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Implementing and scaling complex innovation in public healthcare

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Cover: Illustration created by the author depicting the complex innovation Hospital at Home encircled by three different coloured circles. The circles carry multiple meanings: that multiple system levels need to be taken into account; that scaling entails encompassing larger parts of a system; that the core of innovation implementation and scaling lies nearest the patients and clinicians; and that three different logics can be used together to implement and scale up a complex innovation. An introduction to the logics can be found on page 1.

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ABSTRACT

With an ageing population, healthcare systems are facing increasing numbers of patients and shrinking resources. Hospital at Home – a service delivery model moving hospital-level care to patients' homes – is suggested to help address these issues by increasing hospital capacity while maintaining or increasing quality of care. However, the model is a complex innovation which is notoriously challenging to implement and scale in public healthcare. It has been suggested that different logics of change – mechanical, ecological, and social – can be combined to address these challenges. Mechanical logic denotes a focus on standardisation, linearity, and replicability, ecological logic emphasises emergence, interdependence, and adaptiveness, and social logic focuses on identifying and explaining social mechanisms such as people's behaviour and interpretations.

This thesis uses an action research approach to longitudinally study the implementation and scaling of Hospital at Home in a large hospital in Sweden, including interview data from 59 clinicians, patients, and managers, and a systematic literature review. It confirms that the aforementioned logics can be used in combination in order to support innovation processes. Multiple ways in which this can be achieved are described, for example by maintaining tensions conducive to continued innovation or by avoiding Catch-22 situations. The thesis confirms and extends views in extant innovation literature as well as suggests a convergence point between service ecosystem literature and learning-based approaches to innovation in organisations, enabling integration and cross-fertilisation of insights. Additionally, it provides a developed version of an analytical framework for practitioners who seek to support ongoing innovation processes.

Key words: complex innovation, implementation, scaling, healthcare, action research, case study

LIST OF APPENDED PUBLICATIONS

Paper 1

ACCELERATING INNOVATION SCALING THROUGH INTERPRETATION STABILISATION: OPERATIONALISING TRANSLATION THEORY FOR A LEARNING-BASED APPROACH TO COMPLEX INNOVATION

Peters, S., Hellström, A., Gremyr, I.

Paper 2

HOSPITAL AT HOME AS A HEALTHCARE SERVICE INNOVATION – VALUE-CREATION AND ENROLMENT STRATEGIES

Peters, S., Gremyr, I., Gheduzzi, E., Hellström, A.

Report 1

BENEFITS AND RISKS OF HOSPITAL AT HOME COMPARED TO IN-HOSPITAL CARE ACCORDING TO CURRENT SWEDISH HEALTHCARE ROUTINE.

Bengtsson, M., Aghamn, E., Bergh, C., Carlsson, Y., Ekelund, A., Eneljung, T., Freytag, L., Gyberg, A., Hellström, A., Holmberg, Y., Peters, S., Scharenberg, C., Svanberg, T., Terins, E., Khan, J., Wartenberg, C.

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I often say that I am lucky.

I am lucky that an opportunity to do a PhD in an immensely interesting field came along right when I was receptive to changing up my management consulting career.

I am lucky to have two incredibly supportive, kind, wise and, once in a blue moon, funny supervisors in Ida and Andreas.

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Sofie Peters
Gothenburg, Sweden, May 2026

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1 INTRODUCTION

This chapter outlines the context and relevance of the research, introduces the problems and research questions it aims to address, its delimitations, and finally the structure of the thesis.

1.1 Background

Human populations are aging, and healthcare systems are facing increasing numbers of patients while simultaneously having fewer resources to take care of them (Bergman et al., 2015; Bradbury & Lifvergren, 2016; Denecke et al., 2023; Länsisalmi et al., 2006). To address this, several reports indicate that hospital-based services, which are resource-intensive, need to be moved to the community, closer to or even into patients' homes and with better continuity of care (Bradbury & Lifvergren, 2016; Edgar et al., 2024).

To succeed with moving healthcare to the home, healthcare systems must innovate (Figenschou et al., 2024; Gallouj et al., 2018), that is, implement and scale innovations. In this thesis, implementation is defined as "active and planned efforts to mainstream an innovation within an organization" (Greenhalgh et al., 2004, p. 582) and scaling as "tackling the infrastructural problems (across an organisation, locality, or health system) that arise during full scale implementation" (Greenhalgh & Papoutsi, 2019, p. 1). Innovation in healthcare can be defined as "the intentional introduction and application within a role, group, or organisation, of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, or wider society" and typically entails the implementation and scaling of new services, ways of working, or technologies (Länsisalmi et al., 2006, p. 67). Hospital at Home (HaH)[1] fits this definition.

HaH is an emerging form of person-centred healthcare which entails moving hospital-based services to the home through the introduction of new ways of working to the benefit of patients and society at large (Brody et al., 2019; Leff et al., 2022; Leff & Montalto, 2004; Leong et al., 2021). Across contexts, there are many variations of HaH configurations and definitions (Denecke et al., 2024; Leff & Montalto, 2004). One widely cited definition describes HaH as "an acute clinical service that takes staff, equipment, technologies, medication and skills usually provided in hospitals and delivers that hospital care to selected people in their homes or in nursing homes. It substitutes for acute inpatient hospital care" (*Definition: What Is Hospital at Home?*, 2024). In this thesis, HaH will be referred to as a "model" (short for service delivery model).

HaH is proposed to help address the challenges associated with increased pressure on resources (Casteli et al., 2020; Leong et al., 2021; Rodgers et al., 1997) and has been described as highly evidence-based (Leff et al., 2022). Evidence for example indicates that HaH is as good as or better than traditional in-patient care regarding numerous clinical and other outcomes (e.g., Lai & Ko, 2024; Levine et al., 2025; Norman et al., 2023). The model has been proposed to free up capacity for a variety of diseases and diagnoses, for example heart failure, stroke, and post-surgical patients (e.g., Leong et al., 2021; Williams et al., 2022, 2024). This is accomplished by increasing the time patients spend at home instead of in the hospital (Brody et al., 2019). Having patients stay at home brings with it decreased risk for institutionalisation among older

[1] Hospital at Home (HaH) is a common and concise term, but there are several naming conventions with different implications and origins, for example hospital@home, H@H, acute home-based care, home-based hospital-level care and more.

adults (Goodwin et al., 2011) and less hospital exposure and consequently lower risks of hospital-acquired infections and other adverse events (Arsenault-Lapierre et al., 2021; Cheng et al., 2009; Patel et al., 2024). Many sources also state that HaH is more cost-efficient than regular healthcare, though there is some disagreement (De Sousa Vale et al., 2020; Goossens et al., 2020). Questions remain regarding the model's efficacy for some patient groups and outcomes, including patient preferences (e.g., Saenger et al., 2020; Utens et al., 2013; Williams et al., 2024), model configurations and applicability in various healthcare settings (De Sousa Vale et al., 2020; Denecke et al., 2023; Lai et al., 2021).

Innovation and its implementation in healthcare is often complex (Dryden-Palmer et al., 2022), entailing strong context dependence and system-wide implications (Hollick et al., 2019). Empirical findings (Paper 1) and previous research (Cheng et al., 2009; Denecke, 2025), show that HaH exhibits strong context dependence as well as system-wide implications and it can therefore be understood as a complex innovation. Complex innovations are difficult to implement due to barriers related to technology, staff, patients, finances, regulations, and more (Greenhalgh et al., 2017) and even when barriers are overcome, widespread implementation can take many years (Ii et al., 2018). This pattern is reflected in extant literature on HaH (Lai & Ko, 2024; Leff et al., 2022; Wallis et al., 2024) which highlights the difficulty in implementing and scaling HaH past local initiatives and calls for empirically grounded research on the subject.

Three research areas that are relevant to the implementation and scaling of innovations in healthcare are: evidence-based medicine (stems from clinical epidemiology literature), complexity studies (stems from interdisciplinary literature – ecology, social psychology, and systems analysis), and knowledge-based approaches to innovation in organisations (stems from interdisciplinary literature – organisation and management, information and communications technology, and sociology) (Greenhalgh et al., 2004)[2], with evidence-based medicine being the origin for implementation science in healthcare (Nilsen, 2015) which is defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine [healthcare] practice" (Eccles & Mittman, 2006, p. 1). Evidence-based medicine is a fixture in contemporary medical practice and can be understood as "the purposeful incorporation of the best available evidence into clinical decision making" (Koretz, 2019, p. 60). However, Greenhalgh and Papoutsi (2019, p. 1) note that "innovations rarely achieve widespread uptake even when there is robust evidence of their benefits (and especially when such evidence is absent or contested)". Additionally, the usage of evidence-based knowledge in healthcare has sometimes been investigated through implementation studies, but those studies do not typically deal with the connection to actual innovation activities and processes (Gulbrandsen & Høiland, 2021).

Implementation science, complexity studies, and knowledge-based approaches are based on different logics of change, namely mechanical, ecological, and social logic respectively, with mechanical logic denoting a focus on standardisation, linearity, and replicability, ecological logic emphasising emergence, interdependence, and adaptiveness, and social logic focusing on identifying and explaining social mechanisms such as people's behaviour and interpretations (Greenhalgh & Papoutsi, 2019). These three logics – mechanical, ecological, and social – and their associated research areas – evidence-based medicine and implementation science,

[2] Important to keep in mind is that, despite these naming conventions, all of these research areas are built around both evidence and knowledge.

complexity studies, and knowledge-based approaches to innovation in organisations – comprise the theoretical framework of this thesis, supplemented by complexity-adjacent literature on innovation in service ecosystems. Service ecosystem literature provides the view that contextual changes, such as the changes in location involved in HaH (Denecke et al., 2023), can give rise to tensions between stabilising and change-oriented sources which, depending on how they are handled, may lead to innovation (As'ad et al., 2024).

Complex innovations, which are inherently unpredictable (Storkholm et al., 2019) and have wide-ranging systemic implications, are particularly difficult to implement and scale using mechanical logic (Chambers et al., 2013). In recent decades, implementation science has begun complementing its mechanical logic with ecological logic (Braithwaite et al., 2018) and Greenhalgh and Papoutsi (2019, p. 4) propose that logics may be used in combination when implementing and scaling innovation in healthcare, noting that "as a rule of thumb, the larger, more ambitious, and more politically contested the spread challenge, the more ecological and social practice perspectives will need to supplement (or replace) 'mechanical' efforts to replicate an intervention".

Despite a growing body of research (Reed et al., 2019), there is a lack of guidance for how to support the widespread implementation and scaling of complex innovations in hospitals and other healthcare settings (Dryden-Palmer et al., 2022). This thesis draws on the abovementioned theoretical framework to examine possible avenues for combining logics when implementing and scaling complex innovation in healthcare. An action research case study approach is used, focused on a hospital's implementation and scaling of HaH.

1.2 Problem formulation, Aim and Research Questions

Implementation and scaling of complex innovations is typically difficult and slow (Ii et al., 2018). There is a lack of guidance for how to support these activities (Dryden-Palmer et al., 2022) and extant literature calls for complementing and combined approaches (e.g., Braithwaite et al., 2018; Glasgow et al., 2012; Greenhalgh et al., 2017; Van Nassau et al., 2026).

One way to respond to this call is to combine different logics – mechanical, ecological, and social – which underpin three common lenses on implementation and scaling of innovation in healthcare – implementation science, complexity studies, and knowledge-based approaches – with extra attention paid to the increasing need to complement mechanical logic with ecological and social logic when complexity increases (Greenhalgh & Papoutsi, 2019). An example of an ecological lens is that of service ecosystem literature, which suggests that innovation caused by contextual changes (such as HaH) can be conceptualised as the result of tensions between stabilising and change-oriented forces (As'ad et al., 2024).

The aim of this thesis is to combine mechanical, ecological, and social logics to increase the understanding of the implementation and scaling of complex innovation in public healthcare. It does so by answering two research questions:

RQ1. How can tensions that arise during the implementation and scaling of complex innovations in public healthcare be understood and handled using a combination of logics?

RQ2. What role can mechanical logic have in the implementation and scaling of complex innovation in public healthcare?

1.3 Delimitations

The unit of analysis comprises the part or parts of a hospital organisation that is formally or informally involved with innovation processes. Consequently, systemic implications for neighbouring actors such as primary care are only considered in cases of boundary-spanning, hospital-based activities. Similarly, cultural, regulatory, and other macro-level systems are considered as contextual factors rather than as objects of analysis.

1.4 Structure of the thesis

After this introductory chapter, the theoretical framework (chapter 2) of this thesis is presented, with a summary at the end (section 2.4). Then follows the methodology chapter (chapter 3) which describes my assumptions and the methodological choices that were made. The chapter also includes chronological descriptions and reflections regarding the chosen methods of the two studies comprising this thesis (section 3.6). Then follows a summary of the three publications that are based on the two studies and which are appended to this thesis (chapter 4). The publications are discussed in relation to the theoretical framework in the discussion chapter (chapter 5) and finally the conclusions based on the discussion are presented in the concluding remarks (chapter 6).

2 THEORETICAL FRAMEWORK

The theoretical framework of this thesis is based on three different logics – mechanical, ecological, and social – each corresponding to different areas of research – evidence-based medicine and implementation science, complexity studies and innovation in service ecosystems, and knowledge-based approaches to innovation in organisations respectively (Greenhalgh et al., 2004; Greenhalgh & Papoutsi, 2019). This chapter describes each of these areas and problematises them in relation to the implementation and scaling of HaH.

2.1 Mechanical logic

This section describes implementation science which originates from evidence-based medicine (Nilsen, 2015) and is based on mechanical logic (Greenhalgh & Papoutsi, 2019). Evidence-based medicine in turn stems from clinical epidemiology literature (Greenhalgh et al., 2004). Health Technology Assessment (HTA), a process for guiding decisions regarding which healthcare practices to implement (Facey et al., 2026), is also described, and the section finishes by elaborating on the need to complement and combine implementation science with approaches to implementation and scaling derived from ecological and social logic.

2.1.1 Implementation science

Implementation science, though generically named, is specific to healthcare and can be defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine [healthcare] practice" (Eccles & Mittman, 2006, p. 1). It originated within evidence-based medicine in response to the challenges associated with widespread implementation of evidence-based practices in healthcare and has three overarching aims: guiding translation[3] of research into practice; explaining what influences implementation outcomes; and evaluating implementation (Nilsen, 2015). It takes a structured, relatively top-down, linear approach to developing, replicating, and evaluating interventions in multiple sites, using pilot studies or other tools for cycled, structured learning (Greenhalgh & Papoutsi, 2019).

The evidence-based practices in focus in implementation science can be identified and evaluated in different ways. One is through systematic literature reviews which are considered to be superior to other methods because they provide cumulative evidence from individual studies to guide evidence-based decision-making (Chapman et al., 2023; Koperny et al., 2016). Systematic literature reviews differ from traditional literature reviews in that they aim to identify and evaluate all studies with regard to a specific question and are therefore designed with clear a priori study protocols to eliminate selection bias so that, for example, negative or less cited studies are also included in the review (Nightingale, 2009). The British nonprofit organisation Cochrane is famous for carrying out systematic literature reviews regarding various healthcare topics (Koperny et al., 2016), including different variants of HaH (Edgar et al., 2024; Gonçalves-Bradley et al., 2017) and its implementation (Wallis et al., 2024).

Cochrane reviews typically focus on clinical effectiveness and globally generalised evidence which may need to be contextualised before it can serve as a decision-making basis (Munabi-Babigumira et al., 2013). HTA on the other hand, first conceptualised in 1976 (Banta, 2003),

[3] The word *translation* has several uses in healthcare (Graham et al., 2006), for example translational research which describes linear stages in the process of moving research into policy and practice (Glasgow et al., 2012) which is not to be confused with translation theory discussed in subsequent sections of this chapter.

is recommended by the World Health Organisation to support evidence-based decisions regarding which practices to implement, de-implement, or keep in a particular healthcare system, rather than on a global level (Facey et al., 2026), positioning its importance for implementation science (Esposito et al., 2026). HTA is a multidisciplinary, inclusive, transparent process utilising rigorous and comprehensive methods to assess health technology, often in the form of a systematic literature review (Facey et al., 2026). Facey et al. (2026) define health technology as "any intervention to prevent, diagnose or treat medical conditions; promote health; provide rehabilitation; or organise healthcare delivery". In HTA, inclusion and exclusion criteria used in study protocols are called PICO: population, intervention, comparator, and outcome. In the region of Västra Götaland (where this research was conducted), the HTA centre is a regional support function working to promote evidence-based healthcare (*HTA-centrum*, 2018). The centre reconnects with organisations after six and twelve months respectively to ask in what way their report has been used (*HTA - Health Technology Assessment*, 2024).

Since the initial purpose of HTA was to serve governments, they can be perceived by clinicians and hospital managers as too loosely connected to their daily practices due to mismatches in topic prioritisation, content, and timing (Sampietro-Colom et al., 2015). For example, HTA reports may result in relatively binary recommendations – "yes", "no", or "yes, for specific subpopulations" – whereas the decision-making on hospital-level is usually more nuanced, for example regarding whether or not to conduct a single-case study on an emergent basis or initiate strategic alliances with industry for further research (Sampietro-Colom et al., 2015). There have been calls to include more qualitative measures (Cardoso et al., 2024) and implementation dynamics in HTA (Heggie et al., 2021), and while several aspects are under continuous development – for example by the EU funded project Horizon Europe (CORDIS - EU research results, 2021) – challenges still persist in making HTA suitable as a support for decision-making on hospital-level. Information on emerging technologies is seldom available or of good quality which makes it difficult to produce reliable HTAs; hospitals are better served by budget impact analysis than the HTA standard cost-effectiveness analysis; and HTA rarely addresses organisational aspects despite those being of particular importance to hospitals – in short, HTAs are not primarily tools for hospital decision-making and prioritisation but for regional and national levels, which is the reason for the emergence of the more contextually informed hospital-based HTA (HB-HTA) (Sampietro-Colom et al., 2015). HB-HTA provide science-based, multifaceted information tailored to the hospital's setting (Sampietro-Colom et al., 2015). They base comparisons on the current standard of practice in the hospital rather than on national standards, conduct budget impact analysis rather than use a health economics perspective, and take on average 3 months compared to 12-24 months for HTA (Sampietro-Colom et al., 2015). However, it is a heterogeneous and dynamic model that must be adapted to the context in which it is to be used, and while they are becoming more prominent, especially at larger hospitals in association with regional or national HTA agencies, research is limited regarding various aspects such as how to gain institutional recognition for, and implement, their findings (Tan et al., 2026).

2.1.2 Challenges with implementation science

Evidence-based medicine – the basis of implementation science (Nilsen, 2015) – is a fixture in contemporary medical practice and can be understood as "the purposeful incorporation of the best available evidence into clinical decision making" (Koretz, 2019, p. 60). Over time, systems have emerged or been built around it, and it colours the field of medicine as well as adjacent

systems. For example, policy-making in public service systems is viewed to ideally be evidence-based, despite the difficulties accomplishing this (Newman et al., 2017) and despite this placing possibly unrealistic or detrimental demands on science to produce innovation, built on a too linear understanding of the relationship between research and innovation (Gulbrandsen & Høiland, 2021). Additionally, the positivistic paradigm underpinning evidence-based medicine (Goldenberg, 2006) only started to be complemented by alternative paradigms in healthcare education around the turn of the century (Brown & Dueñas, 2019; Leys, 2003), making professional norms more inclined toward evidence-based ways of thinking (Länsisalmi et al., 2006). The legitimacy of the evidence-based process HTA specifically is bolstered by EU regulations highlighting its ability to promote innovation (EU Regulation 2021/2282, 2021), and in Sweden certain funding opportunities are dependent on an HTA having been conducted (*ALF-medel*, 2020). At the same time, there is significant literature documenting the limitations of the positivistic paradigm when it comes to evaluation in complex systems (Haynes, 2008).

Implementation science is typically sequential (Greenhalgh & Papoutsi, 2019) which aligns with the abovementioned legitimacy-building and financial opportunities functioning as gates in implementation processes: evidence first and legitimacy, funding, and, by extension, implementation, later. However, a growing body of research is noting the limitations of assuming linearity in implementation (Chambers et al., 2013) and of the incumbent implementation science (e.g., Braithwaite et al., 2018; Glasgow et al., 2012; Greenhalgh et al., 2017; Van Nassau et al., 2026). Despite innovation being promoted as vital for addressing societal problems (Langergaard, 2021; Røhnebæk & Holmen, 2021), implementation and scaling of innovations that transform treatment pathways and service delivery in healthcare are slow, often taking up to fifteen years (Ii et al., 2018). Additionally, although there are examples of widespread scaling of innovations using implementation science, they are rare (Greenhalgh & Papoutsi, 2019).

