Exploring Public Sector Innovation Challenges through a Case Study of New Zealand’s Service Innovation Lab

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Mater’s thesis
30 ECTS

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2021
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Exploring Public Sector Innovation Challenges through a Case Study of New Zealand’s Service Innovation Lab

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Number of pages: 103
Language: English

Master of Arts thesis
Creative Sustainability Programme
Department of Design
School of Arts, Design and Architecture
Aalto University

Helsinki, Finland
10.5.2021
Emerging organizational forms of Public Sector Innovation (PSI) labs utilizing design-led approaches have spread globally in the past decade. PSI labs are set up with the aims of responding to rapid changes in societies by applying these approaches to the design of public policy and services. Public sector innovation is a relatively recent area of practice and research, and empirical research with cases of PSI labs focusing on the beginning stages of the innovation cycle is currently growing. However, there are a limited number of case studies of national-level labs, particularly in the Aotearoa New Zealand context.

This thesis presents a qualitative case study on the phenomena of public sector innovation labs situated within the area of public sector innovation research. The case explores the Service Innovation Lab, which operated as a cross-sectoral government initiative between February 2017 and June 2020 in Wellington, Aotearoa New Zealand as part of wider public sector efforts for integrated citizen-centric digital services. One of the goals of the thesis is to gain a better understanding of the current state of design-led PSI labs as a phenomenon through a literature review, supplemented by expert interviews and site visits to labs. The main research component of the thesis explores the challenges with the case Lab and its design-led innovation approach to public services through the perceptions and responses of those closely involved in the case through nine semi-structured interviews. The interview data were analyzed along with supporting internal organizational documentation through reflexive thematic analysis.

The main systemic challenges to innovation in the public sector context were identified as structures of accountability alongside organizational culture and personnel mindsets all reinforcing each other. A challenge unfolding uniquely to the case was changing Lab identity, including aspects of te ao Māori [the Māori worldview]. Two broader categories of responses to navigating the challenges within the context of the case were identified: creating conditions for innovation and facilitating systems learning and delivery. Creating conditions for innovation included the authorizing environment, leadership and innovation culture. The conditions for innovation enabled the Lab to facilitate learning and delivery for integrated services with cross-sector stakeholders. These were achieved through a collective lens of citizen-centricity actioned through the Lab’s approach and personnel mindsets, as well as various strategies for collaboration and openness.

The key findings suggest that the challenges and responses to them largely center on the Lab’s approach in tension with the pressures of the wider public sector. They reveal the Service Innovation Lab as an evolving organization in terms of interacting with the conditions for, learning and delivery for public sector innovation. Such findings can shed light on some of the previously uncaptured, less tangible and measurable aspects of the case. This case study research can serve as an extension of learnings for successive initiatives and provides ground for further studies for this and other cross-sector cases especially in Aotearoa New Zealand and similar contexts.

**KEYWORDS:** public sector innovation, public sector innovation labs, PSI labs, design-led labs, design-led approaches, design for government, case study, citizen-centric
Acknowledgements

A thesis, or any major undertaking for that matter, is never an individual work. I would like to extend a warm thank you to all of the participants, professors, and researchers – especially Mikko and Andrea for kindly offering chats in the very early stages, and Nuria for the support for an alumni lecture on the thesis topic towards the end, our program coordinator Naoko, expert university staff, practitioners, student colleagues, and those beyond who have offered their time, insightful perspectives, and knowledge during this thesis project at Aalto University and around the world, both virtually and face to face. I also owe thanks to all the authors cited in this thesis.

It has been a privilege to meet so many amazing professionals throughout the thesis journey. Thank you to all the interviewees for your enthusiasm, openness, views, further connections, and materials. This thesis would not have been possible without all of you. Your groundbreaking work and wealth of knowledge and experience is an inspiration to me. A special thank you to a key informant from the Department of Internal Affairs. I hope I have done justice to all of your work and what you have shared with me as well as capturing some of the learnings while I have been learning myself.

Thank you to my supervisor Eeva and advisor Emma. It has been exciting to learn in a new area with your inspirational guidance. Your continued support, flexibility, knowledge, and feedback with detailed insights and corrections have been invaluable throughout this process.

Proofreading of the thesis was completed by professional editors.

There are so many kind people who have offered me support over the past months and years in both Finland and Aotearoa New Zealand for getting to this point, much beyond a thesis or a degree. Kiitos. Lastly but not least, love to my dear friends near and far, my family in Helsinki, Keuruu and Wellington – kiitos etenkin äitille kiiveissä ja Mumolle ja Tuijalle, mahtavalle ja rakkaalle tukitimmilleni kotimaassa – and Geoff for all the support and love while going for the extended distance and time.
Foreword

When COVID-19 was not yet part of our everyday, I serendipitously picked up the book “Design for Policy” (2014) from the Aalto library browsing the design and innovation selection shelves. Skimming through it on a summer’s day at Kuusijärvi in Southern Finland, I was instantly drawn to a chapter on PSI labs written by Christian Bason, former head of MindLab in Denmark and a pioneer in applying design and innovation in government. The tension posed by the design in this context and the changing nature of these initiatives started to intrigue me. The idea for writing my thesis on this area started to brew. By this stage, I had tutored on a system thinking course, and got to combine this approach with design thinking elements in practice with a studio course on design in the public sector, supported by a theory class. It struck me that as students working in a design-led way, teams were rapidly able to provide valuable user-centered (or in this instance, citizen-centered) insights to Ministries as our project clients. I started to see the removedness of public servants from the realities of citizen experience and services, the siloed nature of the sector limiting collaboration, the way some policies (or their lack) played out to cause pain points for the utilization of services and the socioeconomic dimensions affecting outcomes. I also learnt the value, yet some limitations, of qualitative and design research in the design process. I saw this as my budding strength and preferred area of focus, perhaps more than evidence-based designing per se.

My motivations for the thesis were to expand my qualitative research and methodological skills with a fully qualitative case research thesis. The opportunity to dive deeper into relatively new subject matter was also an intriguing factor. This focused interest around PSI labs was preceded by broad interests towards learning further about creativity, innovation and innovation management partially sparked by my minor in Management and International Business. Studying in an interdisciplinary sustainable development design program has allowed me to study multiple fields in the past years. At the same time, perhaps a limitation to myself as a thesis researcher is my lack of any one disciplinary background in social sciences with a project of this nature (research into design and innovation). My previous bachelor’s degree background was not strictly in design, but in contemporary art, with creativity and creative research processes and practice, with many principles underpinning design and innovation. However, theory and client project courses during my Master’s degree have allowed me to practice several qualitative and design methods for generating useful insights. Nevertheless, for the Master’s thesis process, this meant a deep engagement in terms of research design, methodology, and executing a qualitative case study analysis with limited previous experience. Towards the end, I also had the opportunity to give back to the Design for Government course community by delivering an alumni lecture on the thesis topic. I have learned so much during this thesis process that I have greatly enjoyed. Besides presenting, the learnings have encompassed: improving my skills in planning and completing an end-to-end research project within a tight deadline, academic information retrieval and writing skills, analysis and synthesis of findings from hundreds of pages of data, methodological and content knowledge, technical skills on multiple programs, namely Atlas.ti and InDesign, networking and communication skills, and independent project management as a whole. I look forward to utilizing and furthering all these skills in subsequent academic and professional projects.

Jane Lehtinen
Helsinki, May 2021
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Summary of terms and acronyms

All-of-government - collaboration at the ministerial and agency level across the public sector system. Sometimes also referred to as “whole-of-government”.

DIA - The Department of Internal Affairs

Incremental Innovation - continuous or gradual improvements to existing processes or products (Fagerberg et al., 2005, p7).

Life-events - moments of significant change in an individual’s life, often requiring multiple interactions with public services.

OECD - Organization for Economic Co-operation and Development

OPSI - Observatory for Public Sector Innovation

Public Sector Innovation (PSI) lab - an organizational form or a unit operating as a separate structure from a larger public sector organization, with a focus on working on complex public issues to improve the well-being of citizens and experience with dealing with government.

Radical Innovation - introduction of completely new processes or products (Fagerberg et al., 2005, p7).

The Lab - the Service Innovation Lab

Wicked Problems - complex, unique problems that are symptomatic of other wicked problems, characterized by no exact definition, right of wrong solutions, knowledge of when the problem has been solved, and those whose solutions can effect problems elsewhere in the system.
Māori terms

Aotearoa - New Zealand, literally translated to “the land of the long white cloud”.

Hui - gathering, meeting, assembly, seminar, conference

Kainga - home

Kaupapa - topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative

Mana - prestige, authority, control, power, influence, status, spiritual power, charisma - mana is a force in a person, place or object.

Manaakitanga - hospitality, kindness, generosity, support. The process of showing respect, generosity and care for Others

Marae - meeting house, a communal and sacred space serving religious and social purposes

Te ao Māori - the Māori worldview

Te Tiriti o Waitangi - the Treaty of Waitangi. A series of foundational documents signed between the British Crown and Maori signed on February 6th in 1840.

Tikanga - correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, plan, practice, convention, protocol - the customary system of values and practices that have developed over time and are deeply embedded in the social context.

Pākehā - a non-Maori New Zealander, especially of European decent

Whanaungatanga - relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging.

Source: https://maoridictionary.co.nz/
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1. Introduction
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1.1 Background

Innovation in the context of the public sector is much less understood and discussed than innovation in the private sector. In the literature, a consensus has emerged recently for the need to explore public sector innovation (PSI) further (De Vries et al., 2015). Particularly public sector innovation labs (PSI labs) have emerged and spread along with academic research attention in the past decade (Bason, 2010; Bukke & Block, 2016; Schuuman & Tõnurist, 2016; Tõnurist et al., 2017; McGann et al., 2018b). There has been initial theoretical research aiming to conceptualize and classify PSI labs and other organizational forms striving for innovation (McGann et al., 2018b; Tõnurist et al 2018), with most published materials being practitioner reports offering surveys and descriptions of operating labs (Fuller & Lockhart, 2016; Kieboom et. al., 2016; Mulgan, 2014; Puttick et al., 2014). The field has rapidly grown in the past years, but case studies of national-level labs in the Aotearoa New Zealand context are still rare (McGann et al., 2018a), with no case studies solely examining the Service Innovation Lab.

In the Aotearoa New Zealand context, particular attention has been paid to co-design in the public sector and the place-based Auckland co-design lab (McGann et al., 2018b; Mark & Hagen, 2020). Extensive empirical research conducted on national-level labs or their challenges is currently scarce (McGann et al., 2018a; McGann et al., 2021). The recent pioneering PSI lab case of the Service Innovation Lab is an example of a large national-level lab that presents a timely reminder of the pressures of the industry, given its recent closure in June 2020 followed by a transition to a newly created government department branch during COVID-19. This thesis views the case through a broad design-led innovation approach, allowing for the inclusion of broader practices unique to Aotearoa New Zealand. These include Māori and Pasifika worldviews acknowledged and incorporated within the Lab’s approach, alongside a focus on cross-sector collaboration in human-centered design approaches (Service Innovation Lab, n.d., Projects). I selected this approach rather than viewing the case purely through design methodologies or tools as is usual in practitioner reports and the field of design (Buchanan, 2015), or reducing the collaborative innovation approaches to a set of toolboxes as a suggested avenue of future research (Gryszkiewicz et al., 2016; Williamson, 2015a) more suitable to the European context.

At Aalto University, several master’s theses have focused on aspects of public sector innovation. In the Creative Sustainability master’s programme at the Department of Design, several recent theses have focused on public sector innovation in the Finnish context with mixed methods approaches (Marton, 2019; Witka, 2020), and autoethnographic and action research cases with design interventions (Berg, 2018; Kokki, 2018). Additionally, theses in other programs from the Department of Design have been written in the area on a wide range of subjects (see for example Gros, 2020; Lerkkanen, 2019; Kantola, 2019; Swan, 2019). Particularly the cross-sectoral National Artificial Intelligence program Aurora AI and the Inland design and innovation lab when it operated as part of the Finnish Immigration Service have featured as cases of multiple theses. Hence when selecting a case, I chose to focus on one outside Finland with a fully qualitative research approach. I had an opportunity to do a case based in Sweden, but settled on the recent Service Innovation Lab in New Zealand as an unexplored case without barriers of language and remoteness due to the COVID-19 pandemic, allowing me to do face-to-face research in support of the qualitative approach (see Section 3.1), which has been noted as suitable for empirical studies of labs’ practices (Gryszkiewicz et al., 2016).
1.2 Research aims and questions

The thesis presents a qualitative case study within a constructivist paradigm in the area of public sector innovation. The single, holistic case focuses on the Service Innovation Lab as a unit within the time frame of its existence as an organization from June 2017 to July 2020.

This thesis research aims to generate a better understanding of:

- the current state of PSI labs and their design-led approaches to innovation, especially within Aotearoa New Zealand;
- the Service Innovation Lab case and its design-led innovation approaches and what challenges these faced within the Aotearoa New Zealand public sector context; and
- how those closely involved with the case perceived and responded to these challenges.

These are achieved through a brief literature review supplemented by expert interviews and site visits, internally available documents from the case and interviews of a selection of practitioners involved with the case. Guided by the epistemological underpinnings, primary data is analyzed through reflexive thematic analysis (see Section 3.3).

The research questions to guide the research to fulfill the aims state above are as following:

1. What are the current issues in public sector innovation for PSI labs and their design-led innovation approaches globally and in Aotearoa New Zealand?

2. What were the challenges associated with the Service Innovation Lab initiative and its design-led innovation approach in the Aotearoa New Zealand public sector context?

3. How did those in key roles* involved with the initiative perceive and respond to these challenges?

*For the purposes of this thesis, I define “those in key roles” as individuals acting in professional roles in the public sector who were closely involved with the Service Innovation Lab case, and had a continuous involvement within it during one or many of the stages of its entire existence. This includes primarily those who worked within the Lab space, as well as the managers who worked at the host organization’s premises. For further details, refer to Section 3.3 and Appendix C.
1.3 Declaration of interest and positionality

I, as the thesis researcher, have no conflicts of interests, as stated in the Privacy Notice and Information for Research Participants (refer to Appendix A). I have conducted this research independently as part of the Aalto University Creative Sustainability Master’s degree design track 30 ECTS thesis component. I purposefully did not seek a thesis position or funding specifically by any organization for a case study in order to allow independent exploration of the topic. The idea for the thesis and selection of case originated from myself, without prior connections to it or the interviewees. I arranged access via formal contact to the case organization and through existing contacts with researchers made through the thesis process.

I will be using “I” for an active voice throughout the thesis to describe my actions, justifications and reflections when appropriate. I acknowledge my positionality as a Finnish-born female who is nowadays also a Pākehā New Zealander, and my previous immersion in the Aotearoa New Zealand context for almost a decade. My positionality and subjectivity brings a bias, and eliminating this is not completely possible. I have interpreted what I have read and what has been told to me through interviewees’ perspectives to the best of my ability. My geographical location residing in both Wellington and Auckland during the conducting of the primary research for the thesis also allowed me face-to-face access to research participants and PSI lab sites in a time of this global unprecedented pandemic crisis.
1.4 Thesis structure

This thesis is structured as follows:

Chapter 1 has introduced the thesis research, briefly framing the background of research and practice to the phenomenon of public sector innovation labs, and presents the thesis aims, objectives and guiding research questions.

Chapter 2 presents an overview of the topics. It focuses on answering the first research question by discussing the academic and some grey literature on the topic of public sector innovation labs and design-led innovation approaches. In addition to literature, it also presents a snapshot of cases and brief synthesized findings on their challenges gathered through interviews and site visits especially in the Aotearoa New Zealand context.

Chapter 3 details the process and design of the study, including methods. Choice of research approach is justified, and methods for data collection are detailed. The research process is described throughout, and the chapter concludes completes with a mention of ethics.

Chapter 4 presents the case context to prime the context for the discussion in the following chapter. This includes the broad governance context to the case, details about the case Lab and some of the projects it has been involved in.

Chapter 5 expands on the previous chapter through the discussion of findings from interviews, which aim to further answer the second, and especially the third research question: How did those in key roles involved with the initiative perceive and respond to these challenges?

Chapter 6 concludes the thesis, and includes a reflection on the findings in relation to the literature and the research aims and questions. This is followed by a discussion of the limitations of the thesis, and the implications for practice and further research.
2. Background
2. Background

In this chapter, I will present a brief introduction to public sector innovation labs and relevant aspects of design-led innovation approaches. The chapter aims to answer the first research question, and to prime subsequent sections of the thesis. Through literature, I will outline general characteristics of PSI labs and design as a problem-solving process, and locate these within a wider field of public sector innovation. Additionally, I present snapshots of three lab cases in government with cross-sector elements, gathered through interviews and site visits, especially in Aotearoa New Zealand.

2.1 Innovation in the Public Sector

Innovation is key for sustained economic growth and the competitive performance of firms, regions, and countries (Fagerberg et al., 2004), and also contributes to economic welfare and social well-being (Dodgson et al., 2014). Innovation and innovation management have been extensively researched in the private sector (Chesbrough, 2003; Christensen, 1997; Fagerberg et al., 2004). However, innovation in the context of the public sector is much less understood and discussed, and not long ago there was a consensus for its need in literature (De Vries et al., 2015); this has started to be increasingly explored since then. Public sector innovation (PSI) is not a completely new phenomenon, for example linking broadly with the New Public Management movement in the 1980s (Osborne & Brown, 2013; McGann et al., 2018b). However, it has received increasing resurgence in practice as well as emerging academic research attention in the past decade (Bason, 2010, Bugge & Block, 2016; McGann et al., 2018b; Schuurman & Tõnurist, 2016; Tõnurist et al., 2017).

There is a rising claim that governments around the world are facing increasingly complex or “wicked” global problems (Peters and Tripp, 1976; Buchanan, 1992; Doorst, 2015), including technological, demographic, and economic changes, coupled with rising citizen expectations for service delivery and decreasing public resources (Bason, 2010). There are several unique features to innovation in the public sector as a context, including democracy, accountability to citizens, and the monopolies public agencies hold. The principle of equality states that all citizens are equal before the law, and therefore expectations of all service offerings being the same; responsibility for legal concerns might hinder innovation, and the inherently political climate with media, opposition, and changes of leadership with elections brings added challenge. Due to these factors leading to risk aversion and short-time gains, PSI has been regarded as a contradiction (Bason, 2010; Bekker et al., 2013; Schuurman & Tõnurist, 2016). Research has noted that “public sector entrepreneurs, boundary crossing networks, empowerment of citizens and experimental policies” (Schuurman & Tõnurist, 2016, p. 81) are essential for PSI, which are challenging to foster in the landscape of public organizations bureaucracy (Bason, 2010; Bekker et al., 2013). According to proponents, PSI can help increase public value by improving public service offerings and their effectiveness, and responding to citizen expectations and needs (Schuurman & Tõnurist, 2016; McGann et al., 2018b).

A major systematic literature review of 181 articles and books from between 1990 and 2004 conducted by De Vries et al. (2015) found that PSI has often been categorized to four main types within a broad range: process, product or service, governance, and conceptual innovation.
Table 1. Public sector innovation types. Source: De Vries et al. (2015, p. 153).

<table>
<thead>
<tr>
<th>Innovation type</th>
<th>Focus</th>
<th>References</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process innovation</td>
<td>Improvement of quality and efficiency of internal and external processes</td>
<td>Walker (2014)</td>
<td>Creation of a ‘one-stop shop’ by a municipality, where citizens can access various services at a single location</td>
</tr>
<tr>
<td>Administrative process innovation</td>
<td>Creation of new organizational forms, the introduction of new management methods and techniques and new working methods</td>
<td>Meeus and Edquist (2006)</td>
<td></td>
</tr>
<tr>
<td>Technological process innovation</td>
<td>Creation or use of new technologies, introduced in an organization to render services to users and citizens</td>
<td>Edquist et al. (2001)</td>
<td>Digital assessment of taxes</td>
</tr>
<tr>
<td>Product or service innovation</td>
<td>Creation of new public services or products</td>
<td>Damanpour and Schneider (2009)</td>
<td>Creation of youth work disability benefits</td>
</tr>
<tr>
<td>Governance innovation</td>
<td>Development of new forms and processes to address specific societal problems</td>
<td>Moore and Hartley (2008)</td>
<td>Governance practice that attempts to enhance the self-regulating and self-organizing capacities of policy networks</td>
</tr>
<tr>
<td>Conceptual innovation</td>
<td>Introduction of new concepts, frames of reference or new paradigms that help to reframe the nature of specific problems as well as their possible solutions</td>
<td>Bekkers et al. (2011)</td>
<td>The introduction of the paradigm that, when assessing a person’s work disability, insurance physicians no longer analyse what people cannot do, but instead analyse what they can still do, hence focusing on potential work ability</td>
</tr>
</tbody>
</table>

They state that most PSI has focused on process innovations within organizations with technological elements, whereas less focus has been on technological process, governance, and conceptual innovations (Table 1) (for more on types, theories, and models of innovation, see for example Hartley, 2005; Śledzik, 2013; Tidd et al., 2006).

