinicians focus on their research, and to encourage them to be part of the projects and hinder projects from stalling, the Clinic helps commercialize through a company and legislation. These points made on doctors, researchers, and clinicians fit the theoretical description of the medical profession logic. This shows how they are part of the logic, as they value treating and curing patients, as well as focusing on research to gain more knowledge and evidence on diseases and the best professional treatments.

In the meeting with the geriatrician on the monitoring project, I experienced first-hand what the clinicians focus on. The geriatrician found the monitor very interesting and focused on the practices where it would be used. He also emphasized the importance of the data and correlations and alarms based on them. He was able to tell us that the data the monitor's algorithm should be based on is not known to him. He said that there is a need for research on the normal vital values of the elderly, as there is no knowledge of the specific time frame and values that would show that an elderly person is getting sick. This information changed the initial idea for the pilot test in the monitoring project to now focus on research and gaining knowledge of the vital values that the monitor needs to monitor the elderly. The involvement of the clinicians as users is important for the innovation process to ensure that the technology has purpose and crates value, together with establishing successful implementation and innovation. Even though this is the case, project manager Carina Byskov mentions that clinicians are often scared that companies will steal their ideas. Trust must, therefore, be established so they feel safe

to be part of the innovation projects and share their ideas, as the Innovation Clinics projects are based on these ideas from employees in the region. This also applies to the actors' part of the care profession logic.

6.2.4 Nurses and elderly: Care profession logic

The last logic is the care profession logic. Nurses from nursing homes, home care, and the hospital are part of this, as well as the elderly as users of the technology. They also take care of the patients, and as a former nurse described, they are doing their best to make informed decisions for the elderly based on measurements and data (Daily fieldnotes, see Appendix 7, 9.1.7). When reading the empirical data collected by the Innovation Clinic through interviews with nursing home nurses and home care nurses during the "Prevention of Dehydration" project, I learned about the practices and views of these nurses. They described how nurses triage and discuss the care of the elderly. It also mentioned how they find technology and implantation challenging, which is why it needs to be easy to use and comprehend. Technology and innovation are furthermore not allowed to take up time, as the nurses do not have time to spare. The aspects mentioned show how the nurses focus on good care for the elderly and patients in general, as well as basing their decisions on evidence from data and their professional judgments which correlates with the theory of the care profession logic. During the workshop, where possible solutions to the "Prevention of the Dehydration" project were presented, did the nurses who participated comment on the monitor (Bjerre (2025)). They emphasized the importance of collecting consent from the elderly to wear the monitoring device. It was also mentioned that when monitoring the elderly, the nurses need to know how and when to respond, as the data and knowledge give them a responsibility to act. These ethical considerations show how the nurses focus on the whole person and their quality of life, which is also part of the logic.

In addition to this, the elderly, during my interviews with them, also on the "Prevention of Dehydration" project, did share their thoughts on the monitor. Almost all of the elderly informants were open to wearing a monitoring device if it was the best for their health and a recommendation from a healthcare professional. Despite this, some found the monitor to be controlling and supervisory. It was also evident that the monitor cannot irritate their skin and daily life (Bjerre (2025)). With the focus on their own health and quality of life, it can be said that the elderly, as potential users of the technology, are also part of the care profession logic. The perspectives on the monitor from both the nurses and the elderly will be used in the monitoring project as aspects to consider when designing the technology and when implementing it.

6.3 Factors in innovation

The following section will collect the factors in innovation mentioned above, and describe the Innovation Clinic's view on innovation and the factors, as well as compare the factors found in the analysis with the 360-degree model. The section will end with a model of factors relevant to the monitoring case, illustrating what is at stake.

Having viewed the actors who are part of the monitoring project and unfolded the controlling logics behind the actors' views, I can now collect the factors in innovation found above.

The fourteen factors found are as follows:

- Trust
- Communication
- Goals
- Values
- Time
- Economy
- Management
- Technology
- Politics
- Users
- Needs
- Legislation
- Organizational structure
- Ethics

It is important to note that the factors represent sub-factors and actors as part of them.

The many factors show the complexity of innovation, as all actors have different agendas, values, and goals for the innovation project. During the projects, a socio-technical negotiation occurs, and

translations take place. The Innovation Clinic's role in the projects, as a mediator and point of passage, makes them the spokesperson. The actors need to go through the Clinic in order to achieve their goals and get their agenda and views across. Communication and trust is thereby key to successful innovation in healthcare.

