Embedding design practices in local government

A case study analysis

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A CASE STUDY ANALYSIS

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Embedding design practices in local government:
A case study analysis

Dissertation

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by

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To my family and friends
who have supported this journey

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Definition of key terms

Local government

"Local government" refers to a government at the municipality level or equivalent. In the U.S., a municipality is a political subdivision of a state, whereas in many countries local governments designate counties, municipalities, cities, and towns (United Cities and Local Governments, 2008). Local governments are responsible for making local policies and providing various public services for the everyday life of residents, such as "social care, schools, housing and planning and waste collection … licensing, business support, registrar services and pest control" (Local Government Association, 2021).

Design for policy practice

In this dissertation, "design practice" refers to the use of design approaches for problems of public service or policy, also referred to as "design for policy" practices. According to Buchanan (2001), designers over the past half century have been using design approaches to problems in the symbol, object, interaction, and organization and system domains. Design for policy may be relevant to design practices in all four domains, but primarily in the last two. The practitioners of design for policy are not only design experts, but also public officers and civil society stakeholders. They often collaborate to tackle societal problems through design for policy practices. The concept of design for policy and how it is implemented in practice will be further explained in Chapter 2.

Public sector innovation lab (PSI lab)

Public Sector Innovation labs, also known as policy labs or i-labs, are defined as "dedicated teams, structures, or organizations focused on designing public policy through innovative methods that involve all stakeholders in the design process" (Fuller & Lochard, 2016, p. 1). It is known that PSI labs use design as a main approach for public policy innovation (Ibid.). PSI labs are established in and outside government but are often considered as an approach to building design capabilities inside government organizations. In this dissertation, the terms "internal agency" and "PSI lab" are used interchangeably.

Summary

Governments around the world are increasingly recognizing the value of design practices in public policy processes. However, despite the growing acceptance of design practices, several barriers to implementing them in the public sector have been identified in the literature. In particular, a small study conducted at the start of this doctoral study, which interviewed designers in the public sector, highlighted a key barrier: a lack of understanding regarding the changes in a government organization that occur when implementing design practices and how to facilitate these changes. This insight led this doctoral study to focus on the internal workings of government organizations and explore the phenomenon referred to as *embedding design in government* in the context of local government.

This doctoral study first delved into the literature in the fields of public policy and design to explore the current understanding of embedding design in government (Chapter 2). Drawing on insights from this review, a preliminary conceptual framework for the phenomenon of embedding design in government was established and the research opportunities in this area were revealed. Embedding design in government was defined as *the process through which a government organization's design capability matures, leading to an increase in value creation through design practices within the government.* Research opportunities were identified in how the organizational design capability matures and how the embedding process can be facilitated in local government. These insights were formulated into the following research questions:

Main research question: How do design practices become embedded in local government?
1. How can actors in local government foster the process of embedding design?
2. How do design practices mature in local government?

To investigate research question 1, a single-case study was conducted in the Municipality of Eindhoven, employing the theoretical lens of design management. Design management refers to the utilization of design knowledge and resources to generate value for the management of an organization. This case study interviewed three groups of employees engaged in design practices: in-house designers, design sponsors, and project managers. Through this study, several strategies that fostered design practices within

the local government were identified, such as communicating and providing learning about design, connecting design to organizational needs, and reflecting on and revising strategy to create more value with design. As a result of these strategies, awareness of design practices in the municipality had changed, design had been recognized as a strategic practice, and some municipal employees had gained design capabilities. However, this study also revealed that despite these positive changes, in-house designers perceived the design practices to be “fragile” and that external factors influenced the process of embedding design in the organization, such as the growing need for stakeholder collaboration in the public sector and the context of Eindhoven as a design city.

Based on these findings, the conceptual framework and research method were re-examined in Chapter 4. Drawing on organizational theory, the phenomenon of embedding design in government was newly defined as *the process through which a government organization's design capability matures, leading to an increase in value creation through design practices and in the stability of design practices within the government.* To capture the complexity of this phenomenon, a new research method was developed, which collected events – what has been said and done – related to design practices over time within government organizations through public documents.

This *document-based* research method was then applied to a multiple-case study conducted in five local government organizations to investigate research question 2, how design practices mature in local government. The findings of this multiple-case study were presented in Chapters 5 and 6. Chapter 5 presented how design practices have matured in five local government organizations case by case, while Chapter 6 described patterns in the process of embedding design in local government through a comparative analysis of the five cases.

A key finding of this multiple-case study concerned the relations between local governments’ understanding of the value of design at the time of the introduction of design practices, what types of design practices are implemented, and how the design practices become stabilized in these organizations in the process of embedding design in local government.

When local government organizations introduced design practices within their organizations, they held varying perspectives on the value of design – design to improve public services and/or to address complex problems in the public sector. These differing understandings influenced the types of design practices implemented within these

organizations. In local government organizations where the value of design for public service improvement was emphasized, design practices were found in which public officers engaged with service users and experts as informants and produced service outcomes over a project term of less than a year – namely, "design for service" practices. On the other hand, in local government organizations where the value of design to address complex problems was highlighted, design practices were found in which public officers collaborated with multi-sector stakeholders in multi-year projects and produced outcomes of problem understanding, project development, and new stakeholder relationships, which co-evolved in the long-term design processes – namely, "design for complexity" practices. In organizations with design for complexity practices, a new type of design practices emerged over time with the aim of systemic change through intentional acts of building infrastructures to support the aim of systemic change – namely, "design for systemic change" practices.

These different types of design practices became stabilized in different ways within local governments. In local governments that embraced design for service practices, the pragmatic legitimacy of design was established – they recognized it as a useful approach for service improvement. New processes and structures emerged to facilitate collaboration across departments, enabling better service designing. In contrast, in local governments with design for complexity and design for systemic change practices, the moral legitimacy of design was established – they perceived it as a practice that empowers communities and promotes inclusivity. Cognitive legitimacy was likely to be established as a necessary practice for public service transformation. New processes and structures emerged to routinize co-design practices with multi-sector stakeholders, such as a new approach to commissioning that supports systems thinking and co-design principles.

Finally, in Chapter 7, the findings from the empirical studies were synthesized with existing knowledge to propose a new model of design maturity in local government. The model emphasizes the versatility – that is, the ability of a local government to access a variety of design practices and (re)frame policy problems – and stability of design practices as indicators of design maturity within a local government organization. Additionally, several insights for design management in local government were provided. The first insight was that in-government designers play a role as change managers who can engage in reflexive practices to observe the changes that design practices create within an organization and act to create more impact with design practices. The second insight was that the design management strategy of *adaptation* – seeking the value of

design practices in a local government organizational context – is important early in the embedding process. The final insight was the significance of design management to stabilize design practices, such as creating narratives about the value of design and new organizational processes and structures to routinize practices.

Overall, this doctoral study contributes new understandings on embedding design in local government, particularly in terms of design maturity and design management. The study findings provide valuable insights for professional designers and organizational leaders in the public sector, enabling them to reflect on and guide their practices to achieve a greater impact with design in government organizations. Additionally, the document-based research method developed in this study offers a useful approach for researchers conducting longitudinal studies on the development of design practices in government organizations.

Samenvatting

Wereldwijd erkennen overheden steeds meer de waarde van ontwerppraktijken in openbare beleidsprocessen. Echter, ondanks de groeiende acceptatie van ontwerppraktijken, zijn er in de literatuur verschillende barrières geïdentificeerd voor de implementatie ervan in de publieke sector. In een kleine studie die aan het begin van dit promotieonderzoek werd uitgevoerd, werden ontwerpers in de publieke sector geïnterviewd. Deze studie bracht met name de volgende belangrijke barrière aan het licht: een gebrek aan begrip van de veranderingen in een overheidsorganisatie die optreden bij het implementeren van ontwerppraktijken en hoe deze veranderingen kunnen worden bevorderd. Dit inzicht leidde ertoe dat dit promotieonderzoek zich richtte op de interne werking van overheidsorganisaties en op het fenomeen dat wordt aangeduid als het *inbedden van ontwerpen in de* context van de lokale overheid.

In dit promotieonderzoek werd eerst de literatuur geraadpleegd op het gebied van overheidsbeleid en ontwerpen om de huidige opvattingen over het inbedden van ontwerpen in de overheid te onderzoeken (hoofdstuk 2). Op basis van de inzichten uit dit onderzoek werd een voorlopig conceptueel kader voor het fenomeen van de inbedding van ontwerpen in de overheid opgesteld en werden de hiaten in de kennis op dit gebied geïdentificeerd. Het inbedden van ontwerpen in de overheid werd gedefinieerd als het proces waardoor het ontwerpvermogen van een overheidsorganisatie zich ontwikkelt, wat leidt tot een toename van waardecreatie door middel van ontwerppraktijken binnen de overheid. Er werden hiaten in de kennis vastgesteld over hoe het vermogen tot ontwerpen binnen een organisatie tot wasdom komt en hoe het inbeddingsproces in de lokale overheid kan worden bevorderd. Deze hiaten in de kennis werden geformuleerd in de volgende onderzoeksvragen:

Hoofdvraag: Hoe worden ontwerppraktijken ingebed in de lokale overheid?
1. Hoe kunnen actoren in de lokale overheid het proces van verankering van ontwerppraktijken bevorderen?
2. Hoe ontwikkelen ontwerppraktijken zich in de lokale overheid?

Om onderzoeksvraag 1 te onderzoeken, werd een enkelvoudig casusonderzoek uitgevoerd in de gemeente Eindhoven, waarbij gebruik werd gemaakt van de theore-

tische lens van designmanagement. Designmanagement verwijst naar het gebruik van ontwerpkennis en -middelen om waarde te genereren voor het management van een organisatie. In dit casusonderzoek werden drie groepen werknemers geïnterviewd die betrokken waren bij ontwerppraktijken: interne ontwerpers, ontwerpsponsors en projectmanagers. Door middel van dit onderzoek werden verschillende strategieën geïdentificeerd die ontwerppraktijken binnen de lokale overheid bevorderden, zoals communiceren en leren over ontwerpen, ontwerpen koppelen aan organisatorische behoeften, en reflecteren op en herzien van de strategie om meer waarde te creëren met ontwerpen. Als gevolg van deze strategieën was het bewustzijn van ontwerppraktijken in de gemeente veranderd, werd ontwerpen erkend als een strategische praktijk, en hadden sommige gemeentemedewerkers ontwerpvaardigheden verworven. Uit dit onderzoek bleek echter ook dat in-house ontwerpers de ontwerppraktijken als "kwetsbaar" ervaren en dat verschillende factoren het proces van het inbedden van ontwerpen in de organisatie beïnvloeden, zoals de groeiende behoefte aan samenwerking met stakeholders in de publieke sector en de context van Eindhoven als een ‘designstad’.

Op basis van deze bevindingen werden het conceptuele kader en de onderzoeksmethode opnieuw tegen het licht gehouden in hoofdstuk 4. Op basis van de organisatietheorie werd het fenomeen van de inbedding van ontwerpen in de overheid opnieuw gedefinieerd als het proces waardoor een organisatorische ontwerpcapaciteit tot wasdom komt, wat leidt tot een toename in waardecreatie door ontwerppraktijken en toename van de stabiliteit van ontwerppraktijken binnen de overheid. Om de complexiteit van dit fenomeen in kaart te brengen, werd een nieuwe onderzoeksmethode ontwikkeld, waarbij gebeurtenissen verzameld werden - wat er gezegd en gedaan is - met betrekking tot ontwerppraktijken in de loop der tijd binnen overheidsorganisaties aan de hand van openbare documenten.

Deze "documentgebaseerde" onderzoeksmethode werd vervolgens toegepast op een meervoudig casusonderzoek dat werd uitgevoerd bij vijf lokale overheidsorganisaties om onderzoeksvraag 2 te onderzoeken, namelijk hoe ontwerppraktijken bij lokale overheden tot wasdom komen. De bevindingen van dit meervoudige casusonderzoek werden gepresenteerd in hoofdstuk 5 en 6. Hoofdstuk 5 laat per casus zien hoe ontwerppraktijken tot wasdom zijn gekomen in vijf lokale overheidsorganisaties, terwijl hoofdstuk 6 patronen beschrijft in het proces van inbedding van ontwerpen in de lokale overheid door middel van een vergelijkende analyse van de vijf casussen.

Een belangrijke bevinding van dit meervoudige casusonderzoek betreft de relaties tus-

sen het begrip van lokale overheden van de waarde van het ontwerpen op het moment van de introductie van ontwerppraktijken, de soorten ontwerppraktijken die geïmplementeerd zijn en hoe de ontwerppraktijken gestabiliseerd worden in deze organisaties tijdens het proces van inbedding van het ontwerpen in de lokale overheid.

Als lokale overheidsorganisaties ontwerppraktijken binnen hun organisaties introduceren, hebben ze verschillende perspectieven op de waarde van het ontwerpen - ontwerpen om openbare diensten te verbeteren en/of om complexe problemen in de openbare sector aan te pakken. Deze verschillende opvattingen beïnvloedden de soorten ontwerppraktijken die binnen deze organisaties werden geïmplementeerd. In lokale overheidsorganisaties waar de waarde van ontwerpen voor de verbetering van de openbare dienstverlening werd benadrukt, werden ontwerppraktijken aangetroffen waarbij overheidsfunctionarissen samenwerken met dienstgebruikers en experts als informanten en waarbij de resultaten van de dienstverlening binnen een projectperiode van minder dan een jaar worden geproduceerd. Deze praktijken worden gedefinieerd als "design for service"-praktijken. Anderzijds werden in lokale overheidsorganisaties waar de waarde van ontwerpen om complexe problemen aan te pakken werd benadrukt, ontwerppraktijken aangetroffen waarin overheidsfunctionarissen samenwerkten met belanghebbenden uit meerdere sectoren in meerjarige projecten en resultaten opleverden van probleeminzicht, projectontwikkeling en nieuwe relaties met belanghebbenden, die samen evolueerden in de ontwerpprocessen op de lange termijn. Deze praktijken worden gedefinieerd als "design for complexity"-praktijken. Binnen organisaties waar "design for complexity" praktijken worden toegepast, ontstond na verloop van tijd een nieuw soort ontwerppraktijk met als doel systemische verandering door het opzettelijk bouwen van infrastructuren om het doel van systemische verandering te ondersteunen. Deze praktijken worden gedefinieerd als "design for systemic change" praktijken.

Deze verschillende soorten ontwerppraktijken werden op verschillende manieren gestabiliseerd binnen lokale overheden. Bij lokale overheden die design for service omarmden, werd de pragmatische legitimiteit van ontwerpen vastgesteld - ze erkenden het als een nuttige aanpak voor verbetering van dienstverlening binnen hun organisatie. Er ontstonden nieuwe processen en structuren om de samenwerking tussen afdelingen te vergemakkelijken, waardoor diensten beter ontworpen konden worden. Bij lokale overheden met praktijken als design for complexity en design for systemic change werd de morele legitimiteit van ontwerpen daarentegen vastgesteld - zij zagen het als een praktijk die gemeenschappen mondiger maakt en inclusiviteit bevordert.

Cognitieve legitimiteit werd waarschijnlijk gezien als een noodzakelijke praktijk voor de transformatie van de openbare dienst. Er ontstonden nieuwe processen en structuren om co-designpraktijken met multisectorale belanghebbenden te routiniseren, zoals een nieuwe aanpak voor het geven van opdrachten die systeemdenken en co-designprincipes ondersteunt.

Tot slot werden in hoofdstuk 7 de bevindingen van de empirische studies samengevoegd met bestaande kennis om een nieuw model van ontwerpbekwaamheid bij lokale overheden voor te stellen. Het model benadrukt de veelzijdigheid - d.w.z. het vermogen van een lokale overheid om toegang te krijgen tot een verscheidenheid aan ontwerppraktijken en beleidsproblemen te (her)formuleren - en stabiliteit van ontwerppraktijken als indicatoren van ontwerpbekwaamheid binnen een lokale overheidsorganisatie. Daarnaast werden er verschillende inzichten voor designmanagement in lokale overheden gegeven. Het eerste inzicht was dat overheidsontwerpers een rol spelen als verandermanagers die zich bezig kunnen houden met reflectieve praktijken om de veranderingen die ontwerppraktijken in een organisatie teweegbrengen te observeren en actie te ondernemen om meer impact te creëren met ontwerppraktijken. Het tweede inzicht was dat de designmanagementstrategie van aanpassing - het zoeken naar de waarde van ontwerppraktijken in een organisatorische context van de lokale overheid - al vroeg in het inbeddingsproces belangrijk is. Het laatste inzicht was dat de designmanagementstrategie van het stabiliseren van ontwerppraktijken, zoals het creëren van verhalen over de waarde van ontwerpen en nieuwe organisatorische processen en structuren om praktijken te routiniseren, een belangrijke designmanagementstrategie is.

In het algemeen draagt deze doctoraatsstudie bij aan nieuwe inzichten over het inbedden van ontwerpen in de lokale overheid, met name op het gebied van ontwerpbekwaamheid en designmanagement. De bevindingen van het onderzoek bieden waardevolle inzichten voor professionele ontwerpers en organisatieleiders in de publieke sector, zodat zij kunnen nadenken over hun praktijken en deze kunnen sturen om een grotere impact te bereiken met ontwerpen in overheidsorganisaties. Daarnaast biedt de documentgebaseerde onderzoeksmethode die in dit onderzoek is ontwikkeld een nuttige aanpak voor onderzoekers die longitudinale studies uitvoeren naar de ontwikkeling van ontwerppraktijken in overheidsorganisaties.

Title: Hands voting
Creator: Florian Ziegler
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1. Introduction

My interest in public sector innovation stems from my participation in a social innovation project in South Korea in 2017. In the old city of Seoul, there are several neighbourhoods that were originally established by sewing workers for the fashion industry. Producing items for fashion markets in the city centre, they were one of the main players in Korea's industrialization in the 1970s and 80s. However, over time, the fashion industry changed, cheap labour from China became available, and land prices in the city centre soared. Many sewing workers lost their jobs, and these areas either became slums or developed to drive these workers out.

My task was to write a strategic report for a cooperative representing sewing workers in one of those areas. This cooperative carried out various projects to revive the sewing industry with funds from the Seoul Metropolitan Government. For example, the cooperative collaborated with fashion college students to develop fashion products and provided sewing education for women who had been out of the job market. However, given the complexity of the problem, the impact of the cooperative's activities was limited. The cooperative did not collaborate with sewing workers in other areas of Seoul or with the larger fashion industry. In addition, the role of the Seoul Metropolitan Government in tackling this problem was limited to auditing and evaluating the cooperative's activities to determine whether to continue or terminate its funding.

This experience made me think about the following two questions. What approaches to dealing with societal problems would be more effective? How can government and civil society stakeholders collaborate better for social innovation? Around that time, I recognized a new trend of using design approaches to address problems in the public sector and started my Ph.D. This dissertation is the result of my exploration over the past five years into how governments can tackle societal problems in collaboration with civil society stakeholders through design practices.

1.1. Global trend of design for policy practices

The story of sewing workers is just one example of the many societal problems that governments need to address. Citizens pay taxes and expect governments to take care of problems in society. However, problems in the public sector are becoming increasingly complex. One scholar described the complexity of these issues in the public sector in recent years:

> "The rise of a global networked economy driven by new technology, new patterns of global trade, finance, and mobility, new media, new lifestyle and health patterns, combined with a literally more turbulent climate, poses daunting challenges." (Bason 2016, p. 2)

The recent COVID-19 crisis has given us tangible experience of how connected the world is and how cultural, technological, economic, and environmental issues are entangled, which hindered efforts to tackle the pandemic.

Regarding the increased complexity in the public sector, an important question is whether our governments are capable of handling complex problems. Complex problems are open-ended and unpredictable. Each problem is related to other problems, so that tackling one problem might unintentionally aggravate the whole situation, that is, the system of problems. In addition, problems in the public sector are often value-laden, and thus diverse stakeholders exhibit different aspirations and perspectives towards these issues (Head & Alford, 2015). In approaching problems of this nature, Roberts (2000) argued that the rational, technical approach typically employed by governments – "specify the problem, gather and analyze data, formulate a solution, implement solution" (p. 2) – does not work. Head and Alford (2015) argued that performance-based managerialism in government, as seen in the story of sewing workers, limits flexibility in imagining new ways to deal with complex problems. In these respects, there is a growing demand for innovation in the way governments deal with complexity in the public sector (Christiansen & Bunt, 2012; Head & Alford, 2015; Mulgan & Albury, 2003; Sørensen, 2017).