2.2 Public Sector innovation (PSI) labs as an emerging phenomenon

PSI labs are specifically created to cope with changes in the innovation landscape and contemporary societal changes mentioned above (Schuurman & Tõnurist, 2016). They have emerged globally as a phenomenon in the past decade, with the highest concentration in the OECD Nordic countries, Europe, USA, Australia, New Zealand, and some Asian countries. Research has also mostly followed focus on these areas (Ferreira & Botero, 2020). In developing countries, similar labs can often be located in the third sector (Tõnurist et al., 2017). The characteristics of PSI labs are composed of “design and user engagement, cross-sector collaboration, open innovation and
new ways of mobilizing data and insights in news ways” (Puttick et al., 2014, p. 5) These “islands of experimentation” (Tõnurist et al., 2017, p. 8) act as separate units utilizing design thinking or design-led methods for public problem-solving (Fuller & Lochard, 2016; McGann et al., 2018b). They mainly center on redesigning of public services (Williamson, 2015), although some explore experimental development of policies (Ferreira & Botero, 2020).

The rise of PSI labs links to the recent trend of platformization in the economy and government as a platform (O’Reilly, 2011). Their emergence is also related to user-centered approaches such as co-creation, co-design, and co-production as well as open innovation (Bason, 2013; Mulgan, 2014; Puttick et al., 2014 as cited in Tõnurist et al., 2017), which has its roots as a private sector framework (Chesbrough, 2003; Fagerberg et al., 2005). What distinguishes the current rise of labs from their predecessors is their focus on users or citizens in services, digitalization, and fiscal constraints (Tõnurist et al., 2015). The drivers can be argued to be multiple, including expanding market logic and widening public servants’ institutional perspectives besides attempts to improve citizens’ lives in the face of contemporary complex problems (Bailey & Lloyd, 2015).

The trend of PSI labs following “labification”(Williamson, 2015b, p. 4) has been viewed as a fad in public management that is driven by public sector marketing motives over those of change, as they can also offer credibility benefits to politicians (Tõnurist et al., 2015). Kieboom (2014) refers to the “political blind spot” (p. 21), which exemplifies the tendencies of labs to depoliticize their actions, including that of their methods (Williamson, 2015b). Although these are

![Figure 1. Map of concepts emerging from literature. Source: Lehtinen (2020).](image-url)
important issues, they are outside the scope of this thesis and are better suited to perspectives arising from political and policy studies. There has also been criticism of the outsourcing of ICT expertise (Williamson, 2015a), and questioning of whether these labs are a new type of actor. Schuurman and Tõnurist (2016) suggest that what distinguishes recent labs is their design thinking approach.

The academic literature on the subject of the PSI labs has largely focused on conceptual and normative overviews (Gryszkiewicz et al., 2016) and not long ago was noted to be rather scarce by a comprehensive review (De Vries et al., 2015). Due to the heterogeneity of labs’ activities, scale, and organizational structures the area of PSI labs is challenging to analyze (Tõnurist et al., 2017), and studies have started to map out the area in the past few years (Tõnurist et al., 2015; Williamson 2015a; Tõnurist et al., 2017; McGann et al., 2018b). There does not seem to be a clear agreement on the concept and definition of the PSI innovation lab (Gryszkiewicz et al., 2016), and the term is sometimes used synonymously and interchangeably with “public and social innovation labs, social labs, policy labs, government innovation labs, innovation teams, design labs, change labs…” or even living labs (Papageorgiou, 2017, p. 6). For the purposes of this thesis, I define a PSI lab as an organizational form or a unit operating as a separate structure from a larger public sector organization, with a focus on working on complex public issues to improve the well-being of citizens and experience with dealing with government. Within these, there are several PSI lab types based on geographic location (national-regional-local) and classification with roles in relation to government, ranging from partner to funder and endorser (Bason et al., 2014). Most innovation labs are rather small units. For example, in a survey of 11 labs globally, Tõnurist et al. (2017) averaged six to seven people, with a range from two to 17. In a survey of innovation labs in Australia and New Zealand conducted by Melbourne Policy Lab, government-based units employed five or less staff (McGann et al., 2018a). However, this number was affected by a few sizable initiatives, so would be even less for most. McGann et al. (2018a) also reported heavy use of external consultants outside of public sector staff.

2.3 Focus on Innovation processes and design-led approaches

PSI labs offer “safe spaces” (Bason, 2010, p. 121) as “testing environments” (Tõnurist et al., 2015, p. 8) to experiment, focusing on the beginning stages of the innovation cycle, identifying and defining problems, quick idea-generation, and prototyping (Lewis et al., 2019; Scuurman & Tõnurist 2016). This is distinct from the diffusion and adoption of innovations (Bekker et al., 2013), which in the PSI landscape is not the focus of PSI labs but rather that of Living Labs (Schuuman & Tõnurist, 2016). Following PSI labs being purposefully composed of small teams, these organizations often lack capacity for implementation and scaling, as well as evaluation measures (Tõnurist et al., 2015). Within the innovation life cycle (Figure 2), the processes of PSI labs can be placed in the first three phases of the cycle, which is characteristic for public innovation initiatives (Lewis et al. 2019; Scuurman & Tõnurist, 2016). Sometimes referred to as the “fuzzy” front end, explorations in this space result in problem-framing through open-ended questions for what should be designed (Sanders & Stappers, 2008, p. 7).

Design-led problem-solving methods, also referred to as designerly methods or design thinking, are evident in PSI lab toolkits, along with data science and digital research and development (Williamson, 2015b). These design-led approaches have recently been employed by governments as an innovation approach to “increasingly enhance [their] problem-solving capacity... in dealing with societal challenges” (De Vries, 2015, p. 146), but are noted to sit uncomfortably
with “traditional” policy and service approaches (Lewis et al., 2019). It is argued that this is what differentiates them from other kinds of public knowledge actors or labs established in previous decades (McGann et al., 2018; Lewis et al., 2019). This type of creative problem-solving, separate from any one field of design, has evolved from the field of practice of industrial product design to deal with increasing levels of complexity with services and systems (Ceschin & Gaziulusoy, 2016) towards “more participatory and cross-disciplinary approaches” (Tjorman, 2012 as cited in McGann et al., 2018, p. 5). These are claimed to be especially suitable for open-ended and novel issues, although not without critical debate (for critique of design thinking, see for example Dorst, 2006; Kimbell, 2011).

“Design-led labs… have been described to prioritise ‘user-centred’ methods such as ethnography, visualisation techniques and collaboration with citizens and other stakeholders to clarify problem definitions and co-create solutions” (Bailey & Lloyd, 2016; Mintrom & Luetjens, 2016 as cited in McGann, 2016). In terms of outcomes and being applied in specific fields of design, design-led approaches in the public sector seem to be largely limited to digital solution and service design, although some policy design is emerging and starting to be explored.

Figure 2. Innovation Life Cycle. Source: OECD (2017, p. 141).

A seminal paper by a leading design scholar Dorst (2011) notes “design thinking” as a paradigm now applied to problem-solving in a range of professional fields beyond design for complex and open-ended problems. Counter to the multiplicity of perspectives preferred by the field of design resisting definitions (Dorst, 2011; Buchanan, 1992), Dorst details the reasoning behind a design-led approach for problem solving. They outline deduction as a type of analysis in predicting results and testing hypotheses in scientific justification, induction as another type of analysis
serving as the core to scientific discovery in answering the “how” based on forming hypothesis, and abduction in what they term as productive thinking for attainment of value instead of facts as an outcome. In abduction, both the “what” and the “how” need to be simultaneously tested on the basis of the known value, which is at the core of design reasoning.

Within abduction, in conventional or “closed” problem-solving, what is not known is the “what” as a designed thing from any order of design from individual items to systems, where its workings and the desired value outcome are known. However, in more complex “open” problem solving, only the end value is known and the creation of the thing as a designed entity and its working needs to be solved simultaneously. In order to achieve the latter, framing as an inductive activity of “a creation of a novel standpoint from which a problematic situation can be tackled” (Dorst, 2015, p. 26) aids this as a unique feature of design thinking. This is followed by proposing of the “what” to test the “how” with the help of conventional “closed” problem-solving, completed by deduction to determine if the “what” (the thing) and the “how” (working principle) can create the value. Following from this, design is defined as a mix of ways of thinking (Dorst, 2015).

Figure 3. Diagram of design as a complex problem-solving process.

2.4 Design at increasing levels of complexity

Ever since Herbert Simon linked design to management and organizations (Simon, 1968 as cited by Junginger, 2008), design has increased in its application to increasing levels of complexity and integration to organizations (Björklund et al., 2018; Dorst, 2015). This also applies in the public sector (Buchanan, 2015). Buchanan, a leading design scholar, details four orders of design (Figure 6), where design starting from problems of symbolic and visual communication has expanded as a problem-solving framework derived from the field now applied to increasing levels of complexity up to the fourth order of complex systems, environments, and organizations.
Third order design deals with activities and organized services—a realm where many PSI labs operate—while fourth order design “addresses the fundamental question of how a collection of independent parts becomes an inter-dependent whole.” (Buchanan, 2015: 12). These relate to the Danish Design Ladder’s steps of non-design, design as aesthetic or form-giving, design as process, and design as strategy (Danish Design Center, 2015). The ladder can be used as one framework to measure the maturity of design in an organization, which has been noted to be increasingly progressing towards the core or organization (Björklund et al., 2018). Junginger (2009) presents four archetypes for this integration (see Figure 7), where most PSI labs could themselves be seen as the integrating design, whereas they serve somewhere between an external resource and peripherally part of the wider host organization (for more on key pieces on evolution of the design field and design thinking, see for example Cross, 2007; Lawson, 1980; Papanek, 1972; Rowe, 1987; Simon, 1969).

![Figure 4. Four orders of design. Source: Buchanan (2015, p. 14).](image1)

![Figure 5. Integration of design in organizations. Source: Junginger (2009, p. 5).](image2)
2.5 PSI landscape within Aotearoa New Zealand

Mark and Hagen (2020) outline a snapshot of a selection of literature in the Aotearoa New Zealand content centered on co-design, in which they note “co-design” as a term and in practice across government in the past five years with limited research. They note the challenges and risks to design in the Aotearoa New Zealand context as lack of culturally connected practice, and supporting “good practice” in being aware of and going beyond imported design tools and methods. Publications have been dedicated to co-design with Māori by Māori with accompanying values and practices (Menzies et al. 2017; Whaanga-Schollum et al., 2016 as cited in Mark & Hagen, 2020). Additionally, challenges exist for dedicating enough resources and sustained implementation, demonstrating value and skills, capacity and commitment to support participation and partnership (Mark & Hagen, 2020, pp. 16–18).

New Zealand has been noted to have a vibrant and growing interest in PSI labs. A survey of 52 PSI labs across Australia and New Zealand conducted through the Melbourne Policy Lab by McGann et al. (2018) revealed the existence of 15 labs in New Zealand, of which 6 were exclusively operating within various levels of government (p. 35). Most labs in the survey were categorized as government controlled, being based within and funded by either national or regional government or government-enabled through relying on government funding, and were based at a parent organization (p. 5). The top challenges of government-based labs in the New Zealand and Australian contexts, in decreasing order, were reported as follows: risk-aversion within the organization; funding constraints; lack of capabilities and skill sets within the organization; and lack of operational capacity within the organization (p. 17).

According to a consensus from experts in the field, including thesis interviews I conducted and consulting the Designer Institute of New Zealand (C. Veninga, personal communication, 26 November 2020) as the leading organization representing all areas of design, design entered the public sector consciousness in New Zealand well into the 2010s. Private design consultancies such as ThinkPlace were noted to run early workshops to build capability in the sector, and the strategy development program Better by Design by New Zealand Trade and Enterprise (NZTA) was pointed as playing a big role in making it known amongst public servants, despite the program’s specific focus on customer-centricity for businesses. A design piece by Auckland City Mission on poverty, which was based on a research study, has been formative in bringing a citizen-centric view to senior leaders (The Family 100 project, 2014). The piece was illustrated by an archetypal persona navigating the challenges between various public services, pointing out pain points and the lack of coordination between agencies. The Inland Revenue Department ran design workshops in the late 2000s (McLean et al., 2010). The formation of the Auckland Co-design Lab in 2015 exemplified early adoption of design in a local initiative accountable for both local and national level. Result 10 government agenda has been a priming and influential program to integrate design into the public sector policy and service development and delivery (see Section 4.1).
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2.6 Snapshots of labs operating within government

Here I present a snapshot of current national level cross-sector labs or units formed on the basis of findings from interviews with lab leads and site visits through brief case descriptions (Yin, 2018). The case snapshots serve as illustrative situated examples of types of cross-sector labs or units operating within government, their approaches and some contextual factors affecting them. The selection of labs was made with the criteria of having a cross-sector element at a government level and through snowball sampling. The sampling started through connections at Aalto University, leading to interviews and site visits where possible to present a brief snapshot of cases outside the main case of the thesis. Three interviews of 45 minutes each were conducted with a total of four practitioners. One interview was conducted online and two face to face during site visits, of which the other was a group interview. The interviews were recorded with the permission of the interviewees, which I then listened through in order to make a combination of transcripted sections and notes. These interviews allowed me to gain general knowledge of the area, to improve my interviewing skills, and test the success of responses to some questions in interview schedules prior to the more specific case interviews. I was also introduced to relevant gray literature through the interviewees.

Some challenges emerging from these interviews included the role of leadership and situatedness of the labs affecting their operations and work; the early maturity of the approach and field the labs operated in requiring communication for the wider public service on the part of the practitioners; and continuity of funding. With the labs in the Aotearoa New Zealand context, questions in aligning with te ao Māori and the Māori population were present, especially strongly with the Auckland Co-design Lab.
Inland, which is part of the Finnish Ministry of Interior, is a small design and innovation team of in-house designers that operated within the division’s Digital Services support unit (Migri) between 2017 and 2019, and shifted to the Ministry after that. The mission of InLand is to co-design new solutions to improve the experience of immigrants through a human-centered design approach, experimentation, and technology. The goals of the lab are to create an experimental culture leading to organizational change, to bring a human-centered approach to the organization’s projects, and to increase cross-agency collaboration through projects. The four different operational models of InLand include leading to consulting, participating through the life of a whole project, consulting, and building space for collaboration. Their selection depends on suitability to the project and partners.

Inland was set up with help from Fjord design consultancy, with a founder’s vision to widely collaborate beyond the organization. However, a higher up mandate for projects with wider collaboration and societal agenda was missing, and contrary to initial ideas the lab was located and funded within the unit and the focus became about in-house designers operating in alignment to Migri goals. This exposes the need for high level support from the public sector in order to have a cross-sector mandate, as well as a need for a separate space and funding in order to be highly collaboratively innovative beyond a single parent organization. The lab shifted to the Ministry level for more strategic work in 2019, a move that allowed for the continuation of the lab to avoid the trend of labs’ short life-cycles and the staff a choice to take more work at this level.

Projects at Inland have included the pioneering “Kamu” chatbot for answering immigration queries. This was later developed into a series of chatbots, which allows citizens to receive information from three different agencies through the same chat, depending on their need, which frees up a customer call center service person’s time for more complex tasks. Qualitative user research informed, for example, the chatbot personality, and projects were frequently prototyped directly with citizens. Other projects have included a scoping bringing together a cross-sector group for insights into sharing data for the benefit of asylum seekers as well as a Q & A calendar communication project debunking some circulating false information that was discovered to exist in relation to the units services. In addition to projects, there has been a year-long service design ambassador program as an initiative to build capability through practice with groups of public servants from beyond the unit to enrich their practices (SISCODE Deliverable 4.2, 2020).
Auckland Co-design lab:  
A place-based lab in the southern part of the largest city in New Zealand

Nested within the Auckland City Council’s Southern Initiative team, the Auckland Co-design lab is a small innovation team embedded in the southern area of the city of Auckland with a social innovation mission. A long-running team of about five people currently, the initiative was established in 2015 with a club funding model from a mix of 11 local and national-level agencies. Besides Auckland Council, these include several ministries and the Police. The purpose of the lab is to lift the capability of citizens to produce equitable social and economic outcomes among families and youth within South Auckland, an area of pronounced complex social issues.

The Auckland Co-design lab has a whānau [family-centered] (design) approach, where work undertaken looks systematically at the wider context of individual people within their families and wider communities. This model also pays close attention to sharing power with communities, letting go of an expert-led model common to the public sector, and hosting spaces where citizens are enabled to build their capability and where projects are often even citizen-led. This requires criticality in unpacking power and how it is held within the framework of the Treaty of Waitangi in Crown-Māori relations is key with continuous learning in this space at the Lab.

A characteristic of the Auckland Co-design Lab’s projects is their long-term nature, with most projects currently being at least 24 months long. Work also aims to build on existing synergies between initiatives and agencies, filling a void in connecting agencies and communities for work that other agencies might not have the mandate for. An example of a current project is Co-design Mamas, a peer-to-peer initiative supporting mothers to enable the best conditions for their children in the crucial development time of their first years of life. Past projects include the Attitude Gap challenge, which uncovered insights for solving persistent youth employment by looking at perspectives and wider ecosystems of youth, employers, and stakeholders and identified future opportunity areas. Current wider work includes leading the way in ethics specifically in co-design, as this area is lacking attention in the Aotearoa New Zealand context.

The initiative was initially a two-year prototype with innovation funding, and an evaluation report of a traditional kind focused on a program lens with inputs and outputs was commissioned. After the prototype phase, the lab entered a club-funding model where the Auckland City Council matches funding from multiple national-level agencies. Some of the agencies are on yearly finding contracts, which adds precariousness (Tangaere, 2018).
**Behavioural Science Aotearoa: a cross-agency unit in the New Zealand’s justice sector**

Behavioural Science Aotearoa is a dedicated behavioral science function located within the Ministry of Justice, and works across the justice sector with partners such as the New Zealand Police, Department of Corrections, Oranga Tamariki [Ministry for Children], The Crown Law Office, and Serious Fraud Office. The unit has been operating since 2019, focusing on understanding people’s behaviour to change it for better justice outcomes. It does this through evidence and methodologies from across social sciences, and recommending and testing those solutions with stakeholders to create locally applicable evidence-based insights. The team has four functions: understanding behaviour, nudging, advice, and capability-building. A staff of 10 has core competencies across a range of disciplines, spanning across natural and social sciences such as psychology, neuroscience, and criminology, and also expertise in service and user experience design and te ao Māori. The unit has been operating since 2019 with a cross-sector governance group setting the strategic direction and areas of priority, and an academic network across New Zealand and Australia for technical advice.

The unit is the biggest of its kind in the behavioral science field in New Zealand. It takes inspiration from the more established field abroad, but adapts it to the unique local context. The aim is to advance more accessible and culturally aware systems. The testing element is critical in achieving this, especially in regard to the Māori population, who tend to have worse justice outcomes coupled with historical injustices from the state. Yet there is not always evidence and testing in this context and benchmarking from abroad is not fully applicable.

The unit differs from most PSI labs in their further focus on research and evaluation. The team did not identify themselves as a lab, although similar elements are present within the unit, including broadly following the double diamond design process model. Due to the early stage maturity of the field in New Zealand, the team identified communication and capability-building for the area as a time-consuming part. With advice, one challenge is to achieve a fine balance between rigor and often long processes, all the way from research through to co-creation and testing in matching the rather fast pace of the public sector. Another noted challenge is perception of advice from research taken at face value as an end point, whereas the testing is an essential element in the approach generating practice-based evidence for policy and service design.