Viewing the factors, it is clear that it is important for innovation to be needed and to create value. Furthermore, time is an overall factor both as a frame for the project, as releasing tasks that free money, and while also being a goal, value, and need in itself. The implementation and use of the innovation also take time, and the innovation projects are bound to use enough time to have a successful innovation but not too much time, as the knowledge gained and innovation will become outdated.

The three factors mentioned by most actors are the economy, legislation, and politics. These can be said to affect the innovation projects the most, which makes them macro-actors. This title is received through translations between the actors, where the factors have more power relations and responsibilities than others. This is the case since the actors have to follow the politics and legislation within healthcare, as well as spend money on innovation projects and make sure the innovation will release and earn money to be implemented into the organizational structure of the healthcare system.

Lastly, it is interesting to note that technology is at the center of innovation but does not bear the projects, as it is affected by other factors. The technology is not the most important element in the innovation process or for the innovation to succeed and be implemented. It creates a focus point, but other actors and their perspectives shape the technology and the project. There are limits to the changes that can be made to the technology, and in that sense the technology do dictate what is possible within the set frame.

6.3.1 The Innovation Clinic's view on innovation

The Innovation Clinic is working on innovation projects and thereby also factors and perspectives on innovation in healthcare. The following describes the Clinic's view on innovation in order to understand the background for the 360-degree model, as in the upcoming section will be compared to the factors found.

The head of the Innovation Clinic, Jacob Ravn, says that he sees the Clinic as doing radical innovation, not with technology but by disrupting processes and workflows. He also said that to do so, they need the full landscape to be able to make the changes. When exploring what is necessary for innovation to succeed Jacob Ravn, mentions funding, he said:

"I have no doubt at all that if you don't have control of the financing, you won't get anywhere. As a

system is fastened together right now [...]." Jacob Ravn, see Appendix 1 page 4 9.1.1

This fits with the public governance logic, as the logic controls the region the Clinic is a unit within Especially with the thought that time is money in innovation projects and in relation to the time of healthcare professionals. As a second aspect affecting innovation, Jacob Ravn mentioned the importance of sharing data. It is difficult to merge data, store data, and understand the systems showcasing the data, which are all part of an infrastructure and legislation that he thinks will play a role in the future (Interview Jacob, see Appendix 1, 9.1.1).

In addition to this, do both project managers Carina Byskov and Maria Kristensen make it clear that one of the complexities in innovation stems from the many professions that come together. This is a strength and a challenge as they often talk past each other. The different languages come from different views and agendas that refer back to the controlling logics. Carina Byskov also mentions the importance of the innovation being needed and, therefore, the importance of talking to users, whether it is clinicians, the elderly, or others (Interview Carina, see Appendix 3, 9.1.3). In agreement with this is project manager Bente Pedersen. She finds it relevant to ensure that there is a problem and a need to be solved as a way the innovation will add value. When innovation is implemented and at the same time creates value, is when she counts it as successful innovation (Interview Bente, see Appendix 4, 9.1.4). Addressing the need for innovation, both Carina Byskov and Jacob Ravn focus on nice-to and need-to have projects. Jacob Ravn mentions:

"So there is a nice-to, and there are need-to projects. Which we kind of have to distinguish between."
Jacob Ravn, see Appendix 1 page 3 9.1.1

It is important to distinguish between an actual need and something that would be nice to have. If the project does not have relevance, an actual need, and a market, then it will not succeed (Interview Jacob, see Appendix 1, 9.1.1). Because of this, it is important to be able to say no to an idea. Someone can have a problem and idea for a solution, but if the problem, need, and market are not big enough, then the project should not proceed further (Interview Carina, see Appendix 3, 9.1.3). Saying no is also relevant when projects become large with little resources. Maria Kristensen explains how she occasionally sees a barrier in wanting to do everything at once and not prioritizing, thereby ending up doing everything half completed instead of doing half completely (Interview Maria, see Appendix 2, 9.1.2).

To navigate the many factors and perspectives, the Innovation Clinic is facilitating the process (Interview Bente, see Appendix 4, 9.1.4). Carina Byskov describes the Clinic as a liaison between the different professions, creating a room where they can express themselves (Interview Carina, see Appendix

3, 9.1.3). This shows again how the Clinic is a point of passage translating the views and perspectives of the actors in the projects. Navigating the field of factors and actors, Bente Pedersen explains:

> *"[...] There are some doors that need to be opened. Then they can sometimes be locked, and then you have to pick them up, or whatever it is, right? Others bind. And some have to be kicked in almost. So if that's how we see it, then there are a lot of doors. In all these different stages, and this whole process we have to go through to get there."* Bente Pedersen, see Appendix 4 page 5 9.1.4

In the innovation process, the Innovation Clinic makes the project owners and other actors aware of what doors or factors need to be opened or worked with. The projects are often owned by the person who had the idea and contacted the Clinic. The Clinic thereby facilitates the process and advises what to do, but it is the project owners who make the decisions within the specific project (Interview Bente, see Appendix 4, 9.1.4).