In this situation, design is being proposed as an approach for government innovation. Design is being introduced into government as a new practice in public policy processes, referred to as "design for policy". While scholars have discussed various types of value creation through design in the public policy context in the literature, which will be revisited in Chapter 2, design is deemed particularly helpful in dealing with complex problems in the public sector. In contrast to the rational and technical approaches employed by government, the design approach known as abductive reasoning can lead to new ways of dealing with complex policy problems by exploring the complexity of the problems while simultaneously developing their solutions. Additionally, design practices

often involve problem-relevant stakeholders in the design process, and this collaborative approach is known to be more effective in addressing complex problems.

Global interests in design for policy can be seen in the recent surge of public sector innovation labs (PSI labs) around the world. PSI labs are set up to introduce innovative practices, including design, into government organizations. Fuller and Lochard (2016) counted over 60 labs in central and regional governments in Europe. A global directory of PSI labs (Apolitical, n.d.) shows more than 100 labs around the world. Given that government organizations can collaborate with designers in and outside government without necessarily establishing a PSI lab, we can expect a larger number of government organizations globally to pursue design for policy practices.

1.2. Barriers to design for policy practices

Despite the increasing interest in design for policy practices globally, various barriers have been reported for governments to use design approaches in public policy processes. To start, Mulgan (2014) pointed out that designers, who are often hired on projects for the underprivileged, are remunerated highly and lack commitment to achieving long-term impact. Several scholars have identified epistemological and aesthetical differences between the way policymakers and designers work (Bailey & Lloyd, 2016; Bason, 2016; Blomkamp, 2017). Bailey and Lloyd (2016), for example, found in interviews with senior staff in the UK central government that they do not consider knowledge gained through design research to be "sufficiently representative, quantifiable, or reliable" (p. 8). Design practices were also described as "a threat because [politicians] don't want to have to change the way they do politics" (Apolitical, 2019). Lastly, McGann et al. (2018) pointed out that design practices may work well for small community problems, but "the methodic practices of design may start to crumble when they are extended to system-wide challenges" (p. 16).

Since the barriers to design for policy practices identified in the existing literature are so diverse, a small study was conducted at the beginning of this doctoral study to understand what hinders design for policy practices. Several designers in the public sector – either in or outside government organizations – were interviewed. The aim of this study was to understand what they consider to be barriers to design for policy practices. The interviewed designers considered the current ways of working in government organizations as the barrier to design practices. They described government ways of working as political, siloed, and risk-averse, while describing design approaches as the opposite. In this respect, three out of the six designers stated that it is important for de-

signers to be inside government and foster design practices and organizational change. However, five of the six designers had no clear knowledge of how to influence design practices and organizational change in governments. In addition, it was found that because designers outside government work on public projects with a given brief, fee, and timeframe, they have no opportunity to influence organizational changes in government after their projects have ended.

These interviews provided an insight that a barrier to design for policy practices is posed by the lack of knowledge about the changes that take place when design practices are implemented within governments and how to foster them. This insight guided this doctoral study to focus on the internal workings of government organizations. The research scope of this doctoral study was narrowed down to how design practices are implemented and developed inside government organizations – a phenomenon that this doctoral study refers to as *embedding design in government*.

1.3. Research aim and design

The aim of this doctoral study is to gain a better understanding of the phenomenon of embedding design in government. Based on a literature review, this research phenomenon is defined in Chapter 2 as the process through which design practices mature in government. In addition, research opportunities are identified on how design practices mature and how the embedding process can be fostered. Based on this understanding, the following research questions are formulated:

Main research question: How do design practices become embedded in government?

1. How can actors in government foster the process of embedding design?
2. How do design practices mature in government?

These research questions are exploratory in that they do not pursue specific factors or causal relationships in them. In addition, they ask about the experiences of people involved in design for policy practices within government organizations. Therefore, these questions will be explored through empirical studies, which will be conducted as qualitative studies. This study started with the assumption that in-house designers play a significant role in embedding design practices within government organizations. Therefore, the first research question is more specific, while the second research question broadens on how design practices can mature in government.

Two empirical studies are planned. The first empirical study will zoom in on a single case

(involving the process of embedding design in a government organization) to explore research question 1, how actors in government can foster the process of embedding design in government. This case study will provide a preliminary understanding of the phenomenon of embedding design in government and help refine the conceptual framework and research method for the following study. Then, using the refined conceptual framework and research method, the second empirical study will focus on multiple cases to investigate research question 2, how design practices mature in government. This multiple-case study will provide an in-depth understanding of the research phenomenon in multiple government organization contexts.

The context of this doctoral study is limited to local government. Different government organizations have different powers and responsibilities in public policy processes, which can influence the design for policy practices and how they evolve in organizations. From among diverse government organizations, this study chose to focus on local government as the study context. Local government is responsible for public services close to the everyday life of citizens, such as "social care, schools, housing and planning and waste collection … licensing, business support, registrar services and pest control" (Local Government Association, 2021). In this respect, local government is an appropriate context to understand what value design for policy practices create in the everyday life of citizens.

1.4. Strategies for quality of knowledge

In a qualitative study, the rigour of the study can be examined in terms of the following four aspects: credibility, transferability, confirmability, and dependability (Cypress, 2017). This doctoral study employs the following strategies to meet the expected quality of knowledge in these four aspects.

Credibility concerns "the accurate and truthful depiction" (Ibid., p. 257) of a research phenomenon. The questions for a researcher to consider in terms of credibility are: "Were the appropriate participants selected for the topic? Was the appropriate data collection methodology used? Were participant responses open, complete, and truthful?" (Given & Saumure, 2008, p. 138). In this respect, this doctoral study gathers data from multiple sources (i.e. interviews and documents) to understand the research phenomenon. In addition, each sub-study explains why and how a certain research method is used. Lastly, the results of this doctoral study have been shared with researchers and practitioners in the field as academic papers. Peer feedback at conferences helped to refine the analysis of research data, which in turn contributed to enhancing the credibili-

ty of the research findings.

In terms of transferability, a researcher's responsibility is "to paint a full picture of the context and then allow the reader to determine if the work is transferable to their context" (Ibid., p. 886). For this purpose, the study context, the participants, and the study design are explained in detail for each study. In addition, the deliberate choice to limit the context of this doctoral study to local governments increased the possibility of transferring the knowledge from this study to other local government contexts.

Confirmability concerns reliability and objectivity in research – that is, ensuring that the interpretation of data is not biased by the researcher's perspective (Ibid.). In this respect, doctoral supervisors participated in the research process to check the data analysis and report process and whether the data truly support the conclusions of the research. The coded data of all studies are disclosed in Appendices 1 and 4 for further transparency.

Dependability recognizes that a research context can evolve, and research approaches can also change accordingly in the research process (Ibid.). In this respect, this dissertation describes how one study leads to the next study, and how the research framework and understanding evolve over the doctoral research process.

1.5. Dissertation structure

This dissertation consists of seven chapters. These chapters evolve sequentially based on the results of the previous chapter, as visualized in Figure 1.1 below.

Chapter 1 (this chapter) has introduced the research problem, research aims, and research design. Chapter 2 reviews the current literature on design for policy and the phenomenon of embedding design in government. Based on this review, a preliminary conceptual framework of the research phenomenon of *embedding design in government* is established and research questions are formulated.

Chapter 3 presents the first empirical study that investigates research question 1, how actors in government can foster the process of embedding design in local government. This study is conducted as a single-case study in the Municipality of Eindhoven. The results of this single-case study help to revise the conceptual framework of the research phenomenon and develop a new research method in Chapter 4.

Chapter 5 presents the second empirical study that addresses research question 2, how

design practices mature in local government, with the updated conceptual framework and research method in Chapter 4. This study is conducted as a multiple-case study in five different local government organizations. Findings of this multiple-case study are reported in Chapters 5 and 6. Chapter 5 presents individual case analyses and Chapter 6 presents cross-case analysis.

Chapter 7 summarizes all findings of this doctoral study (Ch. 3, 5, and 6) and discusses the implications of the findings in relation to the existing literature (Ch. 2). It also discusses the contribution and limitations of this doctoral study and proposes recommendations for design for policy practice and education.

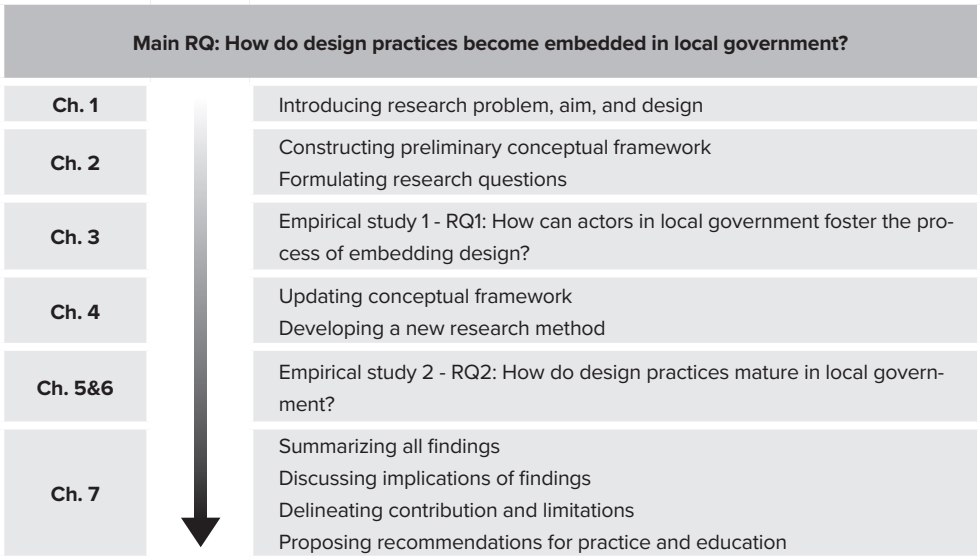

Figure 1. 1 Story flow of this dissertation

The key contribution of this doctoral study is a new understanding of the phenomenon of embedding design in government in the context of local government. This outcome will be of practical value to professional designers and public organizational leaders who are engaged in introducing and fostering design practices in government, enabling them to reflect on and guide their own practices. Additionally, the research method developed in this doctoral study (in Ch. 4) will be useful to researchers conducting a longitudinal study on design practices in government organizations.

Title: Fuel from Waste unConference 2011 - participatory design and storytelling day
Creator: Wyn Griffiths
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2. Understanding the embedding of design in government

The previous chapter discussed that a barrier to design for policy practices is posed by the lack of knowledge about the changes taking place when design practices are implemented within governments and how to foster them. This insight guided the focus of this doctoral study to the internal workings of government organizations. The research scope of this doctoral study was narrowed down to how design practices are implemented and developed inside government organizations – a phenomenon that this doctoral study refers to as *embedding design in government*.

In this chapter, we seek an understanding of how embedding design in government is understood in the current literature. The context of this doctoral study is limited to local government. However, this chapter examines the phenomenon of embedding design in government in the broad context of government organizations. This chapter consists of four sections. The first two sections examine what design for policy means and how design for policy is implemented in practice. These sections provide background knowledge on the research topic of this doctoral study. In the next two sections, we examine what it means to embed design in government, the research phenomenon of interest of this doctoral study, and what has been revealed so far about this research phenomenon. Based on these last two sections, a preliminary conceptual framework is established, and the scope of the research phenomenon is narrowed.

The literature review draws on research in the field of public policy and design using a narrative review. Narrative review is an approach in scientific literature review that allows researchers to "survey previous studies and identify broad patterns ...[and] identify gaps in the research" (Rozaz & Klein, 2010, p. 395). While this type of review describes "the state of the science of a specific topic", it does not provide a methodological approach for use in conducting the review. In this respect, there is a possibility of bias in the selection of literature and synthesis (Rother, 2007). The literature selection started with academic publications of well-known scholars in the design for policy field and evolved to the literature that they refer to.

2. 1. Understanding design for policy

Before delving into the topic of embedding design in government, we first explore the subject of design for policy – that is, the practices of using design approaches to address problems of public services or policy. To this end, we seek to understand what public policy is, examine various perspectives on design within the public policy context, and explore the added value that design approaches bring to the realm of public policy. To understand the concept of public policy, several scholars of policy science were drawn upon. When it comes to how design has been perceived within the context of public policy, the literature on policy design, which is a subarea of policy science, was reviewed. Lastly, regarding the value of design for public policy, the emerging literature of design for policy was examined, which spans both the field of design studies and policy studies.

2.1.1. What is public policy?

Public policy is often associated with things like laws and regulations. However, public policy has a larger meaning. While Cairney (2020) defines public policy in a simple manner as "the sum total of government action" (p. 1), we can easily imagine that government actions to govern a country, state, or region are diverse and complex. In this respect, this section attempts to understand public policy through three examples of public policy definitions used by Howlett and Ramesh (2003). These examples show diverse perspectives among policy science scholars regarding what public policy is.

The first example of a definition of public policy is by Dye (1972, as cited in Ibid.) that public policy is "[a]nything a government chooses to do or not to do" (p. 5). This definition shows that governments are the actors responsible for public policy, and what a government chooses not to do is also a decision "to do nothing, or simply to maintain the status quo" (Ibid., p. 5). According to Cairney (2020), this definition reveals that "policymaking is about power, often exercised to keep important issues off the policy agenda" (p. 229). In other words, this definition reveals that public policy decision-makers are ultimately government organizations and public officers, and their decisions can sometimes be biased by power.

The second example of a public policy definition is by Jenkins (1978, as cited in Howlett & Ramesh, 2003) that public policy is "a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specific situation where those decisions should, in principle, be within the

power of those actors to achieve" (p. 6). This definition reveals that most policies are not the outcome of a single decision but a series of decisions. For example, a government's health policy may include all the decisions of government actors involved in health-related activities (Ibid.). In addition, these decisions are limited by diverse political actors or policy instruments available to the government. Government can make use of a wide range of policy instruments (e.g. regulation, tax, incentive, education, funding) "to put policies into effect", but the choice of which instruments to use is "very much the subject of discussion, deliberation, and dispute" (Ibid., p. 87). In other words, this definition shows that a public policy includes multiple decisions that are influenced by a variety of governmental and non-governmental actors, as well as available policy instruments, and that the decision-making process is contested.

The third example of a public policy definition is by Anderson (1984, as cited in Ibid.) that public policy is "a purposive course of action followed by an actor or set of actors in dealing with a problem or a matter of concern" (p. 7). Similarly, Colebatch (2009) described that "the work of governing is about managing problematic areas of social practice" (p. 11). In other words, public policy is understood as a problem-solving process in which governments identify societal problems, propose solutions, choose certain solutions, implement them, and evaluate whether they have been successful or not.

In keeping with these definitions, public policy can be regarded as the process through which a series of decisions are made by government to deal with problems in society, and these decisions are political and contested because they are influenced by multiple governmental and non-governmental actors and available policy instruments. This description conveys the complexity of public policy.

Public policy is also influenced by contextual factors, being often "driven by situational logics and opportunism" (Chindarkar, Howlett, & Ramesh, 2017, p. 4). Public policy processes also vary "according to political system and territory, time, policy issue, and solutions" (Cairney, 2020, p. 17). Lastly, since many governments from the late 1970s had redistributed responsibilities across multiple levels and types of government through reforms, the central governments of today collaborate with "much larger number of actors … to pursue [their] policy aims" (Ibid., p. 8). In other words, the context in which public policies are made and implemented influences the phenomenon of public policy.

Taken together, for the purpose of investigating the topic of design for policy, this

doctoral study defines public policy as *the process through which government, while governing, deals with societal problems with various governmental and non-governmental actors, and understands the process as political, contested, and situational.* Understanding public policy as such a complex process is critical to understanding the heterogeneity of design practices in the public policy context, which will be discussed in Section 2.2.

2.1.2. Perspectives on design in public policy

May (1991) described policy design as a subarea of policy science with a focus on "public policy formulation … centered on conceptual aspects of problem attribution and construction of alternative policies" (p.187), sometimes with an specific emphasis on policy instruments. In this section, we examine how design has been perceived in the public policy context by drawing on scholars of policy design, some of whom embrace the emerging practice of design for policy.

Design has played a role in the public policy context during the last few decades. Clarke and Craft (2019) described that since the idea of *policy design* first appeared in the 1950s, "enthusiasm for policy design as an approach to policy and governance has ebbed and flowed" (p.1). Recently, interest in policy design has soared again. However, perspectives on design in public policy have changed over time. By examining this shift, this section seeks to understand *design for policy* in the current public policy context.

Howlett (2014) describes policy design as an endeavour of policy actors "to more or less systematically develop efficient and effective policies through the application of knowledge about policy means … to succeed in attaining their desired goals" (p. 188). According to him, since Harold Lasswell expressed the policy process as a series of stages in the 1950s, the interest of policy scholars has been focused on selecting appropriate policy means to realize policy objectives. Design was appraised as an approach "bringing a unique perspective to the policy sciences with its focus on policy tools" (Ibid., p. 192). In these descriptions, we can interpret that *design* in the old policy design context was understood as Herbert Simon's rational problem-solving process, in which designers conduct a "logical search for satisfactory criteria that fulfill a specific goal" (Huppatz, 2015, p. 34).

In comparison, the recent policy design context has seen several changes. Firstly, the policy-making context has changed. In the past, policy was seen as "the creation of a small group at the top of the hierarchy of officialdom – 'the government', or 'the poli-

cy-makers'" (Colebatch, 2018, p. 366). Colebatch (2014) pointed out that in the past two decades there has been "a significant departure from the … assumption that governing is accomplished by the exercise of the authority of states" (p. 308). This means a shift from government to *governance*, a circumstance in which "[a] state becomes a collection of interorganizational networks made up of governmental and societal actors with no sovereign actor able to steer or regulate" (Rhodes, 1997, as cited in Ibid.). This also means that the notion of policy designers expanded from only government actors to NGOs, thinktanks, and citizens (Colebatch, 2018).

Secondly, according to Howlett et al. (2015), the interest in policy tools[1] has shifted from single policy tools to "'toolkits' or multiple tools and tool mixtures … [and] how these mixes evolve over time" (p. 297). They explain that in recent policy design contexts, policymakers are more often in a situation in which they must redesign or "patch" existing policies rather than make new policies. In this regard, a major focus of new policy design studies is "whether combinations of different policy instruments, which have evolved independently and incrementally, can accomplish complex policy goals" (Ibid., p. 298).

Lastly, perspectives on design in the design field have changed. As compared to the old times in which design was described as a rational problem-solving process, design in recent years has been viewed as an abductive and constructivist process (Dorst & Dijkhuis, 1995; Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013). Two of the major contributors to this new perspective are Schön and Krippendorff (Galle, 2011). Schön understood design as a reflective practice in which a "designer's intentions, constraints, and objectives … emerge … through a process of seeing, making design moves, and seeing again … [and the designer] sets new problems, constructs new possibilities for action" (Schön & Rein, 1994, p. 85) – i.e. the abductive reasoning process where the understanding of the problem and ideas for solving it co-evolve. Krippendorff viewed design as meaning-making in the networks of stakeholders (Galle, 2011). Krippendorff (2011) argued that as the trajectory of design problems evolved from products to "language-like, communicative, and social artefacts" (p. 411), design is not only about creating products but also about communicating meanings with stakeholders through drawings, arguments, and presentations.

Regarding these changes in the public policy context and design field, design in the current public policy context is understood as a new way of exploring and meaning-making in policy problems through design approaches (i.e. a new policy tool) in collaboration with a diverse set of policy designers. Similarly, Buuren et al. (2020) described that the

recent policy design orientation is “clearly distinct from the (boundedly) rational and deductive idea of policy design, i.e. design of policy” and is “a way to better understand and structure a policy problem” (pp. 5-6), i.e. design for policy. While design for policy may not be “a wholesale replacement” of the existing policy practices (Clarke & Craft, 2019; Lewis, McGann, & Blomkamp, 2020), it is considered to be a promising part of the toolkits of policy designers.