Linear, pre-planned implementation approaches often fail to account for the emergent and context dependent nature of change in complex public sector settings, and as a result, there is growing scholarly interest in adaptive, learning-oriented approaches to scaling complex innovations (Chambers et al., 2013; Greenhalgh & Papoutsi, 2019), and calls for more focus on system-level dynamics, complexity, and context dependence (Chambers et al., 2013; Van Nassau et al., 2026). Notably, there are increasing numbers of implementation frameworks acknowledging the influence of complexity (Reed et al., 2019), but practitioners, organisations, and governing bodies are slow to adopt them (Greenhalgh & Papoutsi, 2018; Van Nassau et al., 2026).

2.2 Ecological logic

This section describes implementation and scaling in healthcare based on the ecological logic used in complexity studies (Greenhalgh & Papoutsi, 2019). Complexity studies are interdisciplinary (ecology, social psychology, and systems analysis) and stem from general systems theory, but are used in this thesis to highlight the emergent and organic properties of innovation (Greenhalgh et al., 2004). The section starts by conceptualising HaH as a complex innovation and then expands on the benefits and challenges of adopting a complexity lens when studying such innovations in healthcare. The section ends with a description of tensions in service ecosystems, which can be understood as key pathways for innovations caused by contextual changes (As'ad et al., 2024), such as HaH (Denecke et al., 2023).

2.2.1 Viewing innovation as complex

The word innovation is frequently used as a broad, encompassing concept that covers a range of related and partially overlapping phenomena. Its meaning varies across disciplinary traditions and is often tailored to the specific focus of individual studies (Damanpour, 2020). In the public sector, innovation is a relatively new concept with no general consensus regarding its definition, but it has nevertheless become a "powerful organising metaphor for policy and practice" (Langergaard, 2021, p. 24).

De Vries et al. (2016) – working from a public sector perspective – propose four broad categories of innovation: process innovation (administrative or technological), product or service innovation, governance innovation, and conceptual innovation. Varkey et al. (2008) – working from a healthcare perspective – suggest that healthcare innovation typically takes the form of product, process, or structural innovation, meaning: what patients receive, such as a clinical procedure; how services are delivered, for instance through digital monitoring; and the organisational structures or infrastructures that support care delivery, such as community care clinics. Notably, Varkey et al. (2008) also argue that successful healthcare innovation typically requires a combination of innovation types, and that, for example, product innovations introduced without corresponding process and structural changes are less likely to become implemented.

Länsisalmi et al. (2006, p. 67) write that innovation in healthcare can be defined as "the intentional introduction and application within a role, group, or organisation, of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, or wider society" and that "[i]n line with the definition, innovations in healthcare organizations are typically new services, new ways of working and/or new technologies". HaH entails new services, new ways of working, and new technologies (Denecke, 2025) meant to provide safe, high-quality, cost-effective care (Levine et al., 2025), and although HaH initiatives can be traced back to at least the 1940s (De Sousa Vale et al., 2020), the model remains novel in many settings, including Sweden (Smith, 2024). Based on the above, HaH can be defined as an innovation in healthcare.

Complexity studies can be used to highlight the emergent and organic properties of innovation (Greenhalgh et al., 2004). Core characteristics of complex innovations are strong context dependence and system-wide implications (Hollick et al., 2019). Dryden-Palmer et al. (2022, p. 2) describe complexity as arising when "the desired practice change requires multiple steps, involves a number of stakeholders, is difficult to understand and if the innovation requires the action of groups or teams across an organization or system. Complex interventions have multiple components of change including individual behaviour, technology/tools, and organizational processes". Extant literature (Cheng et al., 2009; Denecke, 2025) as well as empirical findings discussed in this thesis (Paper 1), demonstrate that HaH exhibits the abovementioned descriptors. HaH is therefore conceptualised in this thesis as a complex innovation.

2.2.2 Implementing and scaling complex innovation

Increasing complexity in either the innovation or its context has been shown to be associated with lower success rates in implementation and scaling (Greenhalgh et al., 2017; Torugsa & Arundel, 2016). Public sector organisations face persistent difficulties in implementing and scaling innovations, particularly when those innovations are complex (Chambers et al., 2013).

These challenges are especially pronounced in healthcare, which itself is a complex system (Dryden-Palmer et al., 2022; Radnor et al., 2012) and has even been described as one of the most complex organisational forms in modern society (Glouberman & Mintzberg, 2001). Healthcare systems are marked by interdependencies, distributed decision-making, and professional autonomy (Greenhalgh et al., 2017; Hollick et al., 2019), as well as unpredictability, self-organisation, and emergent change processes (Storkholm et al., 2019). They have self-adjusting dynamics, in which stabilising and change-oriented forces continuously interact and may, over time, produce incremental or radical systemic change, such as the gradual shift toward people-centred healthcare (As'ad et al., 2024). Amidst this complexity, healthcare organisations face increasing pressure to innovate in response to rising patient demands, resource constraints, and growing expectations regarding quality and safety (McLoughlin et al., 2020). HaH is an example of an innovation which has proven difficult to implement and scale. Despite successful large-scale implementation in countries such as France, Spain, and Australia, its broader uptake remains limited (Leff et al., 2022). This reflects the more general difficulties associated with implementing and scaling innovation in healthcare systems (Ii et al., 2018; McLoughlin et al., 2020).[4]

Through the framing of HaH as a complex innovation situated within a complex system, we gain access to terminology and research that can help explicate and address the abovementioned difficulties. However, while complexity studies inform a nuanced view of innovation, up until recently they did not provide clear suggestions regarding how to influence ongoing innovation, with some researchers going as far as stating that innovation is a completely unpredictable, unprogrammable process which cannot be controlled (Greenhalgh et al., 2004). This may be one reason for why the best practices put forward by implementation science have maintained a steady grip on medicine: they are easy to understand and apply, at least in theory (Van Nassau et al., 2026).

As research has moved forward, complexity studies have become more prescriptive. Based on the acknowledgement of unpredictability and self-organisation as inherent characteristics of innovation, it recommends focusing on facilitating interdependencies, sensemaking, developing adaptive capability in staff, and enabling networking to encourage distributed problem-solving (Greenhalgh & Papoutsi, 2019). Additionally, phased approaches and deliberate pacing can be helpful by enhancing contextual fit, aligning innovations with organisational priorities, mobilising networks, fostering reflexivity, and mitigating complexity (Dryden-Palmer et al., 2022). However, even organisations that express a general openness to innovation may not be able to implement a specific innovation if system readiness is low, with key determinants of readiness including the perception that existing conditions are untenable, a presence of strategically positioned supporters outnumbering opponents, and alignment with organisational values, goals, or technological infrastructure (Greenhalgh et al., 2004).

2.2.3 Innovation as the result of tensions in service ecosystems

By combining complexity-informed views with insights from other literature based on ecological logic, namely on innovation in service ecosystems, even better understanding of the mechanisms involved in implementing and scaling complex innovation can be achieved (Chae, 2012; Chandler et al., 2019). In service ecosystem literature, innovation can be described as a

[4] There may be many reasons for the limited uptake of HaH, such as regulatory or cultural barriers, and it could be argued that scaling entails addressing these, but that is out of scope of this thesis which focuses on hospital and hospital-adjacent actors and activities.

co-creative process embedded in service ecosystems, which are "relatively self-contained, self-adjusting system[s] of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange" (Vargo et al., 2020, p. 527). This means that innovation is realised in practice through actors interacting and integrating resources within the service ecosystem (Mahavarpour et al., 2023), thereby co-creating or co-destroying value over time (Adebajo, 2025). Vink et al. (2021, p. 174) contextualise this in a healthcare context as follows: "a service ecosystems perspective reinforces that health is not something that can be 'delivered' by an individual actor; rather, health is cocreated by patients, family members, healthcare professionals, and a wide network of connected actors".

HaH entails relocating care delivery from hospital settings to patients' homes, thereby altering established service contexts (Denecke et al., 2023). Such contextual change can modify how actors in a service ecosystem interact, which can lead to changes in the value creation process and ultimately result in innovation in the ecosystem (Edvardsson et al., 2018; Keiningham et al., 2020). The extent to which contextual change leads to innovation depends on two factors: the intensity of the contextual change and how organisations manage tensions caused by the contextual change. Intensity of contextual change can, if low, lead to service ecosystems responding through incremental adaptations that preserve overall stability (As'ad et al., 2024; Koskela-Huotari et al., 2016) and, if high, increase uncertainty and expose tensions that may either enable or constrain innovation (Edvardsson et al., 2018).

Tensions consist of the interplay between stabilising and change-oriented forces, embodied by coordinating and adapting mechanisms. Coordination entails actors drawing on established institutional arrangements to stabilise interactions and limit unintended consequences (As'ad et al., 2024; Koskela-Huotari et al., 2016), whereas adaptation involves actors modifying practices, roles, and resource integration in response to emerging conditions (As'ad et al., 2024; Creed et al., 2019). In healthcare, for example, interactions between patients and healthcare professionals may generate adaptations and improvements to service delivery (Skålén et al., 2018), or give rise to tensions and conflicts that impede progress if they remain unresolved (Chandler, 2025). Therefore, tensions constitute a key pathway for innovation in service ecosystems (As'ad et al., 2024).

Balancing and rebalancing tensions over time is an inherently non-linear, dynamic process (Osborne et al., 2022) which influences whether contextual change is absorbed, resisted, or transformed into sustained innovation (Vink et al., 2021). When adaptation and coordination are balanced, actors may adjust their practices to new contextual conditions, thereby allowing innovation to emerge and create value (Helkkula et al., 2018). When tensions are unbalanced, misalignment between practices and the new context may lead to value destruction, undermining implementation and scaling efforts (Chandler, 2025). Consequently, value created through innovation in healthcare depends not only on the innovation itself, but on the intensity of the contextual change and on how organisations manage the interplay between adaptation and coordination over time (As'ad et al., 2024).

Prior research indicates that managers frequently struggle to anticipate the full implications of contextual change (Edvardsson et al., 2018; Lusch & Nambisan, 2015). When such changes are insufficiently understood, organisations risk under- or overinvesting in the support of innovation, with negative consequences for both service performance and organisational sustainability. This highlights the importance of analysing contextual change not as a neutral background condition, but as a factor influencing the conditions under which actors integrate resources and create value, and shape the implementation trajectory (Edvardsson et al., 2018).

2.3 Social logic

This section describes knowledge-based approaches to innovation in organisations; these are underpinned by social logic and therefore focus on identifying and explaining social mechanisms such as people's behaviour and interpretations (Greenhalgh & Papoutsi, 2019). These approaches build on interdisciplinary literature (organisation and management, information and communications technology, and sociology), and are used in this thesis to illuminate how people construct and transfer knowledge with regard to innovation (Greenhalgh et al., 2004). The section first introduces the field of translation theory and two of its central concepts: interpretative flexibility and closure mechanisms. It finishes with a description of how translation theory can be used to understand innovation processes from a learning-based perspective.

2.3.1 Translation theory

Translation theory, as developed within Scandinavian institutionalism (Czarniawska & Sevón, 1996; Røvik, 2016; Sahlin & Wedlin, 2008; Wæraas, 2021; Wæraas & Nielsen, 2016), offers a lens for analysing implementation and scaling processes. Rather than conceptualising change as the spreading of stable ideas, translation theory understands organisational change as ideas travelling across time and space while being continuously adapted to local contexts. As ideas move, they are actively reinterpreted, edited, and transformed by actors seeking to make them meaningful and workable in specific organisational settings (Czarniawska & Joerges, 1996; Røvik, 2016). These translation processes are carried out by actors such as managers, change agents, and professional groups, who unpack ideas and translate them into locally embedded practices (Spyridonidis et al., 2016; Teulier & Rouleau, 2013). Translation is therefore inherently interpretative, as actors enact new ideas and knowledge in relation to existing understandings, selectively emphasising or downplaying elements to ensure local relevance (Boxenbaum & Pedersen, 2009; Weick, 1988).

Central to this perspective are the concepts of interpretative flexibility and closure mechanisms, originally developed within the study of social construction of technology (Pinch & Bijker, 1984). Interpretative flexibility captures how different social groups attribute different meanings to the same innovation, while closure mechanisms explain how certain interpretations gradually stabilise over time. Sovacool et al. (2023) identify five such mechanisms: loss of interest; forced resolution (for example through external authority or withdrawal of financial support); democratically reached agreement; negotiation leading to compromise; and one position overwhelming others. These concepts have been widely applied across sectors, including healthcare (Fleissig et al., 2025), construction (Wafai & Aouad, 2022), decarbonisation (Sovacool et al., 2023), and smart grids (Tantawy et al., 2026). Within healthcare management, translation theory has been used to study how innovations such as value-based healthcare are interpreted and enacted in clinical settings (Colldén & Hellström, 2018), while public management research has applied it to management concepts (Nielsen et al., 2020), trust-based reforms (Bentzen & Bringselius, 2023), and agile practices in government (Neumann et al., 2024).

Despite these contributions, much of the translation literature remains retrospective and explanatory. Translation studies often compare an original idea with its translated version, focusing on the degree of reinvention during the process (Cassell & Lee, 2017). Such approaches risk implying stability in translation outcomes that does not fully reflect the dynamic and ongoing nature of organisational change (Latour, 1984; Sahlin & Wedlin, 2008).

While recent work has begun to explore how translation can be made more robust in practice (Bentzen, 2019), relatively little attention has been paid to how translation processes – and particularly the stabilisation of interpretations – can be actively supported during implementation and scaling.

2.3.2 Viewing innovation as learning processes

To capture the multidirectional and emergent nature of innovation processes (Tantawy et al., 2026), public sector innovation can be viewed as learning processes that aim to address societal challenges, characterised by repeated experimentation and the possibility of failure (Meijer, 2014). Learning processes are underpinned by knowledge creation, linkage, and transfer, which may occur internally within organisations or involve external actors (Bierly et al., 2000).

Røvik (2016) argues that knowledge transfer across contexts is more likely to succeed when knowledge exhibits high translatability, meaning it can be abstracted from its original context, transferred, and subsequently re-embedded in a new setting. Translatability is reduced when knowledge is complex, tacit, and deeply embedded, particularly when it concerns human interaction rather than technology, when causal relationships are unclear, when knowledge is tied to specific individuals or contexts, or when it is not codified (Røvik, 2016). Similarity between source and recipient contexts further facilitates translation (Røvik, 2016), which helps explain why peer-to-peer knowledge exchange often proves more effective than translation mediated by third parties. However, when direct exchange is not feasible, third parties such as knowledge brokers (McLoughlin et al., 2020) or translators (Røvik, 2016) become important.

In highly professionalised settings such as healthcare, managers often combine specialised and generalist knowledge (Freidson, 2001; Van Den Broek et al., 2014), enabling them to act as translators and boundary-spanners across professional domains (Røvik, 2016). However, given the central role of frontline practitioners in developing and refining innovations, it is critical that leadership facilitates their learning by supporting knowledge sharing, communication, distributed leadership, and access to resources for change (Lv et al., 2025; Meijer, 2014). Empirical studies highlight the consequences of insufficient support for these learning processes. Haycock-Stuart and Kean (2013) show that enforcing policies without meaningful engagement from frontline professionals can cause resistance and disconnect policy intentions from practice. Similarly, Van Den Broek et al. (2014) demonstrate how poorly framed communication during implementation can create suspicion among staff by unintentionally signalling cost-cutting motives rather than improvements in care quality.

Learning and knowledge sharing require time (Chandler et al., 2019; Greenhalgh et al., 2017), particularly in contexts with low translatability (Røvik, 2016), such as healthcare. The interpretative flexibility inherent in innovations necessitates time for dialogue before interpretations can be closed and stabilised (Greenhalgh et al., 2017). In line with this, recent research emphasises the importance of deliberately creating opportunities for reflection and experimentation. Thøgersen (2022), for example, conceptualises such moments as windows of translation, in which actors collectively interpret and adapt new ideas to practical contexts. Consequently, the slow uptake of innovations in healthcare may not only be a symptom of ineffectiveness or inefficiency, but of the role of temporal complexity in innovation processes (Blagoev & Schreyögg, 2025).

2.4 Summary

This thesis's theoretical framework draws on three different logics – mechanical, ecological, and social – each corresponding to different areas of research – evidence-based medicine and implementation science, complexity studies, and knowledge-based approaches to innovation in organisations respectively (Greenhalgh et al., 2004; Greenhalgh & Papoutsi, 2019), with complexity studies being complemented with literature on innovation in service ecosystems.

Implementation science, though generically named, is specific to healthcare. It originated within evidence-based medicine (Nilsen, 2015) and emphasises a structured, relatively top-down, linear approach to evaluation and implementation (Greenhalgh & Papoutsi, 2019), for example through systematic literature reviews, which are meant to guide evidence-based decision-making (Chapman et al., 2023), commonly used in assessment processes such as HTA (Facey et al., 2026). While evidence-based medicine is a fixture in contemporary medical practice (Koretz, 2019), and evidence-based approaches are influential in the decision-making, legitimacy building, and funding in the public sector (Länsisalmi et al., 2006; Newman et al., 2017), research shows that they have limited success supporting the implementation and scaling of innovations, particularly when changes across organisational levels or professional groups are required, as is the case with complex innovations (Chambers et al., 2013; Greenhalgh & Papoutsi, 2019). Extant literature calls for complementing views informed by ecological and social logics (Greenhalgh & Papoutsi, 2019) – such as complexity studies and knowledge-based approaches (Chambers et al., 2013; Haynes, 2008; Van Nassau et al., 2026).

Using a complexity-informed view, HaH can be conceptualised as a complex innovation in a complex system. HaH entails the introduction of multiple new types of services and ways of working (Denecke, 2025), requires coordinated changes across contexts and exhibits context dependence and emergence, which are characteristics of complex innovations (Dryden-Palmer et al., 2022; Hollick et al., 2019). Similarly, healthcare systems exhibit characteristics of complex systems (Dryden-Palmer et al., 2022; Radnor et al., 2012), such as unpredictability, self-organisation, and emergent change processes (Storkholm et al., 2019). From a complexity perspective, implementation is not a matter of replication, but of adaptation and continuous adjustment. This shifts attention from producing evidence before implementation to studying and learning from how innovations interact with different contexts, in alignment with the notion put forward by Holmen et al. (2026) that knowledge production and impact are entangled. System readiness (Greenhalgh et al., 2004), deliberate pacing and phasing (Dryden-Palmer et al., 2022), and local problem-solving (Greenhalgh & Papoutsi, 2019) become important, as well as the continuous handling of tensions (As'ad et al., 2024). Tensions between stabilising and change-oriented forces can arise due to contextual changes, such as moving healthcare from hospitals to patients' homes, and may lead to innovation, depending on how organisations handle the associated interplay between coordinating and adapting mechanisms over time (As'ad et al., 2024).

Finally, using translation theory, innovation can be conceptualised as flexible ideas being continuously reinterpreted and adapted by actors in local contexts (Czarniawska & Sevón, 1996; Røvik, 2016) until they increasingly stabilise as the result of closure mechanisms (Pinch & Bijker, 1984; Sovacool et al., 2023). Support for learning and knowledge sharing becomes central to the implementation and scaling process (Meijer, 2014; Thøgersen, 2022).

Together, these perspectives aid in the understanding of why implementing and scaling HaH is challenging and why mechanical logic is insufficient for such complex innovations.

3 METHODOLOGY

This thesis is an abductive, longitudinal, action research single-case study. In this chapter, I describe what this entails from a theoretical and practical perspective. This chapter also contains descriptions of the two studies upon which the thesis is based.

I begin by outlining my researcher identity and assumptions which together inform many of my choices, including a note on the importance of transparency in this type of research. Then follows descriptions of the thesis's research strategy and research design, including reflections regarding trustworthiness and ethics. Finally, the constituent studies are described.

3.1 Researcher identity and biases

My background in management consulting and current position as an action researcher reveal a preference for being immersed in, and contributing to, practice. This colours my understanding and priorities when it comes to research design and writing up findings. Moreover, I view humans as fundamentally trustworthy agents who do the best they can in any given situation. This means that I may be charitable when interpreting interview data and that I tend to look for systemic explanations when something goes wrong rather than blame individual failure. I also assume that everyone has different frames of reference or "truths" and that my own "truth" is neither more important nor more "correct" than anyone else's (however, like everyone else, I do act according to my "truth"). Finally, I do not identify as being part of any disadvantaged group, and I enjoy many privileges which may be summed up as: white, cis, socioeconomically stable, well-educated, Scandinavian. These privileges carry with them many biases which are difficult to control for since I may not even be aware of many of them.

3.2 Philosophical assumptions

Ontologically, I am a realist. Realists assume that the world does not adapt to human belief (Maxwell, 2013) and that it consists of open systems which change and interact in complex ways (Pratt et al., 2020). Epistemologically, I adopt a constructivist stance, assuming that social reality can affect the world and that it is through it humans understand the world (Maxwell, 2013). The combination of these two philosophical standpoints – ontological realism and epistemological constructivism – is called critical realism: reality is independent of human understanding and humans can only access it through subjective, contextual understanding (Imran, 2024; Maxwell, 2013).