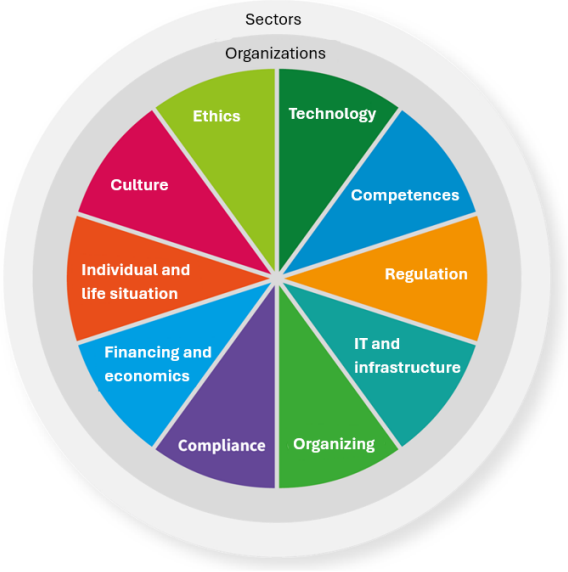
6.3.2 Comparing the factors found with the 360-degree model

To visualize the above factors and perspectives part of innovation, the Innovation Clinic has created the 360-degree perspective model (see section 2.2.1). Figure 6.2 below shows the factors found in this thesis and the model side by side for comparison.

Factors in innovation:

- Trust
- Communication
- Goals
- Values
- Time
- Economy
- Management
- Technology
- Politics
- Users
- Needs
- Legislation
- Organizational structure
- Ethics

(a) The factors found in innovation (see section 6.3).



(b) The 360-degree perspective model, illustration by The Innovation Clinic and translated by Zelina Bjerre (Bjerre (2025)).

Figure 6.2: The factors in innovation found in this thesis alongside the 360-degree perspective model from the Innovation Clinic.

When comparing the two, it is clear that the majority of the factors found in this thesis are repre-

sented in the 360-degree model. Both Ethics, Technology, and Economy have corresponding fractions in the 360-degree model. Politics, Legislation, and Management can be said to be part of the fraction Regulation in the model. The Organizational structure is part of the fractions Organizing and IT and infrastructures, as well as the two rings around it with Sectors and Organizations. Lastly, is Users part of the fractions Culture, Individual and life situation, Competences, and Compliance. The factors represent part of or the whole fractions. This leaves six factors in innovation without a corresponding fraction in the model. The factors are: Time, Values, Goals, Trust, Needs, and Communication. These six factors contribute overall to innovation and the model. Communication refers to the communication that is between the actors and, therefore, the fractions in the model. It is also here that trust must be established. Values, Goals, and Needs can also be found in the actors in each fraction. Additionally, time is an overall factor for innovation and the process of projects, as it is a goal and need in itself because of the lack of professional hands in the healthcare system, just as explained above. The factors not part of the model show a potential need for focus and awareness to improve the model. The six factors can also be said to be relevant for the project manager to have in mind, as this manager is juggling communication, trying to create a trustful environment, working within a time frame, and trying to understand all needs, goals, and values present to have successful innovation.

6.3.3 The 360-degree perspective model

Being at the forefront of innovation projects, the Innovation Clinic has spent a lot of time on the model and their process. Even though this is the case, project manager Carina Byskov thinks that they see the model and the perspectives in the fractions differently between the employees at the Clinic. There are elements that she is not sure about as to what are the subsections to those fractions (Interview Carina, see Appendix 3, 9.1.3). This was made clear in the interviews that they at the Innovation Clinic are not agreeing on everything in relation to the model. Their specific background affects how they understand the parts in the model. Carina Byskov explains that some of the perspectives are a bit fluffy and that if changes are made to the model, it is important for it to remain simple. Moreover, does Jacob Ravn mention that he sees some of the fractions to have overlaps, e.g., Culture, Compliance, and Individual and life situation. He also explains how he sees the technology as part of the solution but that all the fractions are the solution, and not only the technology (Interview Jacob, see Appendix 1, 9.1.1).