2.1.3. Value of design for public policy

In the introduction chapter, it was briefly mentioned that unique approaches of design are deemed useful for public officers to deal with complex problems in the public sector. This section examines more closely what value design approaches bring to the public policy context. First, we examine what value means in private and public organizations. Then, we look at what is currently known about how design practices can contribute to value creation in the public policy process.

What value means in private and public organizations

In design literature, design has been described as a means for value creation in organizations (see e.g. Fonseca Braga, 2016). Yet, what value means can vary depending on the context.

In private organizations, Porter (1996), a scholar renowned for his expertise in the value creation in management, said, “A company can outperform rivals only if it can establish a difference…. It must deliver greater value to customers or create comparable value at a lower cost, or do both.” In other words, he asserted that a company's value centres around its customers. On the other hand, de Mozota (2010) argued that the value of design in private organizations can be categorized into two types, drawing on management science: financial value and substantial value. Financial value is the value for shareholders, partners, and investors, and substantial value is the value for customers, suppliers, and employees. This underscores that value in a company concerns the value of not only customers but also the company's stakeholders.

Applying Porter's argument to the context of public sector, value in public organizations could be centred on the customers of public organizations – the public. This is expressed in terms of public value, “public interest or ‘the common good” (Grant et al., 2014, p. 7). However, similar to the case of private sector, public value must concern not only the public but also various stakeholders around public organizations. Moore (2000) argued that for public value creation, public managers must consider three features in

their work: value, legitimacy and support, and operational capabilities (pp. 197-198). Value represents the purposes that a government organization pursues. Creating this value requires legitimacy and support from citizens, elected members, media, and interest groups. Lastly, the organization needs to have the capabilities to achieve the expected results and value. In other words, the public value must take into account public managers, the organizations they belong to, and members of civil society to which the organizations belong or are related.

In summary, value in private or public organizations can be understood by considering the various stakeholders involved in the organization. In this respect, value is plural. Therefore, whether public value is created through design practices in government can be assessed depending on the organizational context and the specific problem at hand.

Potential value creation through design in public policy processes

Practitioners and researchers in design for policy field have endeavoured to understand how design practices can contribute to value creation in public policy processes. In this section, we explore what has been mentioned regarding the value of design for public policy in the literature. The reviewed literature includes practice-based reports from leading institutions, such as the UK Policy Lab, Government Innovation Lab in Thailand, Helsinki Design Lab, MindLab, and the UK Design Council, as well as empirical studies by researchers in the design for policy field to ensure the validation of claims of value.

However, as suggested in the previous section, measuring value creation through design in public policy processes varies depending on the context of the organizations and the specific policy problems at hand. Therefore, the claim of value attributed to design is more about possibility than certainty.

Based on this review, seven types of value that design can contribute to public policy processes are derived: 1) opening up problem and solution spaces through design reasoning, 2) promoting democracy through co-design, 3) addressing complexity through multi-actor co-design, 4) improving public services through a user-centred approach, 5) managing risk through prototyping, 6) creating a different type of evidence, and 7) navigating the future of policy through speculative design. Some of these types of value are associated with specific design approaches. Thus, they were discussed in conjunction with the corresponding design approaches. Yet, in reality, design practices encompass a mix of different approaches over the design processes.

This list may not be exhaustive, as design for policy literature is quickly growing, but it contains enough information to understand the various types of value that can be created through design practices in public policy processes.

1) Opening up problem and solution spaces through design abduction

As has been mentioned, design is often described as a new way of dealing with complex problems in the public sector. Expert designers have long developed a unique way of handling complex problems through practices in the design domain. Dorst (2015) describes this approach employed by designers as design abduction, "developing and refining both the formulation of a problem and ideas for a solution in concert" (p. 25). This way of reasoning is also described as the co-evolution of the problem space and solution space in design processes. Dorst and Cross (2001) observed how designers work and found that "creative design involves a period of exploration in which problem and solution spaces are evolving and are unstable until (temporarily) fixed by an emergent bridge which identifies a problem-solution pairing" (p. 437). They found that a "creative event occurs as the moment of insight at which a problem-solution pair is framed: what Schön called 'problem framing'" (Ibid., p. 437).

A project by InWithForward, studied by Bijl-Brouwer (2019), is an example of this co-evolution of problem and solution spaces in the design process. InWithForward, a Canadian social design organization, was involved in a project on how to address social isolation for adults with disabilities. This project's outcome was an online service platform called Kudoz, but the design of Kudoz was not created at the end of the design process. It co-evolved with the problem understanding, as described below.

> "The idea for Kudoz came after the problem focus evolved from social isolation among people with a cognitive disability to improving the quality of their relationships by injecting novelty in their lives … Elaborate prototyping and testing then led to the realization that Kudoz could also be used as a tool to support employment service providers and social worker seeking to identify relevant employment opportunities." (Ibid., p. 37)

Mintrom and Luetjens (2016) argued that design abduction is useful as "an approach to navigating and making sense of complexity" in public policy processes traditionally "characterised as an intendedly rational process" (p. 393). As seen in the Kudoz example, the design practice did not define the problem first and find a solution; rather, the understanding of the problem and the solution ideas continuously evolved together during the design process. This design approach can lead to new ways to deal with complex problems in the public sector.

2) Promoting democracy through co-design

Design for policy practices often involve civil society stakeholders in the design process, and are consequently described as a practice that accommodates "a more diverse range of voices and inputs into the policy process" (McGann, Blomkamp, & Lewis, 2018, p. 4). Participatory or co-design, a design method rooted in Scandinavian labour unions in the 1970s and 80s (Parmiggiani & Karasti, 2018), has been practiced based on "the democratic concept whereby people affected by design decisions should be involved in the process of making the decisions" (Blomkamp, 2018, p. 732). Amid growing distrust of politicians and doubts about representative democracy today (Sørensen, 2017), co-design practices in public policy processes are described as a way "to increase democratic legitimacy, narrow the gap between citizens and government … and improve the quality of policy" (Michels, 2012, p. 286).

An example of this is 'The Governing Futures- Voices and Wastewater' project presented in Rosenqvist and Mitchell (2016). The project explored whether low-income communities and local government can co-design new futures for the governance of wastewater service provision. The project proceeded in three phases, using design approaches such as design game and service journey mapping: the first phase focused on everyday experiences of governance, the second on the current state of governance, and the last on alternative futures of governance. Through these phases, the project revealed "hidden power dynamics, the importance of personal relationships and the inaccessibility of local government agencies" (Ibid., p.2268). Based on their findings, the authors argued that design practices can help question the fundamental structure of the relationship between the state and its citizens.

3) Addressing complexity through multi-actor co-design

The value of co-design is also related to the complex problems mentioned earlier. Complex problems are known to be best dealt in "multi-actor collaboration in networks, partnerships and inter-organisational teams" (Sørensen & Torfing, 2015, p. 145). For example, efforts to address mental health problems in youth can be more effective when young people, parents, schools, and mental health workers collaborate. Co-design can be useful for such collaboration.

An illustrative example of this is the case of the Municipality of Fredericia in Denmark, introduced in Christiansen and Bunt (2012). The municipality initiated a project aimed at improving services for elderly citizens at a low cost through human-centered and co-design approaches. Elderly citizens, social workers, nurses, doctors, and relevant public

managers participated in the co-design process. The authors reported that changes were not limited to the front line; they also extended to the practices of the municipality on the political and governance level. According to them, people in the municipality realized, “you are not solving a well-defined problem, but you are continuously addressing it by maintaining practices that are characterised by an empathic relationship with the concrete situation of the citizen” (p.13).

4) Improving public services through user-centred approach

Design is also considered to improve public services through a user-centred approach (Design Council, 2013) in which designers use a variety of techniques, such as interviews and observations, to understand users’ needs. When these design approaches are applied to public service problems, they can help reveal the experiences of citizens and civil servants related to public services. This consequently “helps reveal opportunities for new ways of doing things” (Kimbell, 2015, p. 48) regarding public services.

An example is a project by the Government Innovation Lab in Thailand to improve the queuing system in public hospitals. The design team interviewed and observed the hospital users and identified their needs. The team proposed solutions such as a digital service for users to manage their appointments with hospitals, a new zoning system for waiting areas, and further service ideas (OPDC & UNDP, 2018). Figure 2.1 below shows a prototype of a new queuing system with colour-coded tickets that will be incorporated with a digital application.

Figure 2. 1 An example of improving public services through design practices. Reprinted from *Government innovation lab in Thailand* (p.37) by OPDC & UNDP, 2018. Lincesed under CC by 3.0.

5) Managing risk through prototyping

Among design approaches, prototyping has received attention in the public policy context. Prototyping is an important part of the design process. A prototype is defined as "a working model, albeit crude and incomplete, speedily constructed" (Mayhew & Dearnley cited in Kimbell & Bailey, 2017, p. 217). Prototyping is an iterative process in which designers test through the prototypes, learn, and refine their design ideas (Villa Alvarez, Auricchio, & Mortati, 2020). When applied to the policy context, prototyping helps to "manage risk and expectation, and learn from (low-cost) failure where the cause of a problem is unknown, or where practices still are evolving" (Christiansen & Bunt, 2012, p. 18). Kimbell and Bailey (2017) described that prototyping at different phases of the policy process "closes the gap between policy intent and delivery" (p. 222).

It should be noted that prototyping in the policy context is different from pilots. While both are experimental in nature, pilots are deemed as "the traditional means by which to test out a new policy, and through lengthy, expensive, and bureaucratic processes" (Hagan, 2021, p. 19). Prototypes, in comparison, are relatively small in scale and fast-paced – for example, a prototype can test many elements in a new policy through an implementation lasting a day or few weeks in a single location (Ibid.).

6) Creating a different type of evidence

Design is believed to create a new kind of evidence in public policy processes. According to Greenhalgh and Russell (2009), while the idea that decision making in policy processes are based on best research evidence is self-evident, the traditional idea of evidence-based policymaking that is rational and positivistic fails to address complex policy problems. In contrast, design practices in complex policy problems "build[s] an evidence base on what does or does not work from the perspective of citizens and stakeholders" (Evans & Terrey, 2016, p.245).

The evidence gathered in design processes also raises a question on what is considered useful evidence in the public policy process. Christiansen and Bunt (2012) presented an example of a project by MindLab. The Danish Tax and Customs Administration (DTCA) worked with MindLab under the slogan "Away with the Red Tape." Using design approaches, such as user interviews, service journeys, and prototyping, they investigated citizens' experience with public regulations, communication channels, and public services. Important evidence gathered through the design process was audio clips and radio montage that conveyed "vivid and illustrative" experience of the citizens. This project created a new understanding for public decision makers about "applying a very

different kind of 'knowledge' about the citizens compared with what they are used to" (Ibid., p.25).

7) Navigating the future of policy through speculative design

While design approaches are used for gathering evidence from the past, design also serves as a tool for envisioning the future of policy issues through the practice of speculative design. Tsekleves et al. (2020) described speculative design as "creat[ing] scenarios around ... "what if" questions with tangible and realistic objects [;] designers can fabricate an experience of that possible future" (p. 5). They contend that governments, seeking new tools for future-making, consider speculative design as a "potential tool for including citizens in imagining the future implications of policy initiatives in creative ways" (p. 7). However, Spaa (2021), in contrast, found in her study of policy informers (i.e. professionals who inform policymaking) that these informers encountered challenges when incorporating future scenarios into evidence-based policymaking practices. This suggests the difficulty of legitimizing the outcomes of speculative design as rigorous evidence.

In conclusion, design practices in the context of public policy can create various types of value. However, as mentioned previously, the creation of public value through design practices in policy processes is context-dependent. That is, whether design practices actually created the expected value must be evaluated in the context of a given organization and problem.

2. 2. Design for policy in practice

In this section, we review how design approaches have been applied to public policy practices. This review is done from two perspectives: design practices at different stages of the policy process using the policy cycle model and design practices with different ways of civic participation. The first perspective draws on literature in design for policy, while the second also includes studies of participatory design. This section helps bring the value of design practices discussed in the previous section (2.1.3) closer to real public policy practices.

2.2.1. Design practices at different stages of policy processes

Earlier, public policy was defined as *the process in which government, while governing, deals with societal problems with various governmental and non-governmental actors,* and it was explained that this process is *political, contentious, and situational.* Due to

the complexity in the public policy process, policy studies often use the so-called policy cycle, a model that simplifies the public policy process in several stages. For the same reason, design for policy researchers have used the policy cycle model to make sense of design practices in policy processes. In this section, it is briefly described what the policy cycle model is and what its limitation is. Then, studies on how design practices are carried out in policy processes using the policy cycle model as a framework are reviewed. Finally, it is discussed the insights and confusion arising from these studies because of the use of policy cycle model.

Policy cycle model

The idea of describing the policy process as a series of stages began with Harold Lasswell in the 1950s and it was later refined as the "cycle" model by other scholars (Jann & Wegrich, 2007). There are some variations of the policy cycle model, but most of them proceed from the identification of policy aims, formulation of policy, selection of policy measures, implementation, and evaluation (Cairney, 2020). Here, I use the model of Howlett and Ramesh (2003) as an example, as it has been applied by several design for policy scholars (e.g. Villa Alvarez et al., 2022; Junginger, 2017).

The policy cycle model of Howlett and Ramesh (2003) has five stages (see Figure 2.2 below). Agenda setting is the stage where a government recognizes problems; policy formulation is about setting objectives and seeking solutions and selecting policy instruments; decision-making is the process in which government decides certain actions or non-actions for the problem; policy implementation is about putting a policy into effect, often by delivering public services; and policy evaluation is about assessing the result of a policy and deciding whether the policy needs to be maintained, revised, or discontinued.

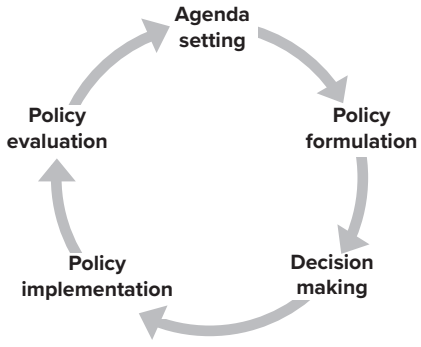

Figure 2. 2 Policy cycle model visualized by the author based on Howlett & Ramesh (2003).

The policy cycle model has served many functions. For example, by breaking down the complexity of the policy phenomenon into stages and enabling the analysis of each stage and the relations between stages, it has contributed to theory-building in policy studies (Ibid.). In addition, the model expressing policy making as a continuous process "allowed to assess the cumulative effects of the various actors, forces, and institutions that interact in the policy process" (Jann & Wegrich, 2007, p. 44). In other words, the policy cycle model has provided a framework for understanding complexity in public policy processes.

However, the policy cycle model has also been criticized. The biggest criticism is that there is a large gap between the policy cycle model and the reality of policy practices. For example, Howlett and Ramesi (2003) said that problem identification, development, and implementation of policy "are often very ad hoc and idiosyncratic processes" (p. 14). Jann and Wegrich (2007) even doubted the value of the policy cycle as they found empirical cases in which "it is more or less impossible, or at least not useful, to differentiate between stages … [or] the sequence is reversed" (p. 56). This means that actual policy processes are context-dependent and not always sequential, unlike suggested by the model. This is something one should be aware of when using this model to understand design practices in public policy processes.

Design practices at different stages of policy cycle

Several studies on design for policy practices have used the policy cycle model as a framework. Here, I particularly draw extensively on a study by Villa Alvarez et al. (2022), as it is one of the few studies that uses the policy cycle model to map out design practices in public policy processes and discuss their value.

Villa Alvarez et al. (Ibid.) investigated forty-six public sector innovation (PSI) labs and mapped their design activities over different stages of the policy cycle. In the agenda-setting stage, they found that design approaches such as visualization, prototyping, and participatory design workshops are used to "[c]reate future scenarios and visions on specific policy issues" (p. 12). The use of design approaches for policy agenda setting is also found in the practices of the UK Policy Lab. The lab was involved in the Open Policy Making agenda that "promote[d] broadening the range of expertise and inputs involved in policy making" (Kimbell, 2015, p. 61). By holding co-design workshops, the lab created "spaces and occasions when people can explore issues and generate ideas collectively at an early stage, when problems and possible solutions are relatively undefined" (Ibid., p. 63). Hillgren et al. (2020) provided another example of using design approaches for

the agenda-setting stage. In a project commissioned by the European Commission's Policy Lab, they used design approaches – a combination of speculative design and co-design – for imagining future governance. Reviewing the article of Hillgren et al. (Ibid.), Kimbell and Vesnić-Alujević (2020) identified the design of future governance "as fitting within a process of policy design in which design spaces are set up, agendas are set and publics are engaged", that is, the agenda-setting stage. In the future governance project, various participants – public servants, people from the NGO and private sector, and researchers – are gathered to play with different worldviews and governance in imagined worlds. While it is unclear if this experiment leads to more concrete policy outcomes, it is an example of using design to imagine a radical future in the policy context.

In the policy formulation stage, Villa Alvarez et al. (2022) reported that some PSI labs used design practices with ethnographic, user-centred methods to "understand a policy issue and inform policy makers" and co-design or prototyping workshops "for generating new insights, policy recommendations, and ideas of solutions" (p. 15). Outcomes of design practices were "policy briefs, national innovation strategies, action plans, or interim policy frameworks" (Ibid., p. 15). Another study that researched PSI labs also reported that 15 out of 30 labs engaged in design practices in the policy formulation stage (Vaz, 2021).

In the decision-making stage, Villa Alvarez et al. (2022) did not find any PSI labs engaged in design practices at this stage. They presumed that it is because this stage is "innately political and implies a choice primarily made by authorised decision-makers" (p. 15). Their speculation might be true because the decisions to be made in this stage involve "legislative approval, executive approval, seeking consent through consultation with interest groups, and referenda" (Cairney, 2020, p. 26).

In comparison, there are abundant examples of design practices in the policy implementation stage. Villa Alvarez et al. (2022) reported that the design practices of the investigated PSI labs are mostly detected at this stage. At this stage of the policy cycle, policies are implemented as public services, and design approaches are used to design these services. An example would be a project by the UK Design Council for the English National Health Service (NHS) (Design Council, 2013). The NHS faced problems with violence and aggression towards hospital staff. The Design Council began ethnographic research and identified a set of violence triggers and three areas of innovation: service, information, and environment. A design agency took over the project and developed outcomes such as new guidance on information, a new staff-centred practice, and tool-

kits for staff. This type of design intervention in public services is found in various areas of the public sector (e.g. hospitals, public libraries, social care, digital services) at both the national and local government levels.

In the last stage of the policy cycle, policy evaluation, Villa Alvarez et al. (2022) found only one PSI lab claiming to use design approaches for policy evaluation, "gather[ing] evidence and data which provides decision-makers a basis to evaluate programs, services, and interventions" (p. 105). Vaz (2021) found that 15 out of the 30 PSI labs he researched use design approaches in this stage, but he did not closely examine what their design practices at this stage look like. Another study on PSI labs (Olejniczak et al., 2020) reported that PSI labs "often try to build, within the main policy cycle, a smaller loop of design–testing–adaptation" (p. 104). However, this creates confusion if the design prototyping, which is used at any stage of the policy process to produce insights and evaluate options (Kimbell & Bailey, 2017), is functionally similar to using design approaches for policy evaluation.