Aside from being a critical realist, I am also a pragmatist. Critical realism is suitable to management research and may be combined with insights from other philosophical positions, such as pragmatism (Imran, 2024; Maxwell, 2013; Pratt et al., 2020). Pragmatists assess the value of knowledge according to its practical consequences and usefulness for action. They deliberately compromise between reflexive ideals and actually producing knowledge in a timely manner (Alvesson, 2003). They do not position scientific contribution in relation to some criterion of absolute knowledge or truth, but instead switch between theories and concepts to find whatever works best in any given situation and context (Imran, 2024; Pratt et al., 2020). According to Imran (2024, p. 5958), pragmatic critical realism "emphasizes the production of knowledge that is theoretically sound (critical realism) as well as practically relevant and actionable (pragmatism)".

3.3 A note on transparency

From a positivistic point of view, qualitative research is often critiqued for lacking in scholarly rigour (Gioia et al., 2013) because reflexive research design, accepted researcher bias, and non-standardised tools for data collection and analysis go against positivistic quality measures (Bluhm et al., 2011). However, these are fundamental characteristics of qualitative research (Bansal & Corley, 2011). In process-based single-case studies especially (process-based as in following a process unfolding over time), positivist criteria are problematic since they assume that it is possible to know beforehand what data to collect, that theoretical constructs will remain constant, and that interpretations are the same across people and time periods (Andersen et al., 2018); assumptions I, as a pragmatist critical realist doing qualitative research, do not share.

Instead, there are different ways to establish trustworthiness depending on which ontological base assumptions are being made, though notably with transparency as a key component (e.g., Dubois & Gadde, 2002; Eisenhardt & Graebner, 2007; Pratt et al., 2020). Specifically, transparency about why the study was done, why this particular context, what was studied and why, how it was done, and how data were analysed (Pratt et al., 2020), as well as acknowledgement of one's own identity and biases which inform one's choices (Maxwell, 2013; Pratt et al., 2020). By doing so, the researcher can demonstrate whether she has engaged with the data in a way that strengthens quality measures such as credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985; Pratt et al., 2020).

Important to note is that, from a positivist perspective, a key function of transparency is to enable replication (Maxwell, 2013; Pratt et al., 2020). However, since realists assume that the world – as with scaling change in complex systems (Greenhalgh & Papoutsi, 2019) – is complex and unpredictable and replication therefore improbable, realists use transparency to help scholars recognise which contexts are roughly analogous so that findings can be pragmatically transferred (Pratt et al., 2020). Hence, I try my best in this methods chapter to be transparent about my identity and biases, assumptions, and methodological choices in an effort to enable pragmatic transferability of findings and to demonstrate trustworthiness of the research.

On this subject, the Chalmers University of Technology's protected instance of Microsoft's LLM Copilot (version number bizchat.20260416.29.3) and Scopus AI (versions released during 2026) were used in a responsible manner for language checks and literature searches in this thesis.

3.4 Research strategy

This section describes the abductive, action research approach I used to formulate and answer the research questions in this thesis. In it, I describe how my choices align with the philosophical assumptions previously presented and I reflect on their ethical consequences and their impact on the research's trustworthiness.

3.4.1 Action research

The action research pioneer Kurt Lewin is often attributed with stating that "if you want truly to understand something, try to change it" (Tolman & International Society for Theoretical Psychology, 1996, p. 31). This sums up the maxim of action research; change in human systems cannot be understood without involving system members in the inquiry (Brydon-Miller et al.,

2003). Action researchers consequently work in collaboration with practitioners to study and support ongoing change in organisations, thereby contributing to both academic theory and practical action (Bell et al., 2022).

Action research is not applied in one single academic discipline but is an approach that began emerging in a variety of fields in the 1940s (Brydon-Miller et al., 2003). Today, it is used to study organisational development in general, as well as in particular sectors such as education and healthcare (Holmen et al., 2026; Pregmark et al., 2023). Healthcare systems are complex (Greenhalgh et al., 2017; Hollick et al., 2019) which means that changing them is characterised by emergence and unpredictability (Storkholm et al., 2019). Compared to conventional health research, action research better accommodates these properties because it allows research designs to be adjusted in accordance with new learnings and in pragmatic negotiation between involved parties (Bradbury & Lifvergren, 2016). Action research rests on the assumption that knowledge is socially constructed, making it an inherently subjective, political, socially engaged, and democratic research approach, separating it from the natural sciences which, it could be argued, may be viewed as objective and value-free (Brydon-Miller et al., 2003). Positivist marks of quality research such as staying detached, no emotional attachment, and being sceptical of everything, are diametrically opposed to the perception of quality in action research, which is all about immersion as a step toward understanding (Fredberg & Pregmark, 2023). Benefits of this type of research are that it can provide more practically relevant and applicable findings, it democratizes knowledge production and can thereby increase trust in the research results, and it can empower stakeholders (Holmen et al., 2026).

In short, action research is appropriate when studying emergent phenomena (Fredberg & Pregmark, 2023; Zandee & Coghlan, 2025), such as complex innovations in public healthcare (Greenhalgh & Papoutsi, 2019). It also matches well with pragmatism (Holmen et al., 2026) since action research's most important tenet is to be beneficial or helpful to the studied organisation (Pregmark et al., 2023) with a minimum of delay between discovery and application (Fredberg & Pregmark, 2023). This in turn aligns with innovation research being increasingly expected to contribute to the realisation of innovations addressing societal challenges (Holmen et al., 2026; Røhnebæk & Holmen, 2021).

Just as there are many ways to do research together with non-academics (Holmen et al., 2026), there are many ways to do action research. Action research projects tend to vary, for example, in the amount practitioners are involved (Pregmark et al., 2023). There are validity threats associated with limited practitioner involvement, as was the case when writing this thesis, but this was mitigated to some extent through intensive, long-term involvement and dialogue with practitioners, rich data, and triangulation of methods (Maxwell, 2013), such as interviews and participant observation (McDonald & Simpson, 2014).

In qualitative research in general, and in healthcare research in particular, informed and voluntary consent is crucial to safeguard human integrity and safety (Fredberg & Pregmark, 2023). For patients that are interviewed once, this may be (and was in the studies) appropriately handled with honest and clear consent forms, exclusion of patients who cannot consent (for example due to age or medical condition), and strong data protection measures (Bell et al., 2022). Additionally, study I was approved by the Swedish Ethical Review Authority (registration number 2024-00599-01) to safeguard patients from harmful research practices.

However, the situations that can occur in action research can complicate this principle. For example, once the action researcher has been immersed for some time in an environment,

subjects may forget that they are not regular colleagues and that they may document conversations and events for research purposes, which may be collaboratively analysed with other practitioners (Fredberg & Pregmark, 2023). I handled this dilemma by often announcing my role as a researcher, which may have had a distancing effect but which I judge as a price worth paying to avoid unintended deception. Another ethical dilemma concerns the research relationships (Maxwell, 2013) I have with my co-authors in study II. Being part of the study gave me valuable insight into an important component of my studied phenomenon, that is, an illustrative case of the application of evidence-based approaches to a complex phenomenon. However, I did not know going into the process that it would become an illustrative case. Even though I have pointed it out to my fellow co-authors, if I were to publish findings based on the discussion in this thesis, I would want to explicitly ask for consent from the participants and preferably perform a collaborative analysis, or at least validation of the findings.

Finally, in immersive research there is famously the risk of "going native", that is researchers becoming so wrapped up in the studied context that they find it difficult to maintain a researcher perspective (Bell et al., 2022). For example, innovation research often brings expectations on the researcher to contribute to realising the innovation in question which can create conflicts regarding objectivity, proximity and analytical distance (Røhnebæk & Holmen, 2021), especially since innovations are often viewed as inherently good (Langergaard, 2021). Since I have no clinical education, nor was situated in the hospital facilities, this risk was somewhat mitigated by my out-group status. My supervisors (also co-authors) and I maintained reflexivity (Alvesson, 2003; Røhnebæk & Holmen, 2021) during weekly meetings to make sure that we did not start to favour particular analysis angles that were based on the organisation's agenda and divorced from the research purpose.

3.4.2 Abductive approach

Theory development based on case studies is emergent (Eisenhardt & Graebner, 2007). Therefore, an abductive approach was employed in this thesis, meaning that the original research design was successively modified to encompass unexpected findings and theoretical insights gained during the process (Dubois & Gadde, 2002; Pregmark et al., 2023). Abductive approaches are typically used within pragmatic critical realism (Imran, 2024), and as such align well with my philosophical assumptions.

When conducting abductive research, there is something of a chicken and egg problem when it comes to the role of theory. As Andersen et al. (2018, p. 543) puts it: "Theory cannot be understood without empirical observations, and the empirical observations cannot be understood without theory". The two studies upon which this thesis is founded naturally influence the theoretical framework of the thesis, orienting it around the implementation and scaling of innovations in healthcare. However, the addition of theory regarding the role of evidence-based practices in healthcare – which was only implicitly present in the appended publications – proved necessary only once RQ2 began taking shape. Moreover, the realisation that this thesis would come to combine three different implementation and scaling logics happened fairly late in the process, as a result of patterns emerging in the interplay between findings and theory.

Being completely transparent in abductive, longitudinal research is difficult for several reasons. Both the studied context and the researcher change over time, emphasising the importance of being reflexive during the process but inevitably leaving us at the end with only a snapshot of what we have learned until that moment in time (Andersen et al., 2018). When describing such

a process, it is important to know what to keep in and what to leave out so as to provide the reader only with relevant information and not obscure the process with unnecessary material (Andersen et al., 2018; Dubois & Gadde, 2002). This can be especially problematic in abductive research, where the initial plan may not even be relevant to the final end product (Dubois & Gadde, 2002). Furthermore, every important step cannot even be documented. As Langley (1999, p. 707) points out in her seminal paper under the rubric "Induction, Deduction, and Inspiration": "there is a step in the connecting of data and theory that escapes any deliberate sensemaking strategy a researcher might decide to apply. [...] Whatever strategy is used, there will always be an uncodifiable step that relies on the insight and imagination of the researcher". Consequently, my aim with this methods chapter is to be transparent without being overwhelming. For more detailed information on the methodology used in each publication respectively, the reader is directed to the appended publications.

3.5 Research design

This section describes how the research was designed to enable the thesis research questions to be answered and how that aligns with the research strategy. Each section includes reflections regarding consequences for level of trustworthiness and ethical ramifications of the choices made.

3.5.1 Qualitative case study

A case study approach was used to answer the research questions in this thesis. Case studies are well equipped to answer research questions concerning how process phenomena happen and are related (Eisenhardt & Graebner, 2007; Maxwell, 2013) and are a recognised research strategy for contributing to theory development (Bluhm et al., 2011; Dubois & Gadde, 2002; Eisenhardt & Graebner, 2007). Case studies enable rich, empirical descriptions of particular instances of a phenomenon, typically based on a variety of data sources (Eisenhardt & Graebner, 2007). They are often used to study emergent, interdependent, and adaptive properties of innovation in complex systems such as healthcare (Greenhalgh & Papoutsi, 2019).

Study I was explicitly using an action research approach. Its resulting two papers generated theory regarding mechanisms in the implementation and scaling of complex innovation in healthcare, which, together with a revisitation of primary data, are used to answer RQ1. Study II was not an action research project, but a systematic literature review. However, participation in Study II's application of an evidence-based process on a complex innovation enables unique and revelatory insight into the fit between such processes and phenomena. Theoretical sampling prioritises cases that grant unusual data access and revelatory power (Eisenhardt, 1989), and Study II, its context and surrounding process are therefore framed, in this thesis, as an action research case study chosen through theoretical sampling. Pragmatist critical realist principles reconcile the differing ontological and epistemological assumptions of the two studies through the overarching goal of knowledge production which may not have been possible otherwise (Imran, 2024). RQ2 is answered by analysing and integrating findings from all appended publications, as well as by revisiting primary data from Study I. An overview of the appended publications is available in Table 1.

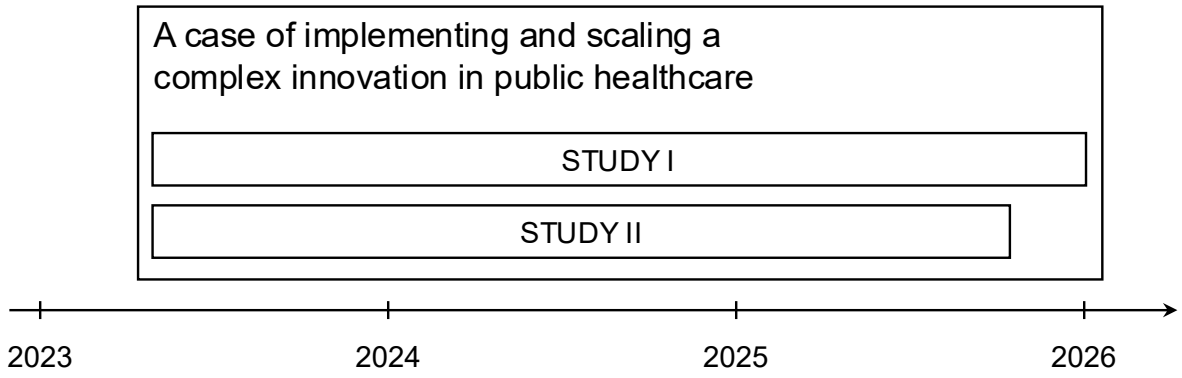
Table 1. Overview of appended publications and their methods.

Study	Publication	Purpose of the publication	Method for data collection	Method for data analysis	Research questions addressed
I	Paper 1	Understanding ongoing implementation and scaling of complex innovation.	Semi-structured interviews with patients and healthcare professionals	Thematic analysis	RQ1 RQ2
I	Paper 2	Understanding the dynamics enabling contextual change to result in innovation.			
II	Report 1	Evaluating HaH.	Secondary data	Systematic literature review	RQ2

3.5.2 Longitudinal, single-case study

I frame the two studies as subcases in a single-case study because (i) they illuminate different aspects of the same phenomenon, and (ii) they were both conducted within a shared, multi-year processual context: an implementation project at Sahlgrenska University Hospital (SU). The SU case was selected through convenience sampling as well as purposeful selection (Maxwell, 2013): SU was accessible since it was the research collaboration partner, and it was relevant to the study focus because it was attempting to explore, implement, and scale up a complex innovation. This single-case framing allows me to expand on the findings from Papers 1 and 2 – addressing RQ1 – and use those findings to analyse the process surrounding the formulation of Report 1 – addressing RQ2. The study timeline is depicted in Figure 1.

Figure 1. Study timeline.



Eisenhardt and Graebner (2007) state that multiple case studies typically increase the quality of theory building compared to single-case studies since they enable discrete experiments that function as replications, contrasts, and extensions to emerging theory. However, this view aligns with positivist logic (Dubois & Gadde, 2014) which can result in quasi-deductive

approaches to test inadequate empirical data (Dubois & Gadde, 2002). Greater numbers of case studies do not by default increase explanatory power (Dubois & Gadde, 2014). Nor can the aim of case study research be generalisation since cases are context dependent and are therefore not samples of replicable phenomena (e.g., Bell et al., 2022; Dubois & Gadde, 2014; Pratt et al., 2020). Gioia et al. (2013) seem to disagree with this, seeing as they posit that generalisation from (single) case studies is possible through the use of grounded theory to generate concepts with obvious relevance to other domains to which principles are portable. However, I interpret Gioia et al. (2013) as agreeing with the transferability of findings between similar contexts (as argued by Pratt et al. (2020)), and that they use the term generalisation to build bridges to a positivist audience.

Since I study a processual phenomenon (implementation and scaling), a longitudinal approach was employed. Longitudinal approaches entail collecting data on multiple occasions and not only allow for rich understanding of a phenomenon (Bell et al., 2022), but are necessary when studying process phenomena since those unfold over time (Andersen et al., 2018). It is a common technique for enhancing trustworthiness in research concerning long-term processes (Pratt et al., 2020), especially regarding complex phenomena such as learning or innovation (Langley, 1999).

3.6 Studies and their methods

In spring 2023, top management at SU decided to explore the potential of HaH in collaboration with Chalmers University of Technology (Chalmers), Södra Älvsborg's Hospital, Skaraborg's Hospital, Skåne University Hospital, and the innovation platform in the Region of Västra Götaland (VGR). The parties applied for funding for an action research project (Study I) and SU top management nominated a Health Technology Assessment (HTA) (Study II), with both studies aimed at exploring and potentially facilitating the implementation of HaH at SU. These are the studies comprising this licentiate thesis.

3.6.1 Study I – Case study

By the end of 2023, state funding for the project "Hospital at Home – a system innovation project" (Swe: Sjukhusvård i hemmet – ett systeminnovationsprojekt) was secured through the national strategic innovation programme Medtech4Health. The funding application had been broadly formulated to enable the capture of multiple and systemic dimensions of HaH and not only, for example, technological aspects. The project group consisted of representatives from Chalmers, SU, and the innovation platform, and was led by researchers and project managers at Chalmers. At this time, SU also initiated an internal development project which later came to be called "SU at Home" (Swe: Sahlgrenska hemma). An action research approach was taken so that Chalmers could help illuminate not only the HaH phenomenon itself, but also the processes and systems surrounding it.

In the beginning, meetings were infrequent and there was a feeling of being stuck at the starting blocks. SU had not yet appointed a project manager for SU at Home who could act as Chalmers' counterpart and the project group and steering group struggled to approach the broad task of "exploring" HaH. On 29 February 2024, Chalmers arranged a kick-off and vision workshop with approximately 25 attendees representing stakeholders in HaH, including a patient representative. Since I began my employment at Chalmers on 21 February, this workshop became my first interaction with both the project and the empirical phenomenon which I had been hired to study for the upcoming five years.

Through March–April, I discussed the research design with my supervisors. Due to the project's broad possibilities and emergent nature of the phenomenon, we decided to employ an abductive approach (Dubois & Gadde, 2002), adjusting the framework as we went along and learned more. Along the same line of reasoning, a single-case design was chosen since single-case studies are equipped to unfold and be shaped to match reality (Andersen et al., 2018). Within that single-case design, five subcases (four pilot studies and the overarching SU at Home project) were ultimately included. Maximum variation sampling (Maxwell, 2013) was used when selecting the subcases, with the aim of capturing the complexity of the studied phenomenon.

In April, I began collecting data through semi-structured interviews with hospital staff chosen due to their interest in carrying out pilot studies of HaH. Purposeful sampling (Maxwell, 2013) was used to select the interviewees based on their professional role and pilot study role. The first eight interviews were conducted together with one of my supervisors and co-authors, with the purpose of calibrating the interview guide so that interviews could be conducted separately in the future. Thereafter, I started interviewing patients whom staff had identified as possible candidates for HaH. We also talked to key informants from Northern Ireland whom I had connected with in March during the UK HaH Society Conference in Birmingham.

Over time, the focus of the interviews shifted, from exploring and preparing for piloting HaH to evaluating and learning from finished pilots and other ongoing HaH initiatives. Data collection approaches also expanded, from individual interviews to group interviews, workshops, and meeting observations, many of which embedded in the organisation's ongoing development work, in line with action research approaches (Eden & Huxham, 1996). Project management and other actors also continuously shared various presentation and internal working material with us. The variety of data collection methods allowed for triangulation, enhancing trustworthiness of the findings (Maxwell, 2013). In total, between April 2024 and February 2026[5], 60 documented data collection events were carried out with 59 unique participants. I participated in 48 events and led 33 of those. One quarter of the total events were conducted remotely (digital meeting or telephone) and the rest in person. See Table 2 for a detailed overview of the data collection.

Table 2. Overview of data collection in Study I.

ID	Role	Interview	Group interview	Workshop	Meeting observation
Subcase 1. SU at Home, a coordination and support project.					
1S01	Project manager	6	2		6
1S02	Project manager	1	2		3
1S03	Top management	1		2	1
1S04	Innovation leader		1	1	1
1S06	Service designer		1		
1S07	Development leader		1		
1S08	Development leader		1		
Subcase 2. Thorax, pilot study of HaH for patients with wound infection after heart surgery.					
2P01	Patient	1			
2P02	Patient	1			
2P03	Patient	1			
2P04	Patient	1			

[5] Study I was officially finished in December 2025, but two additional group interviews were conducted in the beginning of 2026 to capture reflections and potential effects of the transition into a new phase.