Despite the critique, the model is seen as applicable as a frame or dialog tool in the innovation process. Maria Kristensen mentions that she finds the model relevant for consultants and project managers (Interview Maria, see Appendix 2, 9.1.2). Therefore, it can be said to be more relevant to the political

scene, understanding the complexity of innovation, and for project managers working with innovation to ensure a focus on all the elements relevant to successful innovation and implementation. The model is not meant to have a solid form but rather enforce the mindset of finding what is at stake in the specific project (Interview Jacob, see Appendix 1, 9.1.1). It would then be a good idea to create a model for each innovation project to identify the factors, perspectives, and actors involved in the project.

6.3.4 Factors in the monitoring project case

Having the found factors in innovation and the perspectives in the 360-degree perspective model invites to create a new model for the monitoring project as a case.

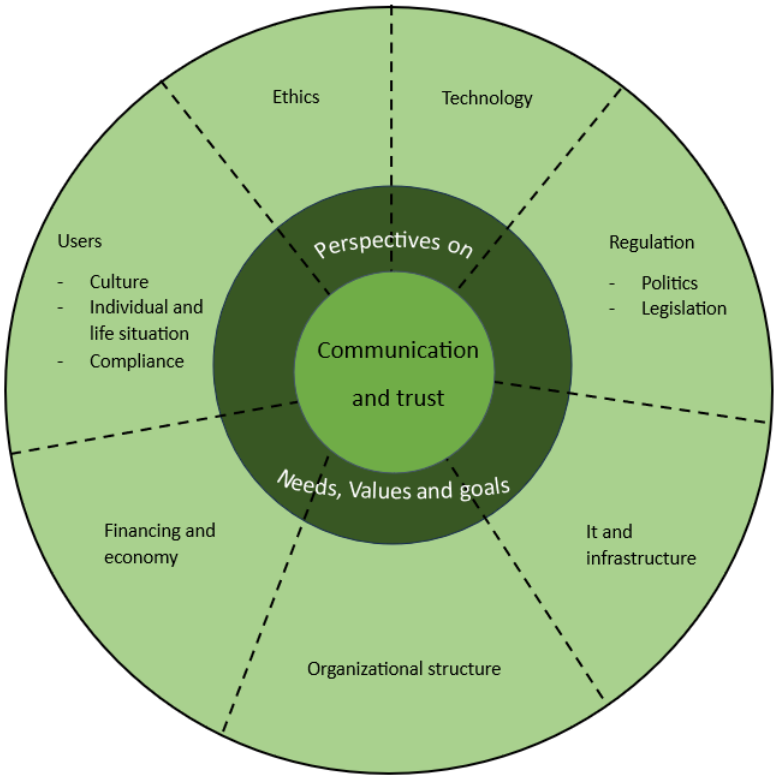


Figure 6.3: Model visualizing the factors in the Monitor of Change project by Zelina Bjerre.

Figure 6.3 shows the factors that are part of the monitoring case. Both factors found in this thesis and fractions from the 360-degree model are used. The fractions with factors in them have different sizes as to what plays a larger part in the project (see section 6.1.1 for description). Between the fractions are dotted lines to show that the factors are connected and affect each other. In the middle are communication and trust, which represent the communication between the actors in all fractions. Around that is a dark green line that focuses on the perspectives on Needs, Values, and Goals that each actor and

fraction represents. The figure is meant to create awareness of the factors and actors part of the project, as well as understanding the perspectives and agendas at stake. When doing this, you are assuring that you have the full picture and, therefore, have a better chance of successful implementation and innovation. When picking the factors and their sizes, the micro- and macro-actors are being picked. Thereby, the controlling logics for the project are also found as to which perspectives the macro-actors have. From what the analysis has shown, it is crucial to be conscious about the choices made in the innovation project when it comes to factors and actors who have the most power as macro-actors. Understanding the actors and factors with less power and a smaller voice as micro-actors is also important for the dynamic in the project and the potential consequences it can have if not including perspectives from a fraction in the figure. Here, the innovation can ultimately fail the implementation or not be used by a group of people because of the lack of involvement.

This fits with the statement from Maria Kristensen that a plan built on a good foundation will make it able to withstand challenges in the process. The foundation is here the figure and the awareness and thoughts behind it. In addition, she mentions the need for generalists who can work problem-based and understand different needs. These people are important for the communication and overview of projects as project managers. This can be Techno-Anthropologists (Interview Maria, see appendix 2, 9.1.2). Communication on the figure is evident for it to add value to innovation. From the comments made by the Innovation Clinic on their 360-degree model, it is shown how important it is to communicate the factors and perspectives in the model so that all parties have a shared understanding of the words, sub-factors, and connotations of the fractions. Therefore, it is important that the project manager and those who work with the figure have the same understanding. It can also be speculated that patterns may be found in the figures for different projects, allowing the creation of a possible template with factors for different types of innovation projects.