Benefits and limitations of the policy cycle lens

The policy cycle lens reveals that design approaches can be used at different stages of the policy process but are more frequently used at certain stages (e.g. policy implementation stage). Regarding this, Kimbell and Bailey (2017) argued that it is necessary to distinguish "between designing public policy and designing public services" (p. 215) – in other words, the distinction between design practices at the policymaking stage and design practices at the policy implementation stage. The reason for this claim was explained by Junginger (2017). She presented the figure below and argued that "in many cases, design is still slotted into the policy design process as an isolated, in-itself closed activity, a fragment or part of policy implementation" (p. 29). A limitation of design prac-

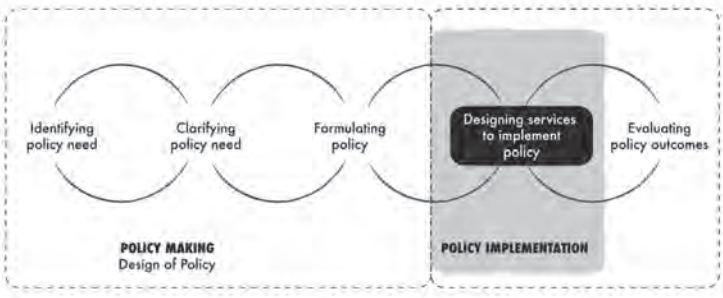

Figure 2. 3 Design practices as separate in policy implementation stage. Reprinted from T*ransforming public services by design* (p.30) by S. Junginger, 2017. Reprinted with permission.

tices for designing public services at the policy implementation stage, according to her, is that design is seen as a means to solve problems that have already been defined at the policymaking stage. She argued that "policy design driven by problem-solving does not lend itself to envisioning and inventing futures", as design approaches are used as "not so much tools to create future experiences but rather tools to regulate experiences of the past" (Ibid., p. 33). Comparing the design practices at the agenda-setting stage and at the policy implementation stage described earlier, Junginger's argument seems convincing. While at the front end of the policy cycle, design practices enabled the exploration of new futures and visions, at the implementation stage design practices helped to solve the given problems – which is still valuable but less daring in terms of policy innovation.

However, the study by Vaz (2021) on PSI labs reported somewhat different results. He reported that 26 out of the 30 PSI labs he studied were engaged in the "problem identification" stage (equivalent to the agenda-setting stage in Howlett & Ramesh's model). This was in contrast with the previous claims on PSI labs (e.g. Lewis et al., 2020; McGann et al., 2018; Villa Alvarez et al., 2022). About this discrepancy, Vaz argued that in practice, public policy processes are not as sequential as the policy cycle model, and some government organizations in design processes "travelled back in the stages of the cycle and contributed to the refinement of previously identified policy problems" (Ibid., p. 180). Similarly, in the study of LabGob (a PSI lab in the Chilean government), Bustamante (2021) described that the lab proposed that the organization should implement a new policy cycle model that would be "adaptive and dynamic, such that policy design and implementation are two interdependent and experimental activities" (p. 202). What these two studies suggest is that either the actual policy process is more flexible than what the policy cycle model describes, or a PSI lab can help make the policy process more flexible.

In conclusion, by examining design for policy practices through the lens of the policy cycle, we were able to see that design practices at different policy stages can lead to different types of value. However, at the same time, it was revealed that the policy cycle model poses a risk of misguiding our understanding of design policy practices because of its gap with real policy practices. In this respect, it will be necessary to understand design practices in the policy process through more empirical cases and to seek alternative policy theories other than the policy cycle model to conduct research on design for policy practices.

2.2.2. Design practices with various ways of civic participation

Design practices in the policy context often involve civil society stakeholders in design processes. Several scholars have associated the adoption of design practices in government with the paradigm of networked governance (Blomkamp et al., 2018; Sangiorgi, 2015; Mortati et al., 2018). Networked Governance – also known as New Public Governance – is a governance paradigm that began to emerge in the late 90s in the public sector. A central idea of networked governance is that complex problems in the public sector are better dealt with through collaborations in networks of public and private sector stakeholders than through hierarchical and technical approaches of precedent governance paradigms (Head & Alford, 2015).

As discussed in Section 2.1.3, by engaging civil society stakeholders in public policy processes, design for policy practices can lead to various types of value such as promoting democracy, addressing complexity, and improving public services. However, we will see in this section that various ways of civic participation in design for policy practices lead to different types of value.

Junginger (2017) described three types of citizen participation possible in the design practices of public organizations – design for, with, and by citizens[2]. Government staff and design experts can design public policies and services *for* citizens. Government staff and design experts can design public policies and services *with* citizens. Lastly, governments can delegate power to citizens, and citizens can design for their own needs. In this depiction, citizen participation is posited as *citizen power* based on Arnstein's (1969) ladder of citizen participation model[3]. This conceptualization highlights citizen power, an important concept in public sector design practices. Without an awareness of citizen power, design practices in the public sector risk creating outcomes that reinforce inequalities under existing systems of government.

In the meantime, some have argued that the impact of citizen participation is more important than the citizen participation itself. Bødker and Kyng (2018) critiqued that in the current participatory design practice, participation itself has become a goal. They argued that the focus of participatory design should instead be on the impact on "work practices and workplace democracy … [and] long-term, sustained outcome" (p. 7). Similarly, Collins and Ison (2009) argued that viewing citizen participation as being equal to citizen power "overlooks the more complex set of relationships which exist in many ongoing participatory situations" (p. 362). According to them, in the context of dealing

with complex problems such as climate change, what matters more is the social learning among participants as a process of "on-going capacity to create, adapt and deliver performances by a group of people with different instruments, skills, perspectives, histories and so on" (p. 365). In other words, they argued that the outcome produced by civic participation is more important than the civic participation itself or the power given to citizens.

Considering the impactful outcome of civic participation, a broadly shared and studied concept in participatory design is *infrastructuring*. Infrastructuring is described as the process of building "socio-material relation in the form of collective interweaving of people, objects and processes" (Björgvinsson et al., 2010, p. 44). It has been argued by several scholars that when design approaches are used to address social problems, traditional project-based design practices have limitations (Ibid.; Hillgren et al., 2011; Mulgan, 2009). As an alternative, "long-term commitment … an open-ended design structure without predefined goals or fixed timelines" (Hillgren et al., 2011, P.180) – i.e. infrastructuring – is proposed.

As an example of infrastructuring, Hillgren et al. (Ibid.) described a project in which the Malmö Living Lab worked with an NGO for immigrant women in Malmö. They described the advantage of infrastructuring as follows:

> "The longer timespan and a more open-ended approach have been especially valuable because … a lot of the design opportunities have related to how new networks and resources have been able, step by step, to connect and align with the women." (p. 180)

In addition, they pointed out that in the long timespan, the lab was able to understand the complexity of the immigrant women's problems and build trust with them. Moreover, they argued that infrastructuring played the role of agonistic spaces[4] – "an arena that reveals dilemmas and makes them more tangible" (Ibid., p. 179). Eriksen et al. (2020) in another study on infrastructuring described that it also serves as a place for different levels of learning among stakeholders, which resonates with Collins and Ison's (2009) earlier description of social learning in citizen participation.

These discussions show that there are various forms of civic participation in design for policy practices, and that depending on how much power is given to citizens and in what setting it takes place, civic participation can lead to different types of value. Citizen participation in public projects can promote democracy in itself, but different forms of civic participation can lead to different types of value such as new design opportunities, understanding the complexity of problems, building trust with stakeholders, and creating

a space for deliberation and learning.

Overall, in this section (2.2), we have explored what "design for policy" looks like in practice from two perspectives: the policy cycle and civic participation. Each lens has revealed heterogeneous design for policy practices at different policy stages and with different ways of civic participation. The heterogeneous design for policy practices can create different types of value from public service improvement to imagining future governance, and to creating spaces for pluralistic democracy.

2. 3. Defining embedding design in government

We have reviewed so far what "design for policy" means and how it is implemented in practice. In this section, we focus on the phenomenon of embedding design for policy practices in government organizations and explore how this phenomenon is currently understood in the literature. To understand the meaning of "embedding" design practices, we first examine various places of design for policy practices taking place in the public sector. Then, we review various types of design practices within organizations through the concept of "organizational design capability" and its models. Insights drawn from these reviews lead to a preliminary definition and conceptual framework for the phenomenon of embedding design in government. The studies examined in this section are from the literature of design for policy and design management.

2.3.1. Various places of design for policy practices

Meyer (2013) described embedding design practices in an organization as "introducing ways of thinking and working into an organization's people … [which] requires the adoption of design methods and practices, roles, structures and processes, and environments" (p. 151). However, the design for policy practices of government organizations take place inside and outside these organizations. The Design Commission (2013) mapped out the different places of design practices in the public sector, as shown in Figure 2.4. From the left in the figure, the first two approaches concern design practices taking place inside government organizations by hiring a strategic designer or creating a PSI lab. In the third approach, design practices are carried out as government organizations collaborate with external design firms directly or indirectly through broker organizations such as the UK Design Council. In the rest of the approaches, government organizations are not involved.

In comparison to Meyer (2013), Kimbell et al. (2010) described embedding design practices in an organization as having a designer on staff. In Figure 2.4, the first two

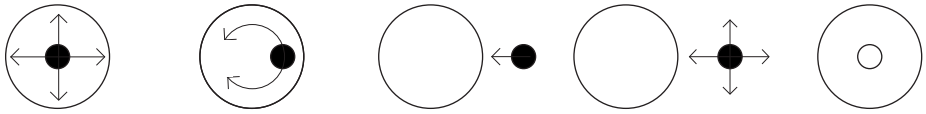

Figure 2. 4 Where design practices sit in the public sector. Adapted from *Restarting Britain 2* (p.31) by Design Commission, 2013. Licensed under CC by 3.0.

approaches from left correspond to the case of having in-house designers. However, according to Kimbell et al. (2010), embedding design in government means more than having designers within government organizations. They stated that embedding design in organizations differs from externally contracting for design services: "Rather than apply their (designers') discipline narrowly to specific issues and projects arising … these new recruits are usually paid … to apply so-called 'design-thinking' to its whole structure and all its functions" (p. 2).

Yet, what it means to apply design to an organization's whole structure and functions is not clear. To understand this, we turn to research on how design practices evolve within organizations. The topic of design practice evolution within organizations has been studied from the perspective of "organizational design capability" in design studies. Therefore, studies on this organizational design capability will be reviewed in the next section.

2.3.2. Organizational design capability and its models

The "ability of an organisation to perform design-related actions in various levels of activity" (Mutanen, 2008, p. 503) is defined as *organizational design capability*. The way an organization "understands, values and utilises design" (Doherty et al., 2015, p. 2) – i.e. organizational design capability – differs from one organization to another. An organizational design capability will "evolve and be updated as the conditions in and around the organization change" (Malmberg & Wetter-Edman, 2016, p. 1290). This has been proven in a study by Mutanen (2008) of an engineering company based in Finland. The company's design capability evolved over time from an expert-centred product development approach to a collective, strategy-centred one in accordance with industry changes, competition in the market, and the company's decision to deal with the problems.

The various design capabilities in private and public organizations have been inves-

tigated and presented as organizational design capability models. These models are proposed as a guideline for design practice development in organizations. In this section, we will examine these models and what they reveal about embedding design in organizations.

The first model is the Danish Design Ladder (Figure 2.5). In 2003, the Danish Design Center (Ramlau & Melander, 2004) conducted a survey on Danish companies to understand the "economic benefits of design" (p. 49) and based on the results made the Design Ladder. This model showed four levels of design activities in a company. The ladder starts from *no design* where a company makes no use of design in its work. In the next steps, *design as styling* and *design as process*, a company uses design approaches for the styling and aesthetics of products and for methods and processes in projects. At the last step, *design as strategy*, design is adopted "as a central aspect of the company's business base, used as a means of encouraging innovation, for instance" (Ibid., p. 49). An important finding of this study was that: "The higher a company is placed on the Design Ladder, the better its gross performance" (Ibid., p. 50).

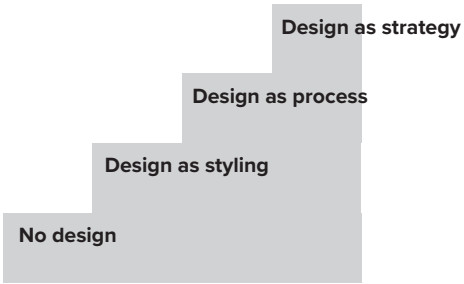

Figure 2. 5 Danish Design Ladder, visualized by the author based on Ramlau & Melander (2004).

Another model for organizational design capability is the Design Management (DM) Staircase by Design Management Europe (Kootstra, 2009). While the DM Staircase is also a four-tier model, what is new about it is that by recognizing design as a means of creating value for management, it describes not only a company's design activities but also design management activities at each stage – design management is defined as using design knowledge and resources to create value for the management of an organization (de Mozota, 2011). In each stage, a specific design management capability is described in terms of awareness, DM process, planning, DM expertise, and design resources. The first stage, *no DM,* is similar to the first stage of the design ladder. No particular design activities take place in that company. In the second stage, *DM as project,*

design is known by some people and performed inconsistently in an organization with limited plans, skills, and resources. In the third stage, *DM as function*, most people know about design, and design is performed consistently in various activities with standard tools supported by sufficient resources. The last stage, *DM as culture,* is where design is known to all organizational people and is an ongoing activity in the organization. At this stage, companies are "design-driven", and design is at the core of their differentiation strategy (Kootstra, 2009).

What both models have in common is that the stage where design is used as a strategic means for management is described as the most mature stage of an organizational design capability. However, Junginger (2009) argued that these two models limit design to the realm of product and service development in organizations and "do not accommodate general organizational problems that might be addressed by design thinking and design methods" (p. 3). Arguing that design's role in the wider organizational context is being increasingly recognized, she proposed a new model that illustrates four places of design practices in an organization (Figure 2.6).

Figure 2. 6 Four places of design in organization. Reprinted from "Design in the organization: parts and wholes", by S. Junginger, 2009, *SVID: Design Research Journal,* p.27. Reprinted with permission.

Starting from left in the figure, in the first place, design practices take place at a distance and are considered as an "add-on" to an organization. The organization hires external designers for a specific need, and the designers' work is restricted by this setting. In the second place, design is part of organizational functions, but there is often "a significant trench" between in-house designers and the rest of the organization. Until this stage, design tends to remain in the traditional realm of product and service development. In the third place, design is at the core of the organization. Design "links directly to an organization's overall strategy" (Ibid., p. 7). The boundaries of design practices are extended to "organization wide problems, for example relating to customer service or to corporate design" (Ibid., p. 7). In the last place, where design is integral to all aspects of an organization, "the role of design is to discover and invent solutions for all kinds of organizational problems ... [including] changing fundamental assumptions, beliefs, norms

and values" (Ibid., p. 7). As compared to the previous two models, this model suggests a possibility that design can transform organizations by linking it to organization-wide problems.

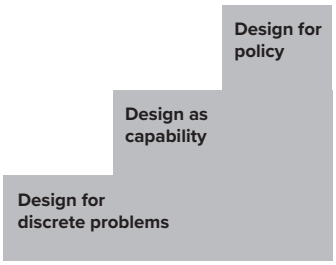

Figure 2. 7 Public sector design ladder. Adapted from *Design for public good* (p.8), by Design Council, 2009. www.designcouncil.org.uk

The last model of organizational design capability examined in this chapter is the Public Sector Design Ladder (Figure 2.7). The UK Design Council (2013) applied the design ladder model to the public sector. The Public Sector Design Ladder starts from *design for discrete problems*, where public organizations apply design approaches to their projects in a one-off mode. In the next step, *design as capability,* public officers "not only work with designers, [but] they understand and use design thinking themselves" (Ibid., p. 8). In the last stage, *design for policy*, design approaches are used by policymakers, "often facilitated by designers, to overcome common structural problems in traditional policymaking such as high-risk pilots and poorly joined up processes" (Ibid., p. 30). The Council described design practices in this stage as "strategic design". While this is the best-known model of design capability in public organizations, it has a limitation in that it does not provide a rich understanding of mature design capability in public organizations. For example, in Section 2.2, we saw that heterogeneous design practices are implemented in the public policy context. This suggests that at the most mature stage of the ladder, *design for policy,* government organizations can engage in heterogeneous design practices.

2.3.3. Insights from the models leading to a definition

Discussions around these models reveal certain insights on the development of design practices in organizations. These insights lead to the definition of embedding design in government.

The first insight is that, ideally, an organizational design capability matures to the stages

in which design practices create more value. This was evident in the four models. In the Danish Design Ladder, it is clearly stated that the higher a company sits on the ladder, the better its gross performance (Ramlau & Melander, 2004). Regarding the DM staircase model, it is described that "the higher a company makes it up onto the stairs, the greater the strategic importance of design at the company [and] a company is more likely to grow when it deploys design in a strategic fashion" (Kootstra, 2009, p. 12). In her model, Junginger (2009) did not present the four places in a hierarchical format, but instead suggested that the broader the engagement of design in organizational problems, the more transformative its impact will be. Lastly, the Design Council stated, with reference to the Public Sector Design Ladder, that "the higher up a public sector body goes, the more value it can create" (p. 30).

The second insight is that organizational design capability matures by the efforts of its stakeholders. Citing the Danish Design Ladder, Bucolo and Matthews (2011) discussed: "The goal of design intervention programs is to enable companies to shift their perspective on the value of design and therefore move up the ladder over time …. The combination of awareness activities and direct company interventions are generally deployed to assist companies in their transition along the design ladder" (p. 245). In other words, they argued that organizational design capability can mature through intentional efforts. The DM staircase model refers to these efforts as design management. Junginger (2009) noted that designers using her tool can "strategize the kinds of relationships they need to develop if they want to achieve a particular design outcome, such as for example, transformational change" (p. 8). Overall, these models posit that it is possible for organizations to develop their organizational design capabilities to different stages as needed by using the models as a guide.

In the context of private organizations, activities such as those listed below have been identified as the efforts to foster organizational design capabilities under the concept of design management:

- Resourcing design capability and embedding it in various levels of an organization (Mortati, Villari, & Maffei, 2014)
- Connecting business (existing practices of an organization) and design (Jevnaker, 2000)
- Elevating design as a strategic practice (Jevnaker, 2000; Micheli, Perks, & Beverland, 2018)
- Communicating the value of design, legitimizing design within an organization (Jevnaker, 2000; Rauth, Carlgren, & Elmquist, 2014)
- Changing organizational culture and integrating design into an organization's DNA (de

Mozota, 2011)

- Formalizing design into the routine, process, and structure of an organization (Malmberg, 2017; Micheli et al., 2018)

Based on these insights, embedding design in government is defined as: *the process through which an organizational design capability matures, leading to an increase in value creation through design practices within the government.* In addition, this process is influenced by in-government actors' effort to *foster* design practices and government change such as design management. This understanding is visualized as the figure below. This is the conceptual framework that will guide this doctoral study on the phenomenon of embedding design in local government.

It is necessary to note that this doctoral research does not measure the value creation through design practices in local government. As previously discussed in Section 2.1.3, assessing public value creation depends on the organization and problem context. Considering this, this doctoral study explores how design practices evolve and what this evolution implies for the increase in value creation through design practices in local governments.

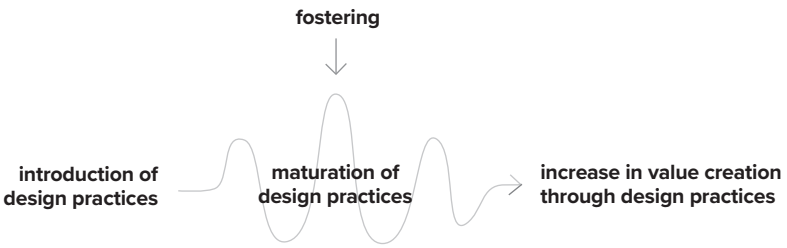

Figure 2. 8 Conceptual framework for understanding embedding design in government

2.4. Existing empirical studies on embedding design in government

In the previous section, embedding design in government was defined as the process through which an organizational design capability matures, leading to an increase in value creation through design practices within the government. It was also revealed that this process is fostered by in-government actors' efforts. In this section, by reviewing existing empirical studies on the phenomenon of embedding design in government in the design for policy literature, I seek areas where further research opportunities exist within the phenomenon of embedding design in government and formulate them as research questions.

2.4.1. Mechanisms of embedding design in government

In the current literature, there are various perspectives on how design practices become embedded in government organizations. One perspective involves understanding the phenomenon through various enabling and hindering factors. Bailey (2012) conducted a study about embedding service design practices in a Scottish government agency, Skills Development Scotland (SDS). Based on four years of engagement and observation, he identified several factors that influenced the embedding process, such as support from senior leaders and building common vocabulary and language on design. On the other hand, Kang and Prendiville (2018), in their study of three local governments in the UK, revealed a number of challenges to design practices, such as diffusing design mindsets and maintaining momentum for further cultural change in the organizations. Both these studies uncovered certain factors that influence embedding design in government. However, to understand how those different factors are related, it seems necessary to find out the underlying mechanism by which design practices are embedded in government organizations.