The projects have included areas such as supporting the Police in decision-making and resolution after offenses have occurred, how to increase attendance in court, supporting people in not breaching conditions for protection orders, and lately, behaviors related to COVID-19. The funding is currently for two years from the innovation fund, which has created pressures to set up, recruit, expand, deliver, and evaluate in this short space of time. The next round of funding is currently being negotiated (Behavioural Science Aotearoa website, n.d.).
3. Methodology, Methods and Process
3. Methodology, Methods and Process

In this chapter, I detail the process and design of the study, including methods. I start with an outline and a justification of the research approach and mention other methods I considered. I follow this by details of methods for data collection: literature review, supplementary methods of interviews and site visits, document analysis, and semi-structured interviews. Additionally I describe gaining access to the organization. I follow this by a section on data analysis, particularly reflexive thematic analysis. Throughout the chapter, I describe the research process and conclude the chapter with a mention of ethics.

3.1 Research approach and design

This thesis presents qualitative exploratory research into the phenomenon of PSI labs in the Aotearoa New Zealand context, utilizing a single holistic case study approach with constructivist underpinnings. Qualitative studies, particularly explorative studies within the qualitative tradition, are especially appropriate as an open ended approach when not enough is known about the phenomenon (Badenhost, 2016; Grey, 2018). Qualitative research has also been identified as suitable for the topic on PSI labs that “demand[s] an explorative approach for an initial investigation”—especially with empirical studies of labs’ organizational practices (Gryszkiewicz et al., 2016, p. 76). I have chosen an empirical research approach of research into or about design and innovation as opposed to a theoretical, artistic, or a combination approach for research through design in the academic context, or research for design especially suited to the field of practice.

Figure 6. Diagram of research design. Source: Lehtinen (2021).
As illustrated in the diagram of the research design (Figure 12), the study is situated within the broad area of public sector innovation, and specifically PSI labs, which encompasses an interdisciplinary approach. The research questions are presented in order of narrowing scope in a continuum from the broad, in terms of the global, to the more local context (RQ1), and from the case and its approach as a whole (RQ2), down to individual perceptions (RQ3). I used snowball sampling to gain access to contacts and participants as part of the supplementary methods for the pre-interviews and site visits, and especially for the main method of the semi-structured case interviews. The size of the circular bubbles in the diagram illustrates the respective weight placed on the methods in forming the findings, where it rests most on the nine semi-structured case interviews, followed by the supporting document analysis and literature review, and the supplementary methods of interviews and site visits.

A qualitative approach that heavily leans on interviews supported by document analysis makes a significant contribution through methods not commonly used in the literature. Multiple previous studies have used a survey approach (Tõnurist et al., 2017; McGann et al., 2018), analysis of secondary sources (McGann et al., 2018b; Mark & Hagen, 2020), and case studies based on survey data (McGann et al., 2020). I considered alternative research approaches earlier on, when only the broad topic and the first two research questions were loosely formed. At that stage, the research could have taken a mixed-methods approach with the inclusion of a survey for determining the widespread nature of PSI labs in the selected context. I received potential results from a large-scale research survey of mapping labs in Australia and New Zealand early in the thesis process, but despite my curiosity about this content and the method, I decided against inquiring in this direction of being extensively informed by results from other surveys, or designing a survey myself, in favor of a solely qualitative study design with the aim of going more in-depth and focused.

When I selected a case study approach, there was a decision to be made about multiple embedded cases of projects within the case. I selected a single unit of the whole Lab initiative as the case because of the placement of the study in the field of innovation research, rather than in the field of service design for example, along with the suitability of the unique context. As the case was not ongoing at the time of starting the thesis research, methods such as participant observation that were originally considered as suitable for cases to be paired with interviews, were out of the question.

Robson (1993) defines a case study as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context, using multiple sources of evidence” (p. 146). Further, Simons (2009) emphasizes the unique nature of the phenomena being studied. A case or ethnographic study has been noted as suitable for the topic, as the elements of a PSI lab are “context specific and can only be determined on an individual basis” (Papageriou, 2017, p. 23).

Here I would like to note, echoing Simons (2009), that case studies are not always solely qualitative. Although they are often equated with the qualitative, they can additionally have quantitative elements through a mixed-methods approach. In this case I have focused on the qualitative methods of document analysis and semi-structured interviews, although a survey for answering my first and second research questions could have been performed. I have excluded this mixed-method approach in order to narrow on a more in-depth and rich understanding of this one case, although it has sacrificed some breadth of research. I will further outline the reasoning for my main qualitative methods for data gathering below.
Case studies are not suitable for generalizations (Yin, 2018). Case studies that examine initiatives not currently in operation particularly present limitations on the methods, as those requiring involvement in the current are ruled out. These methods include, for example, participant observations, which I originally planned as a complementary method prior to the closure of the case. This renders the researcher’s position more distant, and perhaps more objective, and to a position unable to effect change within the case activities for example through action research. However, one advantage in the selected thesis case, particularly with its focus on the challenges, is that the distance created by time can potentially elicit more honest reflections from interviewees. Additionally, reviews and wrap-up materials produced after the case concludes have allowed for further sense-making.

Yin (2018) outlines six sources of evidence to be used in case studies: documents, archival records, interviews, direct observation, participant observation, and physical artifacts. Each has their strengths and weaknesses (see Yin, 2018, p. 114), include a variety of materials, and are complementary to each other. Of these, I have chosen various documents and interviews which I will detail on the following pages. Keeping a case study database with the data and the researcher’s report informed by the extracted data and notes is essential in preserving the data in a collectable form and increasing the reliability of the study (Yin, 2018).

The initial versions of my research questions were informed by Gryzckiewicz et al. (2016) in an exploratory paper presented in the International Journal of Innovation Management on the cross-sector innovation labs phenomenon, including those in the public sector, drawing from literature across innovation management, open science, and open government literature. Gryzckiewicz et al. (2016) posed specific questions for future research alongside suitable methods and topics. The questions posed that I initially selected and were inspired by were: “What are the collaborative innovation practices and ‘toolboxes’ applied by innovation labs? What are the best ways for the innovation labs to organize themselves in that respect?” (p. 87). I also noted that Williamson (2015a) posed a selection of questions, which included: “What is ‘laboratory life’ inside a policy innovation lab? What problem do they define, by what methods?” (Williamson, 2015a, p. 268). What Williamson (2015a) was specifically discussing here was within the wider landscape of PSI labs, which applies to my research. Along with the reported challenges for PSI labs revealed in the wider literature (Tonurist et al, 2017; McGann et al., 2018a), these questions offered a starting point in informing my next set of draft questions: What are the design-led innovation practices and set of tools employed by the PSI lab case as part of their wider innovation practices? What challenges did these design-led innovation processes face, and if they were being negotiated, how so? What needed to be taken into account and what emerged, considering the political cross-sectoral context of the public sector?

Following the focus and getting acquainted with the area through literature (McGann et al., 2018; Mark & Hagen, 2020) and the professional community in Aotearoa New Zealand (see Section 2.5), it became evident that a focus on methods and tools was not best suited to the context. Therefore I adapted my initial questions to be more broadly encompass design-led approaches, of which innovation processes, specific tools, and methods would fall under, but which would also allow for inclusion of other elements such as Māori and Pacific Island worldviews unique to the case study context. Therefore, through some iterations, I adapted the research questions to their final form (see Section 1.2): What are the current issues in public sector innovation for PSI labs and their design-led innovation approaches globally and in Aotearoa New Zealand? What were the challenges associated with the Service Innovation Lab initiative and its
design-led innovation approach in the Aotearoa New Zealand public sector context? How did those in key roles involved with the initiative perceive and respond to these challenges?

In the earlier stages of the thesis process, I considered alternative methods. Prior to deciding on a specific case, I considered pairing interviews with participant observation for triangulation. However, once I picked a historical case, this limited the methods available. Had the study not been limited by time considerations and taken a broader level focus building on from the first and second research question, a survey could have been executed. Despite my curiosity with this method, I chose to not go towards a mixed-methods approach. Instead, I went in favor of a deeper, solely qualitative focus that is exemplified by the choice of a single case and the third research question. This added the focus on the perceptions and experiences of the participants, and also cemented my epistemological underpinnings as constructivist and subjectivist.

I was also aware that surveys can be challenging to do well without prior experience, as my prior experience is limited to extracting and visualizing statistics from the results of a large-scale survey. Additionally, surveys require a considerable amount of time. Therefore, I concluded that had I gone down another direction and approach, I would have preferred that to be the main method for a comprehensive thesis focus.

Another, quite unique consideration during this global pandemic was making use of the opportunity of being able to conduct face-to-face interview research in New Zealand. I spent the time I could have potentially spent on gathering insights through a survey on site visits, further interviews and analyzing the qualitative data thoroughly.

3.2 Methods and process for data collection

3.2.1 Literature review

I completed a literature review (1) for a broad understanding of public sector innovation and PSI labs globally and in Aotearoa New Zealand (2) to attempt to clarify design-led approaches within PSI labs and (3) to identify any potential issues associated with PSI labs and their design-led approaches. The thesis was led by the literature review to fulfill the first thesis aim, suited for my intention of mapping these themes and challenges on the phenomenon and locating a research gap (Snyder, 2019). My goal was to explore the phenomenon for setting the context for the case study as well as to identify gaps and initial questions for informing the direction of the thesis study. Following an initial literature review, a second round of literature was conducted after forming the first research questions on the basis of the initial review, selecting the case, and forming the research design.

The second round of literature review and interviews briefly expanded the literature to the Aotearoa New Zealand context, and further on design-led innovation approaches and some seminal design literature as well as including some monitoring by adding more recent articles published in the past two years. This led to the inclusion of articles adding a further element of design studies. During this round, I learned about advanced literature search techniques, including using boolean operators of OR for synonyms, as well as AND to retrieve results that had all of the search terms. I also used phrase searching to search for the specific certain order or words and truncation (*) to retrieve words with all the possible endings, including plurals (eg. innovation
lab* will show results including innovation lab and innovation labs) (Aalto University, 2007). I set the time period for literature again from 2010 now up to 2021, and conducted the search on the Aalto library database and Google Scholar. Sources were also supplemented with recommendations from practitioners and researchers, which I would have otherwise overlooked. The literature review is representative, not exhaustive.

**Figure 7.** Citation chaining: mapping connections of references within selected literature. Source: Lehtinen (2020).

### 3.2.2 Site visits and interviews

Moving on to the focus specifically in the landscape of PSI labs in Aotearoa New Zealand after the initial literature review on a global and broad level, it became evident that peer-reviewed academic literature concerning the local context was in particular very limited. I concluded this after a second literature search of New Zealand/local sources returned very few results and also following discussions with key organizations and professionals in the area besides my advisor, who researches the field in New Zealand and Australia.

This led me to departing from my original plan of solely relying on an academic literature review by broadening the types of materials included in the initial review as well as seeking additional primary sources of information. I expanded secondary sources to include a selection of gray literature: video presentations, professional reports, and other material produced by relevant organizations in the area of public sector innovation. The fact that even these secondary sources, somewhat limited in my opinion, required additional ways of gathering information in the area beyond an expanded literature review to answer my first research question to gather an understanding to prime the case study. I decided to conduct pre-interviews following a semi-structured format with local professionals in the field in addition to visiting a small selection of labs in operation in Auckland and Wellington.
3.2.3 Document analysis

This method is “often a helpful precursor to observing and interviewing, to suggest issues it may be useful to explore in the case and to provide a context for interpretation of interview and observational data.” (Simons, 2009, p. 23). Yin (2018) categorizes documents to include personal documents such as emails, letters, calendars, diaries, and notes; agendas and reports of events; administrative records, including proposals, progress reports, and other internal records; studies and evaluations of the case; news articles and other media materials. Of these, I selected internal documentation, including documentation from retrospective meetings (e.g., “agendas and reports of events”), and a progress and final report (e.g., “administrative records”) and other wrap-up documentation from the case of the Service Innovation Lab to analyze.

The strengths of documentation are as follows: stable and are thus able to be reviewed multiple times in the same conditions; unobtrusive in terms of not being created for the case study; specific with exact details and also broad; and being able to cover a wide array of events in various times and contexts. Their weaknesses can be the challenge of access or finding them, and bias in both selecting documents and the bias of the authors of the documents. As documents may have this bias, they are not always accurate, and should be considered for the context and purpose they have been produced; they “should not be accepted as literal recordings of events that have taken place” (Yin, 2018, p. 115). Document evidence can be useful in confirming data from other sources. On the other hand, if document evidence is contradictory to other evidence, this calls for further inquiry into the area (Yin, 2018). Reflexive thematic analysis was selected as the analysis approach, with coding assisted by the qualitative data analysis software ATLAS.ti.

A selection of internal documentation (8) was shared with me through some of the interview participants, of which one was a close-up of a section of another document. These included unpublished reports of early delivery in the case Lab’s prototype phase and of the whole Lab with all its phases, a wrap-up document of the Lab timeline made during the closing up stage of the Lab, Miro boards from team meetings, unpublished blogs, and a presentation. I chose to conduct an analysis of five of these (refer to Appendix E.) after determining that they offered sufficient relevant material for findings. The rest of the documents served as useful background information to the case, alongside publicly available material.

Some factors considered in selecting these particular materials included mention of them by several interviewees, the interviewees providing an overall picture of the Lab’s life cycle, and mostly anonymous reflections from team members to supplement those gathered through the interviews. The latter was especially valuable, as public documentation often contained either very little or very broad mentions of these materials. The public documents selected for analysis included a selection of internationally published material and materials from the website. Combining these with other accounts allowed for contrasting of the materials made for the purpose of public communication with the more private reflections.

During the thesis process, I also made a request about any collection items on the case from the National Library of New Zealand, which is also operated by the Department of Internal Affairs. This returned no results from their collections (see Appendix F). I was pointed to the possibility
of making an Official Information Act process to access government records, such as reports and foundational documents, which I had already looked into as a possibility. I chose not to go down this path once I was given access to the internal documentation by a selection of interviewees. I was aware of the limitations any further documentation would provide in additionally answering my third research question, instead moving on to focus on the interviews.

### 3.2.4 Semi-structured interviews

Interviews as a method are suitable for the purposes of gathering interpretative data (Lewis-Beck et al., 2004) on topics, can be used well in combination with other methods, and are appropriate when the interviewer is the researcher closely involved with the research process (Robson and McCartan, 2016), such as my individual thesis project. Interviews can often be found in case studies, and they are suitable for “suggesting explanations of key events, as well as the insights reflecting participants’ relativist perspectives” (Yin, 2018, p. 118).

Face-to-face interviews allow the most data with the addition of the presence of facial gestures and body language. Interview questions need to be well formulated, and long, double-barreled, jargoned, leading, and biased questions should be avoided (Robson & McCartan, 2016). Questions touching on potential tensions and more sensitive issues should be saved for last. The interviewer should maintain a calm and friendly manner, and refrain from excessively commenting on the content in order to let the participant speak. Recording allows for precise recalling of what was said, and transcripts to be made. These need to be accurately translated, and attached to the research report. After several interviews, comparisons can be made, and reflection can take place (Muratowski, 2016).

Interview data should always be recorded, either with notes and/or audio recordings. Transcripts should be made promptly after the interview, as it may be harder to remember the nuances of the interview, meaning, and tone of what the interviewee said as time passes (Simons, 2009). Transcribing is best done with the researcher themselves, as opposed to transcription service, in order to get to know the data more intimately, although it does take time and energy (Yin, 2018), and therefore ample time needs to be devoted to these tasks associated with interviewing in the thesis process.

My reasons for choosing semi-structured interviews was their relatively limited time requirements and suitability for a novice researcher, as opposed to other types of interview methods. I have additionally concluded that interviews with practitioners, particularly with lab leaders and staff, can offer up-to-date perspectives on the phenomenon of PSI labs and their practices. In the field of PSI in regard to the recent wave of labs, there is only approximately a decade of recent practice and limited academic research, of which the peer-reviewed journal articles take some time to be published, and therefore, tend to lag behind recent practice and developments.

I chose to conduct individual interviews, with the exception of one case interview, which included two interviewees in the same role over time. This choice was to eliminate interviewees potentially holding back information in the presence of other individuals who were involved with the case. I anticipated that I would get various views on the same topics, some of which would be perhaps conflicting. Therefore, this justified separate, individual interviews.

The main weaknesses of semi-structured interviews has been noted as providing a subjective narrative of the participants’ experience, opinion, attitudes, and perceptions; recalling
information might not prove to be factual, the participants may not disclose everything, and
there might not be any way to check the reliability of the responses (Muratowski, 2016; Robson
and McCartan, 2016). However, I note that the former is precisely why I have selected it as a
suitable method for my third research question. The relational interview setting might also alter
some of the responses, and this has brought forward arguments about the validity of the data
acquired with this method (Robson and McCartan, 2016). To some extent, in my opinion this can
be minimized
with the interview being socially adept, non-threatening, and experienced with a specific type of
interview. The main challenge was how to approach and get information about the tensions and
contradictory issues present with the case.

As semi-structured interviews can only produce partial understandings of an issue, they
are unlikely to yield deep and complex data by themselves. They are suggested to be used to-
gether with supplementary methods (Lewis-Beck et al, 2004). The flexible nature of the method
with the flow of the interview might prompt the interviewer to ask additional, clarifying ques-
tions which would obviously depart from the interview guide; although this is the strength of
semi-structured interviews, they also add to a challenge to the interviewer whose interview skills
would influence how much information is gathered.

Lastly, interview data should always be recorded, either with notes and/or audio record-
ings. In regard to research ethics, recording of interviews needs to happen with the permission
of the interviewees (Robson and McCartan, 2016, p. 294). Transcripts should be made promptly
after the interview, as “the longer it takes for transcriptions to be completed, the harder it may
be to recall the exact nuances of the interview and the meaning and tone of what the interviewee
said“ (Simons, 2009). Transcribing is best done with the researcher themselves, as opposed to a
transcription service, in order to get to know the data more intimately, although it does take time
and energy (Yin, 2018), and therefore ample time needs to be devoted to these tasks associated
with interviewing in the thesis process.

Access to the sample

In October, I formally approached the Department of International Affairs Digital Pub-
lic Service branch that was responsible for overseeing the Service Innovation Lab and in-
tegrating its work. I did this in writing through a request for a case study with a signed let-
ter in which I outlined the purpose and context of my study and asked to be pointed to a
key contact at the organization, which I emailed to two email contact addresses listed on
the Service Innovation Lab website. This request was responded to by a staff member from
New Zealand Trade and Enterprise and put forward to the Department of Internal Affairs
to locate the right person. After receiving the request, a manager from the Integrat-
ed Services team from the Digital Public Service branch at the latter contacted me and
became a key contact. They gave me general information on the phone on the case
and gave contact details to the most relevant people out of over a hundred individu-
als who have been involved with the case over the years. I got connected to three people
for interviews in January, followed by suggestions for further contacts from some of them. This
formal route has ensured me access to interview several long-term managers who are still working
at the organization, a broad view of the initiative over time, and to also to some key contacts out-
side the organization. I have tracked another stream of interviewees of the Lab staff who moved on to various other organizations through contacting them individually, as described below.

Initial interviews for my first thesis objective of gathering understanding of public sector innovation and PSI labs were set up on request through researchers in the area whom I had conversations with during the beginnings of the thesis process, including my advisor. I conducted a 60-minute remote video interview with the leader of Inland Lab in Finland and two 45- to 60-minute face-to-face interviews with managers of Auckland co-design lab and Behavioral Science Aotearoa in New Zealand, also accompanied by a senior advisor. Once I was set up with the first case interview with a staff member involved with the Service Innovation Lab for my second and third thesis objectives, throughout the interview, names of other people involved with the initiative emerged, whom I asked to be linked to. I have received a response from all of the interview requests sent. This method, called snowball sampling or chain method, can prove effective in gaining access to groups by initially selected interviewees referring to potential future interviewees for the study through their networks. Snowball sampling falls under non-probability sampling, often used in qualitative research (Naderifar, 2017).