ID	Role	Interview	Group interview	Workshop	Meeting observation
2P05	Patient	1			
2P06	Patient	1			
2S01	Nurse	1		1	1
2S02	Nurse	1		1	1
2S03	Acting unit manager	2		1	1
2S04	Physician	1		1	1
2S05	Acting unit manager	1		1	2
2S06	Pharmacist	1			1
2S07	Operations developer	1		1	2
Subcase 3. Obstetrics, pilot study of HaH for pregnant women whose water break very early.					
3P01	Patient	1			
3P02	Patient	1			
3P03	Patient	1			
3P04	Patient	1			
3P05	Patient	1			
3P06	Patient	1			
3S01	Section leader	1		1	
3S02	Unit manager	1		1	
3S03	Nurse midwife	1		1	
3S04	Section leader	1		1	
3S05	Head of Care Unit Physician	1		1	
3S06	Operations developer	1		2	
3S07	Head of Care Unit Physician	1			
3S08	Physician			1	
Subcase 4. Mobile teams, both existing operations and a pilot study for more acutely ill patients.					
4P01	Patient	1			
4S01	Nurse practitioner	1		1	1
4S02	Operations manager	2		4	1
4S03	Physician			1	
4S04	Physician			1	
4S05	Nurse			1	
4S06	Nurse			1	
4S07	Head of Care Unit Physician	1		1	1
4S08	Physician	1			
4S09	Head of Care Unit Physician	2			
4S10	Unit manager			1	3
4S11	Nurse			1	
4S12	Nurse practitioner			1	1
4S13	Head of Care Unit Physician				1
4S14	Nurse practitioner				1
4S15	Section leader			1	1
4S16	Section leader				1
4S17	Operations manager				1
4S18	Nurse				1
4S19	Section manager				1
4S20	Nurse				1
Subcase 5. Forensic psychiatry, pilot study of patient transitions into polyclinical care and society.					
5P01	Patient	1			
5S01	Unit manager	1			
5S02	Coordinator	1			
5S03	Social worker	1			

Throughout the process, data collection events were recorded, transcribed, and coded in the qualitative data analysis computer program NVivo. Most data collection was conducted in Swedish, translated to English and thereby paraphrased before use in papers. I conducted the first-order thematic coding (Van Maanen, 1979) inductively, resulting in approximately 750 first-order codes over 4700 coded quotes, with coding density varying between 1–27 people per code, on average 1.4 and median 2. Coding density was subsequently considered when writing up papers.

In inductive research, there is value in being semi-ignorant of the literature when starting out, meaning that researchers are encouraged not to read up too much on theory beforehand since that may blind them to the inductive categories emerging (Gioia et al., 2013). Simultaneously, there is tension between underuse and uncritical overuse of theory, with the solution being to develop or borrow theories and test them continually while looking for alternative ways of making sense of data (Maxwell, 2013). At the beginning of my PhD journey I fulfilled the semi-ignorant criteria, and as the study progressed I searched for and tried out different theoretical frameworks that could fit the data, similar to the process of matching described by Dubois and Gadde (2002).

Based on emerging patterns early on, I found that the first-order codes could be largely categorised in either one of two categories: data pertaining to the implementation process and data pertaining to aspects of HaH itself. Within these two main categories, I built broad and deep data structures to encompass the large quantity of data. Due to the accumulating data volumes and the mounting data structures, it was decided in my combined supervision and co-author team that I would be responsible for first-order coding, both for practical reasons and to make sure the mounting number of quotes were being stringently coded. Additionally, the ample data access and promising findings led us to adjust the boundaries of this case study to only include SU instead of, as originally hypothesised, collecting data from other hospitals and partners in the collaboration project – other project members than me collected some data from them, but SU became the main focus both for the research project at large and in Study I.

The first-order codes were later subjected to many attempts to match theory to reality through abductive iterations of higher-level coding for Papers 1 and 2 (Dubois & Gadde, 2002). For example, the realisation that HaH can be defined as a complex innovation emerged as a result of comparing collected data to extant innovation literature. Langley (1999, p. 694) formulates the central challenge inherent to this process as "moving from a shapeless data spaghetti toward some kind of theoretical understanding that does not betray the richness, dynamism, and complexity of the data but that is understandable and potentially useful to others". Dubois and Gadde (2002) describe it as trying to lay a jigsaw puzzle based on a blend of pieces from many different puzzles. Our coding process reflects these metaphors. It was a long and frustrating, but also fulfilling, journey. This Gioia-adjacent approach did align well with my constructivist assumption (Gioia et al., 2013), but in hindsight it may have been too ambitious for such a large dataset. Indeed, Bansal and Corley (2011) note that even though coding can help researchers be transparent with the connection between data and theory, it can be untenable for large data sets, something I did not realise until about halfway through when it seemed too late to adjust the approach.

For Paper 1, the process was reminiscent of grounded theory (Gioia et al., 2013), as described by Langley (1999), in that we compared small units of data and gradually built and refined categories which resulted in a few core categories, which in turn comprised a proposed framework. Paper 2 reaped the benefits of the meticulous first-order coding as well, even

though the final result was not a proposed framework as such. However, grounded theory is often mislabelled (Bluhm et al., 2011; Suddaby, 2006; Walsh et al., 2015) and we did not explicitly follow its structure, so we will not use that label for our work.

The above was a tangent on data collection and analysis. Back to the timeline.

The pace of the project picked up in the summer of 2024 when SU appointed a project manager for SU at Home. From that point on, the number of pilot studies, knowledge sharing events, and associated initiatives inside and outside the hospital grew rapidly. Some notable activities were: a large number of nurses, clinicians, associated stakeholders, and researchers (myself included) visiting the World Hospital at Home congress in Vienna; and SU beginning to consolidate their mobile teams' organisations, a process I (given my background as a management consultant) was asked to support with regard to facilitating dialogues and workshops.

My co-supervisor (who was also the Chalmers project manager) and I conducted quarterly interviews with the SU project manager to monitor activities within and related to SU at Home. The first couple of interviews were semi-structured, but subsequent interviews were unstructured to allow for reflexivity around events that the interviewee and interviewers identified as relevant to the unfolding process at the time. These recurring meetings came to serve both as data collection opportunities and as joint researcher-practitioner reflections. The SU project manager and I were also in contact multiple times via email and telephone to discuss how to use the developing research, as well as existing research, to inform the actions of SU at Home. Subsequently, after a second SU project manager had been appointed, my co-supervisor and I were invited to share our thoughts on the HaH strategy which was under formulation. This exemplifies how innovation and research processes can co-evolve (Gulbrandsen & Høiland, 2021).

In December 2025, the collaboration project – and thus Study I – reached its planned end date. It had been initiated in 2023 and ran to the end of 2025. It consisted of multiple work streams and research initiatives, one being my data collection and analysis. Besides knowledge sharing and network building, the project resulted in: the publications appended in this licentiate thesis; an analysis of the HaH implementation strategy employed by SU; case reports from HaH pilot studies at SU and Skaraborg's Hospital written together with the staff; a guidebook and method compilations based on lessons learned from the pilot studies; an edited and summarised version of a master's thesis providing an international outlook on HaH; and more. I was involved to a considerable degree in all of the above, collecting the foundational data, conducting and writing up the analysis. While Paper 1 is mainly based on my own data collection, the case reports became an important complementary source of data for Paper 2.

3.6.2 Study II – Systematic literature review

In May 2024, my co-supervisor asked for me to be included with him in a multidisciplinary group of clinicians and researchers appointed to conduct a HTA of HaH. I was the last person to join the group and did so after the general start-up meeting in April had taken place. I received an introduction to the steps of HTA by a HTA Centre project manager and then joined a discussion regarding the evaluation criteria (PICO) to be used for the systematic literature review.

The PICO was formulated based on the nomination for the HTA, which was to identify the scientific evidence base for a care model in which patients receive care in their own homes,

equivalent in quality to hospital care in terms of standards, intensity, and monitoring, including for example laboratory tests, other diagnostics, and treatments corresponding to what is routinely delivered in acute care hospitals. This was an unusually broad focus, which was noted in the final report: “Unlike traditional reviews focusing on a specific disease or treatment, this HTA analyses HaH as a broader care model, exploring its implementation for any condition except psychiatric ones” (Bengtsson et al., 2025, p. 17).

Once a PICO had been decided upon, HTA Centre employees and librarians performed systematic literature searches in relevant databases and an initial eligibility screening during May–June (for details, see Appendix 1 in the appended report). The eligibility criteria were: only randomised controlled trials (RCTs) – systematic reviews (SRs) would be commented upon but not included in the assessment; only English, Swedish, Norwegian, and Danish language texts; no publication date limit for RCTs, while SRs had to be published by 2019 or later. The search had 5,415 results. After removal of duplicates and an initial screening, 62 RCTs and 17 SRs were distributed to the project group for evaluation. Each RCT was independently evaluated against the PICO by at least four different project members. I was assigned to evaluate twenty RCTs during July. In August, increased understanding of HaH led to an expanded literature search being conducted, resulting in an additional 27 RCTs and SRs, of which I was assigned to evaluate nine.

In August, the project group reconvened and compared their individual evaluations. Participants noted that the complexity and context dependence of HaH led to difficulties comparing articles and difficulties estimating their relevance. Subsequently, the PICO was adjusted to: not include children; limit sampling not only to current healthcare routines but to current Swedish healthcare routines; exclude studies where HaH did not include physical home visits; and exclude studies with study-specific set-ups of HaH. Notably, additional literature searches and changing the PICO and study protocol are not common in HTA. The final PICO is described in Table 3.

Table 3. Evaluation criteria (PICO) used in the HTA.

PICO	
P	Adult patients with conditions usually hospitalised according to current healthcare routine in Sweden. P1: Studies with population of patients with specific conditions (e.g. heart failure, COPD, neurological disease, infection). P2: Studies including patients with differing specified conditions
I	Hospital at home (where the hospital is in charge) - a care model providing healthcare with visits in the patient's home for patients who otherwise would need hospitalisation.
C	In-hospital care (without study-specific set up)
O	Mortality (primary outcome) Change in health status (according to validated scale) Emergency department visits Complications (excluding mortality) (including infections) Health related quality of life (based on validated scales) Patient experience/satisfaction (including sense of security) (based on validated scales) Staff experience (based on validated scales) Experience of close relatives (based on validated scales) Readmission (after discharge from hospital at home or in-hospital care) Length of stay (of hospital at home or in-hospital care)

After another round of exclusions based on the revised PICO, the project group worked together to extract data from the remaining RCTs and, for each paper, fill in a comprehensive "Risk of bias" template evaluating the papers' validity, limitations, sample size, confidence intervals, and conflicts of interest. The certainty of evidence per outcome (O in the PICO) in each paper was then jointly graded by the project group according to Grades of Recommendation Assessment, Development, and Evaluation (GRADE) on a four-level scale.

During the autumn, the project group wrote a report describing the findings and relevant contextual information such as organisational aspects, the current status of HaH in Sweden, ethical considerations, and other related aspects. In parallel, a professor of health economics supported the project group in analysing the financial aspects of the intervention. The exclusion process continued into and overlapped with the writing process because consultations with expert clinicians and increased understanding of the papers indicated limitations in relevance, leaving fifteen RCTs to be included in the final assessment and five SRs to be commented upon.

The process took longer than expected. This was mainly due to both financial data and several outcomes (O in the PICO) being defined differently or unclearly in HaH data (I in the PICO) compared to traditional healthcare data (C in the PICO). For example, if Length of Stay (LOS) is defined as "time spent in hospital", LOS for HaH patients who never visit the hospital becomes zero even though those patients are, in fact, enrolled in hospital-level care services.

During spring and summer of 2025, a quality assurance process was initiated where experts at the HTA Centre, as well as expert clinicians, were asked to review the report. A feedback process followed which resulted in new questions regarding how to calculate and compare costs, and revisions of the GRADE evaluations. After finalisation, the report was published on the homepages of VGR and the Swedish Agency for Health Technology Assessment and Assessment of Social Services respectively.

In October, it was presented to the Program and Priority Council in VGR. Based on the HTA, they deemed the evidence base for HaH as weak, and their recommendation to the healthcare organisations in VGR was that more research was needed. Top management at SU and SU-associated researchers appreciated the importance of identifying knowledge gaps, emphasised that the HTA showed that HaH was neither worse nor better than traditional healthcare regarding patient safety, and looked forward to conducting more research framed within a continuation of the implementation and scaling of HaH.

On a final note, during Study II, the existence of HB-HTA and the potential differences between HTA and HB-HTA were not mentioned. The study was explicitly said to be in accordance with HTA and largely followed the process described by VGR (*HTA - Health Technology Assessment*, 2024).

4 SUMMARY OF APPENDED PUBLICATIONS

This chapter summarises the three publications included in this thesis. An overview of their respective publication statuses is available in Table 4.

Table 4. Overview of the publication statuses of the appended publications.

Publication	Title	Status
Paper 1	Accelerating innovation scaling through interpretation stabilisation: operationalising translation theory for a learning-based approach to complex innovation	Submitted to a scientific journal in spring 2026 and currently under review.
Paper 2	Hospital at home as a healthcare service innovation – value-creation and enrolment strategies	Conference paper accepted for presentation at *EUROMA* in July 2026.
Report 1	Benefits and risks of hospital at home compared to in-hospital care according to current Swedish healthcare routine	Published at *VGR HTA Centre* in June 2025.

Paper 1 was submitted during spring of 2026 to a scientific journal and is under review. An earlier version of the paper was presented as a poster at the World Hospital at Home Congress (WHAHC), 27–29 March 2025 in Vienna, Austria. I am lead author and conducted most of the work collecting and analysing data, developing the conceptualisation, and writing up the paper. Hellström and Gremyr contributed equally to the paper, Hellström with an emphasis on conceptualisation and review, Gremyr with an emphasis on study design and writing up the paper.

Paper 2 was accepted for presentation at the European Operations Management Association (EUROMA) conference, 27 June–2 July 2026, in Vienna, Austria. An earlier version of the paper was presented at the International Association for Quality, Innovation and Sustainability (IAQUIS) conference, 11-13 September 2024, in Viterbo, Italy. I am lead author and did most of the work collecting and analysing data, and contributed to the study design, conceptualisation and write-up. Gremyr made large contributions to the write-up as well as the coordination and conceptualisation of the paper, working together with Gheduzzi. Hellström assisted in the conceptualisation and write-up.

Report 1 is a regional activity-based HTA that was published on 30 June 2025 at the homepages of the HTA Centre in VGR and the Swedish Agency for Health Technology Assessment and Assessment of Social Services respectively. In February 2026, a conference paper abstract based on the report was submitted to the Ecosystem of Evidence (EBHC) conference, 21–24 October 2026, at Taormina, Sicily, Italy. During the exclusion phase of the literature review, I evaluated a total of 30 papers describing randomised controlled trials of various Hospital at Home models. Together with the other co-authors, I then extracted data from the remaining articles and graded their strength of evidence. I also compiled literature lists and contributed to the write-up of the report.

4.1 Paper 1

Paper 1 operationalises the concept of interpretation stabilisation from translation theory for a learning-based approach to implementing and scaling complex innovation in complex systems such as public healthcare. Extant literature primarily applies translation concepts

retrospectively by comparing original ideas with their translated versions, which risks implying linearity in innovation processes which are, in fact, non-linear and unpredictable. This paper, based on Study I, proposes a prospective use of translation theory in the form of an analytical framework – in this thesis referred to as the 4P framework – for understanding and accelerating ongoing complex innovation processes, see Figure 2. The framework comprises four organisational activities – progress, propagation, pacing, and phasing – which, the paper argues, can be influenced and managed together with the aim of accelerating the stabilisation of interpretations.

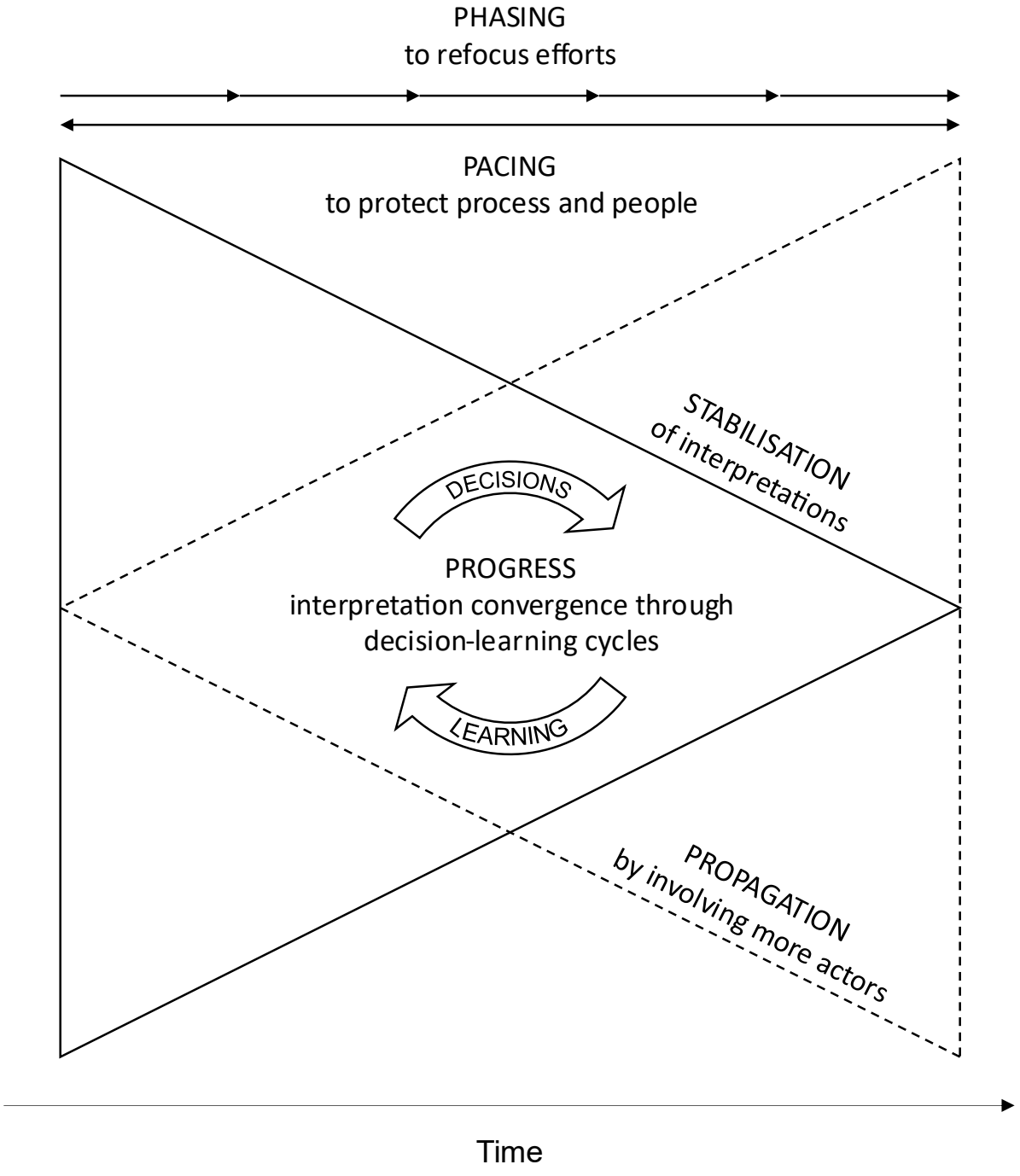


Figure 2. Analytical framework – the 4P framework – for explicating how implementing and scaling of complex innovation may be accelerated through a learning-based approach that supports stabilisation of interpretations.

Progress is the engine of the innovation process and is driven by staff rather than management. This activity is based on the understanding that complex innovation is unpredictable and emergent, which means that only by making decisions and studying their consequences can more be learned about the nature of the innovation and how it is best adapted to each local context. Management can support this activity by expending resources and trust in staff to find solutions viable in their local contexts, as well as providing help, if needed, to use linear, structured approaches such as pilot studies. Importantly, management need to accommodate self-organising aspects such as the transience of champions who oftentimes are individuals stepping up to make essential contributions to the process before returning to their regular work. Furthermore, each decision made, the paper argues, can serve as a potential closure mechanism. This framing allows translation theory to be applied prospectively rather than retrospectively: instead of waiting to see which actions became decisive closure mechanisms in an innovation trajectory, all decisions, large and small, are treated as potential closure mechanisms, thereby maintaining alignment with the multi-directionality of innovation processes.

Propagation entails gradually engaging broader and more remote parts of the system through activities such as knowledge-sharing events, networking, documentation, reporting, and cross-level collaboration. It accelerates the formation of relevant social groups by increasing awareness of the innovation and its implications in neighbouring systems. It also helps identify and transfer high-translatability knowledge between contexts; low-translatability knowledge, however, needs to be created in each local context through the progress activity. Propagation's ultimate aim is to spread the results of the progress activity between contexts, as well as to inspire progress in new contexts, thereby enabling accelerated mutual learning between actors while simultaneously mitigating change resistance through broad engagement. It is driven by both staff and management, as well as any other actor directly or indirectly involved in the particular innovation process. Managers can support this activity by arranging knowledge-sharing events between peers, encouraging the formation of inter- and intra-organisational networks, and helping boundary spanners and champions reach an audience.