Learning as the mechanism of embedding design

Malmberg (2017) considered that the mechanism of embedding design in government is learning. In two selected cases (a social service project and a health lab), she examined how the public organizations involved interacted with design practices. According to her, the process by which an organization learns a new practice develops from exploratory learning to transformational learning and then to exploitative learning. Explorative learning is the phase where the potential value of new knowledge is explored. Transformative learning is an "assimilation" phase where the organization integrates the new knowledge into "the organization's existing structures, routines, and processes in order to later be exploited" (Ibid., p. 211) in the exploitive learning phase. For the learning to evolve, she argued that the role of management is essential. However, the selected two cases were both new initiatives, and thus they did not yield many insights about the more mature transformative and exploitive learning stages.

Adaptation as the mechanism of embedding design

Several other scholars have comprehended that the mechanism of embedding design in government lies in the adaptation of design to the public sector context. Dorst (2015), as seen below, argued that when the design approach is used in a new field, it must be adapted to the context of that new field.

> "When core principles are transposed to other fields by practitioners abstracting from everyday

> design practices and connecting these fundamentals to the corresponding needs in the target field, the actor must delve much more deeply into the practices, and adapt this understanding to the new use context" (Dorst, 2015, p.23)

Drawing on this concept, Meijer-Wassenaar and Van Est (2019) in their study of the Netherlands Court of Audit (NCA) described that "the first step to enable design to add value to an audit is to adapt the understanding of design" (p. 1056) to the auditing. They found that what makes design practice difficult in the auditing context is that it involves different ways of reasoning. While auditors take "a deductive and/or inductive approach to objective knowledge … design process uses iteration to allow for new information and to understand the user's needs" (p. 1064). As they saw the value of design in improving the impact of auditing, they concluded that "the NCA should integrate the audit process with the design process" (p. 1064).

In the meantime, Bustamante (2021) in his study of LabGob (PSI lab) in the Chilean government emphasized the adaptation of design not only to the organizational practices but also to the political context of the organization. At the level of organizational practices, the lab introduced design "in the policy process … [in the way that] policy design and implementation are two interdependent and experimental activities" (Ibid., p. 194). At the level of the organization's political context, he explained that the lab heightened the legitimacy of design by meeting the needs of political leaders. He described that the lab embracing "the political as a matter of design, and not a barrier" (Ibid., p. 166) served as a way to adapt design practices to the political context of the organization.

Networks of design actors as the mechanism of embedding design

Lastly, Terrey (2012) understood embedding design in government as a "continual process of forming and reforming a network of actors" (p. 327). Based on her five years of auto-ethnography using actor network theory, she unravelled how multiple human and non-human actors played a role in the evolution of design practices within the Australian Taxation Office. Human actors in various design roles (e.g. designers, design champions) have formed communities of design practices both inside and outside the organization. Non-human actors such as design theory and methods, workshops, and forums also contributed to this network. She argued that "design must be enacted by many [human and non-human actors] for it to be fruitfully executed in an organizational context" (Ibid., p. 338).

The studies reviewed in this section have offered various perspectives on the process of embedding design in government. They have highlighted key enabling factors and

mechanisms, including sponsorship, learning, adaption of design to the public context, and networks of design actors. The insights gained from this review will be presented in the next section, contributing to the refinement of the scope of this doctoral research.

2.4.2. Research opportunities about embedding design in government

Reviewing existing empirical studies on the phenomenon of embedding design in government and considering the definition of embedding design in government reveal three promising areas of research opportunity in the current literature.

First, there is room for gaining an understanding of embedding design in specific types of government organizations. The existing studies were conducted in various types of government organizations, such as central governments, local governments, tax offices, and audit offices. Moreover, most of these studies were conducted in a single organizational context. Consequently, there is an opportunity to uncover, for example, what common patterns are to be found in the process of embedding design in local governments and how they are different from those in central governments. As local government and central government have different tasks and policy-related power, how design practices are implemented and become embedded in their organizations are likely to be different. In this respect, as explained in the introduction chapter, this doctoral study limited the context of study to local government and investigated the phenomenon of embedding design in multiple local government organizations.

Second, there is an opportunity to gain a deeper understanding of mature design practices in government organizations. Many studies on this research phenomenon were conducted in the early years of design practices in government organizations (e.g. Bailey, 2012; Bustamante, 2021; Malmberg, 2017). While these studies uncovered how design practices are fostered in government organizations, they did not delve into the development of mature design practices over time within these organizations. Therefore, there is room for understanding what mature organizational design capability looks like in government organizations. This leads to the research question: how do design practices mature in local government?

Lastly, as pointed out in the introduction chapter, there is not much knowledge on how to foster design practices and organizational change in the process of embedding design. Critiquing that research of design management has focused on product and service development in the private organizational context, Junginger and Sangiorgi (2017) stated that “activities and efforts of design in the public realm require new ways of de-

sign management" (p. 492). This suggests that strategies identified as design management in private organizations may not be applicable to public organizations. Additionally, considering that our understanding of the mature organizational design capability in government is limited, our understanding of how to mature an organizational design capability is also limited. This knowledge gap is formulated as the research question: how can actors in local government foster the process of embedding design?

2.5. Conclusion

In this chapter, we have examined what design for policy means and how it is implemented in practice to establish background knowledge for the research topic of this doctoral study. We also have reviewed what it means to embed design in the government, the research phenomenon of interest of this doctoral study, and what has been revealed so far about this. As a result, a preliminary conceptual framework is developed, and the scope of the research phenomenon is narrowed.

In the first section (2.1), where we sought an understanding of design for policy, we examined what public policy is, how perspectives on design have changed in the public policy context, and what value design brings to the public policy context of today. Through this, we have understood that public policy is a complex process involving multiple actors and decision-makings, and design is introduced as a new way of working and as a part of policy toolkits in current policy practices. The value that design practices can bring in the policy context are varied, such as opening up problem and solution spaces through design reasoning, promoting democracy through co-design, addressing complexity through multi-actor co-design, improving public services through a user-centred approach, managing risk through prototyping, creating a different type of evidence, and navigating the future of policy through speculative design.

In the second section (2.2), where we explored what design for policy looks like in practice, we examined design for policy practices from two perspectives: design practices at different stages of the *policy cycle* and design practices with diverse ways of *civic participation.* The first lens revealed that design practices at different policy stages can lead to different types of value. The second lens showed us different ways of civic participation leading to different types of value in design for policy practices. This section helped us understand more closely the value of design (discussed in the previous section) in public policy practices.

In the third section (2.3), we reviewed several models of organizational design capability in private and public organizational contexts. By doing this, we have come to the preliminary definition that embedding design in government is the process through which an organizational design capability matures, leading to an increase in value creation through design practices within the government.

Lastly, in the fourth section (2.4), we examined existing empirical studies on the phenomenon of embedding design in government and uncovered new areas of research about this research phenomenon. Research opportunities were identified in what the mature organizational design capability looks like and how actors in governments foster the process of embedding design in government in the context of specific types of government organizations. These insights were formulated as research questions to be explored in this doctoral study in the context of local governments.

In conclusion, in this chapter, a preliminary conceptual framework for the phenomenon of embedding design in local government has been established and research questions have been formulated. These research questions will be addressed in the following chapters (Ch. 3, 5, and 6).

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1 "Policy tools" are used interchangeably with "policy instruments". As mentioned in the previous section, governments can make use of a diverse set of policy instruments to implement policies, such as tax, economic incentives, regulations and legislations, funding, and public services (Cairney, 2020).

2 Junginger (2017) originally described nine types of organizational design practices in government depending on different roles played by design experts, organizational staff, and citizens. Here I mention only three types focusing on the role of citizens.

3 Arnstein's Ladder of Citizen Participation model is the "most widely referenced and influential" (Organizing Engagement, n.d.) model in the field of democratic public participation. She (Arnstein, 1969) argued that "participation without redistribution of power is an empty and frustrating process for the powerless .... allow[ing] the powerholders to claim that all sides were considered but makes it possible for only some of those sides to benefit" (p. 24). She presented eight types of public participation in terms of decision-making power given to the public: manipulation, therapy, informing, consultation, placation, partnership, delegated power, and citizen control. She stated that power is redistributed between citizens and powerholders only on the last three rungs of the ladder, while the rest of the rungs involve either tokenistic participation or non-participation.

4 "Agonistic space" comes from the "agonistic pluralism" concept proposed by Chantal Mouffe (1999) as an alternative to deliberative democracy. In society, we will always have adversaries "with whose ideas we are going to struggle but whose right to defend those ideas we will not put into question" (p. 755). As this agonistic confrontation is the basic condition of human society, she advocates "a democratic society [that] makes room for the expression of conflicting interests and values" (p. 756) instead of seeking consensus as in deliberative democracy. DiSalvo (2010), drawing on Mouffe, argued that when design practices can create spaces for contest and confrontation, they can contribute to the "pluralistic democratic society" (p. 367).

Title: She Decides movement in the U.S.
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3. Fostering design practices in local government

In the previous chapter, the phenomenon of embedding design in government has been defined as the process through which an organizational design capability matures, leading to an increase in value creation through design practices within government. Building on this understanding, this doctoral study seeks to address two research questions: 1) how actors in local government foster the process of embedding design in local government and 2) how design practices mature in local government.

This chapter presents a study addressing the first research question. This study investigates how actors in a local government have fostered design practices and as a result how the organizational design capability has matured in the Municipality of Eindhoven, a local government in the Netherlands. It is conducted as a case study in which in-house designers and non-designer public officers participating in design practices were interviewed. As this study is the first empirical study of this doctoral study, it also aims to explore the process of *embedding design in government* and refine the conceptual framework and research method for the following empirical study.

3.1. Study aim

The focus of this study is to understand how actors in a local government foster the process of embedding design in local government. To contextualize this study, why a local government introduced design practices within its organization and what factors other than the fostering influence the process are also examined. In these regards, the research questions of this study are formulated as follows:

Research question 1. How can actors in local government foster the process of embedding design?

- 1.1. Why does a local government introduce design practices within the organization?
- 1.2. What strategies are used to foster design practices in a local government?
- 1.3. What are the results of the strategies?
- 1.4. Besides the strategies, what other factors influence the process of embedding design?

3.2. Study set-up

The research questions of this study seek descriptive knowledge about how the process of embedding design is fostered in a local government organization. To answer this research question, a case study, a research method that can investigate a research phenomenon in depth within the boundary of a case (Yin, 2014), is deemed appropriate. In this case study, the unit of analysis – the case – includes the activities to foster design practices and their outcomes in a local government organization. By understanding why and how organizational members implement and talk about design practices and interact with others in these design practices, we will be able to understand how the process of embedding design is fostered in the local government organization. To this end, the research data are collected through interviews with the organizational members who are involved in design practices. The rest of this section explains further how the case is selected and how the research data are collected and analysed.

3.2.1. Case selection: The Municipality of Eindhoven

The Municipality of Eindhoven has been selected as a case suitable for the study from among local governments in Europe according to the following criteria. First, it should be an organization that builds design capabilities (for design for policy practices) within the organization. This means that the organization has either a strategic-level designer on staff or a PSI lab has been set up within the organization, as described in Section 2.3.1. Second, the organization should have been engaged in building its internal design capabilities for longer than three years. A shorter history of design practices may mean a scarcity of data about the phenomenon of embedding design in government. Lastly, the in-house designers should be explicitly engaged in activities to foster design practices within the organization. Prior to data collection, in-house designers were contacted to ensure that the candidate organization meets all these criteria.

Eindhoven is the fifth-largest city in the Netherlands (population of 231K) and is known as the “design capital” of the Netherlands (“This is Eindhoven”, n.d.). One of the biggest design events in Europe, Dutch Design Week, is held annually in the city. It is also home to two renowned design schools and the Philips Design Studio.

To bring design practices into the organization, the Municipality of Eindhoven chose to hire in-house designers for its existing departments, rather than setting up a public sector innovation (PSI) lab as many government organizations do. Designers have been hired one by one over several years, and at the time of data collection for this case study, the organization had a total of four professional designers in different depart-

ments.

3.2.2. Data collection

Data for this case study were obtained by interviewing three groups of employees engaged in design practices – in-house designers, design sponsors, and project managers (see the table below for information on the participants). In-house designers are design experts employed to build design capability within the organization. Design sponsors are non-designer members of the organization, often in senior management positions, who support the dissemination of design practices within the organization. Project managers are non-designer members of the organization at a manager level who choose to either use or not use design approaches in their work.

Interview participants were recruited through snowball sampling, that is, through a network of in-house designers and initial interviewees. The table below shows the selection of interview participants. Interviews were conducted face-to-face for 30 to 60 minutes in a semi-structured manner. Conversations were recorded with consent.

Code	Description (position)	Department	Work years in the municipality
P01-ID	In-house designer	Strategy	4
P02-ID	In-house designer	Human resource	2
P03-DS	Design sponsor (head of department)	Strategy	20
P04-DS	Design sponsor (former design program manager)	Strategy	13
P05-DS	Design sponsor (head of department)	Human resource	8
P06-PM	Project manager	Urban planning	7
P07-PM	Project manager	Urban planning	10
P08-PM	Project manager	Human resource	19
P09-PM	Project manager	Social domain	5
P10-PM	Project manager	Urban planning	9

Table 3. 1 Information about interview participants

Table 3.2 presents the interview questions used to obtain the data for each research question. Regarding research question 1.1, design sponsors were questioned about the context around the decision to hire in-house designers for the organization. For research question 1.2, in-house designers and design sponsors were questioned about the activities they have been engaged in to foster design practices in the organization. For the last two research questions, project managers and design sponsors were asked about how they came to know and implement design practices and what changes they

have seen within the organization because of design practices. Additionally, in-house designers were asked to draw a timeline of important decisions made within the organization related to design practices (e.g. decision to hire an additional in-house designer) and their strategies to foster design practices. These drawings (e.g. Figure 3.1) helped the sense-making of what strategies have been carried out and how the organizational design capability has changed over time. The data collection was conducted in 2019.

Research questions	Interview question examples
1.1. Why does a local government introduce design practices within the organization?	(For design sponsors) When and how did the organization start design practices? Who were involved? When and why was the decision made to hire in-house strategic designers?
1.2. What strategies are used to foster design practices in a local government?	(For in-house designers and design sponsors) What was your goal with design practices? What have you done to foster design practices? What are the things that you have learned so far, and what are your current concerns?
1.3. What are the results of the strategies? 1.4. Besides the strategies, what other factors influence the process of embedding design?	(For design sponsors and project managers) When and how did you start design practices? How do you practice design? Do you see any changes in your work, your colleague's work, or the organization because of design practices? Why do you continue or not to use design practices?

Table 3. 2 Interview questions in relation to research questions

3.2.3. Data analysis

The recorded interview data were transcribed. The transcribed data were firstly coded through an open-coding approach using ATLAS.ti software. Open coding involves segmenting the data and assigning codes based on the content of the data, as shown in the examples in Table 3.3. The second round of coding was conducted to draw connections between the codes. Mapping and tables were used to iteratively group and regroup the codes. Mapping refers to the manual process of printing and cutting out code lists and iteratively grouping them on a desk. The code groups which were primarily created in this process were put into a table using MS Excel software. The code groups in the table were again iteratively rearranged to form themes that could answer the research questions. For example, in the table below, we can see that three codes were grouped into the theme "growing need for stakeholder collaboration drives design practices" that answers research question 1.4.

Three strategies helped this analysis process. First, by comparing the answers of in-house designers and non-designer employees, it was examined whether these two groups had a similar understanding of changes in the organization related to design

practices. Second, in-house designers' drawing of the timeline of important decisions related to design practices in the organization was used to arrange the data in an approximate chronological order. Finally, the description of design management strategies in private organizations (refer to Sec. 2.3.2) helped identify the strategies to foster design practices in this local government organization. The codes and themes list are disclosed as Appendix 1 to ensure reliability in the data interpretation.

theme	code	sub-code	exemplary quote
growing needs for stakeholder collaboration drives design practices	stuck and searching for a new way of working	stuck in project	People come to us like ... I'm stuck in my project. Can you please help me?
		searching for a new way of working	We wanted to change the way we work in the municipality ... So, we wanted to get the people in the city involved in what we do and how to do it.
	change in society requires local government to change, not because of design	role of local government changing	Our role [Eindhoven municipality] is changing. [Eindhoven municipality] is much more a facilitator. The players in the city, our citizens, decide what they want, what they need.
		social tendency	It's very common that we don't think about things on our own anymore - we find partners in the city, whether citizens or other parties, and see if we can co-create policies together. It's kind of a societal tendency.
		increasing complexity	I think a way back, we were more capable of solving problems just by ourselves, by our own government. And right now, that's not the case. So, problems are getting in that way, maybe more complex.
		if there wasn't design	I don't know whether the change wouldn't have been there if we didn't have the designers because it's also from a society wants us as a government to fit.
	design is useful	design for stakeholder collaboration	There's a lot to do with our collaboration with other public parties.... So, I think these processes could benefit from the whole design thinking practice.
		design for complex problem	The issue is complex, that you are not really sure which way to go.... I think those kinds of projects are really well made for design thinking...
		design thinking helped	I think design thinking helped us in achieving these new ways of approach.

Table 3. 3 Example of the data analysis process

3.3. Findings

The findings of this case study are reported in four sections. The first section answers why design practices were introduced within the organization. In the second section, three themes are presented to answer what strategies in-house designers and design sponsors have been engaged in to foster design practices in the organization. The third

section addresses the results of these fostering strategies. Lastly, the fourth section reports what factors other than fostering have influenced the process of embedding design in the municipality.

3.3.1. Introduction of design in the municipality

This section answers research question 1. 1, why a local government introduced design practices within the organization.

Eindhoven is a city with a rich design history. The city has Philips, well-known design schools, and many designers. P04 started her interview by explaining this as follows:

> *"Design has been in Eindhoven for six decades.... We have a lot of designers in the city. So, design has been in the city for much longer." P04 (design sponsor)*

According to her description, this city context played a role in the introduction of design practices in the municipality. It was around 2008 when a "visionary" (P 04, design sponsor; P07, project manager) alderman saw a project by Philips Design and "thought [that] we should use design to tackle our own problems as local government" (P04). A study group was then set up within the city council to study design.

In 2009, the municipality bid for World Design Capital 2012[1] with the slogan, "Creating a caring city", which implied "us[ing] design to tackle [the city's] problems" (P04, design sponsor). The municipality did not win this competition, but the city council granted permission to launch a design programme. In this programme, designers and design students in the city were called to participate in tackling societal problems of the city. We can have a glimpse of how this programme was carried out from the quote below. Designers in the city collaborated with the municipality through a broker organization, Dutch Design Foundation, and aldermen were key decision-makers.

> *"We worked with what is now called the Dutch Design Foundation.... they represent a lot of designers, and we thought about problems we were facing, and they made project proposals.... And then, with those project proposals, we went to the politicians. We have these (proposals), shall we try to do this? And then if the alderman who was responsible for a public space decides that she wants to try to solve this problem with designers, then those sectors just had to do it and cooperate." P04 (design sponsor)*

P05 (design sponsor) described this period as the "project by project phase" and "the phase where [the municipality] were hiring designers but … not always sure how to be a good commissioner of work".

In 2014, when this design programme ended, the programme manager drafted an

evaluation report. She recalled that the programme was successful, but the municipality "didn't internalize design thinking in the organization" (P04, design sponsor). She proposed that the municipality needs to hire designers as employees. According to P01 (in-house designer), the decision "to stop the budget for outside designers … [and] have a position for a designer" was partly due to big budget cuts in the organization. In 2015, the municipality hired its first in-house designer.

To sum up, various factors contributed to the introduction of design practices within the municipality, such as the context of the design city, the inspiration from Philips, and visionary city councillors. After a period of experimentation with design practices, the organization saw the value of design and decided to hire an in-house designer.

3.3.2. Three strategies to foster design practices

This section answers research question 1.2 – what strategies are used to foster design practices in the municipality. In the practices of in-house designers and design sponsors, three strategies to foster design practices were identified: communicating and providing learning about design, connecting design to organizational needs, and reflecting on and revising the strategy to create more value with design.