### 3.3 Analysis of data

The criteria I set for the analysis method were as follows: compatibility with constructivist qualitative case studies and my selected methods; suitability for “What” and “How” questions; and having a strong inductive component and being thoroughly doable within the thesis timeframes. Based on these, general inductive analysis (Yin, 2018), including grounded theory, types of thematic analysis (Braun & Clarke, 2006), and content analysis focusing on meaning over quantitative (source), emerged as compatible options. I chose the reflexive thematic approach due to it fitting the criteria I outlined best: being fully qualitative and theoretically flexible in fitting to the research design and its underpinning epistemology. My previous experience also provided a good basis for expanding my learning to this analysis method. Braun and Clarke (2006) outline the following six phases to thematic analysis, as shown by Table 3. Since the original paper, they have rephrased the three steps as “generating initial themes,” as the researcher is the active instrument who shapes the themes (Thematic Analysis, 2021).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizing yourself with your data:</td>
<td>Transcribing data (if necessary), reading and re-reading the data, noting down</td>
</tr>
<tr>
<td></td>
<td>initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes:</td>
<td>Coding interesting features of the data in a systematic fashion across the entire</td>
</tr>
<tr>
<td></td>
<td>data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes:</td>
<td>Collating codes into potential themes, gathering all data relevant to each</td>
</tr>
<tr>
<td></td>
<td>potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes:</td>
<td>Checking if the themes work in relation to the coded extracts (Level 1) and the</td>
</tr>
<tr>
<td></td>
<td>entire data set (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td>5. Defining and naming themes:</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the</td>
</tr>
<tr>
<td></td>
<td>analysis tells, generating clear definitions and names for each theme.</td>
</tr>
<tr>
<td>6. Producing the report:</td>
<td>The final opportunity for analysis. Selection of vivid, compelling extract examples,</td>
</tr>
<tr>
<td></td>
<td>final analysis of selected extracts, relating back of the analysis to the research</td>
</tr>
<tr>
<td></td>
<td>question and literature, producing a scholarly report of the analysis.</td>
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</tbody>
</table>
I bring my bias to the data gathering, especially in analysis and interpretation. My position of a Western worldview, previous professional role as a facilitator, and (inter)disciplinary position studying sustainability and business studies while being based in the study field of design at the Department of Design, and assumptions of interviewees and what they have said formed through the process. However, having been exposed to a variety of cultures and accompanying worldviews from an early age has already allowed me to reflect on my own. Due to my age leading to lack of living through some changes in the public sector that I describe is also a bias of a kind, which I have aimed to correct in the process though helpful pointers from those more aware. To minimize the unreliability generated by these biases, I have checked back with all case interviewees with quotes and analysis sections of the thesis before publication, although that might in turn increase participant bias. In my opinion, this is good practice for courtesy, and was additionally requested by one particular interviewee.

A total of nine case interviews were conducted encompassing nine interviewees between December 2020 and March 2021. Two interviews were conducted with the same person, and one interviewee entailed two people in the same professional role in relation to the Lab case. The duration of the interviews ranged between 40 and 100 minutes, with an average of 70 minutes each. The face-to-face interviews took place at cafes and Victoria University’s premises in central Wellington, and one was partially conducted at the Lab host organization’s current office. The interviewees were rather evenly involved in various phases of the lab in the roles of manager (n=2), Lab lead (n=3), advisor (n=4). One additional planned interview did not go ahead. There were multiple factors surrounding this, including confidentiality concerns. Further interview contacts of those in additional professional roles besides those mentioned were suggested by the time of concluding these interviews, but I made the hard choice not to pursue those despite my interest to do so. This followed due to reaching capacity for the purposes of staying within the bounds of a master’s thesis. I directed focus on interpretations and synthesis of the data from the existing sample suitable for the qualitative aim. However, the suggested additional contacts provides a good basis for future avenues of research (see Section 6.3).

For the purposes of this thesis, “those in key roles” outlined in Research Question 3 are defined as individuals acting in professional roles in the public sector who were closely involved with the Service Innovation Lab case and had a continuous involvement within it during one or many of its stages over the three years (see Section 4.3). This includes mostly those who worked within the Lab space as well as managers that worked at the host organization’s premises. The total number of people involved with the case in a professional capacity in the public and private sectors was estimated to be around 60 people by the key informant, with some of the overseeing managing groups taken into account. The staff working at the Lab were estimated to be 5–30 people at any given time by a hiring manager, and the yearly turnover of staff about 25% by another manager. The Lab staff were all on contracts through the Department of Internal Affairs. The lab team was highly interdisciplinary with expertise in service design, software development, management, policy, and administration. Most of the staff came from backgrounds outside the public sector.

For analyzing the interview data, I started with transcription by completing a mixture of verbatim transcriptions and summary notes from the audio recordings. I listened to the recordings multiple times, and transcribed the first interviews completely. After this, I noted that transcribing substantive sections I deemed important was sufficient, doing this word for word with light editing. My intention was to capture as much of the original, including pauses and filler words where
appropriate, which often accompanied reflection on the challenges, and I concluded might be important information. However, I edited out some filler words that I deemed insignificant, and eventually touched up the final quotations presented in supporting the thesis findings in the discussion.

I performed coding straight off the transcripts and transcript notes on both Google documents and the Atlas.ti program. The types of coding I selected were a combination of descriptive and in vivo coding. A code is a descriptor of a data segment that assigns meaning (Miles et al., 2014). Descriptive coding refers to assigning labels to data to summarize in a word or a phrase a basic topic of qualitative data (Miles et al., 2014). In addition to this, I also did in vivo coding to capture the interviewees’ own words and concepts used in this particular group and context. I coded most of the data twice, and as I progressed, I was able to generate codes with more depth.

I started forming themes by grouping similar codes together. The first round of themes that emerged in the process were rather surface-level. As I went back to earlier steps and coded the data again alongside reflecting on it, I started generating deeper themes. I pulled quotes under similar themes together, and reflected on each quote in terms of content and the whole interview and my impression of the interviewee. Towards the last interviews, I was able to be more intuitive in the analysis process, where I did not need to perform as elaborate coding as with the first interviews to generate insights.

Finally, I started to form a coherent story around the themes and quotes for the thesis discussion. This process was rather organic and took many iterations; through each I was able to add depth and edit to attempt further clarity and coherence. Towards the end, I added more reflectivity through each iteration, balancing to focus the story on the case and interviewees without excessive reflexive commentary in the final text.

3.4 Research Ethics

Prior to the case interviews starting in January, I familiarized myself with the materials of the Finnish National Board on research integrity (Tutkimuseettinen neuvottelukunta, TENK) and sources from Aalto University on ethics to inform me about guidelines for the responsible conducting of research. These, along with the templates from Aalto University, informed me in drafting the documents of Data Privacy and Information for Research Participants (refer to Appendix A) as well as Research Participant Consent Form (refer to Appendix B) to send to interviewees to agree to or sign.

I checked my forms and their accuracy with the help of a legal advisor at Aalto University, and corrected them accordingly, especially relating to anonymization and pseudonymization. Anonymization refers to “the processing of personal data in such a way that the data can no longer be attributed to you as a specific data subject without the use of additional information” (Office of the Data Protection Ombudsman – ODPO, n.d.), while pseudonymization is the “processing of personal data in such a way that the data can no longer be attributed to you as a specific data subject without the use of additional information” (ODPO, n.d.). As my plan is to not use the interviewees’ names but pseudonyms and their broad roles in the case, using the real names of organizations and Wellington as a location might still enable them to be recognized. Hence, I did not promise full anonymization to research subjects.
For each of the interviews, I emphasized the explaining of the recordings, as this needs to happen with the permission of the interviewees (Robson & McCartan, 2016). I did inadvertently conduct two interviews prior to the drafting of ethics forms: one remotely with a lab leader in Finland for the snapshot of labs presented previously, and another for the first case interview face to face in late 2020. In both of these cases, I explained the purpose of my study and asked permission to record the interview in order to personally transcribe it and inform my thesis findings. With the case, I send the relevant chapters to all the interviewees for approval before submitting the thesis. In the interview process, confidential information was given to me, in terms of access to some internal documentation as well as from actual and potential research participants through personal communications and interviews. As the published thesis is publicly available material, this has informed my decision-making. I have omitted any sensitive details relating to individuals, their views, or experiences. I have used pseudonyms instead of participants’ names, and additionally omitted identifying information in quotes. When referring to case interviewees in the Discussion chapter of this thesis, I will be using the pronoun “they” besides pseudonyms to refer to individuals instead of the pronouns “he” or “she”. This further reduces the likelihood of their identification. Despite this, I have not promised full anonymity of participants, as I have not deemed that necessary nor fully possible due to the nature of discussing various roles in relation to the case in this thesis research (see Section 3.5 and refer to Appendix A). Although some of this is contradictory to the case Lab’s approach to openness—for instance, one interviewee explicitly said that I should disclose their name—I saw pseudonymization of the case interviews as adhering to good research practice. Additionally, one potential interviewee raised concerns about confidentiality and identifiability, which led to the interview not proceeding. With regard to the case and its location, I did not see anonymizing these as necessary or possible due to the large and unique nature of the initiative.
4. Context to the Case
4. Context to the Case

In this chapter, I will briefly present background information as the context to the Service Innovation Lab case, and the case itself. First, I will detail the broad context, including the government structure of New Zealand, a government change program, and consequent authorizing structures to the case. I will then go on to introduce several aspects of the case itself, including the operating model, Lab approach, phases over time, and a snapshot of projects the Lab has been involved in. These prime the following chapter 5 discussion, which contains references to the content presented in this chapter. Internal documents (see Section 3.3) and background gathered through interviews have informed some sections and figures of this chapter.

4.1 Aotearoa New Zealand -towards innovative digital government

New Zealand, or Aotearoa in Māori, is a constitutional monarchy with a parliamentary democracy. The highest official is the Governor-General acting on behalf of the Queen as the head of the country and of the Commonwealth. A parliament consisting of 120 members is led by the Prime Minister and cabinet ministers, located in the capital of Wellington. Parliamentary elections are held every three years with a Mixed Member Proportional (MMP) system, which changed from a proportional representation system in 1996. There is no codified official constitution, but the constitution effectively consists of multiple documents. These include the constitution act, and the principles outlined in Te Tiriti o Waitangi [The Treaty of Waitangi] regarding participation, protection, and partnership, which are also made reference to in other constitutional documents. The Treaty acts as a guide to all actions of the public sector, although it is not always followed in practice. It is a series of nine documents between the representatives of the British Crown and Māori tribes and was signed in 1840 in both English and te reo Māori, which provided versions different in its meaning (New Zealand National Library, 2021; The Oxford Illustrated History of New Zealand, ed. Keith Sinclair, 1996).

New Zealand has been categorized as one of the leading innovative governments in the Digital Evolution Index by Turf University and partners measuring data across indicators of supply and demand conditions, institutional environment, innovation and change. New Zealand was amongst the “stand-out” nations in regard to the state and rate of digital economy alongside Singapore, UK, and UAE in an age of digital globalization (Chakravorti & Chaturvedi, 2017, pp. 18–20). The country is a member of D9 Digital Nations, a global network of nations aiming for utilizing digital technology and new ways of working for improvement of citizen lives. Common features of D9 nations are a commitment for services centered around user needs and open source sharing of solutions. The Department of Internal Affairs leads the country’s D9 work.

Focus on Better Public Services as a change program was made a government priority in 2012. “Better Public Services Result 10” was a formative piece of research and an action plan as part of the program, situated within the strategic context of the government’s ICT Strategy and Action Plan (Department of Internal Affairs, 2014a, p. 6). Result 10 paved the way for digital services centered around citizens’ life events over the limitations of agency boundaries as per the vision or outcome statement for Result 10, as refined in 2017: “people hav[ing] easy access to
public services, which are designed around them, when they need them” (Department of Internal Affairs, n.d.). This is composed of vision for customers, services, and systematic government (Department of Internal Affairs, 2014a, p. 18) to reuse and share information with an all-of-government approach, meaning collaboration at the ministerial and agency level across the public sector system.

Through Result 10 Customer research, Department of Internal Affairs (2014b) found several pain points in government services experienced by 51% of respondents of a survey with a sample of 1500 citizens (p. 24). Many were centered around the fragmentation of government services: for example, 44% of respondents had experienced a situation where they had to provide the same information to government agencies twice, 36% had experienced conflicting information given to them by government agencies or staff within a single agency, and 29% experienced a situation where their query could have been solved if the government agency had communicated with another agency (p. 26). Many pain points additionally centered around a frustration with the experience or the outcome, and confusion about eligibility and entitlements.

The result areas aim to respond to the findings, and are composed of integrated services driven by life events, digital transactions, proactive delivery, consent-based information sharing, and secure digital identity (Department of Internal Affairs, 2014a). The program has had a strong focus on delivering better services in both experiences for citizens and with reducing service delivery costs by shifting the most common services to digital, with a target of having 80% of most common public services completed digitally by 2021. Life events in Result 10 are defined as major changes in customers’ lives that require engagement with multiple government services. It listed life-events as those planned (e.g., starting university and getting married), unplanned (e.g., death, illness) and recurring (e.g., moving jobs or a house). Most common life events listed were traveling overseas, death in a close family, starting a job, and becoming ill (Department of Internal Affairs, 2014b).

4.2 Governing structures to the Service Innovation Lab

The Digital Service Council was formed in 2013 with representatives from multiple participating agencies. Its role has been to provide governance of the Result 10 program and champion change within their own agencies across the public sector (Departm of Internal Affairs, 2014a). The Department of Internal Affairs was tasked with leading the Result 10 program and hosting this core cross-sector team as the government’s functional lead agency for digital development. This cross-sector team included chief executives from nine other agencies (Figure 13) to deliver the result areas of Result 10 realized through the Service Innovation Work Program (Department of Internal Affairs 2014a; Department of Internal Affairs, 2014b).

The Digital Government Partnership is a group of over 70 senior leaders set up in 2015 by the Chief Government Digital Officer (Figure 12), following the government strategy for a Digital Public Service. Operating under this is an ICT Partnership Framework, within which the Service Innovation Working Group (SIWG) is one of four working groups ensuring ICT transformation. The SIWG provided oversight, leadership, and coordination, ensuring collectively with the support and direction from Service Innovation Reference Group (SIRG) that the Service Innovation Lab had momentum to deliver.
The Lab was overseen by the Department of Internal Affairs as the host organization, providing oversight and secretariat services. It was set up in partnership with Assurity Consulting Ltd. The Lab was an enabler of the wider Service Innovation Work Program, including projects with a system-focused delivery agenda approved by the governance groups that were outside the remit, capabilities and budgets of single agencies. The Service innovation Lab falls into the integrated model of design in organizations as detailed by Junginger (Figure 7). The Department of Internal Affairs, as the larger overseeing and funding “parent” organization, could be noted to place design as a “peripheral” function, pushing design into these spaces of the lab.

Figure 8. Stakeholder map of the Lab. Source: Lehtinen (2021).
4.3 The Lab model, approach and phases

The operating model of the Service Innovation Lab consisted of (1) offering innovation support through the team's expertise; (2) use of the Lab's space and access to the networks it created around it and working with cross-agency sponsors and partners from public, private and NGO sectors; and (3) hosting and sharing learnings with visitors, including international ones in collaboration with New Zealand Trade and Enterprise (Figure 14). The innovation support offered was mainly around projects aligned with the Lab's work program, where teams consisting of staff from various agencies were based at the Lab. The Lab team provided expertise and access to knowledge and connections through its extensive networks. The staff was interdisciplinary, with expertise in service design, software development, management, policy, and administration. Another aspect of the model involved hosting within the space without further involvement for projects not associated with the Lab itself. Towards the end of the Lab, there was increasing internationalization that accompanied hosting national and international visitors, and being part of the international lab networks.

Funding for the Lab came from several varied sources, and was often uncertain in continuation. There is currently no sustainable funding for cross-sector innovation or its operational delivery on the national level. Funding sources included a mix of sources, including agency baseline funding allocated for agency specific initiatives, and innovation funding for multi- and cross-agency initiatives. Towards the end of the Lab's existence, funding was provided by the Department of Internal Affairs, which impacted the dynamic to the Lab's evolving relationship with the host organization (see 5.5).

The approach of the Lab is described in a collection of documents as including “principles and mindsets, an approach to joined-up working across government and the innovation process.” The Lab approach was underpinned by its eight principles. These were:

- uniting to meet user needs;
- doing the hard things to make it easier;
- learning and improving rapidly;
- providing value or stopping;
- doing the least for the greatest impact;
- building for reuse and openness;
- accepting help and challenge; and
- openly and widely talking about the work.

These principles reflect the user-centered aim for providing systematic services with aspects of design thinking and some elements of systems thinking, speed, and feedback in an iterative design process and high openness and interaction within the ecosystem. Additional functions and learnings within the system emerged throughout its existence (see Chapter 5).

During the operation of the lab between February 2017 and June 2020, the lab went through four distinct phases. These followed from a mix of strategic setting of direction, learning as an organization, and outside factors. The initiative started as a space only, and ended up fully online at the onset of COVID19. The lab was closed with the simultaneous formation of a Digital Public Services branch at the Department of Internal Affairs in support of the recently formed Strategy for a Digital Public Service around this time.
Phase 1: Lab as a space
The Lab was initially set up as a space for collaboration for agencies to work together. It aimed for operating as a neutral space physically outside any one government agency, providing the space coupled with externally procured expertise. This “co-opetition model” included consulting from Assurity Limited, which helped set up the lab concept and space, where public agencies, private sector, and NGO partners could work on projects. A lab lead and small initial team was contracted for the prototype phase of five months. Lab tours and showcases were started, and teams worked on better ways to manage delegations in service delivery, making tax easier for medium businesses and on effective channel and service strategies.

Phase 2: Lab plus
The Lab model extended to in-house service expertise to agencies besides offering the Lab and expertise within the space. A “LabPlus” Work Program for delivery was added, formally known as the Service Integration Work Agenda. Following a successful prototype phase, 12 months of cross-agency “club” funding was granted at this stage to deliver the work program, and multiple experts were hired to expand an already multidisciplinary team. This stage also saw three changes of location from the Assurity Ltd offices to a separate space at Boulcott Street, followed by a sudden move after an earthquake to within the offices of DIA. Projects worked on at this stage included Rates Rebate (see Section 4.4) and projects around certain life events such as becoming a victim of crime or entering tertiary study, and starting a toolkit on agile and service design methodologies.

Phase 3: Lab as a space and service
The Lab’s approach had matured by this stage, and continued to evolve with the dedicated space and service offering. There was growing international interest and visits, and at this stage intentional welcomes and inclusion of te ao Māori were a part of the Lab. During this highly visible stage, the Lab’s offering was more widely known and trusted across government, demand was high, and the work won awards. However, at the same time, several factors led to high turnover of staff. During this stage, the funding shifted from a club funding model to single-agency funding from DIA.

Phase 4: Lab in transition
During the final stage of the Lab, a high turnover of staff continued with multiple new hires. The approach had reached a refined stage with quick setup and highly defined roles for projects. There was no longer any citizen involvement. A few months into the final stage, the country went into lockdown as COVID-19 hit. The work included supporting others with remote working and involvement in the pandemic response, including projects such as COVID-19 Financial Calculator tool. The decision to close the Lab was there at the start of this final phase, while the work aimed to be continued through the creation of the Digital Public Services branch as a customer-centric digital government function within DIA.
4.4 List of Lab projects

Following presents a brief description of a selection of Lab projects which are referred to in the following discussion chapter 5. (For more information on these and all other projects by the Lab see The Service Innovation Lab, n.d., projects).

Better Rules
Better Rules explored a systematic issue of digital transformation of legislation and policy, including machine readable Legislation as Code. At the core of it were rules that are easier to understand and use, both by people and machines. The work started with the Ministry of Business, Innovation and Employment, Inland Revenue, Parliamentary Counsel Office and a software company. It led to a component that is used in three life event services, and sparked international interest and conversation. (An extensive case description of Better Rules can be found at OECD, 2019, pp. 104-112).

Croissant
Croissant is a tool to support democratic decision-making by analyzing public submissions to consultations for better analysis of public opinion. As digital submission makes it easier for citizens to have their say, this can result in thousands of responses taking a multitude of forms, including emails, notes from meetings, and survey responses. The Croissant tool can help analyze this data by tagging and thematizing it. The project was informed by work on an earlier Lab project on exploring how to give youth more say on government policy. This workstream was handed over to the Ministry for the Environment.

Feijoa
Project Feijoa looked at consent based information sharing to aid citizens in accessing government services or benefits. Laws surrounding information sharing and privacy can prevent agencies from sharing information with each other, which means citizens might need to provide the same information to multiple agencies (see Section 4.1). The project focused on a consent-based information sharing tool, where people can manage their own verified information, who to share it with, and when. An early prototype of this was for parents enrolling children in Early Childhood Education.