Pacing refers to how management needs to monitor emerging tensions between stabilising and change-oriented forces and time interventions accordingly. For example, management may deem it necessary to delay structural changes to keep the windows of translation open for longer, potentially taking a risk doing so. However, deciding which interventions to make and when is difficult, especially when progress and propagation accelerate. With acceleration comes an increase in interacting closure mechanisms and social groups, which in turn may affect or multiply tensions throughout the system. Attempting to control such mounting and self-organising dynamics through linear measures is not advisable, nor is attempting to stop propagation activities completely since that would decelerate the stabilisation of interpretations, as illustrated by the inverse relationship between stabilisation and propagation in Figure 2. Instead, the paper argues for a pacing approach in which managers seek to handle tensions by actively listening to people experiencing the tensions and weighing the timing and design of interventions against, on the one hand, the need to protect the well-being of the people affected by the tensions and, on the other hand, the need to maintain a holistic approach directed toward long-term system reconfiguration.

Phasing concerns the mobilisation and remobilisation of resources and focus required during prolonged innovation processes. While pacing may partially support these activities, phasing allows holistic, reflexive adjustments to the direction in which the organisation seeks to take

the innovation process. Transitioning from one phase to another, for example from an explorative phase to an implementation phase, can help renew system readiness and allow social groups to reconfigure and remobilise.

This paper contributes to translation theory and provides practitioners with an alternative way to understand and support scaling of complex innovations. A potential trade-off in highly regulated systems is that variations across local implementations may raise concerns about equity, comparability, and accountability, increasing the onus on management to balance local adaptation with system-level coherence and regulations.

4.2 Paper 2

Paper 2 examines HaH as an innovation caused by contextual change, that is, the change in location fundamental to the move of hospital care from hospital to home. The paper analyses how changes in service delivery location affect value creation, tension dynamics, and the support needed for innovation within complex service ecosystems. Rather than treating HaH as a uniform model, the paper conceptualises it as many possible service configurations, distinguished by which service elements are relocated and how extensively this is done. The paper builds on Study I, focusing on the different extents to which care was relocated from hospital to patients' homes in the four subcases Obstetrics, Thorax, Forensic psychiatry, and the Mobile teams, illustrated in Figure 3.

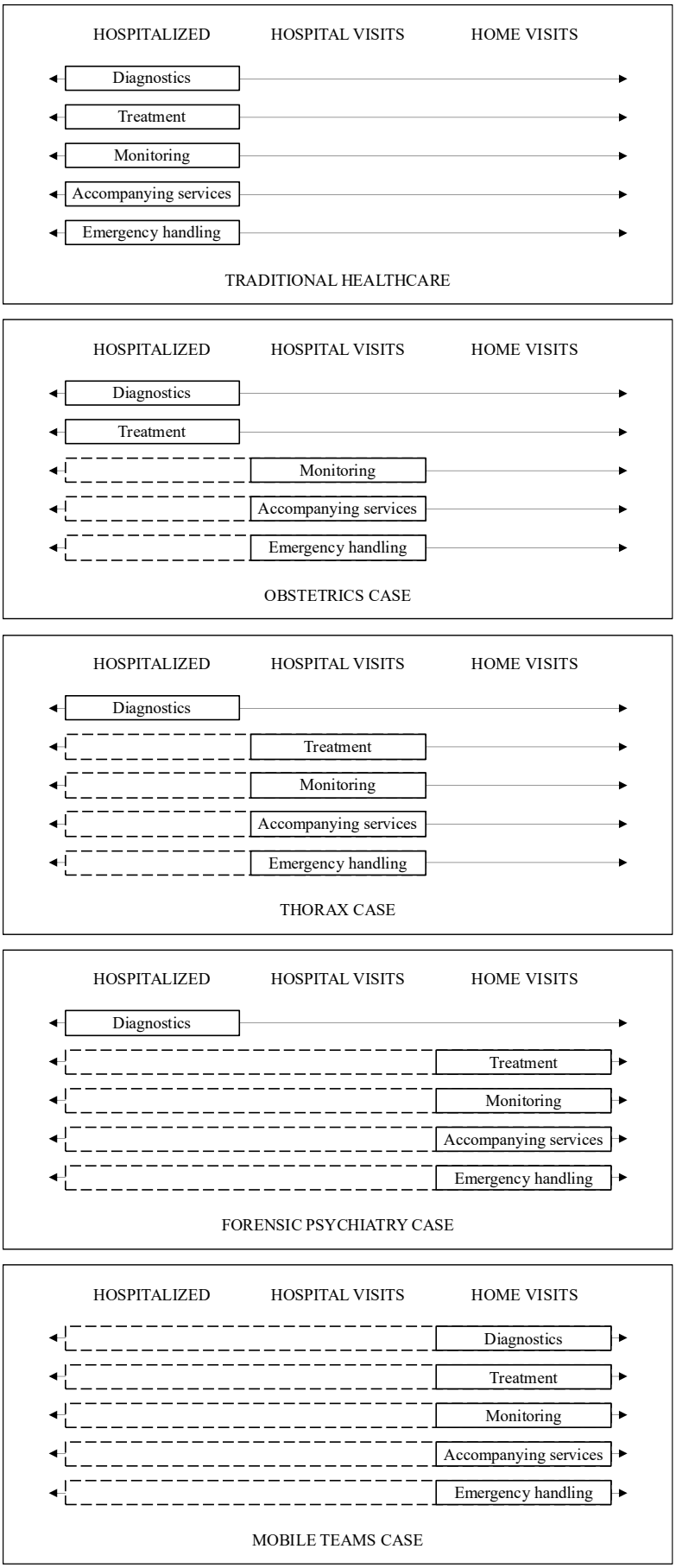


Figure 3. Overview of service configuration per subcase compared to traditional in-hospital healthcare.

The study introduces magnitude of contextual change as an analytical lens to explain variation in innovation dynamics. Magnitude is operationalised as the combination of (i) how many service elements are affected by a location change – diagnostics, treatment, monitoring, accompanying services, and emergency handling – and (ii) how many actors are affected by the resulting tensions. The paper also introduces the notion that the more a contextual change challenges the dominant ways of working, behaving, or thinking in each unique context, the more actors will resist change. This makes the successful introduction of any coordination or adaptation mechanism reliant on the capability of the local social and leadership dynamics to mitigate change resistance.

The paper identifies three empirically grounded patterns of contextual change – low, medium, and high magnitude – which are associated with different types of tensions, different ways of handling them, and different innovation outcomes ranging from incremental adjustment to broader ecosystem transformation:

- Low-magnitude contextual changes involve limited adjustments to individual service elements and affect relatively few actors. Tensions arising in these situations can typically be resolved through local coordination and incremental capability building without major organisational restructuring.
- Medium-magnitude changes affect several service elements and involve more actors, leading to tensions around, for example, responsibility, safety, and capacity. In these cases, organisations can sometimes temporarily rely on workarounds through either coordination or adaptation, which allow innovation to proceed but leave underlying tensions unresolved.
- High-magnitude contextual changes affect multiple interdependent service elements and larger parts of the service ecosystem, often requiring organisational or system-level adaptations such as new roles, units, routines, or policy changes. These changes unfold over long time frames and cannot be addressed solely through local efforts.

Across the subcases, the findings show that tensions are not merely obstacles to be eliminated but play a constitutive role in innovation in service ecosystems. Once tensions are fully resolved at a system level, the innovation effectively phases into established practice, signalling the end of the innovation process. To sustain innovation, rather than resolving tensions, they need to be harnessed and continuously balanced and rebalanced, locally and at system-level, temporarily or more permanently. This occurs in practice through actors at all system levels navigating various combinations of adaptation and coordination mechanisms over time.

The paper contributes to research on innovation in service ecosystems by demonstrating how the magnitude of contextual change shapes both value creation dynamics and innovation trajectories in complex service ecosystems. It adds nuance to existing perspectives by showing that similar location changes can lead to fundamentally different ecosystem responses depending on how deeply they reconfigure service elements and actor interactions in each unique context. For practitioners, the paper highlights the importance of anticipating the magnitude of contextual change and change resistance when designing and supporting HaH initiatives, recognising that different configurations require different forms and durations of managerial support.

4.3 Report 1

This HTA report evaluated the clinical effects, risks, economic and ethical aspects of HaH compared to conventional in-hospital care for adult patients with conditions that are usually hospitalised according to standard treatment in Sweden. The assessment focused on outcomes including mortality, change in health status, emergency department visits, complications, health-related quality of life (HrQoL), readmissions, length of stay, and experiences of patients, staff, and close relatives. The evidence base was restricted to randomised controlled trials (RCTs).

Systematic literature searches were conducted in PubMed, Embase, Cinahl, Web of Science Core Collection, and the Cochrane Library in May 2024, with an update in June 2024. Abstract screening, full-text assessment, and inclusion decisions were performed independently by multiple reviewers with consensus procedures. Included studies were critically appraised, data were extracted, and meta-analyses were conducted where applicable. Certainty of evidence was assessed using GRADE, and conclusions were primarily based on studies without major risk of bias when available. In total, 15 RCTs reported in 16 publications were included, covering patients with chronic obstructive pulmonary disease (COPD), respiratory tract infections, heart failure, neutropenia, and elderly patients with acute deterioration requiring hospital-level care. Across studies, the proportion of screened patients considered eligible for HaH ranged from 11% to 70%. The findings are divided by patient group.

For selected patients with acute COPD exacerbations, HaH may result in no difference in mortality within three months compared with in-hospital care, based on low-certainty evidence. No significant differences were observed for HrQoL or readmission rates, while evidence was insufficient to draw conclusions regarding change in health status, complications, or length of stay. No evidence was identified regarding emergency department visits or experiences of patients, staff, or relatives.

For patients with respiratory tract infections, evidence was very uncertain, and no conclusions could be drawn for any assessed outcomes. Similarly, for patients with neutropenia, the certainty of evidence was very low and hindered conclusions regarding mortality, complications, HrQoL, readmissions, or length of stay.

For patients with heart failure, it was not possible to draw conclusions regarding most clinical outcomes. HaH may be associated with a longer length of stay compared with in-hospital care, based on low-certainty evidence. Evidence on patient, staff, and caregiver experiences was lacking.

For selected elderly patients with acute deterioration, HaH may result in no difference in mortality within one month compared with in-hospital care. HaH may also be associated with a slightly longer length of stay. For other outcomes, including complications, HrQoL, readmissions, emergency department visits, and patient and caregiver experiences, the certainty of evidence was very low.

The economic evaluation within the regional context of Västra Götaland (VGR) was not feasible due to a lack of comparable cost data. However, among included RCTs reporting costs, studies of adequate quality and low risk of bias suggested average cost reductions of approximately 10–25% for HaH compared with in-hospital care, with wide confidence intervals. The ethical considerations highlighted uncertainty regarding key outcomes, potential inequalities in access related to digital literacy and geography, increased burden on families,

and the importance of patient autonomy given the higher level of patient engagement required in HaH.

Overall, the HTA found limited and heterogeneous evidence regarding the effects of HaH across different patient groups. There may be no difference in mortality for selected patients with COPD and selected elderly patients with acute deterioration, while evidence for other populations and outcomes remains inconclusive. The report showed that patient perspective and regional economic consequences are insufficiently studied.

The assessment identified substantial scientific knowledge gaps. Although HaH has been studied for several decades, it suggests that changes in healthcare organisation, medicine, and technology limit the relevance of older studies, highlighting a need for high-quality research evaluating HaH as an alternative to current in-hospital care. Furthermore, it states that considerable variation between patient groups, healthcare systems, and HaH models limits generalisability, and inconsistency in outcome measurement further reduces certainty of evidence.

Searches of the clinical trials registry identified nine ongoing relevant studies, reflecting emerging developments such as increased integration between hospital and municipal services, technological innovations enabling treatment at home, and exploration of HaH models for conditions not covered in the included RCTs. Ongoing research also examines the role of telemedicine and telemonitoring to improve scalability and efficiency of HaH while reducing the need for physical staff attendance.

5 DISCUSSION

In this chapter, findings from the appended publications are synthesised in relation to the theoretical framework to address the two research questions of this thesis. Each question is addressed in turn in sections 5.1 and 5.2 respectively, drawing on Papers 1 and 2 to answer the first research question and on all three appended publications to answer the second.

5.1 Tensions

This subchapter addresses RQ1 (*How can tensions that arise during the implementation and scaling of complex innovations in public healthcare be understood and handled using a combination of logics?*) by synthesising Papers 1 and 2. Paper 1 is concerned with how management can support learning in local contexts (Progress) and increasingly larger parts of the surrounding system (Propagation) by being mindful of tensions (Pacing) and system readiness (Phasing) with the ultimate aim of accelerating the formation of social groups and stabilisation of interpretations, thereby implementing and scaling innovation. Paper 2 focuses on understanding how and to what extent contextual change – such as the move of hospital care from hospital to home – gives rise to tensions between stabilising and change-oriented forces in a service ecosystem; tensions that management need to handle and, to a degree, maintain in order to sustain an innovation process. In short, the papers use different theoretical lenses to illuminate how ongoing innovation processes can be understood and what management can do to support them. This section uses these different viewpoints to further develop their findings with particular focus on the 4P framework proposed in Paper 1.

5.1.1 Path tensions, social tensions and timing tensions

HaH alters established service contexts (Denecke et al., 2023). This can modify how actors in a service ecosystem interact, which may ultimately result in innovation (Edvardsson et al., 2018; Keiningham et al., 2020) if the associated tensions between stabilising and change-oriented forces are handled appropriately (As'ad et al., 2024). In this discussion chapter, such tensions are denoted path tensions, since they concern which path forward to take. From a learning-based perspective on innovation, there are two additional types of tensions, here called timing tensions and social tensions. The former are tensions that occur due to the need to address emergent questions being positioned against the need to wait for emergent answers, and the latter are tensions that occur when actors attempt to propagate their interpretations, thereby risking appropriating, taking credit for, or discounting other actors' work or opinions (Paper 1). Tensions are interdependent and may overlap.

Since path tensions, timing tensions, and social tensions are inherent to innovations such as HaH (Papers 1 and 2) and Greenhalgh and Papoutsi (2019) propose the combined use of social, ecological, and mechanical logics to understand and support innovation, tensions can be analysed using these logics. Social tensions, appropriately, lend themselves to being understood using a social, learning-based logic (Paper 1). Path tensions can be understood on an ecological level by viewing the service ecosystem as a self-regulating entity reacting to contextual changes (Paper 2). Both social and path tensions and their associated logics unite through their focus on humans, either by analysing the construction and transfer of knowledge between individual actors or groups (Greenhalgh et al., 2004), or by viewing the service ecosystem, as Vargo et al. (2020) describe it, as a self-regulating entity consisting of interacting actors integrating resources. Conversely, mechanical logic which is typically linear (Greenhalgh & Papoutsi, 2019) is not as clearly applicable to path tensions since balancing and

rebalancing them over time is an inherently non-linear, dynamic process (Osborne et al., 2022), nor to social tensions since knowledge-based approaches likewise dictate that ongoing organisational change is dynamic (Latour, 1984; Sahlin & Wedlin, 2008). Where it is applicable, at least judging from the empirical findings, is on the third type of tension: timing tensions.

In the SU at Home subcase in Study I, management's handling of the timing tensions between emergent questions and emergent answers – the key balancing act in the 4P framework activity called Pacing (Paper 1) – was seemingly underpinned by mechanical logic. They explicitly assumed that there would be some optimal point in time when they would know enough to make correct decisions and the surrounding system would have matured to a point when the effects of that decision would be as intended. An illustrative example is that management waited for approximately two years before formally defining a strategy for HaH at SU, despite various interpretations circulating. They wanted to learn enough to formulate a useful strategy and to wait to launch it only at a time when the benefit of a clarifying strategy outweighed the risks of the limitations and undesirable lock-in effects that a formal strategy could cause (Paper 1). This aligns with mechanical, linear thinking and can be conceptualised as the intersection between system readiness (Greenhalgh et al., 2004) and knowledge saturation (Paper 1) over time, as illustrated in Figure 4.

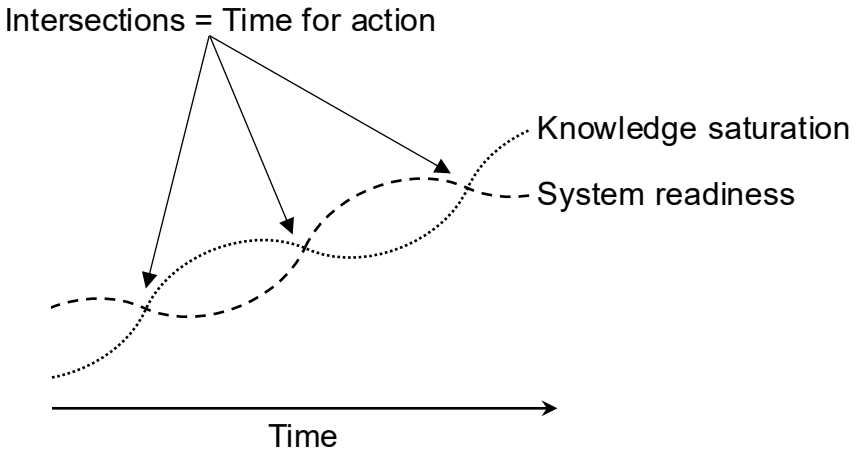


Figure 4. Illustration of intersections between knowledge saturation and system readiness over time.

Other examples where this thinking was seemingly applied in practice were in all of the pilot studies, as well as the consolidation of the mobile teams. Some departments made their piloted practices permanent immediately, while one determined that, using the terminology introduced above, knowledge saturation had not been reached and therefore extended their pilot. On the opposite side of the spectrum, the consolidation of the mobile teams had been anticipated for years, but the involved actors waited until they determined that the organisation had become ready to change which, per managerial judgement and subsequent decision, occurred during SU at Home.

To summarise, the timing of many of the actions of the actors in the case studies was seemingly informed by mechanical logic under the assumption that knowledge saturation and system readiness will intersect. However, is that assumption true? Are there indeed intersections between knowledge saturation and system readiness, and if so, is it possible to know when they occur? Can they be influenced?

5.1.2 Knowledge saturation and system readiness

The more ambitious and complex an innovation process is, the more mechanical logic needs to be supplemented by social and ecological perspectives (Greenhalgh & Papoutsi, 2019). This indicates that the role of mechanical logic is clearest in less complex innovation processes. However, the findings indicate that it also has a role to play in subsets of complex innovation processes. In contexts where the question to be answered is delimited (for example to continue a pilot study or not) and the system boundaries are narrow (for example a department), empirical findings show that in a matter of hours or days actors can decide on their next step (Paper 1), indicating that in those situations it may be relatively quick and easy to assess the level of knowledge saturation and system readiness. Conversely, for complex questions (for example formulating a hospital-wide HaH strategy) in a large system (for example a hospital with 17,000 staff and more than 100 departments), emergence and unpredictability increase (Storkholm et al., 2019), mobilising knowledge and system readiness becomes more time-consuming, and assessing their status more difficult, as demonstrated by the two years this process took at SU (Paper 1).

One way of thinking about this is that mechanical logic typically lends itself to increasing knowledge saturation, for example by using established sequential methods for collecting and analysing data in increasingly larger and different contexts (Greenhalgh & Papoutsi, 2019). This may be especially true if complexity is actively limited, for example through delimited scopes and narrow system boundaries. However, mechanical logic may be less appropriate for influencing or assessing system readiness, since complex systems' unpredictability and emergence (Storkholm et al., 2019) are not conducive to linear approaches (Chambers et al., 2013). Seeing as service ecosystems are made up of interacting actors integrating resources (Vargo et al., 2020), social and ecological logics – which focus on how and why actors act and interact in the way they do (Greenhalgh & Papoutsi, 2019) – may be more appropriate in this regard.

An illustrative example of how knowledge saturation and system readiness connect and can be handled using a combination of logics can be found in the management of SU at Home complementing their collection and evaluation of research and status reports (mechanical logic) with networking and regulatory lobbying (social and ecological logics), both to learn more and to activate larger parts of the system (Paper 1). In the 4P framework, this may be illustrated by placing mechanical logic within the Progress activity which focuses on learning and building knowledge in delimited contexts, often using structured, linear approaches such as pilot studies. Social and ecological logics are positioned in the Propagation, Pacing, and Phasing activities since those are mainly concerned with sharing the knowledge created in the Progress activity and managing actor interactions and resource integration which, according to Paper 1, ultimately affect system readiness.

To answer the questions posed at the end of the previous section: it can be helpful for decision-makers to make the mechanical assumption that there are intersections between knowledge saturation and system readiness but identifying them becomes increasingly difficult with increasing complexity. They may be possible to influence, using mechanical logic to affect knowledge saturation and social and ecological logics to affect system readiness.