Communicating and providing learning about design

The first strategy to foster design practices in the municipality that was identified in this study was communicating and providing learning about design. To communicate about design in the organization, the first in-house designer made herself visible within the organization. The head of the strategy department, this designer's direct boss, believed it important "to give this new way of working a face [and] make it approachable" (P05). Therefore, the first in-house designer made herself visible in the organization through presentations and participation in projects. P03 (design sponsor) said that the first in-house designer was "everywhere helping with difficult sessions and workshops and trainings." The first in-house designer was even described as "the personification of design thinking" (P09, project manager).

Communicating about design was also about demonstrating the value of design to organizational members. For example, in the quote below, P04 (design sponsor) describes that the first in-house designer demonstrated the value of design practices to organizational leaders in design sessions with citizens.

> *"Those aldermen participated in one or more sessions, and they saw how she handles this and how she*

gives the inhabitants the feeling that they are listened to, which for politicians is very important because those inhabitants are the ones re-electing them." P04 (design sponsor)

Regarding the learning of design, in-house designers provided design training and coaching to the organizational members. Training was given only in the early days because the in-house designers found that trainees could not "transfer the learned stuff into their daily jobs" (P02). The coaching took place organically. When necessary, non-designer employees approached in-house designers, who then coached them on the job. Coaching also took the form of expert advice, "making sure that the right type of designer was allocated to the right type of project when [project managers] work with external designers" (P05, design sponsor).

Connecting design to organizational needs

The second strategy to foster design practice in the municipality involved connecting design to organizational needs. From the outset, the first in-house designer interpreted her job as finding the "anchor points", the places where design can be connected to problems of the organization, as she described below.

"My job was really open in the beginning. It was first to find the anchor points, first to find out what's actually going on and then to do something with it .... So, by doing all this [pointing to her first two years in the municipality in her timeline drawing] ... we kind of more made the connection with the problems of the organization." P01 (in-house designer)

As the first in-house designer described in the above quote, by participating in projects during her first two years in the municipality as well as "continuously reflecting together with [external] designers to compare what is happening in different projects" (P02), in-house designers found the anchor points in citizen understanding, collaboration, and learning. In the quote below, the first in-house designer described that these three points are where one should apply design.

"The first thing you need to know is who the users are.... So, more knowledge about the user, about citizens is key. And I think the second one is, well, where are the barriers to work together in a better way? ... And I think the third anchor point is where are we with learning? How can we not reinvent the wheel all the time? .... It says something about where you apply [design]." P01 (in-house designer)

In-house designers said that they shared these insights with leaders of the organization. However, the understanding of design as a means for organizational change (towards a collaborative and learning organization in relation to the second and third anchor points) did not seem to be shared broadly among the organizational members. The head of the strategy department (P05), who is a direct boss of the first in-house designer, was the only one of the non-designer interviewees who described design practices in this way.

Below, he described how his understanding of design practices has evolved from a tool to something with "transformational power":

> *"My assignment was how to introduce design thinking and get a kind of a new tool kit for our problems. And the realization that the transformative power might be there was not by me thought in advance but came realization in the more projects we did and how people got affected by it." P05 (design sponsor)*

In comparison, as we will see in a later section (3.3.4), project managers perceived design as a useful practice for stakeholder participation.

Reflecting on and revising strategy to create more value with design

The third strategy to foster design practices in the municipality involved reflecting on and revising strategy to create more value with design practices in the organization. As mentioned previously, in-house designers in collaboration with external designers continuously reflected on "what is happening in the different projects" (P02) with design practices.

When the first in-house designer's two-year contract with the municipality was ending, she and other designers reflected on the past two years – see the first two years that she described as a "messy phase" in her timeline drawing in Figure 3.1. Key insights from this reflection were: one, they did not observe as many mindset changes among their non-designer colleagues as they had expected. In-house designers valued employees who understand design as mindsets more than those who understand design as tools – this will be further explained in Section 3.3.3. A second insight was that they realized the need to involve people of senior positions rather than project managers in design practices. The first in-house designer (P01) described that the senior positions are "where the reframing usually starts in this kind of organization …. [and] where the really big change was happening". Based on these insights, the in-house designers stopped multiple small-sized projects and decided to focus on three long-term projects as places to "actually make a difference" (P01). In these long-term projects, they intentionally involved people from different departments and hierarchies of the organization to show the organizational leaders what hinders design practices, described as "working together" in the quote below.

> *"One way to overcome this barrier (silo working) is to involve more people than only the people from the pilot projects. So that's why this group [pointing to senior managers in her drawing] is here because they learn the same things as the [projects managers] .... What we take from this project is where the hiccups are, what really blocks us from working together.... So, the political layer knows now why certain things are not working inside the organization." P01 (in-house designer)*

At the time of this interview, another two years had passed since this adjustment. The

first in-house designer evaluated that the most recent two years, which focused on long-term projects, were more successful than the first two years. She said that there would be another moment of reflection soon, which would decide "what is the next phase going to be" (P01). This showed how they make use of reflective practices.

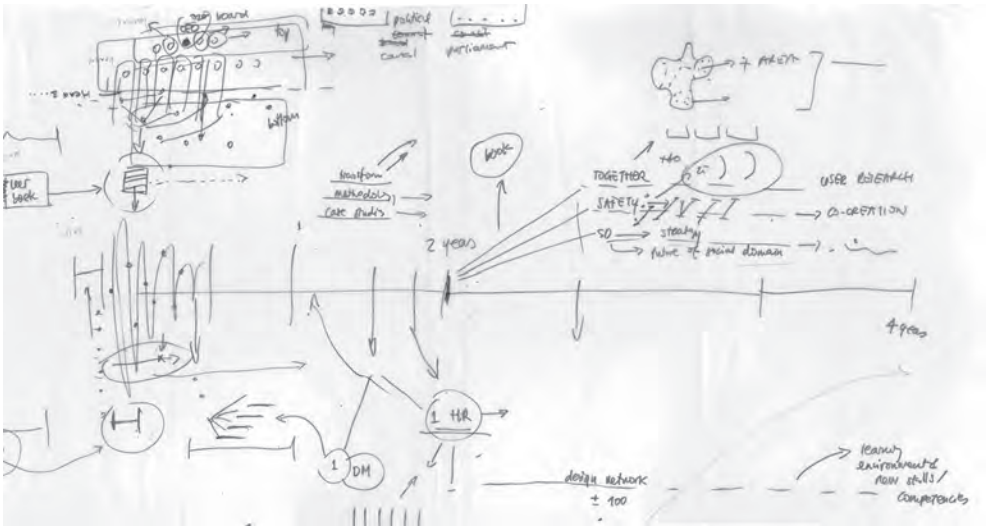


Figure 3. 1 Reflections on and revisions of strategy over a four-year period,, drawn by the first in-house designer (P01)

3.3.3. New design capabilities, but design practices are still "fragile"

This section addresses research question 1.3 – what are the results of the strategies to foster design practices in the municipality. From the interviews, it can be concluded that there had been a development of organizational design capability in the municipality. The awareness of design practices had changed, design had been recognized as a strategic practice, and some employees had gained new design capabilities. Yet, the in-house designers described the design practices in the municipality as "fragile".

Increased awareness of design

The first indication of growth in the organizational design capability was that the awareness of design had changed in the organization. Two project managers noted greater awareness of design within the organization. P10 stated that design thinking had been used in pilot projects in the past, while now it is "not a pilot anymore". P04 said, "a lot of people now in the organization are aware of the fact … that we use design thinking". These views were supported by P05 (design sponsor). He said that design is now an "official function" of the organization, and that third and fourth in-house designers have

been hired by different departments on their own, as he described below.

> *"[The third designer] was an external designer who got hired on a project basis.... she did very good work there, and the head of the Safety Department said, 'Oh, this is working, I want people with that type of skill in my department.' ... [the hiring of the fourth designer] was completely outside my scope." P05 (design sponsor)*

Design being recognized as a strategic practice

The second indication of growth in the organizational design capability was that organizational leaders had recognized design as a practice for strategic decision-making. As we saw how a designer sponsor's (P05) understanding has changed from design as a tool to design as a means for organizational change (Sec. 3.3.2), design was not initially conceived as a strategic practice in the municipality. In-house designers said that they have become more involved in "help[ing] them [councillors] to define the strategy of their own" (P01) or "working with the management of the whole organization" (P02) only in recent months.

There were also a couple of project examples where external designers were hired for projects that required making long-term strategic decisions for the municipality. The quote below describes an example of a design firm being hired for a project concerning the future of the City of Eindhoven.

> *"We had some insights of how Eindhoven is developing and what are the big challenges in the future. ... We can't solve it by only our governments instruments. So, we have to work together with different parties like also the companies here in the city. ... And then we asked for [a design firm] to help us with that by using design approach." P09 (project manager)*

New design capabilities in employees

The last indication of growth in the organizational design capability was that several employees of the municipality had acquired a better understanding of what design is and how to use it. Among them are design sponsors who understand the design practice and sponsor it. P03 (design sponsor) said: "Supporting it [design practice] is for me also understanding the principles ... [because] you need to understand the principles to be able to explain them." The quote below also demonstrates that a project manager was able to support design practices because she understood what types of problems can be effectively tackled with design approaches.

> *"Some things didn't go [well] in that department.... And they asked me, can you [find out] what's going well [and] what's not going well? ... I said to the managers that I think design thinking is the best way to do this project because it makes clear what the experiences of the people of the department could [be]."*

P08 (project manager)

Another group of employees with design capabilities used design approaches themselves in their work. In-house designers divided these people into two groups: those who use only design tools and those who also understand design mindsets. As in the quotes below, they were critical of colleagues who use design tools without embracing design mindsets. P01 described the design mindsets as involving an understanding of the principles behind design tools, while P02 described it as finesse, the details of using design tools.

> *"One of the people we worked with, she actually facilitated quite a large number of sessions. But every time they had to implement ... what they actually did, the stakeholders were not involved anymore. So they didn't really want [them]) to participate. It means that, OK, you applied, you did the post-it thing and you applied them on the wall, but you didn"t really take in the real lessons like the principles behind it." P01 (in-house designer)*

> *"Ssome people think if I apply a tool, then I"m doing design thinking, but it"s more in the finesse .... They say the tool is not working good well enough. So it"s really in the details of using it, you need to have the mindsets to get the details right." P02 (in-house designer)*

Design practices described as fragile

Despite the changes in organizational design capability described so far, in-house designers described the current state of design practices in the organization as being everywhere and nowhere and fragile, as seen below.

> *"The concern is that we are everywhere and we"re nowhere.... there are days that I think we actually did a lot. And then the next day, I think we"re nowhere clear, we are not really far yet." P01 (in-house designer)*

> *"In one way, it"s good that they [(non-designer employees]) know where to find us but, in another way, it"s really fragile." P02 (in-house designer)*

This might be related to the fact that design practices are still up to the individual decisions of project managers in the organization. One project manager said that using design approaches should be a "conscious choice" of project managers in projects where "there's a scarcity of time and money" (P06). In the municipality, no set-ups to support design practices were found in the organization other than the in-house designers and design sponsors.

3.3.4. Growing need for stakeholder collaboration

In this section, research question 1.4 is answered – what factors other than fostering influence embedding design in a local government.

Interviews with project managers revealed that a factor that drives their design practices is the growing need for collaboration with stakeholders in the public sector. Project managers started their design practices through formal design trainings or a contact with in-house designers. In the latter case, the employees approached in-house designers when they felt "stuck" in projects or searched for a new way of working, as described below.

> *"It's not common that people come to us like we want to learn about design thinking, it's more like I'm stuck in my project, can you please help me?" P02 (in-house designer)*

> *"We wanted to change the way we work in the municipality.... we wanted to get the people in the city involved in what we do and how to do it.... And then I came about [in-house designer] and [the alderman] said maybe we should try design approach to find a new way." P07 (project manager)*

Notably, all the project managers described a situation in which they have to work with stakeholders including citizens as being appropriate for design practices. Two of them (P09, P10) described these types of problem situations as being complex and wicked, as seen below.

> *"There's a lot to do with our collaboration with other public parties, governments parties such as the central government and regional governments. So, I think these [project] processes can benefit from the whole design thinking practice." P06 (project manager)*

> *"I think the best problems [for design practices] are the problems that are more like wicked problems. You know that there are many stakeholders, that the issue is complex, that you are not really sure which way to go.... I think those kinds of projects are really well made for design thinking." P09 (project manager)*

Four of them (P07, P08, P09, P10) said that, as a public manager, they are increasingly placed in situations in which they must collaborate with other parties in the city. P05 (design sponsor) described the municipality's co-creation with external stakeholders as "a social tendency".

> *"It's very common that we don't think about things on our own anymore – we find partners in the city, whether citizens or other parties, and see if we can co-create policies together. It's a kind of societal tendency..." P05 (design sponsor)*

P08 (project manager) said: "Our role [in the Municipality of Eindhoven] is changing .... Our citizens decide what they want, and we facilitate." In other words, these project managers interpreted the value of design as an approach to collaboration with stakeholders in the city, in a context in which they are increasingly required to engage in such collaboration. This was evident especially in what P07 (project manager) said below. She described that while design helps the municipality change towards a collaborative way of working, design is not necessarily the driver of such changes.

"I think that design thinking helped us in achieving these new ways of [stakeholder collaboration]. But I don't know whether the change wouldn't have occurred if we didn't have the designers because ... the society wants us as a government to fit." P07 (project manager)

3.4. Discussion

This case study explored the process of embedding design in a local government with a focus on how actors in the local government foster the embedding process. In this section, the findings are summarized and their implications are discussed.

Regarding why the municipality introduced design practices within the organization, the municipality saw the value of design through a period of experimentation and decided to hire an in-house designer. As to what strategies have been utilized by in-government actors to foster design practices in the organization, three strategies were identified: communicating and providing learning about design, connecting design to organizational needs, and reflecting on and revising strategy to create more value with design in the organization. As a result of these strategies, the awareness of design practices has changed, design has been recognized as a strategic practice, and some employees have gained design capabilities in the organization. However, it was also found that despite these positive changes, design practices were described as fragile in the organization. Regarding the factors other than the fostering strategies that influenced the process of embedding design in the municipality, it was found that public managers engage in design practices due to the increasing need for stakeholder collaboration in the public sector. Additionally, the context of Eindhoven as a design city also played a role in why design practices were introduced to the organization.

These findings provide several insights about design management in public organizations. The first insight concerns the role of designers in government organizations. There have been studies carried out by PSI labs that describe the role of in-house designers as design trainers and policy innovators (Carstensen & Bason, 2012; Lewis et al., 2020; McGann, Blomkamp, & Lewis, 2018; Tõnurist, Kattel, & Lember, 2017). In comparison, this case study reveals the role of in-house designers as insiders of government organizations who reflect on changes in the organization related to design practices and act to create more value through design – namely, the role of *change manager.* This is an important role of in-government designers as they can engage in the reflexive practice[2] that Stacy (2018) described:

"Reflexivity points to the impossibility of standing outside of our experience and observing it,

> simply because it is we who are participating in and creating the experience, always with others … this will involve noticing and thinking about our history together and more broadly about the history of the wider communities we are part of." (p. 166-167)

This suggests that there is a difference in the roles of external designers working with government organizations and designers within government organizations. For example, in-house designers can be more involved in change management, while the tasks of design training or executing policy design projects can be shared with external designers. However, it also raises questions such as to what extent should in-government designers be involved in organizational changes in government, and whether they are empowered to engage in these changes. Although these questions cannot be answered within the scope of this doctoral study, the topic of change management of in-government designers will be further discussed in Chapter 7.

The second insight is that the adaptation of design practices to the new field of public policy and government organizations, mentioned in Section 2.3.2, is revealed to be an important design management strategy. Dorst (2015) described such adaptation: "When core principles are transposed to other fields … the actor must delve much more deeply into the practices, and adapt this understanding to the new use context" (p. 23). When the municipality hired its first in-house designer, the practice of using design approaches for policy problems was considered very new in the organization. Although the four-year design programme had demonstrated the value of design practices, the organization did not have an understanding of how design approaches are specifically relevant to organizational practices. It was the job of in-house designers to reflect on their practices in the organization and find out the points where design approaches can help the organizational practices, which they described as "anchor points". After identifying these anchor points as citizen understanding, collaboration, and learning, they used long-term projects as a venue to tackle some of these problems by reflecting together with people from different departments and hierarchies of the organization. This was the adaptation of design to the organizational needs. Considering that reflective practices were necessary to find the anchor points, the design management activity of adaptation will be another important role of designers within government that is differentiated from the role of external designers.

An additional insight about the design management activity of adaptation is that it may need to be extended to a broader scale beyond in-house designers to other employees in government organizations. When in-house designers of the municipality identified the anchor points as citizen participation, internal collaboration, and learning, this under-

standing was not shared broadly in the organization. However, according to Marshak, Grant, and Floris (2018), “Successful organization-wide change requires new organization-level discourses to emerge to persuade stakeholders of the value and purpose of the change” (p. 85). In this respect, if the organization wants to use design not only as an approach for stakeholder engagement but also for greater value creation – for instance, as a means for organizational transformation to a learning and collaborative organization – there should be internal conversations about using design for such value creation. However, it is not known what design management activity is needed to make this conversation happen in government organizations. We will return to this question in Chapter 7 with new findings from the second empirical study presented in Chapters 5 and 6.

This case study in the Municipality of Eindhoven also provided new understandings on the process of embedding design in local government. First, the findings confirm that the use of design as a strategic practice in a government organization represents a mature state of organizational design capability as described in the Public Sector Design Ladder (Design Council, 2013). In the municipality, it took time for organizational leaders to recognize the value of design as a strategic means. However, this finding also raises a question: if this is a mature state of organizational design capability in government, why are design practices in the municipality still considered “fragile”? Are there design practices that lead to greater value creation than using design as a strategic practice within government organizations, or are there other aspects, in addition to value creation, that determine mature organizational design capability? These questions will be explored in the coming chapters (Ch. 4, 5 and 6).

Second, this case study revealed many other factors in addition to design management that influenced the process of embedding design in a local government, such as the context of Eindhoven as a design city and the increasing need for stakeholder collaboration in the public sector. This finding leads to a question about the research method, how to capture the complexity in the process of embedding design in government. This question will be addressed in the next chapter, as it determines the research approach for the next empirical study.

3.5. Conclusion

The case study presented in this chapter investigated how actors in a local government foster the process of embedding design. Three groups of employees engaged in design practices were interviewed concerning the following sub-research questions: why a local government introduced design practices within the organization, what strategies

were used to foster design practices and what were the results of the strategies, and what other factors besides the fostering strategies influenced the process of embedding design in local government.

This case study uncovered design management strategies in local government, such as communicating and providing learning about design, connecting design and organizational needs, and reflecting on and revising strategy to create more value with design. This revealed that designers within government organizations play the role of "change manager", which differentiates them from external designers collaborating with government organizations. In addition, the adaptation of design practices to the new field of public policy and government organizations was revealed to be an important aspect of design management.

There were also new understandings about the phenomenon of embedding design in government. Although design has been recognized as a strategic practice in the municipality, design practices were described as "fragile" in the organization. This finding raised a new question: besides using design for strategic practice in government organizations, what does the organizational design capability of a government look like in its mature form? In addition, multiple factors were uncovered that influence the process of embedding design in local government, such as the increasing need for stakeholder collaboration in the public sector. This raised another question: how should the complex phenomenon of embedding design in local government be studied? These questions will be addressed in the next chapter, as they will help refine the conceptual framework and research approach for the next empirical study.

*Note: The data for this study were collected in 2019. Therefore, this study does not represent the current state of design maturity in the Municipality of Eindhoven.

1 The World Design Capital is awarded every two years by the World Design Organization to a city in the world in recognition of its "effective use of design to drive economic, social, cultural, and environmental development" ("World Design Capital", n.d.).

2 Reflexive practice is differentiated from reflective practice in that the former is described as "a stance, being able to locate oneself within a structural picture, appreciating how one's own self relates to the organization", while the latter is an "act of reflecting on practice" (Malthouse et al., 2014, pp. 598-599).