Renting a property
The Lab undertook a discovery for renting a property life event with a well-being lens of Kāinga [home] with the Ministry of Business, Innovation and Employment, Housing New Zealand, and Work and Income NZ to inform the development of potential government services. Renting of houses has increased in the past decades, especially amongst and Māori, Pacific peoples, and families with children. However, rental houses are more damp, moldy, and cold than owner-occupied houses. Taking the Māori concept of Kāinga as home and people much beyond that of a rented property with elements connecting to wider environment and one’s whānau [family] and identity, and what it means today allowed for finding that good landlord-tenant relationships were key to improved quality outcomes for housing (Piripi, 2018).
Rates Rebate
Rates Rebate aimed towards automated digital delivery of financial entitlements for low-income citizens to improve the process for both citizens and providers. Rates Rebate is a yearly subsidy of residential rates that low-income homeowners are entitled to receive from local councils and administered by the Department of Internal Affairs, which many eligible citizens do not claim. The project explored proactive design and delivery of the rates rebate to be automatic, starting from why many people do not apply and the system barriers to applying. The project included a full innovation process from a discovery phase with a sprint by multiple government agencies and local councils; a trial of a digital application process prototype with citizens by Auckland and Tauranga City Councils; and a beta trial, after which it was handed to an owning agency to decide whether to move this into full production.

20-year emerging technology landscape
The emerging technology landscape was a piece of visualized ongoing research mapping various categories of technologies in progressive timescales from 5 to 20 years from 2019 onwards. Its purpose was to aid public sector staff in understanding of types, forms, connections, and impact of various developing technologies alongside the challenges and opportunities they bring in disrupting public processes and services. The seven key areas identified for a high priority focus were Artificial Intelligence, Spatial Computing, Encryption, Internet of Things, Big Data, Robotics and Autonomous Systems and Quantum Computing.

Whetūrangitia
Following the release of SmartStart, a service to help parents navigate government services around childbirth, and Te Hokinga ā Wairua as services around death, a gap for those who had experienced the death of a child was recognized. To explore the lack of services for loved ones who had lost a child in utero, during birth or in infancy, several hui [meetings] were organized for bereaved parents to bring forward their experiences. The main insight was the lack of a common single source of information on the matter, and the Māori concept of whānau pani where those in grief are allowed to be in it, while being supported by those they trust: their whānau pani. This led to an integrated Whetūrangitia website that combines information and resources from multiple sources.
5. Discussion
5. Discussion

The findings presented in this chapter aim to answer the second and third research questions: What were the challenges associated with the Service Innovation Lab initiative and its design-led approach in the Aotearoa New Zealand public sector context? How did those in key roles involved with the initiative perceive and respond to these challenges? These are answered with findings generated through reflexive thematic analysis of interviews, along with supporting internal documentation from the case, both woven together in the analysis. I start the chapter with an overview of key findings, and the remaining chapter is divided into two sections following two categories of responses to challenges, detailing aspects within each. Short definitions of Māori terms appearing in the text are noted in brackets, and a list of terms can be further seen on page 10.

5.1 Overview of findings

I identified the main systemic challenges to innovation in the public sector context as structures of accountability alongside organizational culture and personnel mindsets, which in turn were reinforcing each other. Structures supporting accountability through vertical single-agency priorities and focus on fast deliverables were noted by all interviews to be in contrast to the collaborative cross-sector way of working required for horizontal design-led approaches with little hierarchy. The culture and personnel mindsets included risk-aversion and expert mindsets, with resulting preferences for incremental innovation.

I identified two broader categories of responses from those involved with the case to navigate the challenges within the context of the case: creating conditions for innovation, and facilitating systems learning and delivery. Creating conditions included the authorizing environment on the strategic level and leadership on the operational Lab level connecting to innovation culture within the space of the Lab. These conditions enabled the Lab to facilitate learning and delivery for integrated services with cross-sector stakeholders. These were achieved through a collective lens of citizen-centricity actioned through the Lab’s approach and mindsets as well as various strategies for collaboration and openness. Strategies for collaboration, such as “beg, steal, borrow” in using objects to facilitate connections and a “first-in, first-served” strategy with work program priorities. Openness included open Lab days and tours, and communication and reporting of work online. These largely emerged during the initiative due to its experimental nature.

A challenge unique to this case was changing Lab identity, including aspects of te ao Māori [the Māori worldview] and changing relations with the host organization. The latter aspects were connected to frequent changes in the physical space and funding. The Lab identity was evidently influenced by the team at the Lab in any given time, in which there was high turnover. Te ao Māori was increasingly incorporated at some stages of the Lab, coinciding with increasing internationalization. The lab operated within four different physical spaces during its existence, of which being located inside the host organization’s office proved most challenging as it was unusual and disruptive from circumstantial necessity as a result of an earthquake. The funding was inconsistent and uncertain from changing sources, eventually moving from cross-agency funding to single-agency funding from the host organization. Aspects of these were noted to lead to the closure of the Lab.
The findings are synthesized into a discussion narrative that formed around the themes I have presented as categories here. However, they are not strictly following the order of this summary of findings, as there is considerable overlap between the challenges and the responses to them.

Figure 9. Diagrams of themes and their relationships on the basis of findings. Source: Lehtinen (2021).
5.2 Creating conditions for innovation

5.2.1 Authorizing environment — responding to the contextual challenges of innovation in the public sector

The nature of public sector structures calls for purpose-built authorizing environments with support from senior leadership and groups of middle management that create a cross-sectoral innovation mandate. These counter some of the characteristic tendencies of the public sector (see Section 2.1), posing a tension to innovation capability from within, and enable collaborative work beyond single-agency accountabilities.

In one of the first interviews I conducted, an advisor talked of the inherent tensions of innovation in the public sector context. The following quote from advisor 1 highlights the difference between rhetoric and setting of strategy from leadership in opposition to realizing public sector innovation in practice: “They talk about innovation and collaboration, but our structures are not set up for that. We work in these incredibly hierarchical, siloed, risk-averse organizations. It’s completely—it’s the antithesis of what you need to do this work effectively.” This speaks to operational delivery of innovation and the culture of collaboration needed to enable that delivery being challenging due to the prevalent systemic structures and culture of the public sector. Hierarchies within siloes—individual agencies and departments—are features of bureaucracies that produce multiple conditions counterintuitive to culture that enables innovation. The quote hints to the tone of the interviewee in the situation and their position on the operational end of innovation with their work at the Lab. It reveals their frustration with the reality of this tension posed to the work and with higher-up leadership and management (“they”), which they perceived as part of the problem. They were not the only interviewees expressing such sentiments: perceptions and experiences such as this seemed to be a common reflection to the challenging reality of public sector innovation with the case.

This particular interviewee had a previous career in the front line in the private sector. These professional experiences could have informed their view of more effective innovation and user-centricity in comparison prior to them making a career change to the public sector with a motivation to apply these approaches to social problems. Here, user-centricity becomes citizen-centricity when applied to this context, but it needs different models adapted to this specific context in order to be realized. For some services, the public sector can be the only provider, which limits “user” choice of alternatives, sometimes rendering them nonexistent. There are no user-pays models and other feedback mechanisms with the pressures of the markets to shape these services, so the drivers have to be intentionally created from within the sector or are responses to catching up to wider trends. Particularly tailored services to certain population groups need to be considered according to their needs, which might require expanding the existing approaches to service development and piloting for generating data for service improvement (see Section 2.5).

The contextual challenges in opposition to what is needed for innovation were also explained by another advisor:
Because our organizations are funded from verticals... It’s a challenge to try and [collaborate] horizontally; that requires shared accountability, and the mechanism for shared accountability or shared transparency, because the Ministry of Social Development has a different minister than the Department of Internal Affairs. So there’s a really interesting tension between the vertical design of our public sector and - normally speaking- the horizontal approach of service design and user experience. —Advisor 2

The opposing tensions of the design-led approaches pushing for horizontality with non-hierarchical ways of working within wide-ranging collaboration contrast with the “vertical” or “siloed” nature of the public sector. These terms were often used by interviewees when referring to the working mechanisms for accountability. The advisor expanded on the quote above by making a point that bureaucratic public sector structures are “designed to ensure transparency and accountability” with the core purpose of keeping order and stability. This presents a constant tension between stability and change when presented with the purpose to innovate within the sector, which the main system of structures and culture reinforcing each other is biased against. An advisor who worked in a delivery lead role in the first phase illustrated this inherent tension of public sector innovation with a practical exercise in the Lab space during tours with senior leaders:

I often spoke about the silos of government and how collaboration was possible, but required sustained effort. What I did was this—you know those physiotherapy bands—Tera bands? I wrapped one around a pillar in the middle of the lab and used it as a metaphor—if you pull two bands around two pillars and stand in them you can meet in the middle. So you can collaborate, just everything is pulling you back. —Advisor 4

At the same time, this advisor emphasized the need for the mandate from senior leadership for solving problems, rather than delivering prescribed solutions without spending much time on understanding the problem space of the issue in question first. However, much a lot of effort is needed in order to function as a Lab whose core staff worked in such a way made possible with a design-led approach. Labs never operate in a vacuum, and need outside mechanisms of support that are not always established as noted by Lab lead 1: “Labs burn brightly and then fade away. That can be a positive thing, but also it can be a systemic thing around organizations that don’t support innovation in a way that can sustain it.”

The tension of structure and the prevalent culture of the sector was navigated with supporting layers of management from the host organization and the multiple governing groups for an authorizing environment. This was made possible by Result 10 (see Section 4.1), which was described as “groundbreaking” by several interviewees, of which some had been part of drafting it. The membership of the governing groups cut across managerial levels, including a Lab manager at the host organization. The cross-sector governance groups coordinated the funding and space for the Lab (see Section 4.1). These formed the protective layers that the Lab as an all-of-government initiative was both made possible with and accountable for.

One of the things that they [Service Innovation Work Program] recognized at one point was that we need a Lab. So what they built was a space. They basically literally organized
with a small amount of money, a space and bit of authority and bit of permission and a few government projects to be working in that space. Where they could be taught in a different way, where they could learn different skills, where they could work in a different way. —Lab lead 1

The Lab was thus within an operating environment creating the necessary conditions differing from the rest of the sector in terms of the mix of forces of accountability, funding, and ownership. As it was physically removed from any one organization in a separate space (see Section 4.3), this created neutrality later with a work program to allow space for a “different way of thinking and working”—a phrase often used across the interviewees. Alongside the authorizing and governing groups operated a wider network of participants ranging from agency partners to citizen participants changing from project to project, forming its stakeholder network (refer to Figure 14 in Section 4.3). These were the priming conditions for innovation and starting the Lab and the work.

5.2.2 Leadership within the Lab —demonstrating by doing

With a mandate, funding and space, these were only the external conditions created within the public sector structures that allowed for going forward with a Lab initiative itself. The necessity of the Lab’s approach in demonstrating by doing and showing value through the initiative within its governance and stakeholder network was emphasized:

It was known that we needed to show the way by doing it, demonstrating it. You’ll find that there are lots of reports and research in this area, but actually doing anything is the challenge. So from the beginning, we were about just doing it, getting on with it!
—Manager 2

This shows not only the mindset conveyed needed from a driven intrapreneurial-minded team to initiate, set up, and maintain such an initiative, but also the realities of surviving as a PSI lab. It needed to tangibly demonstrate value-creation as an entity with outputs to its wider stakeholders in the public sector system and beyond, quickly and constantly from the very beginning. The manager had a key role in activating the Lab within the wider context. They encapsulated the purpose from a management point of view: “The lab was never about “The Lab”: it was an enabler of the [Service innovation] Work Program” (see Section 4.3).

This manager had proposed the idea of the Lab in turn to their tier 3 general manager in response to seeing the need for it within the wider Service Innovation Work Program, who got on board. This tier 3 manager was described as acting as part of the enabling mechanism for the lab by another manager, despite not necessarily understanding it deeply. At the beginning of the Lab setup, the manager quoted above hired a lab lead who was introduced to them, describing the lab lead as “giving momentum” to the whole initiative. The lab lead similarly spoke to the need to focus on implementation over plans in their analysis in the initial strategy for the lab prior to leading the Lab program through a prototype phase they suggested:
[The governance team] asked me to come and do an analysis of what the strategy should be for the Lab. I came over and... I said in the report that you don’t need another plan: you just need to implement it. You got a Lab, but you got no program: what you need is LabPlus, your programme of work... So we did a 10-week experiment of LabPlus and were able to prove a bunch of hypotheses that showed a lot of value. —Lab lead 2

They pointed to the fact that having a space was not enough. The suggestion to put a LabPlus programme in place, otherwise known as the Service Integration Work Agenda, ensured delivery of work. Essential to the delivery was also the Lab lead’s move to have designers and developers working side-by-side as part of the team structure:

The reason our lab had [both] design and [developers] was that I thought there was no reason to have a lab without delivery... So we created a structure which had a design lead, a tech lead and a strategy lead - excellent leadership. So LabPlus was having a program to do delivery work, not just coordination work. There was a huge possibility of things we could make: what are the reasonable components that we could make, what are the services we could make, what are the actual things we could deliver that provide value to citizens. —Lab lead 2

They noted that the Lab was unique in the New Zealand landscape in terms of this pairing of the staff expertise. Such a team structure allowed for the Lab to have an ability to engage in different stages of the innovation process from pre-engagement in identifying opportunities to the stages of technical delivery of beta testing when needed. It was also noted that it allowed for these two groups normally not working side by side to expand both of their ways of working and frames of references, where the lab leads played a role in balancing expectations in order to deliver:

Between the scope of designers that we had there, there was... this tension: they wanted to know more, and we as [leaders] tried to make sure that we got to an outcome and could move on and keep the momentum going, because you lose interest from stakeholders there very quickly... So there was definitely a tension between the rhythm that we needed to keep as a team as a whole to be productive and adding value, but also keeping in mind that there was potential dissatisfaction when you do that. —Lab lead 2

The lab leads did not need to only balance between the staff’s expectations and satisfaction within the Lab, but within the wider stakeholder network. For enhancing stakeholder relations, acknowledgement of their involvement and support for enabling steps in the delivery, however close or distant with the Lab in reality, was noted as a leadership tactic from an advisor and a delivery lead.

The contextual pressure to hit the ground running was noted by several interviewees to be a challenge, not only with managing expectations but also because any organization and team takes time to form initially in organizational and cultural terms. However, the Lab managed to do this already within its initial 10-week pilot phase, where the lab lead was invited to initiate alongside a small team.
5.2.3 Leadership within the lab — Creating an innovation culture within the space of the Lab

To enable a culture within a Lab as a unique space within the public sector that is conducive to innovation required intentional work on the culture:

We did a lot of work on the culture, establishing the right culture: a culture of kindness, a culture that gets everyone aligned on a goal around improving the lives of people of New Zealand. That value set was quite easy for everyone to wrap themselves around, but the natural friction flared up occasionally. Because we had a culture in place, it was manageable. — Lab lead 2

This reveals a mission-led organization around citizen-centricity (see Section 5.4). The quote also points to an accepting culture with an emphasis on empathy for both its mission and team. It allowed space for conflict that often results from varying disciplines and worldviews/frames of reference coming up against each other when attempting to work toward that goal—what the lab lead termed as “disciplinary fiction.” It was pointed out that the Lab staff was diverse in terms of professional backgrounds, genders, and ages, which are all ingredients for increasing innovation. This would naturally increase the points of view present, and hence contribute to the “disciplinary fiction.” Ethnic diversity, especially in terms of Māori representation and involvement with stakeholders, was noted to be lacking by one non-Pākehā interviewee, and something that I noted throughout my engagement with the case.

One of the Lab’s advisors described their experience of the culture and connections in seeing a community form around this and being part of something bigger as one of the most memorable things for them during their time at the Lab. They particularly noted the atmosphere of the aftermath of regular open Lab days (see 5.3.4) held on Fridays:

We had some really open lab events that turned into — not quite a party but good friends and people who were safe to be around. We’d turn up and hang out and be in the space, but also talk candidly and also get to know people in our community. — Advisor 3

What is evident from this quote is the psychological safety present in the Lab team, which is a necessary priming condition for innovation teams and organizational creativity. This in turn allowed for open conversations and questioning, which is especially important in this space of work with multiple pressures and often varying views and goals. Something that additionally contributed to this was what the lab leads noted as acting as “shielding” staff from the pressures of the authorizing and wider environment.

Atmosphere of the space

The space also played a role in facilitating an inviting and innovative culture, and was repeatedly noted to play a central role in the Lab’s work and identity in documents in addition to the interviews. As a dedicated neutral and safe space, it was seen as a necessary enabler of the work. The Lab spaces in the different locations—with the exception of the time spent at the host organiza-
tions premises—(see Section 4.3) were noted to be in alignment with the work by manager 2: “The rundown feel of the space matched the innovativeness. If it would’ve been a polished space, people would’ve expected polished ways of working too.” This “ad hoc” nature of the space was noted by some interviewees to be reflective of the quick and agile way of working. There were mismatched furniture and items gathered from several locations, hand-drawn visuals, and Kanban boards for visualization of working processes. All these elements were aimed at a friendly space that was not too perfect but friendly and inviting, in order to present a safe space for collaborators to break away from mindsets of their “usual” way of working.

Openness was also supported by the space. Many interviewees alongside advisor 2 also emphasized how anyone was welcome to the space: “[At Thorndon Quay, the location in the last Lab phase] we were a place—it was a little bit run down, but it was welcoming and warm. A little bit like a marae experience, really.” This is just one of the many descriptions of the space, which was repeatedly noted to facilitate an inviting and inclusive way of working.

The space had been an old office space, it had effectively been kind of occupied by the team. So the furniture was begged, borrowed and stolen from various spaces. There were drapes on the wall, hand-drawn visuals, kanban boards. So it did have that quality that a lot of labs have of being part of but also being slightly removed, and maybe slightly insurgent quality to what they are doing. It felt different, it felt like there were some interesting things going on there and on a busy day you did have people coming in from different agencies. —Lab lead 1

Towards the third phase of the lab, te ao Māori was also incorporated into the team culture and intentional welcomes with specific protocols. This was noted to be due to a particular advisor who set these practices up. It presented an opportunity for learning for the team, which still continues for many. In some projects, notably in early phases for Whetūrangitia as information on services for bereaved parents and renting a property (see Section 4.4), a te ao Māori lens was strongly present. However, focus on it was not in the foreground as a whole at the Service Innovation Lab, unlike other labs (see Section 2.6), as this seems to be more challenging and hinted to be perceived as not as relevant on the national level with a digital focus.

Supporting various types of innovation: 10 % Playtime

A concrete yet informal measure to contribute to the innovation culture put in place as the “10% work” or “10% play time” was referred to by some interviewees. This allowed the lab staff to work on projects of their own choosing outside commissioned work to diversify types of innovation for a small portion of their working time:

...a culture which allows -if you have a 10% play time policy... I try to put this in place wherever I go: that’s the sort of thing that enables [bottom up and radical? innovation] to happen, because it has to be allowing [the team] to do formative work, not just normative. —Lab lead 2
In the public sector context, this allows for work with bottom-up and radical innovation tendencies, which are hard to achieve with the pressures of the context that has a tendency for incremental innovation. A manager revealed how public servants often have an unallocated amount of time to work on whatever rises, including emergencies and to use if they are passionate about driving something specific forward. In innovative fields, staff often work on multiple self-directed projects outside of work crossing over with it:

[The 10%] was the never discussed amount. [The lab lead said we] have crazy ideas, and [they] think it’s really helpful, but... don’t do too much but you can timebox it at something like 10%... We were all innovators and doing stuff in our own time anyway... [We had] side projects and all the techies did as well, so it was a natural thing to do. —Advisor 3

Some projects and prototypes that resulted from this 10% policy included the Feijoa project on consent-based data sharing and Better Rules (see Section 4.3). The quote shows how in the case of the Lab, they were cautious about broadcasting this unallocated time in case it was perceived as unfair use of public money by public officials and citizens. This also follows from how innovation in government is viewed: “This is the problem: Government doesn’t see innovation as part of it’s operation model. It seems it as a nice-to-have, and if it’s really effective, it probably belongs in the private sector.” This quote from lab lead 2 reveals how it is being viewed as a luxury rather than a necessity, which often leads to lack of setup and tolerance for innovative initiatives from within the sector, in this case from a Lab. They are not prioritized in operations in “business as usual,” many times leading to procurement from the private sector (see Section 2.2). This can lead to high costs, as one interviewee noted that “the amount we pay private agencies [for innovation related activities] is... obscene.” Multiple interviewees raised the question of how to sustainably make innovation part of the public sector models themselves rather than contracting it out or directly adopting private sector models without adjusting them to the context. Incentivizing to do so in monetary terms can also be challenging. One advisor noted that, for example, there are no evaluation measures for cost savings resulting from reduced costs from multiple agencies for a cross-agency digitized services. This additionally limits the ability to make a case for them.