Chapter 7

Discussion

This chapter discusses the factors in innovation against literature within the field and ends with a discussion of the Innovation Clinic's ability to ensure implementation and successful innovation.

The inclusion of literature on factors influencing and contributing to innovation in healthcare shows that this thesis and case support the findings in the literature in a Danish context. In the review "Factors contributing to innovation readiness in health care organizations: a scoping review" by van den Hoed *et al.* (2022), they included forty-four studies from all over the world to find factors that contribute to the readiness of innovation. They found four main factors with ten sub-factors, all of which are also found in this thesis case. The factors found were: commitment to innovation with behavior and competencies as sub-factors, strategic course for innovation with the innovation strategy and process as sub-factors, leadership for innovation with the leadership style and managers role as sub-factors, and finally, the climate for innovation with the sub-factors of room for learning and innovative organizational culture (van den Hoed *et al.* (2022)). The overlap with the factors in this thesis is shown in the focus on the innovation process, management, culture, competencies, and behavior that correspond to involving the users. Some overlap is also found in a qualitative study by Krelle *et al.* (2023) on "Perceptions of Factors Associated with Sustainability of Health Care Innovation Centers" in the United States. They have found the factors contributing to the sustainability of innovation centers and their innovation projects. The three key activities and factors for long-term sustainability were up-skilling staff, acting as networking nodes for their institutions by bringing together people from different parts of the organization, and facilitating innovation projects valued for quality improvement and cost avoidance, and not just by commercialization and return on investment (Krelle *et al.* (2023)). The factors are also found in this thesis, as the Innovation Clinic focuses on the user's competencies, the needs and values the innovation solves and gives, and by creating a room and environment for the actors to meet and work with the innovation projects. The overlaps with the factors in the literature and in this thesis show that this thesis' case supports the findings but also contributes with new factors and perspectives as time and specific reasons and perspectives of the actors were not represented. Different from this is the

review "A myriad of factors influencing the implementation of transitional care innovations: a scoping review" by Fakha *et al.* (2021), which includes twenty-one studies from mostly the United States and focuses on the facilitators and barriers that influence the implementation of transitional care innovations for elderly in long-term settings. Transitional care innovations can be programs, models, or interventions used to prevent or improve transitions between settings, e.g., from home to the hospital. Several of the twenty-five factors found in the review coincide with those found in this thesis, from organizational readiness to targeting the right group as users. A difference was found in the factor of the implementation process with planning and evaluation (Fakha *et al.* (2021)). This is not part of the factors found in this thesis, and the focus on implementation and evaluation leaves the question of whether the Innovation Clinic has the ability to ensure successful innovation and implementation.

On the one hand, the Innovation Clinic focuses on all the factors found in this thesis, as well as the perspectives in their 360-degree perspective model, to understand all perspectives and the complexity of the innovation project. When involving different actors to understand the problem, needs, and values, they try to ensure that the innovation will create value when implemented and that there is a market. Additionally, when the actors are involved, the Clinic tries to get as many onboard the project as possible, so the innovation has relevance for many. Involvement of users is also a way to make the innovation as relevant as possible and make the users feel part of the process, so they want to use the technology after implementation, as they are associated with it. Companies also become part of projects to understand all the facets, see the values, and feel some type of ownership of the project and innovation. The Innovation Clinic thereby strives to make the innovation as relevant and valuable as possible to ensure implementation and successful innovation, where the innovation is used and creates the intended value.

On the other hand, the Innovation Clinic's process described in Figure 2.2 shows that external business partners, such as companies, take over innovation projects and are in charge of the production, implementation, and possible evaluation of the innovation. The companies are part of the innovation projects with the Clinic and can be affected hereby, but the companies are the ones to produce and implement the innovation. The company can make changes and ultimately decide whether the innovation is implemented and is successful. Furthermore, changes in the market can affect the implementation, as well as new legislation and changes in political strategies. If the Innovation Clinic were then to find a different company or change the technology to fit the legislation and strategies, time and funding would become factors. For the innovation to generate value and be successful, it needs to be implemented when there is a problem to solve and when it still adds value. The Innovation Clinic can

thereby be seen as having the possibility of ensuring successful innovation and implementation, and at the same time not, as it is companies that produce and implement the technology and the users who need to use it afterward for the innovation to be successful.