5.1.3 Resolving tensions as potential closure mechanisms

Just as any decision can be viewed as a potential closure mechanism (Paper 1), attempts to resolve a tension can be viewed as potential closure mechanisms. For example, in the Thorax subcase, the department resolved a capability-related path tension during their pilot study by initiating a new form of collaboration with another department (coordination mechanism) (Paper 2), and after the pilot study, the department decided to increase their collaborations with other departments, for example the mobile teams, in their development of HaH. Thus, that resolved path tension may have served to stabilise the department's interpretation of HaH as a collaborative effort rather than a department-bounded project.

Based on this understanding, attempting to resolve tensions (making decisions) and studying the effects of the attempts (learning) can be positioned as decision-learning cycles within the Progress activity in the 4P framework, creating a convergence point between the complexity-informed, service ecosystem view and the social, learning-based view of innovation. This convergence point allows for a deeper understanding not only of the Progress activity, but of the Pacing activity as well, and can be used to better explain empirical findings in Study I.

For example, management in the SU at Home subcase was unwilling to commit to long-term decisions (that is, attempts at long-term resolution of tensions) before they reached the perceived intersection between knowledge saturation and system readiness, instead being willing to maintain tensions despite this contributing to frustration among staff (Paper 1). The service ecosystem view sheds light on this somewhat controversial move: by management not wanting to resolve tensions too early, since that would risk locking them onto a suboptimal path (Paper 1), they opted for maintaining and rebalancing tensions, which is conducive to a continued innovation process, provided they are not maintained for too long (Paper 2). This further clarifies Pacing's role as not only knowing when to resolve tensions, but also when to maintain them, or in the words of Chandler (2025), harnessing them to enable innovations.

5.1.4 Summary

Literature and the findings indicate that there are three types of tensions: tensions between stabilising and change-oriented forces (path tensions) (As'ad et al., 2024); tensions between actors as a result of potential closure mechanisms (social tensions); and tensions regarding when to act in situations where emergent questions have emergent answers (Paper 1), which, it is suggested, can be conceptualised as the intersections between knowledge saturation and system readiness (timing tensions).

With service ecosystems being made up of interacting actors integrating resources (Vargo et al., 2020), ecological and social logics – which focus on how and why actors act and interact in the way they do (Greenhalgh & Papoutsi, 2019) – may be most appropriate to understand and handle path tensions and social tensions respectively. Mechanical logic, on the other hand, which typically involves sequential methods for collecting and analysing data in increasingly larger and different contexts (Greenhalgh & Papoutsi, 2019), may lend itself to supporting knowledge saturation, as long as complexity is delimited. Conversely, system readiness may be best addressed using social and ecological logics since complex systems are inherently emergent and unpredictable (Storkholm et al., 2019), and consequently non-linear. Taken together, this means that timing tensions are probably best understood using a combination of logics, especially with increasing complexity, in line with Greenhalgh and Papoutsi (2019).

Additionally, it is proposed that tension resolution can be viewed as closure mechanisms which creates a convergence point between social, learning-based views of innovation and complexity-informed, service ecosystem views. This enables an integration of the findings in Paper 2 into the 4P framework proposed in Paper 1, deepening the understanding of its constituent activities.

5.2 The role of mechanical logic

This subchapter addresses RQ2 (*What role can mechanical logic have in the implementation and scaling of complex innovation in public healthcare?*) by synthesising all appended publications, building on the discussion in the previous subchapter regarding tensions and logics, and extending the discussion of the 4P framework. The empirical focus for this subchapter is Report 1 and the events surrounding it.

5.2.1 Tensions arising from seemingly contradictory evidence-based research

As described in section 4.3, the HTA report (Report 1) found limited and low-certainty evidence across assessed patient groups, which was insufficient for evaluation for most, though not all, outcomes and populations. In summer 2025, the final verdict based on the report concluded that the evidence base for HaH was weak and that further research was needed. Simultaneously, a substantial body of international literature indicated clinical efficacy of HaH (Bilchick et al., 2019; Brody et al., 2019; Lai & Ko, 2024; Shepperd et al., 2021; Tiberg et al., 2016; Wells et al., 2004), and several SU hospital departments had long-standing experience with different HaH models reporting beneficial outcomes. Together, this situation appeared to produce contradictory signals regarding the strength and relevance of available evidence.

The three tension types introduced in the previous subchapter may be used to illuminate the forces that emerged in response to this situation. Path tensions and associated social tensions emerged concerning how to act in relation to the contextual change implied by the verdict, that is, whether to maintain the existing trajectory or adapt it. Timing tensions arose because the HTA results had limited contribution to knowledge saturation, while nevertheless contributing to system readiness through increased legitimacy. Ultimately, rather than causing a clear change in the implementation trajectory, the verdict became integrated into the ongoing process that continued largely along its existing path. In this sense, the contextual change introduced by the HTA was sufficiently limited to be addressed through coordination rather than adaptation (Paper 2), and the HTA remained a potential closure mechanism rather than becoming a decisive milestone in the stabilisation of interpretations (Paper 1). Timing tensions were rebalanced and maintained since additional avenues for knowledge development were also pursued.

More broadly, while processes such as HTA can be associated with mechanical logic since they are meant to support evidence-based decision-making in healthcare (Greenhalgh & Papoutsi, 2019; Sampietro-Colom et al., 2015), the situation revealed the concurrent operation of social and ecological logics that enabled continued action despite inconclusive findings. Though strictly mechanical logic would not necessarily imply that an inconclusive verdict should lead to an intervention being halted, it would plausibly call for some form of adjustment, such as further exploration in acknowledgement of the weak evidence. Instead, the period following the HTA coincided with increased formalisation and acceleration of scaling-related activities, such as the formal definition of HaH at SU and planning for supporting infrastructure. Multi-logic dynamics were also visible within the HTA process itself, where adjustments to study

protocols reflected challenges in aligning a complex intervention with a predominantly mechanical evaluative approach. This aligns with prior observations regarding the difficulty of applying purely mechanical logic to complex health interventions and that one logic is often emphasised, though seldom the only one used (Greenhalgh & Papoutsi, 2019).

The presence of social and ecological logics alongside mechanical logic allowed both the HTA process and the implementation effort to continue without becoming stalled by a requirement for definitive evidence prior to further action. Given the emergent characteristics of complex innovation (Storkholm et al., 2019), this prevented a potential Catch-22 situation in which further evidence generation would depend on continued implementation, while implementation would be constrained by the absence of such evidence. This aligns with the notion that knowledge production and impact are entangled (Holmen et al., 2026).

5.2.2 Research challenges related to expectations, timing and complexity

The apparent discrepancy between the weak state of evidence identified in the Swedish HTA (Report 1) and the more favourable conclusions of global systematic reviews such as Cochrane reviews (Edgar et al., 2024; Gonçalves-Bradley et al., 2017) raises important methodological questions. A key explanation lies in the different purposes of these approaches. Cochrane reviews aim to assess whether an intervention works in general and therefore prioritise generalisable outcome measures which may need to be contextualised to specific healthcare systems (Munabi-Babigumira et al., 2013). HTAs on the other hand are designed to assess the applicability of evidence in a specific healthcare context (Facey et al., 2026). This leads to different inclusion criteria, analytical priorities, and standards for grading evidence. In addition, HTAs are explicitly intended to inform decision-making within particular healthcare systems (Facey et al., 2026), which may encourage caution in interpretation so as not to inadvertently support unsafe practices. The methodological differences notwithstanding, there may be additional contributing factors to the perceived discrepancy.

First, the results of the HTA were anticipated by decision-makers within different parts of the healthcare system: the region and the hospital. Attempting to serve multiple purposes within a single review can create challenges in topic prioritisation (Sampietro-Colom et al., 2015), which may result in difficulties defining a PICO that addresses everyone's expectations. Such challenges may be amplified for interventions that are heterogeneous and context-dependent.

Second, the timing of the HTA proved consequential. The two-year interval between nomination and completion of the report coincided with substantial changes in both practice and research related to HaH. The COVID-19 pandemic had accelerated knowledge production and system readiness internationally and nationally (Paper 1), while the research community increasingly shifted attention from questions of efficacy to questions of implementation and scaling (e.g., Lai & Ko, 2024; Levine et al., 2025; Pandit et al., 2024; Wallis et al., 2024), following a widely cited research agenda (Leff et al., 2022). As a result, by the time the HTA was completed, its focus on clinical efficacy aligned less well with the dominant concerns shaping decision-making at that point. Importantly, this does not imply that the HTA findings were incorrect, but rather that their situational relevance could be perceived as somewhat limited.

Third, the complexity and heterogeneity of HaH models posed substantial challenges for comparability, aligning with Denecke (2025, p. 14) who, when looking to create a taxonomy for HaH models, stated that "the challenges encountered in collecting information on different

characteristics of the taxonomy underscore the urgent need for more comprehensive and standardised reporting in scientific papers on HaH interventions". Although the HTA focused on outcomes rather than models, establishing outcome comparability requires assumptions about model similarity (De Sousa Vale et al., 2020). The wide variation among HaH models necessitated successive clarifications and narrowing of the PICO. Excluding models without home visits reduced the relevance of the findings for contexts in which such models were being developed, while additional requirements regarding similarity to Swedish routines led to the exclusion of studies lacking sufficient contextual detail. Restricting the review to only commenting on recent systematic reviews further reduced access to qualitative and contextual information (Report 1). The inconclusive cost-effectiveness analysis similarly reflects broader methodological challenges in assessing HaH economics (Goossens et al., 2020).

5.2.3 Complementing evidence-based approaches with other logics

Contextualising generalised evidence to inform safe and effective medical practice is essential (Munabi-Babigumira et al., 2013). HTA offers several advantages in this regard. Its integration within existing administrative structures makes it accessible and recognisable, it can confer legitimacy and funding opportunities, and, importantly, it can build evidence-based knowledge (Sampietro-Colom et al., 2015). In this case, however, the HTA primarily fulfilled these former functions, while contributing less to actionable knowledge. This illustrates how HTA may have limited effectiveness as a standalone tool for guiding implementation and scaling decisions for complex innovations such as HaH.

Alternative evaluative approaches that are better suited to complexity exist and continue to develop (Reed et al., 2019), though their adoption remains slow due to institutional, cultural, and legislative factors (Greenhalgh & Papoutsi, 2018; Van Nassau et al., 2026). While these broader conditions lie beyond the scope of this thesis, the role of evaluation methods promoting evidence-based medicine within complex innovation processes can be further specified.

For complex interventions, evaluative approaches must work with, rather than against, unpredictability and context dependence. To achieve this, it is important to assess whether an intervention is in fact complex. Frameworks such as NASSS (Greenhalgh et al., 2017) provide one way of making such assessments. For interventions characterised by low complexity, mechanical logic embodied in processes such as HTA may be sufficient, but as complexity increases, mechanical logic needs to be complemented by social and ecological logics, as suggested in section 5.1.2. This shifts emphasis from evaluation prior to implementation toward ongoing learning, adaptation, and course correction during implementation and scaling, in line with Holmen et al. (2026). Frameworks such as the 4P framework (Paper 1) and others that explicitly embrace complexity (Reed et al., 2019) may support such processes.

Within the 4P framework (Paper 1), evidence-based processes such as HTA can primarily be situated within Progress, as they, similarly to pilot studies, provide structured support for increasing knowledge saturation and, by extension, decision-making. Secondarily, they may contribute to system readiness by codifying information for dissemination through Propagation, and by supporting the handling of timing tensions, legitimacy, and funding associated with Pacing and Phasing. In this sense, evidence-based processes and methods, underpinned by mechanical logic, have a role throughout complex innovation processes, alongside approaches grounded in social and ecological logics (Greenhalgh & Papoutsi, 2019).

Finally, selecting appropriate evidence-based processes warrants careful consideration of expectations and scope. HTA may be well suited to supporting regional or national recommendations, while hospital-level decision-making may benefit more from faster and more practically oriented processes such as HB-HTA (Sampietro-Colom et al., 2015). The scope of the evaluative question is also critical. HaH models are highly context-dependent and oriented around human interaction, resulting in low translatability and limited suitability for decontextualisation (Røvik, 2016). Such interventions therefore require evaluation and learning within each specific context (Paper 1). At the same time, certain components of HaH, such as remote monitoring technologies or specific medical devices, may exhibit higher translatability. Focusing evaluative efforts on these components allows mechanical logic to be applied to its full potential.

5.2.4 Summary

Evidence-based research findings that appear to contradict other research or established practices can generate path, timing, and social tensions. This case illustrates how such situations may be managed by pragmatically combining logics to sustain ongoing implementation and scaling. While evidence-based processes such as HTA remain important, their application to complex innovations may be challenging and may sometimes yield findings with limited situational relevance for decision-making in hospitals. It is therefore proposed that actors first assess the complexity of an intervention (Greenhalgh et al., 2017) and, based on this assessment, apply an appropriate combination of mechanical, social, and ecological logics, for example through the use of the 4P framework.

6 CONCLUDING REMARKS

This chapter describes the conclusions and implications of this thesis, ending by addressing its limitations and suggesting future topics for research.

6.1 Conclusions

The aim of this thesis – to combine mechanical, ecological, and social logics to increase the understanding of the implementation and scaling of complex innovation in public healthcare – was addressed through two research questions: (1) how can tensions that arise during the implementation and scaling of complex innovations in public healthcare be understood and handled using a combination of logics, and (2) what role can mechanical logic have in the implementation and scaling of complex innovation in public healthcare? The questions were addressed using an action research approach to longitudinally study the implementation and scaling of a complex innovation – HaH – at a large hospital in Sweden, including interview data from 59 clinicians, patients, and managers, and a systematic literature review.

Based on a combination of literature and findings from Papers 1 and 2, this thesis suggests that three types of tensions can arise when implementing and scaling complex innovations in public healthcare: tensions between stabilising and change-oriented forces (path tensions) (As'ad et al., 2024); tensions between actors as a result of potential closure mechanisms (social tensions); and tensions regarding when to act in situations where emergent questions have emergent answers (Paper 1), which are suggested to be conceptualised as the intersections between knowledge saturation and system readiness (timing tensions). Greenhalgh and Papoutsi's (2019) suggestion that a combination of different logics – ecological, social, and mechanical – may be used to handle innovation and that increasing complexity especially increases the need to complement mechanical logic with social and ecological logics is proposed to be extended to encompass tensions as well as subsets of complex innovations.

The rebalancing and maintenance, rather than resolution, of tensions may be conducive to continued innovation (Paper 2). This notion is strengthened by the conceptualisation of tensions as potential closure mechanisms suggested in this thesis since resolution can thus be conceptualised as interpretation stabilisation which, once completely stabilised, signals the end of an innovation process, in line with Paper 2.

The suggested tensions are used to analyse the events surrounding seemingly contradictory evaluations of HaH evidence, as generated through the HTA (Report 1) in relation to other sources. The analysis reinforces the previously suggested notion that, in cases of complex innovation, a combination of logics is required to manage and rebalance path, timing, and social tensions. It is also proposed that reliance on mechanical logic alone may create a Catch-22 situation in which innovation risks being constrained by the absence of definitive evidence and vice versa, aligning with the notion put forward by Holmen et al. (2026) that knowledge production and impact are entangled.

The perceived contradiction was shown to be associated, on the one hand, with the use of different evidence-based processes designed for different purposes at local and global levels, and, on the other hand, with challenges related to expectations, timing, and the complexity of the intervention. Together, these factors contributed to evidence that was methodologically sound yet of limited situational relevance for the ongoing decision-making process. Despite this, established evidence-based processes such as HTA remain systemically integrated and constitute accessible means of building legitimacy, securing funding, and reviewing evidence-

based knowledge (EU Regulation 2021/2282, 2021; Länsisalmi et al., 2006; Newman et al., 2017). It is suggested that the role of evidence-based methods in the implementation and scaling of innovations in public healthcare should be contingent on the degree of intervention complexity, in line with (Greenhalgh et al., 2017). Mechanical logic may play a more prominent role for low-complexity interventions, whereas higher-complexity interventions require greater emphasis on social and ecological logics (Greenhalgh & Papoutsi, 2019). In such cases, evidence-based methods and processes may be more usefully applied to specific components of an intervention rather than to the intervention as a whole, primarily supporting knowledge saturation (Paper 1) and indirectly system readiness (Greenhalgh et al., 2004).

6.2 Theoretical implications

This thesis contributes to research on innovation in the public sector, a research field that has emerged as vital over the last two decades (Røhnebæk & Holmen, 2021). Through empirical examples, this thesis confirms Greenhalgh and Papoutsi's (2019) view that with increasing complexity, mechanical logic needs to be complemented with social and ecological logics in the implementation and scaling of innovations in public healthcare. The findings indicate that this is also true for subsets of complex innovation processes where complexity may be possible to delimit.

By suggesting a convergence point between service ecosystem literature and learning-based approaches to innovation in organisations, the thesis deepens the understanding of tensions associated with complex innovation processes. It is also suggested that the intersection between knowledge saturation (Paper 1) and system readiness (Greenhalgh et al., 2004) may be used to conceptualise tensions regarding when to take action in unfolding innovation processes, and that these intersections become difficult to identify with increasing complexity.

Finally, it is suggested that evidence-based methods and processes (underpinned by mechanical logic) risk being used in ineffective and inefficient ways in decision-making regarding complex innovation. However, when used in combination with social and ecological logics, they have an essential role to play in the building of knowledge and other activities.

6.3 Practical implications

This thesis's suggestion that different logics may be used to influence knowledge saturation and system readiness may be helpful for managers attempting to handle timing tensions, as long as they keep in mind that with increasing complexity the intersections between knowledge saturation and system readiness can become difficult to identify.

To ensure a good fit, the motivation and scope of a question should be interrogated before employing a certain approach or method. For practitioners and managers to be able to choose appropriately, regional and other institutional systems need to offer complements and alternatives to existing evidence-based methods and processes. HB-HTA may be a possible addition to the regions' existing HTA toolboxes (Sampietro-Colom et al., 2015; Tan et al., 2026), but more ecological and socially informed frameworks are also needed such as the NASSS framework (Greenhalgh et al., 2017), the 4P framework (Paper 1), or others (Reed et al., 2019). Since many processes and methods stemming from evidence-based medicine are established and have strong legitimacy (Koretz, 2019; Länsisalmi et al., 2006), cultural and

other systemic changes will be required for regions and other institutions to appropriately support complex innovation.

6.4 Limitations and future research

This case study primarily focused on one process for identifying and evaluating evidence-based practices, HTA, and the suggested conclusions would benefit from broader inclusion in future studies. The proposed conceptualisation of tensions and their relation to different logics illustrates one way in which insights from different bodies of literature may be integrated to shed light on the dynamics of implementation and scaling in complex systems. Further development of this conceptualisation, or of similar intersections between these literatures, may therefore constitute fruitful avenues for future research.

For future research, an extension of the 4P framework (Paper 1) is suggested through the addition of a new activity: Prognosticate. This activity could serve two purposes. First, in line with the conclusion that the degree of complexity of an intervention should shape the role of approaches based on mechanical logic, Prognosticate could accommodate complexity assessments conducted before and during innovation processes. Second, Prognosticate could support the forecasting of tensions that may arise during the implementation and scaling process, and by extension the associated resources needed to handle them, increasing the chances for sustainable innovation processes. Managers frequently struggle to anticipate the full implications of contextual change (Edvardsson et al., 2018; Lusch & Nambisan, 2015). The current 4P framework (Paper 1) highlights the importance of handling tensions, but it does not provide guidance regarding how to calculate the resources needed to do so. However, the relationship between the magnitude of contextual change and the resulting tension dynamics proposed in Paper 2 may be used to forecast what tensions may arise, where they may arise, how large a part of the ecosystem will need to be activated to handle them and, consequently, what and how many resources need to be mobilised. This can further develop the 4P framework by providing the activities Pacing and Phasing with helpful estimates of both the resource needs during a project (meaning the resources needed to maintain or resolve tensions) and the length of potential phases (meaning how long it may take to resolve systemic tensions).

One concrete way of Prognosticating may be as follows: first, deconstruct the service in question into service elements and analyse the extent of the contextual change per component (as was done in Paper 2). Then, per service element, conduct scenario analyses of which potential path, social, and timing tensions may arise, estimate how many actors (that is, how large a part of the system) will be needed to resolve those tensions and how long that would take, and based on that estimate the resources needed to properly scope, pace, and phase the project. Due to the emergence and unpredictability characterising complex innovation processes, Prognosticating cannot only be done before project start but needs to be repeated regularly; quarterly or biannually may be appropriate for a large project, based on the reflexivity dynamics observed in the SU at Home case study. Notably, different cases in a complex organisation (such as a large hospital) will exhibit different magnitudes of contextual change (Paper 2). Hence, Prognostication needs to be based on multiple cases, proportionate in number to the complexity of the process. Additionally, for difficult-to-resolve tensions, temporary and local workarounds may emerge (Paper 2) which are less resource-intensive, but are still important to try to forecast since workarounds cannot be maintained indefinitely (Paper 1), and misalignment between practices and a new context may lead to value destruction,

undermining implementation and scaling efforts (Chandler, 2025). Notably, this is a crude first attempt at outlining this Prognosticating activity; more research is needed.