The 10% work at the Lab was supported by the managers interviewed, but some noted that when staff wanted it to be more, this was a problem. Naturally, the uncertainty of outputs from this 10% time is not always easily measurable nor guaranteed. Additionally, when ideas for more radical innovations emerged, they were often pushing against the systems set in place by, for example, coming up against the realities of legislation.

Influence of broader cultural strengths—Number 8 wire mentality

One interviewee talked about aspects of New Zealand culture more broadly in contributing to an ingenuity with an innovative spirit and resourcefulness. Another interviewee echoed this by the saying “necessity is the mother of invention”; restrictions can force one to innovate. This “No. 8 wire mentality,” a colloquialism for inventing solutions that is derived from available materials on farms to repair equipment, is something I have also observed during the years I have spent in New Zealand. Independence as a small community is additionally valued, and played an even more important role prior to an increasing global interconnectedness brought by forces of globalization and digitalization.
This interviewee reflected how what they termed colonizers, from the early Moriori to Māori and finally Pākehā settlers alike, needed to adjust to life with limited resources “when the next ship didn’t arrive” for supplies. This, alongside the close networks characteristic of this small nation, often referred to as “two degrees of separation,” coupled with relatively low hierarchies in workplaces, contributes to broader conductive conditions for innovation.

The response to the pandemic was raised by several interviewees as an example of innovation under urgent necessity, although it has not been framed as such. The managers interviewed even made a connection with the Lab’s way of working, perhaps playing a role in paving some way to the quick, cross-sectoral pandemic responses (see Section 5.5).

5.2.4 Types of innovation

As discussed (see Section 5.3.1), achieving change in culture and operations within organizational structures aimed to facilitate stability presents a constant dilemma. When innovation happens, some forms are often better tolerated by the public sector system than others. An advisor likened innovation in government to waves on a beach in their periodicity and type: “For me, innovation and change in government [are] like waves breaking away the sand dunes on a beach —the first wave won’t do it and retreats, but the next wave may go further.” This speaks to the tendency for tolerating incremental innovation, such as enhancement to existing processes and products, and the right moments to push for it.

When it comes to the more radical types, including systemic change, the waves that reach the shore need to be very strong, are much less frequent, and the retreats are often even longer. For the latter type, the public sector tends to resist it or push it out to other sectors, leaning on the known as noted my manager 1: “If you work in a system which requires what it believes to be absolute, or has very low risk threshold, it works on what it believes is an absolute answer.” This paints a rather rigid picture on preference and steering of certain types of evidence and solutions; what some interviewees termed as “recognizing good.” However, it has an element of truth in it, of which the Lab with its approach challenged and expanded (see Section 5.4.1). A Lab lead referred to the facets of innovation model by OPSI (refer to Figure 13), contrasting what they called “normative innovation” [towards certainty/incremental] and “formative innovation” [towards uncertainty/radical], with governments’ tendency and tolerance to be strongly in the former space:

What you end up doing is top-down normative [enhancement-oriented innovation]: innovating on known problems, finding efficiencies, automation, improvement for the status quo. You actually need innovation happening in all quadrants. Directed formative [mission-oriented innovation] is the vision to get there; normative undirected [adaptive innovation] —bottom-up innovation in domains we understand; and [anticipatory innovation] you rarely see, but what I hope I’m good at enabling. —Lab lead 2

This is no surprise, taking into account the risk-aversion, expert culture with strong disciplinarity and tendency to focus on robust built-up evidence through analysis, coupled with pressure of short delivery cycles and the need for sensitivity with the political climate. These are necessary in ensuring stability and functionality, but can also lead to reactivity in responding rather than
anticipating or having a future-focus, which is one strength of the field of design. The status quo can create discomfort for taking a more future-focused view toward the uncertain through generating evidence from testing through experimentation and piloting, or orchestrating initiatives from a system’s view with long-term futures. This can serve as a type of risk-reduction.

Figure 10. Model of public sector innovation facets. From OPSI (n.d.), retrieved March 4, 2021.
A manager mentioned multiple potential early value propositions of the Lab, including building components for other agencies to use (enhancement-oriented), getting agencies to collaborate (mission oriented) and problem-frame (adaptive innovation) with the design-led approach, infrastructural change, and even altering how the government was managing itself (anticipatory innovation). Some of the latter were less feasible than others in their aspiration, and “the practicality of some of those meant that they couldn’t survive.” What emerged as one of the purposes of the Lab was providing experimentation, placing its activities somewhere in the middle of the facets. Manager 1 recounted: “We found that we could do [experiments] really cheaply and quickly, and that became the value proposition, because agencies had no mechanism at that stage to test using an experimental process. The lab was perfectly positioned for that.”

The citizen-centricity laid out by Result 10 (see Section 4.1) provided the top-down mandate for the mission, and the experimentation played out mostly in the adaptive innovation space: this is where most projects were positioned. However, there were examples of anticipatory innovation such as the 20-year emerging technology landscape (see Section 4.4), which explored future technologies and underlying values. Another example in this space was Better Rules (see Section 4.4), exploring digital transformation of legislation and policy, including machine-readable legislation.

5.3 System learning and delivery

5.3.1 Towards citizen-centricity

Citizen-centricity was a unifying lens of the Lab’s design-led approach and one of its guiding principles (see Section 4.2). It allowed the aligning of purposes for various agencies to come together, serving for mission-oriented innovation. The following quote beautifully and concretely captures this essence of the citizen-centric purpose of the lab in improving the lives of all New Zealanders with integrated digital services around life-events:

If you’re a citizen, you don’t usually care what department the government service is from. You just want a better experience when you’re having your baby or when you’re in [the midst of] a traumatic thing... and you’re trying to navigate that space... [and] whatever that interface is between your daily or your weekly experience with the government, you don’t really care. —Advisor 2

Here, empathizing with the perspective of the citizen helps to see services organized around the needs surrounding life-events, as opposed to viewing them from separate agencies’ perspectives according to the provider organization’s internal structures and functioning. Having an empathetic mindset for citizen-centricity as a public servant means willingness to partially, even if temporarily, suspend an expert-led model prevalent in the sector:

For me [the design-led approach] is about getting to understand people and spending time with them. Like that concept of whanaungatanga, building and establishing relationships with people. I got my assumptions tested and blown out of the water, the ‘aha’
moment I had when I first started doing this work. We shouldn’t be assuming that we know the answers. —Advisor 1

To be able to do this may require getting beyond initial emotional reactions and cultivating appreciation for citizens’ lived experience. These shifts were often observed to be commonly challenging for many when confronted with this mindset. The advisor also talked about the importance of understanding the experiences of citizens that any given policy or service design would affect, with their position being far removed from lived experiences of those they are often designing for:

I don’t come from a background with [similar lived experiences], so why should I be the person here saying what’s best for you and what you need and setting policy? Or same with what services you need, because I don’t have that experience, I have no idea what that is, and the only way we are going to effectively—actually, some of these problems are to properly understand the problem. —Advisor 1

They saw design-led approaches and co-design as ways towards gaining a deep understanding of the people who are designed for, or ideally with, as well as the root of the problem you are trying to tackle. Early stages of a design approach is also reflected in how they viewed problem-framing as essential in this. They saw quantitative evidence helpful for this stage in identifying a problem to focus on and perhaps a population affected, but noted the importance of qualitative and design-led approaches in the latter stages. They saw the design-led approach allowing deeper insight and working towards solving persistent and systematic social issues from their noted privileged positionality. Their positionality is simultaneously a barrier to understanding drastically different lived experiences, yet to a degree has contributed to achieving their current role where they are able to work towards affecting change towards these.

In some instances, having a citizen-centric mindset might also mean admitting that one as an organization and a system does not know what to optimally do, counter to norms of expert culture. Admitting agency shortcomings was necessary in order to open up to empathic listening and subsequent service improvement for the best outcomes for citizens. A manager’s recount of a dialogue that went on between agencies and citizens in a Hui [meeting] for scoping to help create supporting services for bereaved parents following a loss of a child illustrates this:

In that meeting, these parents were happy to stand up to some of the representatives of the agencies. The agencies expressed that they just don’t know how to operate... and parents would ask, “why do they do this?”. The agencies would say that they are required to do certain things by law and don’t know what to do, to which the parent replied [whispers]: “Why don’t you ask us?” —Manager 1

Taking the mindset that the citizen at the center of the service knows their situation and often what they themselves need best subsequently allows designing of often a whole system of services around these real needs. This might require expanding one’s conception of legitimate knowledge, e.g., evidence to inform the creation of services to include accounts of lived experience, including emotive aspects. This can be a shift in a culture that assigns especially quantitative evidence as the most legitimate and often sole form of knowledge for informing policy and
services, where emotions are assigned an irrelevant position. In the above instance, getting to these conversations also meant going beyond the Pākehā-led design approach, and creating this space with a te ao Māori approach.

[A Pākehā model of design is] about you as the person, whereas when you use the te ao Māori approach, you literally arrive from the—and everything would relate to te ao Māori in terms of family and tikanga and all those other things came with you... So with that, you could unpick different parts of an equation. —Manager 1

The manager noted that this approach provided sufficient mana [power] to go ahead with an event which allowed the sharing of stories and coming together of groups within a safe space to share information and experiences deeply. In their view, this would have been very challenging within a more clinical Western design-led approach. This is one example of how the Lab approach allowed for “different ways of working,” also beyond solely a design approach in incorporation aspects of te ao Māori.

In the spirit of reflexive thematic analysis, here I see it appropriate to briefly reflect on my prior experience in relation to spaces of connecting and healing within te ao Māori. Despite being in the beginning of my journey in understanding te ao Māori myself, attending collective spaces and actions of healing within that have allowed for acknowledgement and inclusion of wider systemic, emotive and embodied lived experiences integrated beside the purely “intellectual.” These are often lacking from theoretically-oriented and individualistically focused Western frameworks, regardless of the discipline. Even so being aware of these, I caught my ingrained Western view of service design when an advisor talked further about the differences between worldviews. This was following a mention of neoliberalization of the New Zealand public service in the 1980s in the footsteps of many other nations around that time.

I think the seduction of service design is based on [a] neoliberal bias, because it’s based on the individual being the pinnacle of the experience. And I think that—in the Lab I challenged some of our designers; I said that... actually in a Māori worldview or a Pacific Island worldview the individual is not the pinnacle of the experience. I’m fascinated by how... what we’ve now got across every public agency service designers and UX designers, essentially still designing for the individual, which is a very Western view of thinking about the world. Because actually: What is it to be a community? What does the collective need? So I think there’s some interesting things there in terms of the bias of design thinking, and in terms of better outcomes for all citizens. —Advisor 2

During this interview, I also clearly noticed my internalized disciplinary assumptions from service design and innovation approaches reflecting a Western individualistic value system, despite having attempted to expand that to community-based ideas in past projects. When a multiplicity of structures support that worldview, it is difficult to step outside or expand that on a level of actions, and values, as turned out in the case of the Lab. However, the initiative succeeded in expanding some mindsets and applying citizen-centricity, even if as a concept that reflects an individualistic value set.
5.3.2 Gathering around a perspective for enabling cross-sector collaboration

Although the citizen-centricity was set from the beginning, originating from Result 10 (see Section 4.1), some aspects of the Lab were not able to be foreseen from the start: the citizen-centricity was set from the beginning, originating from Result 10 (see Section 4.1), some aspects of the Lab were not able to be foreseen from the start:

When we really started to recognize and articulate what our value proposition was, a big part of that was teaching and building capability and building more of a systematic viewpoint of the problems that we were trying to solve as well. —Lab lead 3

It was around the citizen-centric goal and perspective that collaborators from various agencies were able to gather around throughout their engagement at the Lab. The Lab aimed to alleviate some of the issues encountered with working in this way:

The service design process, actually when you worked with agencies they were incredibly engaged with this idea of working to serve the population better —they really wanted to. But then were then bound by the issues of trying to achieve that. So there was a real ethos to do it, but it was really hard to do, because there were systemic things that pushed back. They don’t know enough, they wouldn’t know how to start, they were sometimes scared to go and ask the public. —Manager 1

A lab lead described this gradual process and some of these challenges, as noted in the previous example in facilitating spaces for gathering together citizens, agencies, and stakeholders for information sharing and problem-solving:

So clearing some of those roadblocks worked really well: you could create a safe environment where the public could come in and communicate together. You would have a structured program where people who weren’t used to making decisions in the presence of those that would consume the things they were talking about would become comfortable and they started to leverage each other’s ability. —Lab lead 3

Here, the lab as a separate space worked to its advantage in bringing together multiple stakeholders, where synergies started to form. Facilitators had a key role in the lab with this as well as in scoping conversations with multiple stakeholders in the room, or acting as connectors as advisor 2 did: “I spoke often how one of my roles was to help people within the public sector to see opportunities and see ways in which they could work with other parts of the public sector.” This reflects the lab model at the intersection of working in the areas of connecting in the lab space and network and creating conditions for joined-up working with cross-agency sponsors and partners (see Section 4.2). Several interviewees described that many times you would have for the first time in the same team or even a space a range of professionals gathered around an issue: from designers and developers to policy and business analysts and lawyers. The shift in coming together around a common point of view in this facilitated process was described:
What would happen is that agencies would come in, and for a little while to begin with when you’d start working with them, put their separate agency hats on. But if you keep focusing them on that problem space around the customer, they start slowly taking them off and they start to see [the problems] from that point of view. —Lab lead 3

The design-led mindset and approach allowed for this shift of perspective, where the projects could work in the space of improvement for both the customer and the agencies. Although some saw the Lab more as a contracting place or a design house, the Lab was seen in fact guiding project partners in the process by lab leads, as one of them noted: “We didn’t do it for [the partners], we did it with them.”

5.3.3 Suspending judgement - semantics and associations

A manager talked about the slight change of language they started using when talking about the design-led problem-solving process to stakeholders: they started calling experiments “hypotheses.” They expanded on how semantics shape our understanding and associations, and “experimentation” would often make people, especially in senior roles, shy away, particularly when it had to do with citizens. Another interview echoed the same sentiment, referring to the “safer” associations and familiarity government officials have with the more typical scientific evidence-led ways of working in the context. Issues of association were also noted by practitioners at Behavioural Science Aotearoa (see Section 2.5). They expanded on the problem-solving process: “The whole point of a known hypothesis is to bind us into the concept that we’re wrong, and to shape our thinking process.” Here we see the overall abductive approach of the design-led process in problem solving (generating practice-based evidence) being used in practice for determining the “how” but using terms often associated with inductive and deductive reasoning in more “traditionally” evidence-led operations for parts of the design-led problem solving process described (see Section 2.3 for Figure 5).

Similar issues of semantics were aimed to be surpassed by naming some projects randomly, also partially in not locking in a project by its name in order to make room for pivoting. An interviewee described how, for example, to name projects “Feijoa” and “Croissant” (see Section 4.4), as naming them after breakfast foods anonymized them in regard to their content, although might have initially confused some project partners or participants.

These tactics, although small, were used as a way to suspend some associations and judgement that might follow, which are an essential part of the creative parts of the design process as well as scientific research. The manager also noted that calling something a “lab” has preconceived notions attached to it. One interviewee talked about “innovation” likewise being a much thrown-around and loaded word with assumptions tied to it, especially with technology, which can burden any initiatives in being set on a preconceived course. All of these words are loaded with meaning, and it is challenging to escape beyond their limitations.

Another aspect that related to judgement and preconceptions formed around the Lab principle of experimentation and learning was the latter often seen and defined as a failure. Many interviewees mentioned this, and an advisor spoke about their view in relation to this:
We were really struggling from [a particular] project team to the Lab, communicating how to get right—a pivot, which is the first thing we did—and a close when it’s not successful.... I think for me it was really hard to recover from, because it should have really been celebrated as a success that we didn’t sink money into something that wasn’t a good idea. Instead it was seen as a failure. [With this particular project] we actually nailed it in terms of what the Lab was about, which was to test ideas and if they didn’t work, don’t pursue them. —Advisor 3

Their view is in alignment with the lab principle of “learning and improving rapidly” as well as “providing value or stopping.” A learning—or a failure—is difficult to justify in terms of delivery, especially operating within a wider environment that is not tolerant of it. A manager noted that “agencies had no mechanism at that stage to test using an experimental process,” and this became the value proposition which the Lab was well positioned for. However, integral to the experimental process is iterative learning by doing. As one manager noted, “they weren’t used to extracting data from an experiment,” and resulting pivots or stopping were often seen as a failure. In addition, one of the lab leads mentioned that as there was an expectation to deliver digital service solutions, an assumption that underlines some of the Lab’s principles, other types of solutions, such as non-digital or more systematic ones, were also often seen as failures, even when supported by evidence.

5.3.4 Openness and communication

Another of the Lab’s practices that contributed to learning within the stakeholder system as well as supporting the Lab’s approach was its principle of “openly and widely talking about our work” (see Section 4.2). Open communication took the forms of blogging, visual communication, and storytelling in the Lab space. Besides this, any code components were made available online as open source. Advisor 3 commented that what emerged early on was hosting visitors in the space as an aspect of open communication about the Lab: “An element which hadn’t necessarily been planned, but became important was to try to bring people in and see what we were doing and tell the story.” The storytelling in the space was supported by visualizations of the Lab’s approach and metaphors on the tensions of public sector innovation when guiding visitors through. This advisor played a big part in delivering this within the wider stakeholder network. One of the many realizations was the lack of understanding and capability for the joined-up ways of working the Lab tried to achieve, which would presumably be one of the first barriers to involvement from agencies. Interviews would often talk about “meeting people where they were at” in terms of building learning and capability for design-led innovation approaches, of which the above is an example of taking introductory steps for. Starting hosting of visitors for tours connects to the ethos of “showing, not telling” exemplified by the Lab team and approach since its inception (see Section 5.3.2).

In addition to guided tours of regular visits from multiple groups to the Lab, open Lab days on Fridays were set up, where anyone could drop in the space. An advisor noted: “The uniqueness I suppose for the physical space was that it was an open, collaborative space that anyone and everyone was welcomed in. And we worked really hard to be intentional with our welcomes...” Multiple other interviewees talked about the welcoming, warm and non-threatening feel of the Lab space. One interviewee noted the “low level relationship-building” aspects of this. The open
ness also applied to the Lab space to be used by those who needed it, even when they were not in any way involved with the Lab and its projects.

Someone said to us: “oh you know I’m struggling with a meeting room” And we’d say: “look, there’s a space here, just come and use our space, you know. There’s coffee, tea, help yourself. Come down here and work for a day, then head off.” So it’s—on some levels it’s really low level relationship-building. But that has a huge long-term value, because then you go well you actually demonstrated you care. The next time you come back with a big project, you’ve got space. —Manager 1

This seemed to in part be a tactic to bring people in, who would sometimes get exposed to and be curious about the Lab by nature due to being in the same space. However, some interviewed staff noted that having external groups using the space as part of the Lab’s offering could sometimes be disruptive to their work, alongside the hosted tours.

Openness as an ideal is common in the design and digital fields, as nowadays open innovation within ecosystems is becoming more and more common. This is not how things are usually done in government, and the way the Lab managed to do this was multilayered:

We tried to work in the open, [which included] blogging about what we did... Usually stuff goes through comms with finesse... so putting something out raw...and being non-threatening at a low level... and all of it being small enough not to scare the horses and dealing with it by covering “no we’re not, just read it”... it was a tactic to divert questions and Official Information Act request[s] by working in the open and let people see stuff. —Advisor 4

The quote reveals that working at a “low level” was beneficial in being able to do this. A manager noted that once people become familiar with something, it lessens resistance. The openness was not just for learning for the wider system; it also served to allow for the continued Lab approach. However, achieving full openness in this context was a challenge, and documentation and interviews revealed the reality of the limitations to communications in the context. Communication materials in relation to the Lab needed to be shaped by the political environment. I observed the differences between public materials and unpublished materials, and lack of some published materials. The interviews additionally yielded data on multiple challenges besides those mentioned on the documents, which means not all categories of challenges and learnings had (yet) been recorded. The fact that unpublished blog posts and other materials were revealed in the interviewing process was an indication of strict rules on communication and perhaps partially intentional in all cases. Limitations placed on publicizing material deemed too innovative were placed especially around elections in 2017. This presents a dilemma for the principle of openness at the Lab, and to an ethos of sharing learnings for the national and international Lab community.