Chapter 8

Conclusion

In conclusion, the thesis indicates the complexity of how different actors, perspectives, values, and factors affect innovation projects in healthcare. To answer the first part of the problem statement on actors' perspectives on innovation, it can be concluded that the actors have different goals, needs, values, and agendas that affect their views on innovation. The actors on the Innovation Clinic's Monitor of Change project can be grouped by home care and nursing home nurses and elderly, general practitioners and geriatrician, municipalities and legislation, and companies such as IMP Scandinavia. The municipalities and legislation are part of Erik Riiskjæs Public governance logics, which focus on politics and the law, e.g., GPDR. They focus on the distribution of resources and overall welfare. They, therefore, view innovation as something that needs to follow the legislation and contribute to the welfare of society as a whole. Companies are part of the Market logic and have a different focus. They value business and the economy and, therefore, wish for innovation to be productive and efficient in order to make a change in healthcare that can give them a spot in the market and thereby earn money. Thirdly, the doctors, such as general practitioners and the geriatrician, are part of the Medical profession logic. They focus on cures and the best possible treatment. Their perspective on innovation is to improve cures, provide greater knowledge of the disease, and provide the best professional treatment for patients. It is also important that innovation, whether it is a device, procedure, or other, has been tested and classified with professional evidence of safety and effect. Agreeing with some of the perspectives are nurses and the elderly, part of the Care profession logic. They also focus on good care and evidence of innovation. However, they value and perceive innovation as something that needs to improve the care and quality of life for patients and the elderly, as they focus on the whole person. The Innovation Clinic is navigating the perspectives above as a point of passage that translates the perspectives and values, trying to give all the actors influence in the innovation projects for it to be successful. The actors different perspectives constitute factors affecting innovation.

To answer the second part of the problem statement, it can be concluded that fourteen factors in innovation were found and that they all correspond to actors, logics, and sub-factors. The factors found

are listed in no particular order: Trust, Communication, Goals, Values, Time, Economy, Management, Technology, Politics, Users, Needs, Legislation, Organizational structure, and Ethics. It is important to be aware of the factors and perspectives in order to get all the way around the landscape and facilitate the innovation to succeed. It is mostly project managers, consultants, and politicians who will need the full overview, but it can be beneficial to create a visual figure of the factors that play a role in the innovation project in order to set the best team of actors and understand their perspectives and goals. When viewing the factors in the Monitor of Change project, it is clear that they affect differently, and when choosing their degree of involvement, the controlling logics and macro-actors are also chosen. Some factors and actors hold more power over the project, such as regulation with politics and legislation, financing and economy, and the organizational structure. These are aspects that the monitor needs to follow. Secondly, are the users of the monitor important for the project to know the problem that needs solving and what is needed for the monitor to be used in practice. Ethics and technology play a smaller part, and it can be concluded that the monitor is the center of the project, but it is not barring as it is affected by other factors. Lastly, communication and trust between the actors are important for the project, as well as understanding the needs, values, and goals of each of them. Above all the factors is time, as a goal, need, and frame, which affects the innovation process to succeed when relevant and to finish as it will lose value and purpose over time.

Chapter 9

Appendices

9.1 External attachments:

9.1.1 Appendix 1

See the attached PDF file, "Interview Jacob", for the transcribed interview with the head of the Innovation Clinic, Jacob Ravn.

9.1.2 Appendix 2

See the attached PDF file, "Interview Maria", for the transcribed interview with project manager at the Innovation Clinic, Maria Brændstrup Kristensen.

9.1.3 Appendix 3

See the attached PDF file, "Interview Carina", for the transcribed interview with project manager at the Innovation Clinic, Carina Østervig Byskov.

9.1.4 Appendix 4

See the attached PDF file, "Interview Bente", for the transcribed interview with project manager at the Innovation Clinic, Bente Koch Pedersen.

9.1.5 Appendix 5

See the attached PDF file, "Fieldnotes NIL", for the fieldnotes from event "Når innovation lykkes - på tværs 2025" (in English "When innovation succeeds - across 2025") at UCN Aalborg.

9.1.6 Appendix 6

See the attached PDF file, "Fieldnotes HNN", for the fieldnotes from event for companies "Hvornår er nok, nok?" (in English, "When is enough, enough?") arranged by the Innovation Clinic.

9.1.7 Appendix 7

See the attached PDF file, "Daily fieldnotes", for the fieldnotes from participating in meetings and talks at the Innovation Clinics office.