Title: Hands voting
Creator: Florian Ziegler
Source: fundaciodc.org/en/citizen-participation/
License: CC by 4.0

4. Developing a research method to study embedding design

The study in the previous chapter investigated how actors in local government foster the process of embedding design. From this case study, we have gained new insights on the process of embedding design in local government and design management in this process. This study also raised new questions. Even though design was used as a strategic practice in the Municipality of Eindhoven, in-house designers described the design practices as "fragile". Aside from design being used for strategic decision-making in government organizations, what do mature design practices in government look like? In addition, the study revealed many factors besides fostering that influence the process of embedding design in local government. What is a research method that captures the complexity involved in the process of embedding design in local government?

These questions are addressed in this chapter. By answering these questions, the conceptual framework of this doctoral study is refined, and a new research method is developed for the next empirical study. The first question is addressed by bringing in organizational theory to gain a new perspective on the phenomenon of embedding design in government. The second question is addressed through the development of a new document-based research approach.

4.1. An organizational theory perspective

Introducing a new practice into an organization can be seen as an organizational change. Schatzki (2012) defines *practice* as "an organized collection of the activities of different people" (p. 13). Gherardi (2009) describes that "a practice becomes such when it is socially recognized as an institutionalized doing" (p. 117).[1] In this sense, bringing in a new practice of design into an organization means changing the institutionalized activities of the organizational members – that is, organizational change. To develop a

new perspective on the phenomenon of embedding design in government, this section explores organizational studies regarding how a change occurs in organizations, how a new practice evolves in organizations, and what these understandings mean for the research phenomenon of embedding design in government. The literature examined here spans different subareas of organizational studies, including organizational dynamics, organizational development, practice translation, and practice normalization. This selection is chosen because it provides a complementary understanding of change in organizations and the evolution of new practices.

4.1.1. Change in organizations

According to Seel (2006), there are two assumptions in classical organizational theory. The first is that organizations remain in one state or another, and the second is that organizational change can be planned. Kurt Lewin's well-known organizational change model of "unfreeze – make change – refreeze" was based on these assumptions (Ibid.). Lewin believed that human behaviour can be in the state of "a quasi-stationary equilibrium" (Burnes, 2004, p. 985). He argued that the equilibrium needs to be destabilized or "unfrozen" before new behaviours (i.e. change) are sought. This step includes actions such as inspecting the status quo of the organization and creating a safe place for employees afraid of change. After change is implemented, the last step is to refreeze the new behaviours at a new quasi-stationary equilibrium to keep them safe. Refreezing is described as actions such as aligning the new behaviours with the norms and culture of the organization (Ibid.).

Recent scholars disagree with the static idea of organizational change. They understand organizations as complex systems and consider organizational change to be emergent instead of planned (Dooley, 1997; Seel, 2006; Shaw, 1997; Stacey, 2012). According to Stacey (2018), the organizational future is "determined by the interplay of all the choices, intentions, and strategies of all the groups and individuals both in an organization and in all other organizations" (p. 152). Organizational change "emerges" in the local interactions of many people who are "conscious, self-conscious, emotional, often spontaneous agents" (Stacey, 2012, p. 15). This means that change in an organization is very uncertain. Then, is the phenomenon of organizational change always unpredictable? Fortunately, despite the uncertainty in complex systems, human behaviour has some repetitive patterns, and based on them "we can recognize with hindsight what has happened" (Stacey 2018, p. 153) in organizations. However, this does not mean that certain patterns are guaranteed in organizational change processes. In this regard, Stacey (Ibid.) calls for "more reflection on what we are actually doing" (p. 155) than prescriptive ideas about

what we should do in organizations.

Nevertheless, understanding patterns in organizational change can help us identify and reflect on what is happening in an organization. To this end, the next section discusses common patterns in how a new practice evolves in organizations.

4.1.2. The evolution of new practices within organizations

To understand the patterns of how a new practice evolves in organizations, studies by several scholars are examined in this section: Nicolini (2010), May and Finch (2009), and Roehrig, Schwendenwein, and Bushe (2018). Although their theories are described in different terms, they all view organizations as complex systems. They also have complementing perspectives on how a new practice within organizations becomes diffused and stabilized. We shall look into how a new practice evolves in an organization based on their theories.

The introduction of a new practice within an organization is led by a group of people who have an interest in the new practice. In the early phase of the evolution of a new practice, the supporters of a new practice experience and experiment with this practice through small-scale pilot projects (Roehrig et al., 2018). Nicolini (2010) argued that "the circulation of innovation [e.g. a new practice] requires work and energy that can only be provided by the interests of those involved" (p. 1013). Similarly, May and Finch (2009) stated: "The production and reproduction of a material practice requires continuous investment by agents in ensembles of action that carry forward in time and space" (p. 540).

The next phase in the evolution of a new practice can be described as consisting of its spread to more members of the organization beyond its initial supporters. After the new practice was tested on a small scale, it can start gaining some "traction" (Roehrig et al., 2018) in the organization. Nicolini (2010) described it as "the emergence of a bandwagon" (p. 1014). He argued that traction can be created because of luck, intentional effort, or a combination of both. Roehrig et al. (2018) suggested that a way to foster this phase is to create a learning loop, "whereby people are encouraged to observe changes in the desired direction and share this feedback with others" (p. 337). May and Finch (2009) argued that "legitimization" matters, that is, "the work of interpreting and 'buying in' to that practice in relation to institutionally shared beliefs about the propriety and value of knowledge and other existing practices" (p. 543).

Legitimacy seems particularly important as it is considered as "a precondition for the continuous flow of resources and the sustained support" (Palazzo & Scherer, 2006, p. 71) for a new practice. According to Suchman (1995), three types of legitimacy can be established for a new practice in organizations: pragmatic, moral, and cognitive ones. Pragmatic legitimacy concerns "self-interested calculations of an organization's most immediate audiences" (Ibid., p. 578) about the usefulness of the new practice. Moral legitimacy is about the new practice meeting "the audience's socially constructed value system" (Ibid., p. 579). Cognitive legitimacy means that the new practice is perceived as "necessary or inevitable based on some taken-for-granted cultural account" (Suchman, 1995, p. 582) in organizations. The establishment of legitimacy is "a contested process that unfolds across time" (Johnson et al., 2006, p. 59). It is mediated by the audiences strategically but cannot always be deliberately manipulated. Suchman (1995) argued that while pragmatic and moral legitimacies can be constructed through vigorously engaging organizational actors in "explicit public discussion", cognitive legitimacy cannot be influenced to any great extent, as the defence of a new practice can "imperil the objectivity and exteriority of such taken-for-granted schemata" (p. 585). In other words, according to him, pragmatic and moral legitimacies can to some extent be shaped by the efforts of organizational actors, but cognitive legitimacy largely depends on autonomous behaviours in organizations. Among the three types of legitimacy, according to him (Ibid.), moral legitimacy is more resistant than pragmatic legitimacy, as "moral legitimacy reflects a prosocial logic that differs fundamentally from the narrow self-interest" of a new practice's audience. Meanwhile, cognitive legitimacy is "the most powerful" of the three types, because "[i]f alternatives [to the new practice] become unthinkable, challenges [to be solved by that new practice] become impossible" (p. 583).

The last phase of the evolution of a new practice in an organization is where the new practice becomes a routine part of the organizational practice. May and Finch (2009) describe it as institutionalization, normalization, or stabilization, "the point where [a new practice] has become generally habitualized" by being "embedded in the matrices of already existing, socially patterned, knowledge and practices" (p. 537, 540). Roehrig et al. (2018) described that in this phase organizational leaders can set up new organizational structures and processes to "institutionalize" the new practice. They define the organizational structures and processes as follows:

> "Structures include anything to do with how work is divided up and coordinated. They are all the variables about how tasks and roles are designed, how work is coordinated, how people are grouped, and how authority is allocated."

> "Processes are both formal and informal aspects of the organization that guide or channel behavior, including policies, procedures, rules and regulations, reward systems, norms, values, beliefs, culture, and 'what your boss pays attention to.'" (Ibid., p. 340)

Nicolini (2010) in his empirical case of a new practice of telemedicine in Northern Italy, envisioned that once telemedicine has become "institutionalized as a 'normal' way" (p. 1022), the term telemedicine could disappear, as it has become an essential part of the medical practices. In other words, in an ideal situation, a new practice evolves to the point where it becomes stabilized as a routine practice of an organization. Less ideally, the new practice can fail to be stabilized in the organization. Although the evolutionary process of a new practice may differ depending on the nature of the new practice and the situated context, the concept of stabilization and patterns in the evolutionary process are useful to understand the process of embedding design in government. The term *stabilization* is used in this doctoral study instead of *institutionalization* or *normalization* because organizations are understood as complex systems in which "simultaneous change and stability" (Roehrig et al., p. 330) flow. In other words, considering the constantly changing dynamics of organizations, the term stabilization is more appropriate than institutionalization or normalization.

4.1.3. Revised conceptual framework

Applying the new understanding from the previous section to the research phenomenon of embedding design in government reveals that the stabilization of design practices in government is missing from the current conceptual framework. In other words, if embedding design in government was defined in Chapter 2 as *the process through which an organizational design capability matures, leading to an increase in value creation through design practices within government,* the stabilization of design practices within the organization is another aspect of the maturation process. Figure 4.1 shows the updated conceptual framework in the context of local government.

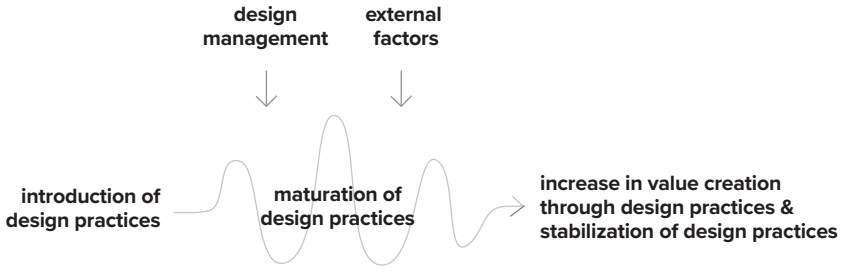


Figure 4. 1 Updated conceptual framework to understand embedding design in local government

Design practices within a local government organization mature over time, influenced by the design management strategies of its members and external factors. In the case of the Municipality of Eindhoven, it was found that various design management strategies were employed by in-house designers. I argued that the design management should be extended to non-designer employees. Regarding external factors, it was identified that Eindhoven's status as a design city and the growing demand for stakeholder collaboration influenced the embedding process. As design practices mature in the organization, more value is created through design practices and the design practices become stabilized. Regarding the stabilization of design practices, patterns such as how the legitimacy of design practices is established and how design practices are routinized as new processes and structures will be essential to gaining an understanding of the mature organizational design capability of a local government.

4.2. A document-based approach

This section describes a new research method for the next empirical study. This new research method was developed in response to the question posed in the previous chapter – how to better capture the complexity in the process of embedding design in local government. This new research method collects multi-year data on design practices within government organizations from public documents and reconstructs them over time to build narratives about how design practices have matured in these organizations.

4.2.1. Study aim

Based on the new conceptual framework (Figure 4.1), the next empirical study investigates how design practices mature in local government in terms of value creation and practice stabilization. By investigating this research phenomenon in multiple local government organizations, this study seeks an in-depth understanding of embedding design in local government. The research questions of this study are as follows:

Research question 2. How do design practices mature in local government?

2.1. Why do local governments introduce design practices within their organizations?

2.2. What different design practices for different value creation do local governments implement, and how do they evolve over time?

2.3. How is the legitimacy of design practices established in local governments?

2.4. What new processes and structures emerge to support design practices in local governments?

4.2.2. Study set-up

The research questions of this study ask how the ways in which organizational members interpret and utilize design practices have changed over time in local government organizations. Since this is about the experiences of people in these organizations, a qualitative study is conducted. A case study is chosen as the study method because it allows comparing multiple cases, thereby limiting the research phenomenon of interest to an analysis unit – that is, a case. The analysis unit of this study is the process of embedding design in local government. This data is collected through public documents released to the public by government organizations. Document analysis is a data collection method suitable for process-oriented, historical data (Bowen, 2009). In the rest of this section, it will be explained how a new research method was devised, how the cases are selected, and how the data are collected and analysed.

A document-based approach

What is a research method that captures the complexity involved in the process of embedding design in local government? As an answer to this question, a new research approach is devised that understands the process of embedding design in government *as a series of past to present events related to design practices.*

The process-oriented approach has been used in organizational studies. It is an attempt to create a plausible description of an organizational phenomenon through the reconstruction of related events over time. In organizational studies, it is used to "address questions about how and why things emerge, develop, grow, or terminate over time, as distinct from variance questions dealing with covariation among dependent and independent variables" (Langley et al., 2013, p. 1). This approach is thus useful for understanding an evolving phenomenon in complex situations where the relations among variables are hard to discern, such as the research phenomenon of this doctoral study.

In the context of this multiple-case study, by collecting and arranging events – what the organizational members have done and said – related to design practice over time, this study attempts to construct a plausible explanation of how design practices have matured within local government organizations. This approach seeks to find emergent patterns over time rather than to find causal relations among various factors that have influenced the process of embedding design in government.

The data regarding the events related to design practices over time is collected from public documents – that is, documents that governments open to the public. In docu-

ment analysis, it is possible to conduct a longitudinal study in a relatively short research time by comparing documents from different time points (Bowen, 2009). Additionally, document analysis serves as a less biased data source, as the researcher does not intervene in the making of the data, in comparison to studies on design for policy practices with ethnographic research approaches (e.g. Bailey, 2019; Bustamante, 2019; Malmberg, 2017; Spaa, 2021; Terrey, 2012; Vaz, 2021). Finally, as this doctoral research was conducted during the COVID-19 pandemic, a document-based approach was a practically attractive option.

Regarding the analysis of documents, according to Karppinen and Moe (2012), there are two approaches to document analysis. One is to use the documents as a source for understanding a research phenomenon, and another is to treat documents "as texts or social product that have consequences in themselves" (Ibid., p. 11), employing methods like discourse analysis or narrative analysis. The latter approach in public studies is usually "associated with the framework of governmentality and its focus on understanding the discursive aspects of political power and public policy" (Ibid., p. 11). Since this case study uses documents as a source to understand the phenomenon of embedding design in government, the first approach was implemented.

Lastly, it is important to note the novelty of this document-based approach. The table below displays various research approaches employed in empirical studies of design practices in governments. While this list is not exhaustive, it suffices to illustrate the diversity of empirical research methods in the design for policy field. As shown, the use of document analysis as a research method in this field is not new. While ethnographic methods such as interviews and observations are most common, document analysis is used either in conjunction with other methods or as the sole research approach. A novelty of the document-based approach of this doctoral study is that data on design practices over several years were collected from public documents to understand the evolution of design practices in organizations. While this approach is not new in historical studies, it is new in design for policy studies.

However, there are also limitations to this research approach. The approach, based on publicly available documents, restricts our perspective on the research phenomenon of interest. It does not reveal informal discussions, unrecorded decisions and events, or tacit knowledge surrounding design practices in government. The narrative of the evolution of design practices within a government is constructed solely from available documents. The context in which important decisions and events took place related

Empirical studies	Research methods
J. Bailey & Lloyd, 2016; Pirinen et al., 2022; Whicher & Crick, 2019	Interview
Hyysalo et al., 2023	Interview, workshop
S. Bailey, 2012; Kang & Prendiville, 2018	Interview, observation
Terrey, 2012	Interview, artefacts analysis, observation
Vaz, 2021	Interview, observation, online survey
Spaa, 2021	Interview, observation, graphic elicitation
Bason, 2017; Malcolm & van der Bijl-Brouwer, 2016	Interview, observation, document analysis
Joosse, 2022; Malmberg & Wetter-Edman, 2016	Interview, document analysis
J. Bailey, 2019	Autoethnography
Bustamante, 2021	Action research through design
McGann et al., 2018	Document analysis (PSI lab websites and reports)
Olejniczak et al., 2020	Document analysis (PSI lab website, reports, articles, and guidebook)
Komatsu et al., 2021	Document analysis (PSI lab website, blog, and master theses by the lab interns), narrative interview

Table 4. 1 Research approaches in empirical studies of design practices in governments

to design practices is not provided. Lastly, as will be explained in the data collection section, the document search process poses a limitation. These limitations will be addressed again in Chapter 7, where the limitations of this doctoral study are discussed.

Case selection criteria

To find local governments that build design capabilities (for design for policy practices) within the organizations, the global PSI Lab directory[2] was first searched. A second search was done through literature and the doctoral supervisors' academic networks.

A list of candidates was made with the following criteria considered for case selection: 1) governments of English-speaking countries, 2) organizations that had been building their internal design capabilities for longer than three years (because governments new to design may not have many activities to analyse), and 3) availability of publicly accessible online documents related to design practices.

Five cases were selected. Initially, it was planned to select five organizations that had engaged in design practices for many years (approximately 10 years). However, as design is a relatively new practice in the public sector, there were not many local government organizations with such long years of design practices. Thus, for this study, the following cases were chosen: one case with less than five years, two cases with five to ten years, and two cases with over ten years of embedded design practices. The assumption was that comparing organizations with varying lengths of experience with design practices could show more explicitly the process of embedding design over time.

Selected cases

Based on the selection criteria, five local governments are selected, as presented in Table 4.1. This selection includes a mix of different countries and sizes, and counties and cities. Despite these differences, this case selection is justified for the following reasons.

First, they are all local governments responsible for implementing national policies (i.e. designing and delivering public services) and making local policies. Depending on the country, the selected local governments may have slightly different areas of responsibility. For example, in the United States, education services are managed by local governments, whereas in New Zealand, the central government is responsible (United Cities and Local Governments, 2008). However, globally more power and responsibility have been given to local governments through policy reforms (Ibid.). In this regard, all the selected local governments can apply design approaches to problems of varying complexity, from public services to local policies.

Second, as we have seen in Chapter 2, design for policy practices often involve collaboration with civil society stakeholders. The selected local governments are all located in countries known for the proliferation of the networked governance paradigm that supports collaborative governance of public affairs.

Finally, depending on the size and context of the organization, the speed at which design practices are embedded and the patterns in the process of embedding of design

may vary. However, this can enrich the understanding of the research phenomenon if a sufficient description of the context is provided.

case	New York City	Auckland City	Austin City	Cornwall County	Kent County
country	USA	New Zealand	USA	UK	UK
local population	8m	1.66m	1m	566k	1.5 m
number of employees	N/A	10,100	13,800	5,000	9,800
starting year of embedding design	2017	2015	2014	2010	2007

Table 4. 2 Description of selected local government cases

Data collection

The data collection consisted of two parts: selecting documents related to design practices in the local government's online database[3] and examining the selected documents to find the data that answer the research questions.

Regarding the selection of documents, the online databases were searched with keywords derived from literature studies, which are service design, co-design, co-production, participatory design, and co-creation. In design for policy literature, service design and co-design are the most frequently used terms to designate design practices in government. Participatory design, co-production, and co-creation were added as they are terms used interchangeably or associated with co-design, according to Blomkamp (2018). Terms like community engagement were excluded because, while relevant to public design practices, they do not necessarily make use of design-led processes, principles, or tools (Ibid.). In this search, admittedly, I omitted many other terms, such as design thinking, that refer to design practices in the design for policy literature.

However, this omission was addressed through an iterative search process. As I searched with these five keywords initially, I found traces of design practices in each organization. Then, I learned that each organization has distinctive terms to describe design practices within the organization. For example, in New York City Council, *service design* was the preferred term, while in Kent County Council, *human-centred* was used. Subsequently, I conducted searches using these newly found terms in the online database. This iterative approach allowed me to complement the initially limited selection of keywords.

In this search, a large number of documents were generated depending on the keyword. In this case, documents with similar content were repeated, or there are documents in which a keyword was used without sufficient explanation of the context. For example, as seen in the figure below, a search with the keyword “service design” on the Cornwall County Council site resulted in Council meeting minutes on the same topic on multiple dates. In this case, the most recent document was checked. In addition, the “command + F” function was helpful in quickly finding a paragraph containing a search keyword in a document and determining whether the context in which the keyword is used is sufficiently provided in the document. For example, if a document contained the word “service design”, but there was no detailed description of the context in which the service design was conducted (e.g. who participated, for how long, etc.), it was excluded from the document selection.