5.3.5 Challenges of achieving cross-sector collaboration

There was consensus from interviewees that achieving sustained cross-sector collaboration was often challenging despite the mandate to do so, and the collective mission around citizen-centric-
ity. It was sometimes challenging to get collaborators buy-in or continue engagement in projects, as single-agency priorities could work against initial engagement or often took over at later stages when involvement had started (see Section 4.3). An advisor spoke about the process of engagement:

You hope to do a number of things right through from creating the agenda (of) what was you had to get them to understand and be invested enough in the agenda for the work shops for even to turn up [laughs], and then when they’re in the room to help them to see what are the opportunities—or challenges—to work together, and then also having them leave feeling empowered... —Advisor 2

There is a sense of communicating the value, approach, and collectively making progress on problem-framing as well as what appears to be a relatively strong need for buy-in. This was achieved in a multitude of ways, openness, and communication being some of them. A manager who had an extensive network of higher officials described a simple tactic utilizing relationality around objects for contributing to getting buy-in. It involved asking contributions of office supplies to be brought in from individuals in stakeholders positions to their first project meetings at the Lab. By doing this, the manager described how they had already gotten partners’ buy-in through unofficial means for the project before these partners had even stepped into the Lab by being invested in contributing to it with objects. The manager termed this tactic “beg, borrow and steal” in running on goodwill and creating a sense of being resourceful as a team and a network, which was likewise applied to acquiring furniture and supplies in the Lab spaces, from cups to chairs.

Once buy-in and engagement were in place however, prioritization due to the prevalent structures of accountability could lead to losing agencies from project collaboration, even during later phases of projects. An advisor recounted their view on this:

Where I was [with] that was—yes, but those people are in contr- we´re not paying them, we´re supporting them and if their verticals move them onto other things or say things [need to] stop, we have to honour and respect that. The worst thing you can do is to give them grief because they’re just doing what they’re being told within their vertical.

—Advisor 2

This hints to the hierarchy of authority the cross-sector governance had in relation to the existing vertical structures for accountability over individual agencies, and certainly the position of the staff at the Lab. This advisor saw their role in supporting agencies and other stakeholders coming to the Lab in any way they could, “meeting them where they were at” with the Lab’s approach. It also reflects their role in not being accountable for delivery in their role as their managers did, who would presumably be in a more difficult position if project partners would fall through and this affected delivery.

It was quite common for agencies to delay the start of cross-sector projects when they were first priority at the Lab as per the work program. This could lead to instances where the agencies would delay the start until there were only a few months left of the government financial year, which meant that delivery needed to happen within that short space of time. It could also mean that there was little cross-sector work for the Lab to do around certain periods—during which they started working on “what was good for the innovation system” (see Section 5.3.4).
A lab lead talked about the lab leadership team changing tactic in order to respond to this:

For the second year we changed the process to... get the board’s agreement that if you’re in the top 20 things that they wanted us to focus on, then it’s first in gets stressed.... if number 10 is organized before number 1, we’ll start with number 10. That created a little bit of upward pressure... [and] a bit of a race to actually get organized, which meant that we didn’t spend months trying to sort that out, we just closed that loop a little bit.

—Lab lead 2

They described that this led to those who were fully on board to get more organized, whereas for those who were not, it represented “a dignified way out.” Before this, there would often be alternating periods of intense busyness and periods of waiting. At these times, lab leads described working on different types of projects with a longer-term view that would benefit the innovation system as a whole (refer to Section 5.3.4), and also collaborating internationally.

Unique to this particular Lab initiative, continuous struggles with the physical space posed an additional challenge to collaboration. The necessity of a removed, neutral space was continuously highlighted in documents as a precondition for systematic cross-agency work, and was part of the purposes clearly from the start. Despite consistent mention of the Lab being a fully neutral space from the start, the fact that it was started within a consultancy premise speaks otherwise. The third space within the host agency organization temporarily for a few months was even less so, and proved to be the most challenging. The reason for the latter was a temporary closure following an earthquake. This will be discussed in more detail in the next section.

5.4 Changing Lab identity and relations with the host organization

A manager noted that one of the challenges was the fact that the Lab was that it was not “kaupapa driven”; its identity was shaped and dependent on whoever was at the Lab at any given time. The key informant who had been at the Lab through all of its phases estimated that there was a staff turnover of 25% within the team at the Lab in any given year. Many interviewees detailed how the Lab staff had almost completely changed in the last, wrap-up phase (see Section 4.3). This was following an especially high period of turnover in a turbulent period towards the last year of the lab, which I observed was linked to precarious funding as one factor. An advisor noted: “There was a whole new team of people coming around [in the Last phase of the Lab], so some of the vibe changed and some of the people changed. Different expertise.” By this stage, some of the people who had been influential in setting up in the earlier phases of the Lab had moved on. The processes were said to be more effective and streamlined, and eventually moved online. It was noted that towards the end “everybody became so focused [...] to deliver [an] outcome” at the expense of experimentation in the Lab’s approach, which was more rigorous and present in the approach at earlier stages.

Funding played a part in the changes, and was also mentioned as a challenge in the documents. Short-term funding can lead to diverting focus away from the work itself and into time and effort spent into justifying continued support. The short-term funding cycles and yearly need to bid for the next year’s round of funding can additionally create pressures to focus on short-term work and quick deliverables. This in turn can compromise long-term thinking and outcomes, and there can be a gap between these two supporting each other.
With the Lab’s relationship with its host organization, two main challenges emerged: being temporarily located and working within the host organization’s premises, and the changing nature of the relationship and the Lab towards the end of its existence.

Following a major earthquake during the second LabPlus stage, the Lab had to exit its premises within a few hours’ notice due to the building being deemed unsafe. This was described by several interviews as leading to an intense team effort to get everything out of the building. With a lack of a space to relocate, the Lab “camped” at the host organization’s premises for some months. All interviews had noticeably strong negative reactions and statements when the topic of location within DIA was raised in the interviews, and there was agreement on clear learning to not have to do that as an innovation lab.

We ended up taking over one of the spaces in the DIA, which people were really good about for the first couple of months, and then I think we over-stayed our welcome with the rest of the organization, before we finally got another set up. —Advisor 1

Being located within the host organization highlighted the differences between the—effectively—two organizations:

What you found was such a difference in culture. In the main system, people -very structured, very bureaucratically driven process, and then you got this team that had just arrived that are just about “get it done”. Everything —we just need to keep doing —and you can’t stop... the hilarious thing was that by the time we got to that point [of leaving for another space], no one was [questioning whether] we needed a separate space, it was like “when will you leave? You’re just too disruptive. We recognize this now, we can’t house this.” —Manager 1

Another point on the problem of being positioned as a lab within a government agency made by an advisor was to do with dimensions of power: “When you walk into the building, it says “the Department of Internal Affairs”: that already signals a place and position of power —a power imbalance.” This is especially true when citizens are involved in processes within the Lab. This does not support the horizontal and non-hierarchical way of working, nor does it present a welcoming space. Moving away from the host organization’s premises to Thorndon Quay (see Section 4.3), one advisor noted that it was the “home.” Although some interviewees saw this space as great and near, about half of the interviews referred to the Lab’s physical, as well as metaphorical, placement in the periphery or outskirts when referring to this space:

[The Lab] did have that quality that a lot of labs have of being part of but also being slightly removed, and maybe slightly insurgent quality to what they are doing...[The last Lab space] was quite different to any other government agency, because it was a rented space slightly away from the main hub of all the agencies. Not far away, but one of the things that people said that it was too far away. And it was probably a 5-10 minute walk from here. But that was a barrier in terms of getting people to come together or come to a meeting. Not always, but it was mentioned often enough. —Lab lead 1
In a small city such as Wellington, distances become relative. In a central business district where most government agencies exist side-by-side, the location was removed from that. One interviewee saw this as a reflection of the lack of respect and value placed on the Lab by the wider authorizing and stakeholder environment. When the Lab moved online during COVID19 lockdown, the physical space became irrelevant in its operations. However, following this a lack of a neutral and collecting space in the sector was noted. Although the space itself was not the focus of the Lab initiative, consensus for its value consistently comes across in the documents and by most interviewees. It was noted to be a part of the service offering, even alongside digital aspects earlier on. On the other hand, when the lab operations moved online, the space was noted to not be essential by some. I highlight that citizen engagement lessened towards the end of the lab’s existence, and that the physical space is important especially for these engagement aspects.

Towards the end of the Lab’s existence, the multi-agency funding model transferred to single-agency funding model:

[When the innovation fund] started to dry up, DIA took the responsibility of funding it.... With other agencies quitting commission work... it was one of the steps towards closing it. I think people in DIA I went: “Why are we shouldering the burden for a cross-government team?” A way of funding these teams is passing the hat around and getting people to put the money in. That’s great, because it’s collaborative, but precarious as well in terms of it takes a couple of people to step away, and suddenly things are looking a bit more difficult.
—Lab lead 1

During this time, there was a noted increasing ownership on the Lab’s projects from the host organization. As one advisor put it: “At the end a lot of our projects were DIA-based, so it made it even harder to argue that we were this independent, open, government space.” This preceded the formation of the Digital Public Service branch at the host organization in 2020, which continued much of the mission of the Lab. In late 2019, the decision to close the Lab was made, and the newly formed Digital Public Service branch at the Department of Internal Affairs continues the work. In the end, it was noted that the Lab was measured against initial planned goals and outputs, and closed accordingly. However, due to its experimental nature, all of these could not, and perhaps should not, be foreseen. It became evident throughout the interviews that there had been no formal or in-depth evaluation of the Lab’s work at the time of writing this thesis, and no evaluation frameworks to measure some of the Lab’s learnings and impacts within the context. Whether and how well the Lab and its aftermath succeeded in bringing innovation within the public sector was left as an open question and noted to be debatable by some interviewees, especially when it comes to integrating capability back into the host organization.

The closing of the Lab coincided with the emergence of COVID-19, and in some ways this timing was serendipitous:

[The Lab] was an experiment for how the [public sector] system now needs to run... Because I think that’s actually —one of the advantages of this occurring, just before you went to COVID, is that the system was just a little bit more resilient because there were lessons that flowed out of this. —Manager 1
Determining direct causal relationships is not feasible, and many of the impacts of the Lab were and are not easily observable, describable, or quantifiable, specifically within short timeframes. However, intense adaptability, resourcefulness, systematic collaboration and learning with capability uplift, rapid experimentation and delivery are only some of the ingredients needed for increasingly digital service delivery under the current conditions. These are issues that governments around the world currently have to grapple with, and will emerge changed in the post-pandemic era.
6. Conclusion
6. Conclusion

In this chapter, I conclude the thesis by reflecting on the results in relation to earlier sources presented in the thesis, and evaluate them with regard to the research aims and questions. I follow this with a discussion of the limitations and reliability of the research, extending from Chapter 3. Then I outline implications for practice and further research.

6.1 Reflection on results

This thesis set out with the aim of understanding the current state of design-led PSI labs as a phenomenon, particularly in Aotearoa New Zealand. The main empirical component of the thesis explored the Service Innovation Lab initiative and its design-led innovation approach, and the challenges faced, along with some of the varying perceptions of, and responses to, these challenges from a selection of individuals in key roles associated with the case. The study was led by the questions: What are the current issues in public sector innovation for PSI labs and their design-led innovation approaches globally and in Aotearoa New Zealand? What are the challenges associated with the Service Innovation Lab initiative and its design-led innovation approach in the Aotearoa New Zealand public sector context? How did those involved with the initiative perceive and respond to these challenges? In terms of the last research question, I defined those in key roles as individuals acting in professional roles in the public sector who were closely involved with the Service Innovation Lab case and who had a continuous involvement within it during one, or many, of its stages over its entire existence. This includes mostly those who worked within the Lab space, as well as managers who worked at the host organization’s premises. The first aim was fulfilled through the literature review coupled with the supplementary methods of interviews and site visits. For the main part of the thesis, I analyzed nine semi-structured interviews and a selection of five internal documents through a reflexive thematic analysis.

The key findings suggest that the challenges, and the responses to them, largely centered on the Lab’s approach in tension with the pressures of the wider public sector. I identified the main systemic challenges to innovation in the public sector as structures of accountability, and organizational culture and mindsets, which reinforced each other. Structures supporting accountability through vertical single-agency priorities and a focus on rapid deliverables were noted by all the interviewees to be in contrast with the collaborative cross-sector way of working required for horizontal design-led approaches with little hierarchy. The culture and mindsets included risk-aversion and expert mindsets, with resulting preferences for incremental innovation.

I identified two broader categories of responses from those involved with the case to navigate the challenges within the context of the case: creating the conditions for innovation, and facilitating systems of learning and delivery. Creating the conditions included the authorizing environment on the strategic level, and leadership on the operational Lab level, and connecting to innovation culture within the space of the Lab. These conditions enabled the Lab to facilitate learning and delivery for integrated services with cross-sector stakeholders. Learning and delivery were achieved through a collective lens of citizen-centricity actioned through the Lab’s approach and mindsets, as well as various strategies for collaboration and openness. Strategies for col-
oration included a “beg, steal, borrow” approach in using objects to facilitate connections, and a “first-in, first-served” strategy with work program priorities, while the approach to openness included open Lab days and tours, and communication and reporting of work online. These largely emerged during the initiative due to its experimental nature.

A challenge unique to this case was the changing nature of the Lab identity, including aspects of te ao Māori [the Māori worldview], and the changing relations with the host organization. The latter aspects were connected to frequent changes in the physical space and funding. The Lab identity was evidently influenced by the team at the Lab at any given time, as a result of the high staff turnover. Te ao Māori was increasingly incorporated in some aspects of the Lab, coinciding with increasing internationalization. The Lab operated in four different physical spaces over its existence, of which being located inside the host organization’s office proved most challenging, as the circumstances for this were unusual and highly disruptive, stemming from circumstantial necessity as a result of an earthquake. The funding was inconsistent and uncertain from changing sources, eventually moving from cross-agency funding to single-agency funding from the host organization. Aspects of these changes were noted to lead to the closure of the Lab.

The findings show the challenge of innovation in the public sector, with specific consideration of the Aotearoa New Zealand and other similar public sector contexts. The tension between the Lab’s design-led approach and the wider public sector corresponds to the literature, with broad notions of challenges to, and the contradictory nature of, PSI and the conditions for the challenges within this context, where there is considerable risk-aversion and pressure for rapid deliverables (Bason, 2010; Bekker et al., 2013). The findings show the necessity of creating an authorizing environment, and of leadership within the Lab to counter some of the pressures stemming from the wider public sector when operating an innovation Lab within it.

The Service Innovation Lab case falls clearly within the current wave of PSI with a focus on citizens as users, digitalization, and fiscal constraints (Tõnurist et al., 2015) that are evident in the New Zealand government rhetoric for digital service delivery, and also from the data analyzed in this thesis. The activities of the Lab fall within all facets of the innovation life cycle, from identifying problems to diffusing lessons, and although the focus on evaluating projects was mentioned, it was not so apparent in the data for this thesis (refer to Figure 2). However, most of the activities fell within the beginning stages of the cycle, as is usual for PSI labs (Lewis et al., 2019; Scuurman & Tõnurist 2016). For example, internal documents showed multiple projects remaining at the stages of identifying problems and generating ideas that did not proceed further, which did not appear in the publicly available materials. The Service Innovation Lab was atypical in its large scale and the number of people involved, compared to most initiatives surveyed in the literature (McGann et al., 2018; Tõnurist et al., 2017), as well as being temporally located within its host organization. The Lab falls into the integrated model of design in organizations, as detailed by Junginger (2009) (see Figure 7). The Department of Internal Affairs, as the larger overseeing and funding “parent” organization, was noted to position design as a “peripheral” function, pushing design-led approaches into these spaces of the lab. Being located within the host organization, resulted in the process of design actually being situated within the organization. The placement of the Lab within the host organization was a temporary solution in response to an earthquake as an unforeseen outside factor, and had a considerable negative impact on its identity, culture, and success. This demonstrates the necessity of locating PSI labs in a fully neutral, separate space, as is often referred to in the literature as the usual and unique qualities of PSI labs (Bason, 2010; Tõnurist et al., 2015; Tõnurist et al., 2017).
The Lab showed the multiple characteristic challenges of PSI labs over its existence, including with leadership support, funding, longevity, and building understanding of, and capability for, its approach. These were also challenges for other labs with similar elements (see Section 2.5). A club funding model showed most success in supporting cross-sector initiatives. This was also the case with the other two labs presented in this thesis (see Section 2.5) with similar funding structures. The shift from multi-agency funding to single-agency funding seemed to have a negative impact on the Lab, along with changes in its identity and working away from cross-sector projects. Issues relating to te ao Māori are unique to design in the Aotearoa New Zealand public sector, which also posed challenges (Mark & Hagen, 2020) that I was unable to draw extensive findings of in this thesis. However, the addition of te ao Māori aspects within the Lab’s approach and culture allowed for increasing understanding of them, not only within the team and the Lab stakeholder network, but also for culturally improved services in certain instances.

Furthermore, the findings of this thesis were able to draw attention to, for example, innovation culture and language use at the case organization and their impact on the team and their work, that to my knowledge, descriptions of are mostly lacking in the literature, particularly in Aotearoa New Zealand. Such findings were able to be revealed due to the use of qualitative interviews coupled with a thematic analysis of the data. The inductive analysis contributed to findings that were at times unexpected, with some not apparent in the existing literature or in theoretical frameworks.

Overall, the findings reveal the Service Innovation Lab as an evolving organization in terms of interacting with the conditions for learning and delivery for public sector innovation through various collective and individual responses taken by those involved with the initiative during over three years of its existence. Such findings can shed light on some of the previously uncaptured, and less tangible and measurable aspects of the case. This case study research can serve as an extension of learnings for successive initiatives, and provides ground for further studies for this, and other, cross-sector cases, particularly in Aotearoa New Zealand and similar contexts, as I will detail in Section 6.3.

The objectives of the thesis research were to conduct a literature review to explore public sector innovation, PSI labs and relevant aspects of design globally and in Aotearoa New Zealand, supplemented by interviews and site visits; to conduct analysis of internally available documents on the Service Innovation Lab case on the challenges encountered and; gathering empirical in-depth data about the perceptions and responses to these challenges through semi-structured interviews of a sample of those in key roles involved with the case.

The extent of this case by itself proved to be vast for a subject of a thesis due to its unusually large nature in the field of PSI labs (McGann et al., 2018). I came to this realization during interviews, when increasing amounts of information started to emerge from multiple interviewee perspectives. I account this as a consequence of undertaking explorative research with no previous existing research on the case and to being a novice researcher myself, as was with other learnings undertaking the thesis research. The findings remain on a broad level, serving as a starting point for further research. I acknowledge that the first objective corresponding to the first research question was not possible to comprehensively answer within a scope and limits exerted by a 30 ECTS master’s thesis, and posing it was ambitious in hindsight. However, the first research question served as a good starting point to prepare me for the empirical research on the main case, and has thus remained as one of the guiding research questions. As I started from global PSI
literature, this allowed me a broad view of the field that I later narrowed down to Aotearoa New Zealand. The broadness however left me with limited time to answer the question, and I was unable to form extensive or conclusive findings, partially also perhaps due to the young field. With the literature review, due to the many terms used for similar meaning, the lack of definitions, the various fields these contributions come from, limits to space in the thesis, and limits of my experience with this method, the review presents a snapshot of the research in the area. I focused on the methodological and empirical parts of the thesis at the expense of expanding or improving the literature review and the introduction chapter. Partially using primary evidence to answer the first research question is a strength of the results in relation to it, which additionally allowed me to hone my methodological skills in preparation of the main part of the thesis.

Therefore in this thesis, I chose to focus on the second and especially third aims and respective research questions more comprehensively with the data gathered in regard to the Service Innovation Lab to inform the main results in the discussion. As I was able to access internally available documentation to triangulate it with data gathered by interviews to form synthesis for the discussion chapter, this was a strength to the thesis. The thesis as a whole focused most heavily on answering the last, and strongest, research question. The data and subsequent findings from the case interviews yielded the most amount and quality of data. The number of case interviews, a total of nine in the roles of manager (n=2), Lab lead (n=3), advisor (n=4), could have been less to produce sufficient in-depth data for the purposes of a thesis and for answering the third research question with this type of explorative study design. The amount of data gathered posed considerable demands on my time for listening to the recordings and transcribing, that I would have otherwise used for further follow-up of interviews on the data had there been less interviews. However, overall in my opinion the approximate proportion of time and depth used for fulfilling the objectives and answering the research questions proves balanced for the purposes and bounds of this thesis.