9.1.8 Appendix 8

See the attached PDF file, "Interview guide", for the interview guide with questions used during the four interviews with the project managers and the head of the Innovation Clinic.

Bibliography

Agency, D. M., 2023 Medicinsk udstyr. Accessed: 08-04-2025 Link: https://laegemiddelstyrelsen.dk/da/udstyr/.

Apple, n.d. Apple watch. Accessed: 08-04-2025 Link: https://www.apple.com/dk/watch/.

Bjerre, Z. R., 2025 User involvement in innovation: An internship at the innovation clinic. Master in Techno-Anthropology ninth semester project.

Brinkmann, S. and S. Kvale, 2019 Transcribing interviews. In *Doing Interviews*, Chapter 8, pages 105–114, SAGE Publications.

Bundgaard, H. and H. O. Mogensen, 2018 Kodning. In *Antropologiske Projekter: En grundbog*, edited by H. Bundgaard, H. O. Mogensen, and C. R. (red.), Chapter 4, pages 78–79, Samfundslitteratur, København, 1. edition.

Cambridge dictionary, n.d. Factor. Accessed: 16-05-2025 Link: https://dictionary.cambridge.org/dictionary/english/factor.

Danish Life Science Cluster, 2025 Når innovation lykkes – på tværs 2025. Accessed: 10-05-2025 Link: https://www.danishlifesciencecluster.dk/arrangementer/naar-innovation-lykkes-paa-tvaers-2025/.

Danske Regioner, 2023 Tusindvis af medarbejdere må bruge deres arbejdstid på indlæggelser, der kunne have været forebygget. Accessed: 07-03-2025 Link: https://www.regioner.dk/services/nyheder/2023/marts/tusindvis-af-medarbejdere-maa-bruge-deres-arbejdstid-paa-indlaeggelser-der-kunne-have-vaeret-forebygget.

Danske Regioner, n.d. Sundhedsinnovation og forskning. Accessed: 13-04-2025 Link: https://www.regioner.dk/sundhed/sundhedsinnovation-og-forskning/.

Datatilsynet, 2023 Pseudonymisering og anonymisering. Accesed the 11-05-2025 Link: https://www.datatilsynet.dk/regler-og-vejledning/behandlingssikkerhed/katalog-over-foranstaltninger/pseudonymisering-og-anonymisering.

DeWalt, K. M. and B. R. DeWalt, 2011 Learning To Be A Participant Observer: Theoretical Issues. In *Participant observation: A guide for fieldworkers*, Chapter 2, pages 19–40, AltaMira Press, Maryland, 2.

edition.

Emerson, R., R. Fretz, and L. Shaw, 1995 In the field: Participating, observing, and jotting notes. In *Writing Ethnographic Fieldnotes*, edited by R. Emerson, R. Fretz, and L. Shaw, Chapter 2, pages 17–38, The University of Chicago Pres, København, 1. edition.

Emerson, R., R. Fretz, and L. Shaw, 2011 Fieldnotes in ethnographic research. In *Writing Ethnographic Fieldnotes*, edited by R. Emerson, R. Fretz, and L. Shaw, Chapter 1, pages 1–20, The University of Chicago Pres, København, 2. edition.

Fakha, A., L. Groenvynck, B. de Boer, T. van Achterberg, J. Hamers, *et al.*, 2021 A myriad of factors influencing the implementation of transitional care innovations: a scoping review. Implementation Science **21**: 1–24.

Fredskild, T. U. and D. Dalkjær, 2017 Innovation i sundhedsvæsnet. In *Innovation i sundhedsvæsnet*, edited by T. U. Fredskild, D. Dalkjær, and H. L. (red.), Chapter 1, pages 21–48, Gads Forlag, København, 1. edition.

Garmin, n.d. Health science. Accessed: 08-04-2025 Link: https://www.garmin.com/da-DK/garmin-technology/health-science/.

Gokalp, H. et. al, 2018 Integrated telehealth and telecare for monitoring frail elderly with chronic disease. Telemedicine journal and e-health: the official journal of the American Telemedicine Association **24**: 12.

Gyldendal, 2017 Sundhedsvæsnets opbygning. Accessed: 02-03-2025 Link: https://socialogsundhedshjaelperensrolle.ibog.gyldendal.dk/?id=144.

IMP Scandinavia, n.d.a Hjem. Accessed: 08-04-2025 Link: https://www.impscandinavia.com/.

IMP Scandinavia, n.d.b Løsningen - fremtidig. Accessed: 08-04-2025 Link: https://www.impscandinavia.com/team-3.