The development and possible extension of the 4P framework suggested in this thesis is based on a single-case study which, although rich in data and empirical examples, cannot guarantee transferability of findings to other contexts. Thus, future research is needed to test the applicability of these findings on the implementation and scaling of complex innovations in primarily other public healthcare contexts, but potentially also in other complex systems such as public administration in general and perhaps the educational system in particular, which, similarly to healthcare, comprises strong professions (clinicians versus teachers) supporting beneficiaries (patients versus students) through processes of value co-creation. Finally, since practitioners, organisations, and governing bodies are slow to adopt frameworks for implementing and scaling innovations in healthcare (Greenhalgh & Papoutsi, 2018; Van Nassau et al., 2026), future research on helping relevant actors adopt new frameworks may be especially valuable.

REFERENCES

Adebajo, A. (2025). Value co-destruction dynamics in public service innovation ecosystems. In S. P. Osborne, C. Bianchi, & J. Macfarlane, *Public Service Logic and Public Service Reform* (1st edn, pp. 85–98). Routledge. https://doi.org/10.4324/9781032633671-7

ALF-medel. (2020, October 29). ALF Västra Götaland. https://www.alfvastragotaland.se/utlysningar/alf-medel-hta/

Alvesson, M. (2003). Beyond Neopositivists, Romantics, and Localists: A Reflexive Approach to Interviews in Organizational Research. *Academy of Management Review*, *28*(1), 13–33. https://doi.org/10.5465/amr.2003.8925191

Andersen, P. H., Dubois, A., & Lind, F. (2018). Process validation: Coping with three dilemmas in process-based single-case research. *Journal of Business & Industrial Marketing*, *33*(4), 539–549. https://doi.org/10.1108/JBIM-07-2016-0152

Arsenault-Lapierre, G., Henein, M., Gaid, D., Le Berre, M., Gore, G., & Vedel, I. (2021). Hospital-at-Home Interventions vs In-Hospital Stay for Patients With Chronic Disease Who Present to the Emergency Department: A Systematic Review and Meta-analysis. *JAMA Network Open*, *4*(6), e2111568. https://doi.org/10.1001/jamanetworkopen.2021.11568

As'ad, N., Patrício, L., Koskela-Huotari, K., & Edvardsson, B. (2024). Understanding service ecosystem dynamics: A typology. *Journal of Service Management*, *35*(6), 159–184. https://doi.org/10.1108/JOSM-07-2023-0322

Bansal, P. (Tima), & Corley, K. (2011). The Coming of Age for Qualitative Research: Embracing the Diversity of Qualitative Methods. *Academy of Management Journal*, *54*(2), 233–237. https://doi.org/10.5465/amj.2011.60262792

Banta, D. (2003). The development of health technology assessment. *Health Policy*, *63*(2), 121–132. https://doi.org/10.1016/S0168-8510(02)00059-3

Bell, E., Bryman, A., & Harley, B. (2022). *Business research methods* (Sixth edition). Oxford University Press.

Bengtsson, M., Aghamn, E., Bergh, C., Carlsson, Y., Ekelund, A., Eneljung, T., Freytag, L., Gyberg, A., Hellström, A., Holmberg, Y., Peters, S., Scharenberg, C., Svanberg, T., Terins, E., Khan, J., & Wartenberg, C. (2025). *Benefits and risks of hospital at home compared to in-hospital care according to current Swedish healthcare routine* (Fördelar Och Risker Med Sjukhusvård i Hemmet Jämfört Med Inneliggande Vård Enligt Nuvarande Vårdrutin i Sverige). Västra Götalandsregionen, Sahlgrenska Universitetssjukhuset, HTA-centrum.

Bentzen, T. Ø. (2019). The birdcage is open, but will the bird fly? How interactional and institutional trust interplay in public organisations. *Journal of Trust Research*, *9*(2), 185–202. https://doi.org/10.1080/21515581.2019.1633337

Bentzen, T. Ø., & Bringselius, L. (2023). Translating trust as a magic concept in public sector reforms: A comparative study of the Danish and Swedish trust reform. *International Public Management Journal*, *26*(5), 764–784. https://doi.org/10.1080/10967494.2023.2223198

Bergman, B., Hellström, A., Lifvergren, S., & Gustavsson, S. M. (2015). An Emerging Science of Improvement in Health Care. *Quality Engineering*, *27*(1), 17–34. https://doi.org/10.1080/08982112.2015.968042

Bierly, P. E., III, Kessler, E. H., & Christensen, E. W. (2000). Organizational learning, knowledge and wisdom. *Journal of Organizational Change Management*, *13*(6), 595–618. https://doi.org/10.1108/09534810010378605

Bilchick, K., Moss, T., Welch, T., Levy, W., Stukenborg, G., Lawlor, B. T., Reigle, J., Thomas, S. C., Brady, C., Bergin, J. D., Kennedy, J. L. W., Abuannadi, M., Scully, K., & Mazimba, S. (2019). Improving Heart Failure Readmission Costs and Outcomes With a Hospital-to-Home Readmission Intervention Program. *American Journal of Medical Quality*, *34*(2), 127–135. https://doi.org/10.1177/1062860618788436

Blagoev, B., & Schreyögg, G. (2025). Eigenzeit: A New Lens on Temporal Complexity. *Academy of Management Review*, *50*(1), 93–113. https://doi.org/10.5465/amr.2022.0440

Bluhm, D. J., Harman, W., Lee, T. W., & Mitchell, T. R. (2011). Qualitative Research in Management: A Decade of Progress. *Journal of Management Studies*, *48*(8), 1866–1891. https://doi.org/10.1111/j.1467-6486.2010.00972.x

Boxenbaum, E., & Pedersen, J. S. (2009). Scandinavian institutionalism – a case of institutional work. In T. B. Lawrence, R. Suddaby, & B. Leca (Eds), *Institutional Work* (1st edn, pp. 178–204). Cambridge University Press. https://doi.org/10.1017/CBO9780511596605.007

Bradbury, H., & Lifvergren, S. (2016). Action research healthcare: Focus on patients, improve quality, drive down costs. *Healthcare Management Forum*, *29*(6), 269–274. https://doi.org/10.1177/0840470416658905

Braithwaite, J., Churruca, K., Long, J. C., Ellis, L. A., & Herkes, J. (2018). When complexity science meets implementation science: A theoretical and empirical analysis of systems change. *BMC Medicine*, *16*(1), 63. https://doi.org/10.1186/s12916-018-1057-z

Brody, A. A., Arbaje, A. I., DeCherrie, L. V., Federman, A. D., Leff, B., & Siu, A. L. (2019). Starting Up a Hospital at Home Program: Facilitators and Barriers to Implementation. *Journal of the American Geriatrics Society*, *67*(3), 588–595. https://doi.org/10.1111/jgs.15782

Brown, M. E. L., & Dueñas, A. N. (2019). A Medical Science Educator's Guide to Selecting a Research Paradigm: Building a Basis for Better Research. *Medical Science Educator*, *30*(1), 545–553. https://doi.org/10.1007/s40670-019-00898-9

Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why Action Research? *Action Research*, *1*(1), 9–28. https://doi.org/10.1177/14767503030011002

Cardoso, M. M. D. A., Marques, R. T., Machado-Rugolo, J., Thabane, L., Püschel, V. A. D. A., Weber, S. A. T., Almeida, R. T., Duque, G. P. D. N., De Paula, C. C., Lopes, L. C., Gabriel, M., Drumond, S., Rodrigues, C. M., & Vanstone, M. (2024). Mapping frameworks for synthesizing qualitative evidence in health technology assessment. *International Journal of Technology Assessment in Health Care*, *40*(1), e53. https://doi.org/10.1017/S0266462324000369

Cassell, C., & Lee, B. (2017). Understanding Translation Work: The evolving interpretation of a trade union idea. *Organization Studies*, *38*(8), 1085–1106. https://doi.org/10.1177/0170840616670435

Casteli, C. P. M., Mbemba, G. I. C., Dumont, S., Dallaire, C., Juneau, L., Martin, E., Laferrière, M.-C., & Gagnon, M.-P. (2020). Indicators of home-based hospitalization model and strategies for its implementation: A systematic review of reviews. *Systematic Reviews*, *9*(1), 172. https://doi.org/10.1186/s13643-020-01423-5

Chae, B. (Kevin). (2012). An evolutionary framework for service innovation: Insights of complexity theory for service science. *International Journal of Production Economics, Green Manufacturing and Distribution in the Fashion and Apparel Industries*, *135*(2), 813–822. https://doi.org/10.1016/j.ijpe.2011.10.015

Chambers, D. A., Glasgow, R. E., & Stange, K. C. (2013). The dynamic sustainability framework: Addressing the paradox of sustainment amid ongoing change. *Implementation Science*, *8*(1), 117. https://doi.org/10.1186/1748-5908-8-117

Chandler, J. D. (2025). Institutional dissonance and innovation: Higher education from a service ecosystems perspective. *Journal of Service Management*, *36*(2), 142–155. https://doi.org/10.1108/JOSM-04-2023-0143

Chandler, J. D., Danatzis, I., Wernicke, C., Akaka, M. A., & Reynolds, D. (2019). How Does Innovation Emerge in a Service Ecosystem? *Journal of Service Research*, *22*(1), 75–89. https://doi.org/10.1177/1094670518797479

Chapman, A., Rankin, N. M., Jongebloed, H., Yoong, S. L., White, V., Livingston, P. M., Hutchinson, A. M., & Ugalde, A. (2023). Overcoming challenges in conducting systematic reviews in implementation science: A methods commentary. *Systematic Reviews*, *12*(1), 116. https://doi.org/10.1186/s13643-023-02285-3

Cheng, J., Montalto, M., & Leff, B. (2009). Hospital at Home. *Clinics in Geriatric Medicine*, *25*(1), 79–91. https://doi.org/10.1016/j.cger.2008.10.002

Colldén, C., & Hellström, A. (2018). Value-based healthcare translated: A complementary view of implementation. *BMC Health Services Research*, *18*(1), 681. https://doi.org/10.1186/s12913-018-3488-9

CORDIS - EU research results. (2021). *HORIZON | CORDIS | European Commission*. Horizon Europe – the Framework Programme for Research and Innovation (2021 to 2027). https://cordis.europa.eu/programme/id/HORIZON

Creed, W. E., Taylor, S., & Hudson, B. (2019). Institutional aesthetics: Embodied ways of encountering, evaluating, and enacting institutions. *Organization Studies*, *41*, 017084061983525. https://doi.org/10.1177/0170840619835254

Czarniawska, B., & Joerges, B. (1996). Travels of Ideas. In B. Czarniawska & G. Sevón (Eds), *Translating Organizational Change* (pp. 13–48). DE GRUYTER. https://doi.org/10.1515/9783110879735.13

Czarniawska, B., & Sevón, G. (Eds). (1996). *Translating organizational change*. De Gruyter. https://doi.org/doi:10.1515/9783110879735

Damanpour, F. (2020). *Organizational Innovation: Theory, Research, and Direction*. Edward Elgar Publishing. https://doi.org/10.4337/9781788117449

De Sousa Vale, J., Franco, A. I., Oliveira, C. V., Araújo, I., & Sousa, D. (2020). Hospital at Home: An Overview of Literature. *Home Health Care Management & Practice*, *32*(2), 118–123. https://doi.org/10.1177/1084822319880930

De Vries, H., Bekkers, V., & Tummers, L. (2016). Innovation in the Public Sector: A Systematic Review and Future Research Agenda. *Public Administration*, *94*(1), 146–166. https://doi.org/10.1111/padm.12209

Definition: What is Hospital at Home? (2024). https://whahc-community.kenes.com/mod/page/view.php?id=1042

Denecke, K. (2025). Mapping the landscape of Hospital at home (HaH) care: A validated taxonomy for HaH care model classification. *BMC Health Services Research*, *25*, 84. https://doi.org/10.1186/s12913-025-12251-5

Denecke, K., Kushniruk, A. W., & Borycki, E. M. (2024). A Comprehensive Framework for Hospital@Home Care Models. In M. Giacomini, B. Blobel, & P. Veltri (Eds), *Studies in Health Technology and Informatics*. IOS Press. https://doi.org/10.3233/SHTI240051

Denecke, K., May, R., Borycki, E. M., & Kushniruk, A. W. (2023). Digital health as an enabler for hospital@home: A rising trend or just a vision? *Frontiers in Public Health*, *11*, 1137798. https://doi.org/10.3389/fpubh.2023.1137798

Dryden-Palmer, K., Berta, W. B., & Parshuram, C. S. (2022). Implementing a complex hospital innovation: Conceptual underpinnings, program design and implementation of a complex innovation in an international multi-site hospital trial. *BMC Health Services Research*, *22*(1). https://doi.org/10.1186/s12913-022-08768-8

Dubois, A., & Gadde, L.-E. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research*, *55*(7), 553–560. https://doi.org/10.1016/S0148-2963(00)00195-8

Dubois, A., & Gadde, L.-E. (2014). "Systematic combining"—A decade later. *Journal of Business Research*, *67*(6), 1277–1284. https://doi.org/10.1016/j.jbusres.2013.03.036

Eccles, M. P., & Mittman, B. S. (2006). Welcome to Implementation Science. *Implementation Science*, *1*(1), 1, 1748-5908-1–1. https://doi.org/10.1186/1748-5908-1-1

Eden, C., & Huxham, C. (1996). Action Research for Management Research. *British Journal of Management*, *7*(1), 75–86. https://doi.org/10.1111/j.1467-8551.1996.tb00107.x

Edgar, K., Iliffe, S., Doll, H. A., Clarke, M. J., Gonçalves-Bradley, D. C., Wong, E., & Shepperd, S. (2024). Admission avoidance hospital at home. *Cochrane Database of Systematic Reviews*, *2024*(3). https://doi.org/10.1002/14651858.CD007491.pub3

Edvardsson, B., Frow, P., Jaakkola, E., Keiningham, T. L., Koskela-Huotari, K., Mele, C., & Tombs, A. (2018). Examining how context change foster service innovation. *Journal of Service Management*, *29*(5), 932–955. https://doi.org/10.1108/JOSM-04-2018-0112

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, *14*(4), 532–550. https://doi.org/10.2307/258557

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory Building From Cases: Opportunities And Challenges. *Academy of Management Journal*, *50*(1), 25–32. https://doi.org/10.5465/amj.2007.24160888

Esposito, S., Donà, D., Brigadoi, G., & Campana, B. R. (2026). From Promise to Practice: Harmonizing Telemedicine in Pediatric Chronic Respiratory Diseases. *Journal of Clinical Medicine*, *15*(4), 1540. https://doi.org/10.3390/jcm15041540

EU Regulation 2021/2282, 458 OJ L (2021). http://data.europa.eu/eli/reg/2021/2282/oj

Facey, K. M., Holtorf, A.-P., & Single, A. N. V. (Eds). (2026). *Patient Involvement in Health Technology Assessment*. Springer Nature Switzerland. https://doi.org/10.1007/978-3-032-11284-2

Figenschou, T., Li-Ying, J., Tanner, A., & Bogers, M. (2024). Open innovation in the public sector: A literature review on actors and boundaries. *Technovation*, *131*, 102940. https://doi.org/10.1016/j.technovation.2023.102940

Fleissig, J., Delcourt, C., & Steils, N. (2025). Patient-Centricity in the Pharmaceutical Industry: A Review and Research Agenda. *International Journal of Consumer Studies*, *49*(1), e70012. https://doi.org/10.1111/ijcs.70012

Fredberg, T., & Pregmark, J. E. (2023). Ethical dilemmas in collaborative action research. In D. B. Szabla, D. Coghlan, W. Pasmore, & J. Kim (Eds), *Handbook of Research Methods in Organizational Change* (pp. 452–466). Edward Elgar Publishing. https://doi.org/10.4337/9781800378520.00032

Freidson, E. (2001). *Professionalism, the third logic: On the practice of knowledge*. University of Chicago Press. https://books.google.se/books?id=Tgn3sThG8QEC

Gallouj, F., Rubalcaba, L., Toivonen, M., & Windrum, P. (2018). Understanding social innovation in services industries. *Industry and Innovation*, *25*(6), 551–569. https://doi.org/10.1080/13662716.2017.1419124

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, *16*(1), 15–31. https://doi.org/10.1177/1094428112452151

Glasgow, R. E., Vinson, C., Chambers, D., Khoury, M. J., Kaplan, R. M., & Hunter, C. (2012). National Institutes of Health Approaches to Dissemination and Implementation Science: Current and Future Directions. *American Journal of Public Health*, *102*(7), 1274–1281. https://doi.org/10.2105/AJPH.2012.300755

Glouberman, S., & Mintzberg, H. (2001). Managing the Care of Health and the Cure of Disease—Part I: Differentiation: *Health Care Management Review*, *26*(1), 56–69. https://doi.org/10.1097/00004010-200101000-00006

Goldenberg, M. J. (2006). On evidence and evidence-based medicine: Lessons from the philosophy of science. *Social Science & Medicine, Part Special Issue: Gift Horse or Trojan Horse? Social Science Perspectives on Evidence-Based Health Care*, *62*(11), 2621–2632. https://doi.org/10.1016/j.socscimed.2005.11.031

Gonçalves-Bradley, D. C., Iliffe, S., Doll, H. A., Broad, J., Gladman, J., Langhorne, P., Richards, S. H., & Shepperd, S. (2017). Early discharge hospital at home. *Cochrane Database of Systematic Reviews*, *2021*(6). https://doi.org/10.1002/14651858.cd000356.pub4

Goodwin, J. S., Howrey, B., Zhang, D. D., & Kuo, Y.-F. (2011). Risk of continued institutionalization after hospitalization in older adults. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, *66*(12), 1321–1327. https://doi.org/10.1093/gerona/glr171

Goossens, L. M. A., Vemer, P., & Rutten-van Mölken, M. P. M. H. (2020). The risk of overestimating cost savings from hospital-at-home schemes: A literature review. *International Journal of Nursing Studies*, *109*, 103652. https://doi.org/10.1016/j.ijnurstu.2020.103652

Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*, *26*(1), 13–24. https://doi.org/10.1002/chp.47

Greenhalgh, T., & Papoutsi, C. (2018). Studying complexity in health services research: Desperately seeking an overdue paradigm shift. *BMC Medicine*, *16*(1), 95, s12916-018-1089–4. https://doi.org/10.1186/s12916-018-1089-4

Greenhalgh, T., & Papoutsi, C. (2019). Spreading and scaling up innovation and improvement. *BMJ*, l2068. https://doi.org/10.1136/bmj.l2068

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. *The Milbank Quarterly*, *82*(4), 581–629. https://doi.org/10.1111/j.0887-378X.2004.00325.x

Greenhalgh, T., Wherton, J., Papoutsi, C., Lynch, J., Hughes, G., A'Court, C., Hinder, S., Fahy, N., Procter, R., & Shaw, S. (2017). Beyond Adoption: A New Framework for Theorizing and Evaluating Nonadoption, Abandonment, and Challenges to the Scale-Up, Spread, and Sustainability of Health and Care Technologies. *Journal of Medical Internet Research*, *19*(11), e367. https://doi.org/10.2196/jmir.8775

Gulbrandsen, M., & Høiland, G. C. L. (2021). The relationship between research and innovation in the public sector – an analysis of five cases from labour and welfare services. *Nordic Journal of Social Research*, *12*(2), 46–69. https://doi.org/10.7577/njsr.3687

Haycock-Stuart, E., & Kean, S. (2013). Shifting the balance of care? A qualitative study of policy implementation in community nursing. *Journal of Nursing Management*, *21*(6), 867–877. https://doi.org/10.1111/jonm.12088

Haynes, P. (2008). Complexity Theory and Evaluation in Public Management. *Public Management Review*, *10*(3), 401–419. https://doi.org/10.1080/14719030802002766

Heggie, R., Boyd, K., & Wu, O. (2021). How has implementation been incorporated in health technology assessments in the United Kingdom? A systematic rapid review. *Health Research Policy and Systems*, *19*(1), 118. https://doi.org/10.1186/s12961-021-00766-2

Helkkula, A., Kowalkowski, C., & Tronvoll, B. (2018). Archetypes of Service Innovation: Implications for Value Cocreation. *Journal of Service Research*, *21*(3), 284–301. https://doi.org/10.1177/1094670517746776

Hollick, R. J., Black, A. J., Reid, D. M., & McKee, L. (2019). Shaping innovation and coordination of healthcare delivery across boundaries and borders: A comparative case study. *Journal of Health Organization and Management*, *33*(7/8), 849–868. https://doi.org/10.1108/JHOM-10-2018-0315

Holmen, A. K. T., Hovland, J., Røhnebæk, M., & Tronsmo, E. (2026). Co-research: Methodological opportunities and challenges. *Nordic Journal of Innovation in the Public Sector*, *4*(1), 1–9. https://doi.org/10.18261/njips.4.1.5

HTA - Health Technology Assessment. (2024, November 14). Vårdgivarwebben Västra Götalandsregionen. https://www.vgregion.se/halsa-och-vard/vardgivarwebben/utveckling--uppfoljning/htacentrum/hta/

HTA-centrum. (2018, December 3). Vårdgivarwebben Västra Götalandsregionen. https://www.vgregion.se/halsa-och-vard/vardgivarwebben/utveckling--uppfoljning/htacentrum/

Ii, S. S., Fitzgerald, L., Morys-Carter, M. M., Davie, N. L., & Barker, R. (2018). Knowledge translation in tri-sectoral collaborations: An exploration of perceptions of academia, industry and healthcare collaborations in innovation adoption. *Health Policy*, *122*(2), 175–183. https://doi.org/10.1016/j.healthpol.2017.11.010

Imran, H. (2024). Pragmatic critical realism and Mixed methods in Inter-disciplinary Research—Management and Information systems. *International Journal of Scientific Research and Management (IJSRM)*, *12*(03), 5953–5962. https://doi.org/10.18535/ijsrm/v12i03.em01

Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. *Journal of Business Research*, *116*, 431–440. https://doi.org/10.1016/j.jbusres.2019.08.003

Koperny, M., Leśniak, W., Jankowski, M., & Bała, M. (2016). The cochrane collaboration – The role in the evolution of evidence-based medicine, and the development of cooperation in poland. *Przegl Epidemiol*.