6.2 Limitations and reliability of the research

The limitations of the thesis include the selected single case and methods, the past nature of the case, the bias of the researcher and the participants, limitations posed by confidentiality, and the limited sample in the selection of participants. Counter to my assumptions, gaining access to the case and internal documentation did not prove to be limitations. A single case study cannot be compared or generalized, so the findings of the thesis apply exclusively to this case (Yin, 2018). To gain a more widespread understanding, a multiple case study or survey approach would be needed. However, this would not have been feasible within a single thesis to produce sufficient insights. To counter concerns about case study reliability (Yin, 2018, p. 46), I kept an extensive case study database in electronic personal storage folders. The first part of the database contained notes on the research data and subjects, as well as the raw research data. These were composed of links with access to, or downloaded versions of, potential and selected internal documentation for analysis, background notes on all interviewees, interview schedules, full transcripts from the recordings and notes from the interviews, as well as the coded interview transcripts, and a list of emerging themes and sub-themes complete with the relevant codes and selected supporting quotes. I coded the transcripts a second time within days or weeks of the first coding. The second part of the database contained my research report and
reflections, including a research diary that I kept throughout the thesis, reflecting on the process and my subjective thoughts. During the data analysis stage, the diary played an important role in the reflexive thematic analysis. During this stage, the research diary and the thesis draft blended into one, and the resulting key points from this process are integrated into the final thesis. These are all essential considerations in qualitative research, where the researcher is the instrument in gathering and interpreting the data. However, I acknowledge that bias cannot be fully bypassed, despite exercising reflexivity.

As this study concerns a case that is no longer operating, this placed temporal limits for methods for gathering data. Some limitations to selected methods, particularly to semi-structured interviews as the main method were outlined in Section 3.2.3. I coupled the interviews with document analysis for triangulation. The interviews additionally relied on memory of past events, some of which happened several years ago, and could contain incorrect recollections. One interview in particular noted that they had difficulty remembering some of the exact details due to the passing of time.

Apart from my own bias as the researcher, there could be potential participant bias as well. I suspect that with any of the challenges faced by the participants, I did not always get the opportunity to hear the full, unpolished truth in the form of opinions from people’s own perspectives across the roles. Confidentiality issues contributed to this in part, most acutely evidenced by one interview not going ahead due to confidentiality concerns. These could be a result of a multiplicity of factors: psychology, the political awareness of people working within the public sector, and the existing systems and structures in place in a postcolonial context. Limitations to disclosures were potentially also compounded by the fact that the interviews were mostly one-off interviews. Despite the interviewees speaking as private individuals, they were also bound to their roles, both current and past, and the responsibilities that came with them as a priority. However, I generally seemed to elicit deep reflections and responses, and the findings revealed multiple aspects that have not previously been mentioned in public, or even in the internally available documents I have analyzed. This suggests that, overall, the interviews were highly successful for fulfilling my research aims. To increase reliability, I refined the interview schedules in the interviews for the purposes of answering the first research question (see Appendix D.) before the case interviews, and conducted a round of a few initial case interviews. All the quotes used and the relevant case findings were sent to each case interviewee to approve prior to the submission of the thesis. This increased reliability, as misinterpretations were minimized, although it could also have increased participant bias.

The selection of participants is limited in its sample size, and thus non-exhaustive. This was mostly due to time limitations in gathering and analyzing the data posed by fitting into a thesis project timeframe, as well as through narrowing the groups to closely match the research question. Due to the rather small number of those closely involved with the case, estimated at 25-30 people by one of the managers over the total existence of the Lab, a more extensive research project could have aimed to interview all of those involved to produce more extensive and in-depth findings. Towards the end of the interviewing phase, I had to decline further suggested interview connections as per snowball sampling due to time limits. However, these can provide a good starting point for subsequent research, as detailed in the next section.
6.3 Implications for practice and future research

This thesis study has identified the main challenge areas for the Service Innovation Lab case, and captured some of the views and responses of a sample of participants in key roles involved within the lab. The case study codified tacit knowledge from the case held by the practitioners, which is essential for open learning in PSI labs globally. The study should prove to be useful for practitioners to increase their awareness of some of the main areas that require attention when setting up and operating an initiative such as this. As the thesis presented an explorative study using an inductive analysis approach, it was able to capture some aspects of the case that may not be captured through evaluative studies within the current frameworks. More evaluative studies focusing on the Lab’s activities and impacts, beyond the limitations set by the existing metrics and practice frameworks, could be beneficial to aiding and expanding innovation practice. The findings of this thesis could potentially help inform such evaluation frameworks and practices for PSI labs.

In addition, the thesis draws on learnings to aid further cross-sectoral innovation and Lab practices that are applicable in this context, as well as potentially in settings elsewhere with similarities to Aotearoa New Zealand. From a practice point of view, the study aimed to gain a better understanding of design-led approaches and their challenges, providing a snapshot of the landscape of PSI labs and the case lab. There is a limited understanding of these within the wider New Zealand public sector, as concluded from the data.

The thesis study is the first case study in the academic realm focusing solely on this particular case. The case itself was the first cross-sector governed innovation Lab specifically with digital service elements in Aotearoa New Zealand. As such, this study provides a starting point for further research in this context.

A case study of the Service Innovation Lab could have explored the case and its various other aspects through multiple other disciplines and angles. Some of these I deemed unsuitable from my position within the Department of Design, namely a political science approach, which would offer ample avenues for further research (see Section 2.2). Within a service design discipline, individual projects embedded within the Lab case as a unit could be further explored.

Subsequent studies of this particular case could expand on the perceptions of the challenges the Lab faced and the approach taken to deal with them from those in various positions not directly and/or consistently involved with the Lab throughout its existence. This would require a sample across various government management and participant groups, such as citizens and agencies outside the public sector, as the sample for this study was limited to a selection of those who had direct involvement with the Lab and were employed by the host organization. To undertake this type of further study, I have a selection of potential existing contacts, and would be interested to undertake further research as an extension of the thesis either independently or in collaboration with others. This type of research could be executed as a mixed-methods or a qualitative study, depending on the extent of representativeness of the sample aimed for, the type of study, and the depth of findings desired.

Particularly relevant to the Aotearoa New Zealand context are studies with a te ao Māori lens to the approach and the projects, and the challenges faced within the political context in this case, as well as other national-level cases and their projects. The tensions posed by internationalization in the later phases of the Lab could also be a fruitful angle for research, as would a study focusing exclusively on the analysis of the Lab’s external communications. Another interesting avenue would be to follow the formation and contributions of the Lab’s members to existing...
communities of practice, such as a currently operating public sector service design network, as well as Lab staff and their career trajectories and engagement with Lab-influenced approaches in the public sector and beyond after their involvement with the Lab. A timely strand of research beyond the Lab’s existence could focus on the Digital Public Service branch that superseded the Lab, and which currently operates within the Department of Internal Affairs. This angle could explore which aspects of the Lab’s culture and practices were able to be transferred, adapted, or maintained in a branch of a government department, and what makes PSI labs beneficial as vehicles for PSI. Finally, looking at the impacts of COVID-19 on the Lab’s last phase, and how building capability and resilience through its practices could have affected or could strengthen responses to services in the midst of the pandemic, would provide an additional timely focus, as the global situation unfolds.
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Appendices
Appendix A.

Privacy Notice and Information for Research Participants in Jane Lehtinen’s master’s thesis study

Date produced: 18.1.2021

Kia Ora! Thank you for considering participating in my thesis study as an interviewee.

Participation in this study is voluntary. You can discontinue your participation in the study at any time. Should you discontinue your participation, you will not be subject to any negative consequences, but information gathered from you up until the point of cessation of your participation may be used in the study according to this Privacy Notice and the applicable data protection legislation.

1. Purpose of the study
The thesis research explores the challenges associated with the historical case of the Service Innovation Lab and its design-led approaches in the Aotearoa New Zealand public sector context. The aims of the thesis are gathering an understanding of the current area of public sector innovation, public sector innovation labs and related design-led approaches globally and in Aotearoa New Zealand, as well as the challenges and enabling factors of the design-led approaches in the case, and how these challenges might have been negotiated, taking into account the specifics of the local public sector context.

2. Gathering of data
Information is obtained directly from the interviewees face-to-face in Wellington, New Zealand or by phone/online through recorded semi-structured interviews. Interviews will last approximately up to 1 hour. Your participation is voluntary and no compensation is given.

In addition to these interviews that your participation will form a part of, thesis findings will be informed by a literature review on the topics and document analysis of publicly available documents on the case.

3. Conflicts of interest and further information
No conflicts of interest are noted from the master’s thesis researcher. If you would like further information on the data collection and the study, I am happy to share my full approved research plan.

4. What personal data is processed?
The categories of personal data (any information relating to you as an identifiable person) includes research data and contact information. The research data contains your interviews and it may include voice data through a recording of the interview by phone/online or in person, as well as your profession and role with the Service Innovation Lab case. Your contact data includes your name, and may include your phone number and personal email address.

5. Sources for collection of personal data
In addition to the data to be collected directly from the participants of the study, data will be collected from publicly available documents on the case, including the Service Innovation Lab’s website, any of its publications and related media materials.

6. a) Processing of personal data in the study
Personal data from semi-structured interviews and aforementioned publicly available sources will be used to inform thesis findings. The data collected will be kept to a minimum to solely achieve this goal. Any contributions and quotes used in the final thesis from the interviews will be pseudonimized. Complete anonymity cannot be guaranteed as you might still be able to be indirectly recognized. Only findings based on the data will remain and become publicly available.
b) the purpose for the processing of personal data
Any personal data will solely be used for the purposes of analysis for findings in the master’s thesis study of Jane Lehtinen.

c) effects on data subjects
The data subjects are expected to not be affected by this process in any way.

d) legal basis for processing personal data
The legal basis for processing your personal data is your consent.

7. Sharing of personal data
The research data and contact information data will be collected, stored and processed by the thesis researcher, and the research data may be shared with the academic supervisor of the thesis. The supervisor for the study is Eeva Berglund, Adjunct professor of Environmental Policy, Department of Design, Aalto University.

8. Storage period of your data and anonymization
The data will be stored on a personal hard drive and a password-protected personal storage. The files will be destroyed by the end of 2021 six months after the completion and approval of the master’s thesis.

The personal data will be pseudonymized between March and April 2021 upon the conclusion of all interviews, and prior to any presentations of preliminary results and submission of the thesis draft. Pseudomization refers to the processing of personal data in such a way that the data can no longer be attributed to you as a specific data subject without the use of additional information.

Complete anonymity in data for findings cannot be guaranteed as you might still be able to be indirectly recognized by the location and generic role in relation to the Service Innovation Lab case.

10. The rights of the study participant
According to the General Data Protection Regulation (GDPR), data subjects have the right

- to obtain information on the processing of their personal data
- of access to their data
- to request rectification of their data
- to object to the processing of their data
- right to erasure, if research data have been unlawfully processed and processing is no longer necessary for archiving purposes in the public interest, scientific research purposes or statistical purposes and erasure of research data will not render impossible or seriously impair objectives of scientific research

In the event, that the research study does not require, or no longer requires, the identification of a data subject, controller Jane Lehtinen shall not be obliged to acquire additional information in order to identify the data or the data subject for the sole purpose of fulfilling the rights of the data subject. If Jane Lehtinen cannot identify the data related to a data subject, the rights of access, rectification, objection and erasure shall not apply. However, if the data subject provides additional information enabling his or her identification and the identification of the research data, the rights are not affected.
11. More information on the study and the exercising of your rights

The controller in this master thesis study is Jane Lehtinen.
Jane Lehtinen
jane.lehtinen@aalto.fi
+64 22 0925078 (NZ) or +358 44 9536586 (FIN)

Thesis supervisor of the study is Eeva Berglund
eeva.berglund@aalto.fi

The research participant must contact Aalto University’s data protection officer if they have questions or demands related to the processing of personal data.

Data Protection Officer Anni Tuomela
Phone number: +358 0947001
Email: tietosuojavastaava@aalto.fi

If the research participant sees that their data has been processed in violation of the General Data Protection Regulation or data protection legislation, the participant has the right to lodge a complaint with the supervisory authority, the Data Protection Ombudsman (see more: tietosuoja.fi).
Appendix B.

Research Participant Consent Form

Researcher:
Jane Lehtinen
Creative Sustainability master’s student
Department of Design, School of Arts, Design and Architecture, Aalto University
jane.lehtinen@aalto.fi
+64 22 0925078 (NZ) or +358 44 9536586 (FIN)

Title of research project:
Exploring Public Sector Innovation (PSI) through a design-led PSI lab’s challenges: case Service Innovation Lab

The thesis research aims to find out about the challenges associated with the historical case of the Service Innovation Lab and its design-led approaches in the Aotearoa New Zealand public sector context. As part of this, perspectives of past and present staff involved with the initiative are gathered through semi-structured interviews.

- I understand that my participation in this study is entirely voluntary, and no compensation is given.
- I have read and understood the information given to me in the Privacy Notice and Information for Research Participants in Jane Lehtinen’s Master’s Thesis Study. I have had the opportunity to ask any questions and have them answered (in person or via email).
- I give permission for the interview to be audio recorded. The audio recordings will be used only by the researcher for transcription to inform findings.
- I understand that information may be used by Jane Lehtinen to inform the thesis research findings, which will be made public by Aalto University.
- I understand that I may discontinue my participation and withdraw from the study at any point, without the need to give any reason for this.
- I can choose to not answer any questions, in which case they can be skipped.
- I give my consent and agree to volunteer in this study.

Date:   /   / 2021

__________________________________________
Research participant name & signature
(agreeing to participate can also be expressed via email)
# Appendix C.

## Expert interviews

<table>
<thead>
<tr>
<th>Date</th>
<th>Interviewee(s)</th>
<th>Interview details</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.12.2020</td>
<td>Design Lead</td>
<td>60 minute online interview</td>
</tr>
<tr>
<td>9.2.2021</td>
<td>Director</td>
<td>45 minute face-to-face interview at Auckland Co-Design Lab, Auckland</td>
</tr>
<tr>
<td>5.3.2021</td>
<td>Manager, Senior Advisor</td>
<td>45 minute group face-to-face interview at Behavioural Science Aotearoa, Wellington</td>
</tr>
</tbody>
</table>

## Case interviews

<table>
<thead>
<tr>
<th>Date</th>
<th>Interviewee(s)</th>
<th>Interview details</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.12.2020</td>
<td>Advisor 1</td>
<td>60 minute face-to-face interview at Mojo Cafe, Wellington</td>
</tr>
<tr>
<td>21.1.2021</td>
<td>Advisor 2</td>
<td>70 minute phone interview</td>
</tr>
<tr>
<td>17.2.2021</td>
<td>Lab lead 2, Lab lead 3</td>
<td>80 minute face-to-face group interview at Kelburn Cafe, Wellington</td>
</tr>
<tr>
<td>20.1.2021</td>
<td>Manager 1, 19.2.2021</td>
<td>40 minute phone interview, 60 minute face-to-face interview At Bicycle Junction, Wellington</td>
</tr>
<tr>
<td>19.2.2021</td>
<td>Lab lead 1</td>
<td>60 minute face-to-face interview At Vic Books Cafe, Wellington</td>
</tr>
<tr>
<td>22.3.2021</td>
<td>Advisor 3</td>
<td>90 min face-to-face interview at Victoria University and Department of Internal Affairs</td>
</tr>
<tr>
<td>1.3.2021</td>
<td>Advisor 4</td>
<td>70 minute face-to-face interview at Vic Books Cafe, Wellington</td>
</tr>
<tr>
<td>3.3.2021</td>
<td>Manager 2</td>
<td>100 minute face-to-face interview at Vic Books Cafe, Wellington</td>
</tr>
</tbody>
</table>
Appendix D.

Interview schedule for [name of interviewee]
site visit to the Auckland Co-design Lab on Tue 9.2 @ 11:30 am
[address, phone number]

[Intro: Explain the purpose of my study, mention ethics forms and ask to sign, mention about recording, ask if it’s ok to take photos]

The thesis research explores the challenges associated with the historical case of the Service Innovation Lab and its design-led approaches in the Aotearoa New Zealand public sector context. The aims of the thesis are:

- gathering an understanding of the current area of public sector innovation, public sector innovation labs and related design-led approaches globally and in Aotearoa New Zealand
- the challenges of the Service Innovation lab and its design-led approach
- how these challenges might have been perceived and responded to by various roles within the initiative, taking into account the specifics of the local public sector context.

First research question:
What are the current issues in public sector innovation for PSI labs and their design-led approaches globally and in Aotearoa New Zealand?

[Basic info / notes on the lab and interviewee here]

Intro

1. Could you describe the Auckland Co-design lab and your current role here briefly?
2. Could you tell me about a particularly memorable moment at the Auckland Co-design Lab? Why?
3. How did you first get involved with the Lab?

The Auckland Co-design lab

4. How did the Auckland Co-design Lab form?
   ○ Have there been any similar place-based initiatives before in New Zealand? How about abroad?
   ○ This is a long-term initiative due to its nature. How does the funding work?

5. In its wider context, what needed to happen before the Lab started operation in order to set up such an initiative with a design-led approach?
   a. Was there a “precursor” to the Lab’s work?

6. Do you ever feel you have to justify this type of work?
   a. To stakeholders? Citizens?
7. What would you say is the biggest challenge with the work by the Lab?
   a. How about with its design-led approach?
   b. How are you responding to these challenges at the Lab?

8. Your model is “flipped” in terms of whanau-led and -centric. How do you approach citizens for participatory work?

9. Are there any instances where you have come across legal limitations or requirements in the public sector context in a project that were challenging?

10. You have previously stated that there is a gap in formalized ethics in co-design practice. What are you currently working on in this space?

**Broader on innovation labs & design in Aotearoa**

11. When would you say the trend of using co-design (and service design) started being increasingly used in Aotearoa New Zealand?

12. What are your thoughts about the relationship between design-led inputs, as opposed to the “usual” evidence-led way of working in the public sector?

13. In your opinion, what are the main cultural tensions with labs in general standing in contrast to public sector culture? How about tensions specific to local PSI labs?

14. What do you think are the main challenges in the Aotearoa New Zealand public sector innovation landscape?

15. What are you currently working on at the Lab?
### Appendix E.
Internal documents selected for analysis

<table>
<thead>
<tr>
<th>Document and date produced</th>
<th>Description</th>
<th>Audience and purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Service Innovation Lab: Reflections on the Prototype Phase (2017)</td>
<td>A short report on the first five months of the Lab. Written by the first Lab delivery lead in the form of a blog post. 10 pages of text and images.</td>
<td>Internal, intended for publication (might have been public previously) For wrap-up of the first Lab phase</td>
</tr>
<tr>
<td>Summary report (2020)</td>
<td>An overview report of the story of the Lab over time, with sections on about the Lab, Lab’s approach, project stories, insights and toolkit. Collaboratively authored by the Lab team in 2020. 30 pages of text with visuals.</td>
<td>Internal, intended for publication</td>
</tr>
<tr>
<td>Miro board: Lab timeline (2020)</td>
<td>A detailed timeline version of the four Lab phases between 2017 and 2020. Contains overview, key points, projects, staff, and some notes and reflections.</td>
<td>Internal, for wrap-up of last Lab phase</td>
</tr>
<tr>
<td>Miro board: Team retrospective (2020)</td>
<td>A board containing notes and diagrams from several team sessions in May 2020.</td>
<td>Internal</td>
</tr>
<tr>
<td>Miro board: Lab toolkit and story (2020)</td>
<td>A board containing a draft of the summary report and an engagement overview including boards from workshops with multiple groups and results from a small survey and interviews with the Service Innovation Reference Group (SIRG).</td>
<td>Internal, to prepare the Summary Report and website</td>
</tr>
</tbody>
</table>
Our response to your request RTR1097712 is:

Tēnā koe Jane Jasmin Lehtinen

Thank you for your enquiry about the Service Innovation Lab initiative and whether or not the library has any collection items related to the case.

I have searched our recent indexed articles to see if there is any published material relating to the Service Innovation Lab at DIA. Unfortunately we do not seem to have indexed any articles about the Service Innovation Lab. This does not mean that there were none published, but it does indicate that there were no major articles in New Zealand publications.

In addition, the Library is part of the Department of Internal affairs, and so I am aware that there likely to be internal documentation relating to the Lab that I cannot share with you as they are government records. However, you may be able to use the Official Information Act process (https://www.dia.govt.nz/Official-Information-Act-requests) to request material such as reports or foundational documents relating to the Service Innovation Lab if this is relevant for your research.

Nāku noa, nā

Amy Watling
Research Enquiries
Alexander Turnbull Library
Part of the Department of Internal Affairs