IMP Scandinavia, n.d.c Løsningen - nuværende. Accessed: 08-04-2025 Link: https://www.impscandinavia.com/blank-1.

Indenrigs- og sundhedsministeriet, 2024 Aftale om sundhedsreform 2024. Accessed: 02-03-2025 Link: https://www.ism.dk/Media/638743383915480390/Aftale%20om%20sundhedsreform%202024%20%20vers.%202-04.02.2025.pdf.

Innovationsklinikken, n.d.a Hvad er innovation? Accessed: 02-03-2025 Link: https://innovationsklinikken.rn.dk/Om-Innovationsklinikken/Hvad-er-innovation.

Innovationsklinikken, n.d.b Medarbejdere. Accessed: 02-03-2025 Link: https://innovationsklinikken.rn.dk/Om-Innovationsklinikken/Medarbejdere.

Innovationsklinikken, n.d.c Om innovationsklinikken. Accessed: 02-03-2025 Link: https://innovationsklinikken.rn.dk/Om-Innovationsklinikken.

Jensen, J. and S. Svendsen, n.n. Good tape. Accessed: 11-05-2025 Link: https://goodtape.io/.

Juul, T. and O. Madsen, 2019 *Digital Understøttelse og Udbredelse af Redskaberne til Tidlig Opsporing*. Carve Consulting P/S, København.

Krelle, H., M. Martinez, K. Garry, and L. I. Horwitz, 2023 Perceptions of factors associated with sustainability of health care innovation centers. JAMA Network Open **10**: 1–9.

Olesen, F. and J. Kroustrup, 2007 ANT – Beskrivelsen af heterogene aktør-netværk. In *Introduktion til STS*, edited by C. B. Jensen, P. Lauritsen, and F. Olesen, Chapter 3, pages 63–91, Hans Reitzels Forlag, 1. edition.

PubMed.gov, n.d. Pubmed. Accessed: 25-05-2025 Link: https://pubmed.ncbi.nlm.nih.gov/.

Region Midtjylland, n.d. Hvad er telemedicin? Accessed: 13-04-2025 Link: https://www.fagperson.sundhed.rm.dk/til-ansatte-og-samarbejdspartnere/telemedicin/hvad-er-telemedicin/.

Region Nordjylland, 2024 About telecare nord. Accessed: 13-04-2025 Link: https://rn.dk/Til-sundhedsfaglige/Sundhed/Sundheds-IT/TeleCare-Nord/Om-Telecare-Nord/About-TeleCare-Nord.

Riiskjær, E., 2014 Baggrund og Spørgsmål. In *Patienten som partner*, Chapter 1, pages 13–30, Syddansk Universitetsforlag, Odense, 1. edition.

Rosenberger, R. and P.-P. Verbeek, 2015 A Postphenomenological Field Guide. In *Postphenomenological investigations: Essays on Human-Technology Relations*, edited by R. Rosenberger and P.-P. Verbeek, Chapter 1, pages 9–41, Lexington Books, USA, 1. edition.

Rytter, M. and K. F. Olwig, 2018 At snakke om det: måder at interviewe på. In *Antropologiske projekter*, edited by H. Bundgaard, H. O. Mogensen, and C. Rubow, Chapter 11, pages 181–194, Samfundslitteratur, København, 1. edition.

Spradley, J., 1979 Asking descriptive questions . In *The Ethnographic Interview*, pages 44–61, Harcourt Brace Jovanovich, København, 1. edition.

Steven, A., G. Wilson, and L. Young-Murphy, 2019 The implementation of an innovative hydration monitoring app in care home settings: A qualitative study. JMIR mHealth and uHealth **7**: 1.

Sundhedsdatastyrelsen, n.d. National udbredelse af telemedicin. Accessed: 13-04-2025 Link: https://sundhedsdatastyrelsen.dk/digitale-loesninger/telemedicin.

Teixeira, E. et. al, 2021 Wearable devices for physical activity and healthcare monitoring in elderly

people: A critical review. Geriatrics (Basel) **6**: 38.

Tidd, J., J. Bessant, and K. Pavitt, 2005 Key Issues in Innovation Management. In *Managing Innovation: Intregrating Technological, Market and Organizational Change*, Chapter 1, pages 1–63, John Wiley & Sons, Ltd, England, 3. edition.

van den Hoed, M. W., R. Backhaus, E. de Vries, J. P. H. Hamers, and R. Daniëls, 2022 Factors contributing to innovation readiness in health care organizations: a scoping review. BMC Health Services Research **22**: 1–18.