Koretz, R. L. (2019). Assessing the Evidence in Evidence-Based Medicine. *Nutrition in Clinical Practice*, *34*(1), 60–72. https://doi.org/10.1002/ncp.10227

Koskela-Huotari, K., Edvardsson, B., Jonas, J. M., Sörhammar, D., & Witell, L. (2016). Innovation in service ecosystems—Breaking, making, and maintaining institutionalized rules of resource integration. *Journal of Business Research*, *69*(8), 2964–2971. https://doi.org/10.1016/j.jbusres.2016.02.029

Lai, Y. F., & Ko, S. Q. (2024). Time to shift the research agenda for Hospital at Home from effectiveness to implementation. *Cochrane Database of Systematic Reviews*, *2024*(3). https://doi.org/10.1002/14651858.ed000165

Lai, Y. F., Lim, Y. W., Kuan, W. S., Goh, J., Soong, J. T. Y., Shorey, S., & Ko, S. Q. (2021). Asian Attitudes and Perceptions Toward Hospital-At-Home: A Cross-Sectional Study. *Frontiers in Public Health*, *9*, 704465. https://doi.org/10.3389/fpubh.2021.704465

Langergaard, L. L. (2021). Conceptualising public sector innovation: Introducing the lens of the epistemological, pragmatic and normative dimensions. *Nordic Journal of Social Research*, *12*(2), 24–45. https://doi.org/10.7577/njsr.3684

Langley, A. (1999). Strategies for Theorizing from Process Data. *The Academy of Management Review*, *24*(4), 691. https://doi.org/10.2307/259349

Länsisalmi, H., Kivimäki, M., Aalto, P., & Ruoranen, R. (2006). Innovation in Healthcare: A Systematic Review of Recent Research. *Nursing Science Quarterly*, *19*(1), 66–72. https://doi.org/10.1177/0894318405284129

Latour, B. (1984). The Powers of Association. *The Sociological Review*, *32*(1_suppl), 264–280. https://doi.org/10.1111/j.1467-954X.1984.tb00115.x

Leff, B., DeCherrie, L. V., Montalto, M., & Levine, D. M. (2022). A research agenda for hospital at home. *Journal of the American Geriatrics Society*, *70*(4), 1060–1069. https://doi.org/10.1111/jgs.17715

Leff, B., & Montalto, M. (2004). Home Hospital—Toward a Tighter Definition. *Journal of the American Geriatrics Society*, *52*(12), 2141–2141. https://doi.org/10.1111/j.1532-5415.2004.52579_1.x

Leong, M. Q., Lim, C. W., & Lai, Y. F. (2021). Comparison of Hospital-at-Home models: A systematic review of reviews. *BMJ Open*, *11*(1), e043285. https://doi.org/10.1136/bmjopen-2020-043285

Levine, D. M., DeCherrie, L. V., Siu, A., Schiller, G., Timpe, C., Murphy, S., Paulson, M., Lung, C. L., Nottidge, M., Titchener, K., Leff, B., & Hospital at Home Users Group Practice Standards Council. (2025). Practice Standards for Acute Hospital Care at Home. *Journal of the American Geriatrics Society*, *73*(7), 2037–2045. https://doi.org/10.1111/jgs.19427

Leys, M. (2003). HEALTH TECHNOLOGY ASSESSMENT: THE CONTRIBUTION OF QUALITATIVE RESEARCH. *International Journal of Technology Assessment in Health Care*, *19*(2), 317–329. https://doi.org/10.1017/S026646230300028X

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

Lusch, R. F., & Nambisan, S. (2015). Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly*, *39*(1), 155–175. https://doi.org/10.25300/MISQ/2015/39.1.07

Lv, M., Zhai, J., Zhang, L., Wang, H., Li, B.-H., Zhang, T., & Moreira, P. (2025). Change Fatigue Among Clinical Nurses and Related Factors: A Cross-sectional Study in Public Hospitals. *Health Services Insights*, *18*, 11786329251318586. https://doi.org/10.1177/11786329251318586

Mahavarpour, N., Marvi, R., & Foroudi, P. (2023). A Brief History of Service Innovation: The evolution of past, present, and future of service innovation. *Journal of Business Research*, *160*, 113795. https://doi.org/10.1016/j.jbusres.2023.113795

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach: An interactive approach*. SAGE Publications. https://books.google.se/books?id=DFZc28cayiUC

McDonald, S., & Simpson, B. (2014). Shadowing research in organizations: The methodological debates. *Qualitative Research in Organizations and Management: An International Journal*, *9*(1), 3–20. https://doi.org/10.1108/QROM-02-2014-1204

McLoughlin, I., Burns, P., Looi, E., Sohal, A., & Teede, H. (2020). Brokering knowledge into the public sector: Understanding improvement facilitators' priorities in the redesign of hospital care. *Public Management Review*, *22*(6), 836–856. https://doi.org/10.1080/14719037.2019.1604795

Meijer, A. J. (2014). From Hero-Innovators to Distributed Heroism: An in-depth analysis of the role of individuals in public sector innovation. *Public Management Review*, *16*(2), 199–216. https://doi.org/10.1080/14719037.2013.806575

Munabi-Babigumira, S., Johansen, M., & Paulsen, E. (2013). Den norske EPOC-satellitten: Støtte til kunnskapsbaserte beslutninger. *Norsk Epidemiologi*, *23*(2). https://doi.org/10.5324/nje.v23i2.1646

Neumann, O., Kirklies, P.-C., & Schott, C. (2024). Adopting agile in government: A comparative case study. *Public Management Review*, *26*(12), 3692–3714. https://doi.org/10.1080/14719037.2024.2354776

Newman, J., Cherney, A., & Head, B. W. (2017). Policy capacity and evidence-based policy in the public service. *Public Management Review*, *19*(2), 157–174. https://doi.org/10.1080/14719037.2016.1148191

Nielsen, J. A., Wæraas, A., & Dahl, K. (2020). When management concepts enter the public sector: A dual-level translation perspective. *Public Management Review*, *22*(2), 234–254. https://doi.org/10.1080/14719037.2019.1582689

Nightingale, A. (2009). A guide to systematic literature reviews. *Surgery (Oxford)*, *27*(9), 381–384. https://doi.org/10.1016/j.mpsur.2009.07.005

Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. *Implementation Science : IS*, *10*, 53. https://doi.org/10.1186/s13012-015-0242-0

Norman, G., Bennett, P., & Vardy, E. R. L. C. (2023). Virtual wards: A rapid evidence synthesis and implications for the care of older people. *Age and Ageing*, *52*(1), afac319. https://doi.org/10.1093/ageing/afac319

Osborne, S. P., Powell, M., Cui, T., & Strokosch, K. (2022). Value Creation in the Public Service Ecosystem: An Integrative Framework. *Public Administration Review*, *82*(4), 634–645. https://doi.org/10.1111/puar.13474

Pandit, J. A., Pawelek, J. B., Leff, B., & Topol, E. J. (2024). The hospital at home in the USA: Current status and future prospects. *Npj Digital Medicine*, *7*(1), 48. https://doi.org/10.1038/s41746-024-01040-9

Patel, R., Thornton-Swan, T. D., Armitage, L. C., Vollam, S., Tarassenko, L., Lasserson, D. S., & Farmer, A. J. (2024). Remote Vital Sign Monitoring in Admission Avoidance Hospital at Home: A Systematic Review. *Journal of the American Medical Directors Association*, 105080. https://doi.org/10.1016/j.jamda.2024.105080

Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology might Benefit Each Other. *Social Studies of Science*, *14*(3), 399–441. https://doi.org/10.1177/030631284014003004

Pratt, M. G., Kaplan, S., & Whittington, R. (2020). Editorial Essay: The Tumult over Transparency: Decoupling Transparency from Replication in Establishing Trustworthy Qualitative Research. *Administrative Science Quarterly*, *65*(1), 1–19. https://doi.org/10.1177/0001839219887663

Pregmark, J. E., Fredberg, T., Berggren, R., & Frössevi, B. (2023). Learning From Collaborative Action Research in Three Organizations: How Purpose Activates Change Agency. *The Journal of Applied Behavioral Science*, *59*(4), 617–646. https://doi.org/10.1177/00218863231195909

Radnor, Z. J., Holweg, M., & Waring, J. (2012). Lean in healthcare: The unfilled promise? *Social Science & Medicine, Part Special Issue: Organization Studies and the Analysis of Health Systems*, *74*(3), 364–371. https://doi.org/10.1016/j.socscimed.2011.02.011

Reed, J. E., Green, S., & Howe, C. (2019). Translating evidence in complex systems: A comparative review of implementation and improvement frameworks. *International Journal for Quality in Health Care*, *31*(3), 173–182. https://doi.org/10.1093/intqhc/mzy158

Rodgers, H., Soutter, J., Kaiser, W., Pearson, P., Dobson, R., Skilbeck, C., & Bond, J. (1997). Early supported hospital discharge following acute stroke: Pilot study results. *Clinical Rehabilitation*, *11*(4), 280–287. https://doi.org/10.1177/026921559701100403

Røhnebæk, M., & Holmen, A.-K. T. (2021). Introduction to Special Issue Public sector Innovation—Conceptual and Methodological Implications. *Nordic Journal of Social Research*, *12*(2). https://doi.org/10.7577/njsr.3670

Røvik, K. A. (2016). Knowledge Transfer as Translation: Review and Elements of an Instrumental Theory. *International Journal of Management Reviews*, *18*(3), 290–310. https://doi.org/10.1111/ijmr.12097

Saenger, P., Federman, A. D., DeCherrie, L. V., Lubetsky, S., Catalan, E., Leff, B., & Siu, A. L. (2020). Choosing Inpatient vs Home Treatment: Why Patients Accept or Decline Hospital at Home. *Journal of the American Geriatrics Society*, *68*(7), 1579–1583. https://doi.org/10.1111/jgs.16486

Sahlin, K., & Wedlin, L. (2008). Circulating Ideas: Imitation, Translation and Editing. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin, *The SAGE Handbook of Organizational Institutionalism* (pp. 218–242). SAGE Publications Ltd. https://doi.org/10.4135/9781849200387.n9

Sampietro-Colom, L., Lach, K., Cicchetti, A., Kidholm, K., Pasternack, I., Fure, B., Rosenmöller, M., Wild, C., Kahveci, R., Wasserfallen, J., Kiivet, R., & AdHopHTA project partners. (2015). *The AdHopHTA handbook: A handbook of hospital-based Health Technology Assessment (HB-HTA)*. The AdHopHTA Project (FP7/2007 -13 grant agreement nr 305018). http://www. adhophta.eu/handbook

Shepperd, S., Butler, C., Cradduck-Bamford, A., Ellis, G., Gray, A., Hemsley, A., Khanna, P., Langhorne, P., Mort, S., Ramsay, S., Schiff, R., Stott, D. J., Wilkinson, A., Yu, L.-M., & Young, J. (2021). *Is Comprehensive Geriatric Assessment admission avoidance hospital at home an alternative to hospital admission for older people? A randomised trial*.

Skålén, P., Karlsson, J., Engen, M., & Magnusson, P. R. (2018). Understanding Public Service Innovation as Resource Integration and Creation of Value Propositions. *Australian Journal of Public Administration*, *77*(4), 700–714. https://doi.org/10.1111/1467-8500.12308

Smith, P. (2024). *Hospital at Home – Sjukhus hemma*. Forum för Health Policy. https://healthpolicy.se/wp-content/uploads/2024/06/Rapport_Sjukhus-hemma-2024_webb.pdf

Sovacool, B. K., Iskandarova, M., & Geels, F. W. (2023). "Bigger than government": Exploring the social construction and contestation of net-zero industrial megaprojects in England. *Technological Forecasting and Social Change*, *188*, 122332. https://doi.org/10.1016/j.techfore.2023.122332

Spyridonidis, D., Currie, G., Heusinkveld, S., Strauss, K., & Sturdy, A. (2016). The Translation of Management Knowledge: Challenges, Contributions and New Directions. *International Journal of Management Reviews*, *18*(3), 231–235. https://doi.org/10.1111/ijmr.12110

Storkholm, M. H., Mazzocato, P., & Savage, C. (2019). Make it complicated: A qualitative study utilizing a complexity framework to explain improvement in health care. *BMC Health Services Research*, *19*(1), 842. https://doi.org/10.1186/s12913-019-4705-x

Suddaby, R. (2006). From the Editors: What Grounded Theory is Not. *Academy of Management Journal*, *49*(4), 633–642. https://doi.org/10.5465/amj.2006.22083020

Tan, H. Y., Tan, J. K., Xin, X., Poopalalingam, R., Kwek, K., Thumboo, J., & Atkinson, M. K. (2026). Advancing hospital-based health technology and impact assessments: Institutionalizing strategic decision-making in innovation adoption. *International Journal of Technology Assessment in Health Care*, *42*(1), e9. https://doi.org/10.1017/S026646232510336X

Tantawy, M. M., Foord, D. J. A., & Rosenbloom, D. (2026). The interpretive flexibility of smart grids: Transitions, policy mixes and technology innovation systems in the Canadian Maritimes (2009–2022). *Research Policy*, *55*(4), 105436. https://doi.org/10.1016/j.respol.2026.105436

Teulier, R., & Rouleau, L. (2013). Middle Managers' Sensemaking and Interorganizational Change Initiation: Translation Spaces and Editing Practices. *Journal of Change Management*, *13*(3), 308–337. https://doi.org/10.1080/14697017.2013.822674

Thøgersen, D. (2022). Windows of Translation in Public Service Innovation. Introducing a New Mission in Public Childcare. *Journal of Change Management*, *22*(4), 401–421. https://doi.org/10.1080/14697017.2022.2051061

Tiberg, I., Lindgren, B., Carlsson, A., & Hallström, I. (2016). Cost-effectiveness and cost-utility analyses of hospital-based home care compared to hospital-based care for children diagnosed with type 1 diabetes; a randomised controlled trial; results after two years' follow-up. *BMC Pediatrics*, *16*(1), 94. https://doi.org/10.1186/s12887-016-0632-8

Tolman, C. W. & International Society for Theoretical Psychology (Eds). (1996). *Problems of theoretical psychology: Carleton University, Ottawa, Ontario, Canada, 21 - 26 May 1995*. Captus Press.

Torugsa, N. (Ann), & Arundel, A. (2016). Complexity of Innovation in the public sector: A workgroup-level analysis of related factors and outcomes. *Public Management Review*, *18*(3), 392–416. https://doi.org/10.1080/14719037.2014.984626

Utens, C. M. A., Goossens, L. M. A., Van Schayck, O. C. P., Rutten-van Mölken, M. P. M. H., Van Litsenburg, W., Janssen, A., Van Der Pouw, A., & Smeenk, F. W. J. M. (2013). Patient preference and satisfaction in hospital-at-home and usual hospital care for COPD exacerbations: Results of a randomised controlled trial. *International Journal of Nursing Studies*, *50*(11), 1537–1549. https://doi.org/10.1016/j.ijnurstu.2013.03.006

Van Den Broek, J., Boselie, P., & Paauwe, J. (2014). Multiple Institutional Logics in Health Care: 'Productive Ward: Releasing Time to Care'. *Public Management Review*, *16*(1), 1–20. https://doi.org/10.1080/14719037.2013.770059

Van Maanen, J. (1979). The Fact of Fiction in Organizational Ethnography. *Administrative Science Quarterly*, *24*(4), 539. https://doi.org/10.2307/2392360

Van Nassau, F., Driessen, A., Van Bodegom-Vos, L., Walters, B. H., Ista, E., Keijser, W., Van Der Kleij – Van Der Sluis, R., Welker, G., Wensing, M., & Vis, C. (2026). Topics for implementation research: Implementation researchers' and practitioners' views in The Netherlands. *Implementation Science Communications*, *7*(1), 63. https://doi.org/10.1186/s43058-026-00890-6

Vargo, S. L., Akaka, M. A., & Wieland, H. (2020). Rethinking the process of diffusion in innovation: A service-ecosystems and institutional perspective. *Journal of Business Research*, *116*, 526–534. https://doi.org/10.1016/j.jbusres.2020.01.038

Varkey, P., Horne, A., & Bennet, K. E. (2008). Innovation in health care: A primer. *American Journal of Medical Quality*, *23*(5), 382–388. https://doi.org/10.1177/1062860608317695

Vink, J., Koskela-Huotari, K., Tronvoll, B., Edvardsson, B., & Wetter-Edman, K. (2021). Service Ecosystem Design: Propositions, Process Model, and Future Research Agenda. *Journal of Service Research*, *24*(2), 168–186. https://doi.org/10.1177/1094670520952537

Wæraas, A. (2021). Understanding change in circulating constructs: Collective learning, translation and adaptation. *The Learning Organization*, *28*(1), 1–14. https://doi.org/10.1108/TLO-08-2020-0140

Wæraas, A., & Nielsen, J. A. (2016). Translation Theory 'Translated': Three Perspectives on Translation in Organizational Research. *International Journal of Management Reviews*, *18*(3), 236–270. https://doi.org/10.1111/ijmr.12092

Wafai, M. H., & Aouad, G. (2022). Innovation transfer in construction: Re-interpreting factor-based research from the perspective of the social construction of technology (SCOT). *Construction Innovation*, *23*(5), 1323–1344. https://doi.org/10.1108/CI-08-2017-0070

Wallis, J. A., Shepperd, S., Makela, P., Han, J. X., Tripp, E. M., Gearon, E., Disher, G., Buchbinder, R., & O'Connor, D. (2024). Factors influencing the implementation of early discharge hospital at home and admission avoidance hospital at home: A qualitative evidence synthesis. *Cochrane Database of Systematic Reviews*, *2024*(3). https://doi.org/10.1002/14651858.CD014765.pub2

Walsh, I., Holton, J. A., Bailyn, L., Fernandez, W., Levina, N., & Glaser, B. (2015). What Grounded Theory Is…A Critically Reflective Conversation Among Scholars. *Organizational Research Methods*, *18*(4), 581–599. https://doi.org/10.1177/1094428114565028

Weick, K. E. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies*, *25*(4), 305–317. https://doi.org/10.1111/j.1467-6486.1988.tb00039.x

Wells, M., Harrow, A., Donnan, P., Davey, P., Devereux, S., Little, G., McKenna, E., Wood, R., Chen, R., & Thompson, A. (2004). Patient, carer and health service outcomes of nurse-led early discharge after breast cancer surgery: A randomised controlled trial. *British Journal of Cancer*, *91*(4), 651–658. https://doi.org/10.1038/sj.bjc.6601998

Williams, S., Morrissey, A.-M., Steed, F., Leahy, A., Shanahan, E., Peters, C., O'Connor, M., Galvin, R., & O'Riordan, C. (2022). Early supported discharge for older adults admitted to hospital with medical complaints: A systematic review and meta-analysis. *BMC Geriatrics*, *22*(1), 302. https://doi.org/10.1186/s12877-022-02967-y

Williams, S., O'Riordan, C., Morrissey, A.-M., Galvin, R., & Griffin, A. (2024). Early supported discharge for older adults admitted to hospital after orthopaedic surgery: A systematic review and meta-analysis. *BMC Geriatrics*, *24*(1), 143. https://doi.org/10.1186/s12877-024-04775-y

Zandee, D. P., & Coghlan, D. (2025). Action research for impact in addressing the grand challenges. *Strategic Organization*, *23*(1), 147–161. https://doi.org/10.1177/14761270241270913