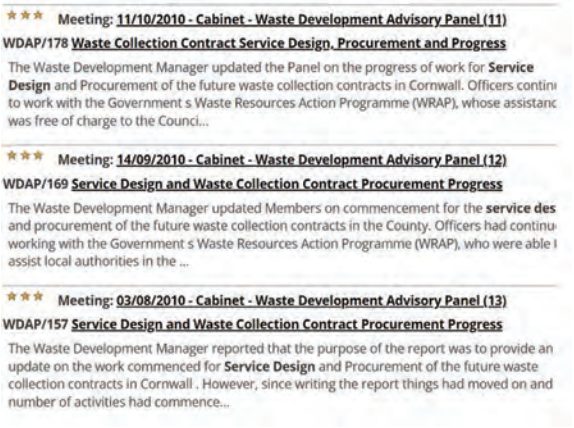


Figure 4. 2 Example of similar contents repeated in a keyword search result

While reading the selected documents, additional keywords to be searched were generated (e.g. project titles). This document selection process was iterative because new keywords constantly appeared while browsing previously selected documents. Certain keywords, such as project titles, were additionally searched on Google. When the local government had a specific unit for design practices, its websites and blogs were another source for the document search. All documents used in this study are presented in Appendix 3.

When about twenty to thirty documents had been selected in each local government organization, the next step was to find the data to answer the research questions. The data collected concerned what people in the organization have done and said about

design practices in the process of embedding design in local governments. The boundary of what has been done and said was set by the research questions. In the rest of this section, it is explained in which types of documents what types of data were searched for to answer the research questions.

This study explores research question 2 of this doctoral study, how design practices mature in local government, in terms of value creation and practice stabilization based on the conceptual framework on the phenomenon of embedding design in government (refer to Sec. 4.1.3). Sub-research questions 2.1 and 2.2, shown below, concern the maturation of design practices in terms of value creation in local government.

> 2.1. Why do local governments introduce design practices within their organizations?
> 2.2. What different design practices for different value creation do local governments implement, and how do they evolve over time?

Question 2.1 asks why the organization decided to embed design practices in the organization. This will reveal what value design practices were perceived to have at the time of the introduction of design practices. This is also necessary to understand how the value of design practices changes or diversifies over time in the organization. The data for this question is searched in documents describing the launch of a PSI lab or hiring of in-house designers. Question 2.2 seeks an understanding of various design practices in local governments, how such design practices lead to different types of value, and whether new types of design practices emerge over time in local governments. Data for these questions were obtained from reports of projects/programmes in which design approaches were used. Three to four projects are selected in each organization regarding the heterogeneity of design practices and differences between time points. The selected projects were examined in three aspects: project brief, ways of civic participation, and project outcome. In Chapter 2, we have seen that the value of design for policy practices can vary depending on the stage of the policy process and ways of civic participation. The project brief can tell in which stage of the policy process design approaches are used. Regarding the way of civic participation, project term, who participated, and how they participated in terms of learning, power, and infrastructuring are considered. The outcome of the projects/programmes can reveal what value design practices have delivered.

Sub-research questions 2.3 and 2.4, shown below, concern the maturation of design practices in terms of stabilization in local government.

2.3. How is the legitimacy of design practices established in local governments?

2.4. What new processes and structures emerge to support design practices in local governments?

Two aspects are examined: how the legitimacy of design practices is established in the organization and how new processes and structures emerge in the organization. As we saw earlier in Section 4.1.2, the establishment of the legitimacy of a new practice and the emergence of new processes and structures to routinize the new practice are signs that the new practice is being stabilized in organizations. For research question 2.3, drawing on the legitimacy theory by Suchman (1995), three different types of legitimacy – pragmatic, moral, and cognitive legitimacies (refer to Sec. 4.1.2) – of design practices were investigated in the organizations. Data concerning legitimacy were searched in what has been said about the value of design practices in local government organizations in documents such as in a PSI lab's evaluation report or organizational strategy reports mentioning design practices. For question 2.4, statements about new formal or informal procedures, roles, teams, and units created in relation to design practices are searched in various documents of organizational news, Council meeting minutes, and evaluation reports of PSI labs. This data collection was conducted in 2020.

Data analysis and reporting

In the data analysis, several strategies were used. First, the coding and thematizing of data were guided by the research questions. The data were firstly coded through an open-coding approach. In the second round of coding, codes were iteratively grouped and regrouped to form themes that could answer the research questions. This was done in the same way as the data analysis process in the previous empirical study (Ch. 3). Second, a Miro visualization was used as a tool to make sense of the data. As seen in the figure below (on the next page), the coded data were coloured and grouped based on research questions and laid out in a timeline. This visualization was particularly useful for finding patterns in the comparative analysis across cases. Third, the document analysis created meta-data such as the author (if the document was produced by in-house designers or non-designer employees) and the date of the document. These meta-data were a source of understanding not only the chronological order of what has been said and done regarding design practices, but also who talked about design practices within the organization. Lastly, multiple researchers (doctoral supervisors) participated in the data analysis, serving as the third eye to "bring both confirmation of findings and different perspectives" (Carter, Bryant-Lukosius, Dicenso, Blythe, & Neville, 2014, p. 545).

The research findings are reported as individual case analyses (Ch. 5) and a comparative analysis (Ch. 6). In the individual case reports, themes that answer the research questions are presented. At the end of each individual case report, a summary of how design practices have been embedded – in other words, how design practices have matured – in the organization is created in the plot of intention, action, and outcome. In other words, the summary was narrated in the plot of why the organization introduced design practices, what different types of design practices for different value outcomes have been implemented, and as a result to what extent the design practices have been stabilized in the organization. The narrative in the plot of intention, action, and outcome is often used in process-oriented organizational studies (Czarniawska-Joerges, 1995). The comparative analysis in Chapter 6 presents common or unique patterns found in the process of embedding design in the multiple local government organizations in relation to the research questions.

Figure 4. 3 Using visualization as a data analysis strategy: the coded data were mapped 1) in timeline, 2) with colour codes according to research framework & questions, and 3) tagged with meta-data as seen in the zoom-up image (right image)

4.3. Conclusion

This chapter addressed the two questions raised from the case study of the Municipality of Eindhoven in Chapter 3. Aside from design being used for strategic decision-making in government organizations, what do mature design practices in government organizations look like? What is a research method that captures the complexity of the process

of embedding design in local government? By answering these questions, this chapter aimed to refine the conceptual framework and develop a new research method for the next empirical study.

Regarding the first question, we reviewed how a new practice evolves and stabilizes in organizations by drawing on organizational study. Based on this new understanding, embedding design in government was newly defined as the process through which the design capability of a government organization matures in terms of value creation and practice stabilization. The second question was answered by developing a new research method for the next empirical study. The new research method was an approach to construct a plausible account of how design practices mature within local government organizations by collecting events (what has been said and done) related to design practices over time. It attempted to understand the pattern of change over time rather than finding causal relationships among various factors in the process of embedding design in local government. Data on change over time were collected from public documents.

With this new research method and the updated conceptual framework, a multiple-case study was conducted in five local government organizations regarding research question 2 of this doctoral study, how design practices mature in local government. The next two chapters will present the findings of this multiple-case study. Chapter 5 will report how design practices have matured in five individual local government organizations. Chapter 6 will present a comparative analysis of the five cases to distil patterns in the process of embedding design in local government.

1 Schatzki, Gherardi, and Nicolini (whom I reference later in 4.1.2) are renowned scholars of practice theory. Their work contributed to my understanding of what constitutes a practice within organizations – sayings and doings, human interactions, rules and understandings, and the material entities to accomplish the practice (Schatzki, 2012; Nicolini, 2009). However, it is important to note that I did not employ the research methodology associated with practice theory in this doctoral study. Practice theory heavily emphasizes ethnographic research methods, such as observation and interviews within organizations. Unfortunately, due to the constraints imposed by the COVID-19 pandemic, I was unable to engage in these on-site research activities.

2 https://apolitical.co/pages/government-innovation-lab-directory

3 Local government organizations publish various kinds of documents on their websites or separate sites, such as council meeting minutes, project reports, organizational strategy reports, council news, etc. The sites are shared in Appendix 2.

Title: Fuel from Waste unConference 2011 - participatory design and storytelling day
Creator: Wyn Griffiths
Source: fuelfromwaste.wordpress.com
License: CC by 2.0

5. Five case studies of embedding design in local government

In the previous chapter, based on the findings of the empirical study in Chapter 3, the conceptual framework was updated and a new research method was developed. Embedding design in government was redefined as the process through which the design capability of a government organization matures in terms of value creation and practice stabilization. A new research method was developed for a second empirical study on how design practices mature in terms of value creation and practice stabilization in five local government organizations.

This chapter presents the findings of the multiple-case study case by case. Table 5.1 presents the five cases. The five local governments started embedding design in different years, employing different approaches. The number of years spent on building internal design capability increases from left to right in the table.

case	**New York City**	**Auckland City**	**Austin City**	**Cornwall County**	**Kent County**
country	USA	New Zealand	USA	UK	UK
starting year of embedding design	2017	2015	2014	2010	2007
approach of embedding design*	internal agency (Service Design Studio)	internal agency (Co-Design Lab, The Southern Initiative)	internal agency (Innovation Office, Office of Design and Delivery)	embedded designer	internal agency (Social Innovation Lab Kent)
size of internal agency or embedded designers**	less than 5 staff	Co-Design Lab: 10-15 staff, TSI: 40+ staff	IO: 5-10 staff, ODD: 40+ staff	N/A	less than 5 staff

Table 5. 1 Description of five cases studied
*This follows the classification of the Design Commission (2013) presented in Chapter 2. "Embedded designer" means that a strategic-level designer is hired as an employee in the organization instead of setting up a separate unit (internal agency) as in the rest of the cases.
** Staff size was found based on web searches or organizational documentation.

The research questions of this multiple- case study are restated below. Each case attempts to illustrate how design practices have matured in the organization by presenting themes related to these research questions in a roughly chronological order, with a summary at the end.

Research question 2. How do design practices mature in local government?

2. 1. Why do local governments introduce design practices within their organizations?

2.2. What different design practices for different value creation do local governments implement, and how do they evolve over time?

2.3. How is the legitimacy of design practices established in local governments?

2.4. What new processes and structures emerge to support design practices in local governments?

5.1. Case 1: New York City Council

5.1.1. Service Design Studio

Regarding why the New York Council introduced design practices within the organization, the Council has an innovation unit called NYC Opportunity under the Mayor's Office. Since 2014, NYC Opportunity had worked with external designers on a project basis to "explor[e] how service design can advance financial inclusion" (doc.02-2017) for low-income residents. It had four projects in this period: ACCESS NYC, Growing Up NYC, Queensbridge Connected, and HOME-STAT. The first two projects were about designing digital platforms for citizens to easily access certain public services. The third project was about "bring[ing] free broadband service to five New York City Housing Authority (NYCHA) housing developments" (doc.10-2020). The last project, HOME-STAT, concerned the issue of homelessness in the city – this project will be examined later. It was stated that these projects "demonstrated the value of using human-centred design methodology to inform service" (doc.02-2017).

In 2017, NYC Opportunity established the Service Design Studio to "institutionalize a replicable approach, which directly harnesses the unique insights and experiences of public services users to design and deliver … public services" (Ibid.). The Studio's mission was described as "helping the City further engage with residents and those who deliver services so that their insights can shape new and existing programs" (doc.01-2017). In particular, it was stated that "44.2% of New Yorkers live at or near poverty", and design approaches will help "mak[e] public services for low-income New Yorkers as effective and accessible as possible" (Ibid., also see Figure 5.1).

5.1.2. Service design

To understand what different design practices for different value creation have been implemented, and whether any new types of design practice have emerged over time in the organization, four projects carried out at different times were examined: the HOME-STAT and three Design for Opportunity (DFO) projects. The DFO project was one of the offerings by the Service Design Studio to the Council employees, besides design training and one-hour work sessions. In the DFO projects, over "6-18 month engagements", the Service Design Studio worked with the City agency/department "to apply service design methods to enhance an existing initiative for low-to-moderate income New Yorkers, or to design a new initiative" (doc. 10-2020). We shall examine the four projects one by one.

The HOME-STAT project involved the Service Design Studio as a design team, and the Department of Homeless Services (DHS) and Street Homelessness Service Providers as partners. This project aimed "to understand [homeless people's] complete journey from living on the street to being permanently housed, to identify what barriers they and their service providers face, and to create enhancements to improve end-to-end service delivery" (doc.13-2017). The Service Design Studio conducted interviews and shadowing of "staff from providers, government agencies, and clients" (Ibid.). The project outcome was "a narrative report to accompany a detailed journey map, a visual representation of a participant's experiences in moving from the street to housing" (doc.01-2017).

As to the next project, in 2018, the Service Design Studio worked with the Administration for Children's Services (ACS) to carry out the Pathways to Prevention project. The ACS is a department that "support[s] children after a traumatic incident has taken place" (doc. 06-2018), but this project aimed to prevent such incidents from occurring in advance. The design process started with "listen[ing] to … the voices of families and front-line staff" and moved to "test[ing] a dozen prototypes aimed at helping to create more dignified, informed and empowering experiences for families as they journey through Prevention Services" (doc.07- 2019). The project outcome was "brochures that describe prevention services in plain language, and service checklists that allow families to work with their case planners" as well as "other more exploratory prototypes … serving as a foundation for longer-term initiatives" (Ibid.).

The Envisioning a Better Shelter project was carried out in 2019, again with the Department of Homeless Services (DHS). This project "explore[d] how applying a perspective rooted in Trauma-Informed Care (TIC) might influence shelter-related policies

and practices" (doc.09-2019). The Service Design Studio interviewed "Trauma Experts, Service Delivery Staff, and Families Residing in Shelter", and through a "half day co-design workshop" with the stakeholders, 200 ideas were generated to prototype (Ibid.). At the end of this project, the Studio held a retreat with the DHS staff to "help all staff see the relevance of TIC to their role and hand over recommendations in a meaningful and actionable way" (Ibid.).

Lastly, in 2020 the Service Design Studio worked on a project to redesign the annual recertification portal for the NYC Housing Authority (NYCHA). Residents of NYCHA housing go through a recertification process each year "to determine their rent based on household income" (doc.12-2021). This project aimed "to address concerns that residents and staff had, and to simplify the process to improve the residents' and staff's experience" (Ibid.). The design process participants were "NYCHA staff … residents, advocates", and the project outcome was a new online portal with "a big improvement in terms of clarity, ease of use, and … accessibility" (Ibid.).


NYC Opportunity

News

The Launch of the Nation's First-Ever Municipal Service Design Studio Dedicated to Improving Services for Low-Income Residents

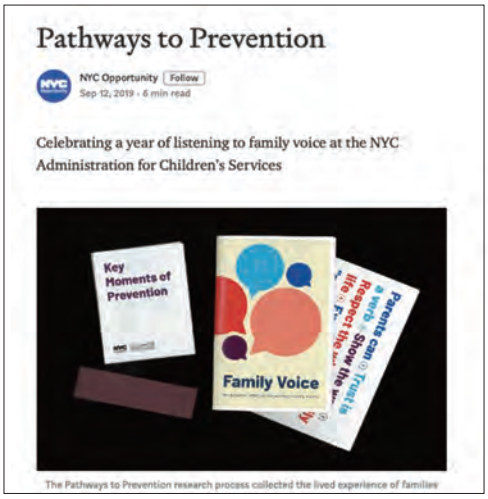
October 6, 2017

FOR IMMEDIATE RELEASE, October 6, 2017

NYC Mayor's Office for Economic Opportunity, Mayor's Fund to Advance New York City, and Citi Community Development Announce the Launch of the Nation's First-Ever Municipal Service Design Studio Dedicated to Improving Services for Low-Income Residents

New York – Today the Mayor's Office for Economic Opportunity, the Mayor's Fund to Advance New York City, and Citi Community Development announce the launch of the nation's first-ever Service Design Studio and toolkit dedicated to making public services for low-income New Yorkers as effective and accessible as possible. The announcement took place at

Figure 5.1 News post of NYC Opportunity describing the launch of the Service Design Studio as "Dedicated to Improving Services for Low-Income Residents."


Pathways to Prevention

NYC Opportunity Follow

Sep 12, 2019 · 6 min read

Celebrating a year of listening to family voice at the NYC Administration for Children's Services

Key Moments of Prevention

Family Voice

The Pathways to Prevention research process collected the lived experience of families

Figure 5.2 Blog post about the Pathways to prevention project, describing "listening to family voice".

These four projects were executed at different time points between 2017 and 2020. Design practices in these projects had similar patterns. The Service Design Studio and problem-responsible employees collaborated for service outcomes – service products,

service prototyping ideas, and recommendations for further service development. The design processes involved stakeholders such as service users and problem experts during a short project term of less than a year. Stakeholders assumed the role of *informants* in the design processes, providing "the real-lived experiences of residents and service delivery staff" (doc.09-2019) – see also Figure 5.2. Other than the type of design practices exhibited in these four projects, no particularly new types of design practices have been discovered over time.

5.1.3. Pragmatic legitimacy

With regard to the issue of how the legitimacy of design practices has been established in the organization, the pragmatic legitimacy of design practices was identified in the New York Council.

As described in Section 5.1.1, NYC Opportunity decided to "institutionalize" service design practices after exploring the value of service design through several projects carried out with external designers since 2014. It was stated that projects in this exploratory period "demonstrated the value of using human-centred design methodology to inform service" (doc.02-2017). Pragmatic legitimacy concerns the self-interested calculations of immediate audiences regarding the usefulness of a new practice (Suchman, 1995). The data above suggest that the usefulness of the design practices for public services has been demonstrated – i.e. pragmatic legitimacy has been established – among early proponents (e.g. NYC Opportunity).

However, there was no evidence that the value of design practices was widely recognized in the organization. Most of the documents describing design practices in the organization were produced only by those responsible for promoting design practices (i.e. NYC Opportunity and the Service Design Studio). Additionally, an evaluation report by the Service Design Studio in 2020 (doc.10-2020) described "barriers to institutionally spreading service design, like difficulty explaining its value and lack of buy-in from agency leadership". This report advised that the Studio "could consider a number of options to help City staff understand and promote the value of service design" within the organization.

5.1.4. New process and structure to gain traction

In the same year of the Service Design Studio's launch, the Mayor's Office created "a new procurement tool for hiring and working with outside design firms" for their employees "to more easily create and deliver effective, efficient, and equitable public services"

(doc. 04-2017). In 2020, the Administration for Children's Service (ACS), the department that collaborated with the Service Design Studio on the Pathway to Prevention project, issued a request for proposals (RFP) worth $3 billion "incorporating an end user focus and components of service design, hiring a design consultancy for a future service design project" (doc.10-2020). It was stated that this RFP would "ensure that the service design is incorporated into not just ACS, but also the providers with which they work" (Ibid.). This department also established "a design learning community to spread service design learning among agency staff" (Ibid.). These new processes and structures were identified early in the process of embedding design into the organization and were intended to engage more organizational members and external service providers in service design practices. These changes are identified as efforts to build traction after the new practice of design has been introduced to the organization and tested with a small number of supporters (refer to 4.1.2, where the patterns in new practice evolution are discussed).

5.1.5. Summary

Since 2014, NYC Opportunity, an innovation unit under the Mayor's Office, had explored the value of design practices with external designers, and in 2017 they established the Service Design Studio to institutionalize this new practice in the organization. Design practices were described as an approach to designing and delivering better public services for low-income residents.

Examining four projects between 2017–2020 indicates that the design practices in these projects were similar. The Council staff (the Service Design Studio and problem-responsible employees) led the design process, and service users and experts participated as informants. These projects lasted less than a year, and the outcomes were service products, prototyping ideas, and recommendations for further service development. Apart from the design practices with these patterns, no particularly new types of design practices have been discovered over time.

As the Service Design Studio was established in 2014 after an exploratory period, the pragmatic legitimacy of design seems to have been established for early proponents (e.g. NYC Opportunity), but no evidence was found that the value of design would have been widely shared in the organization. New processes and structures to support design practices were discovered, such as a new procurement tool, a new RFP, and a new design learning community. These changes are identified as efforts to gain traction for design practices in the organization.

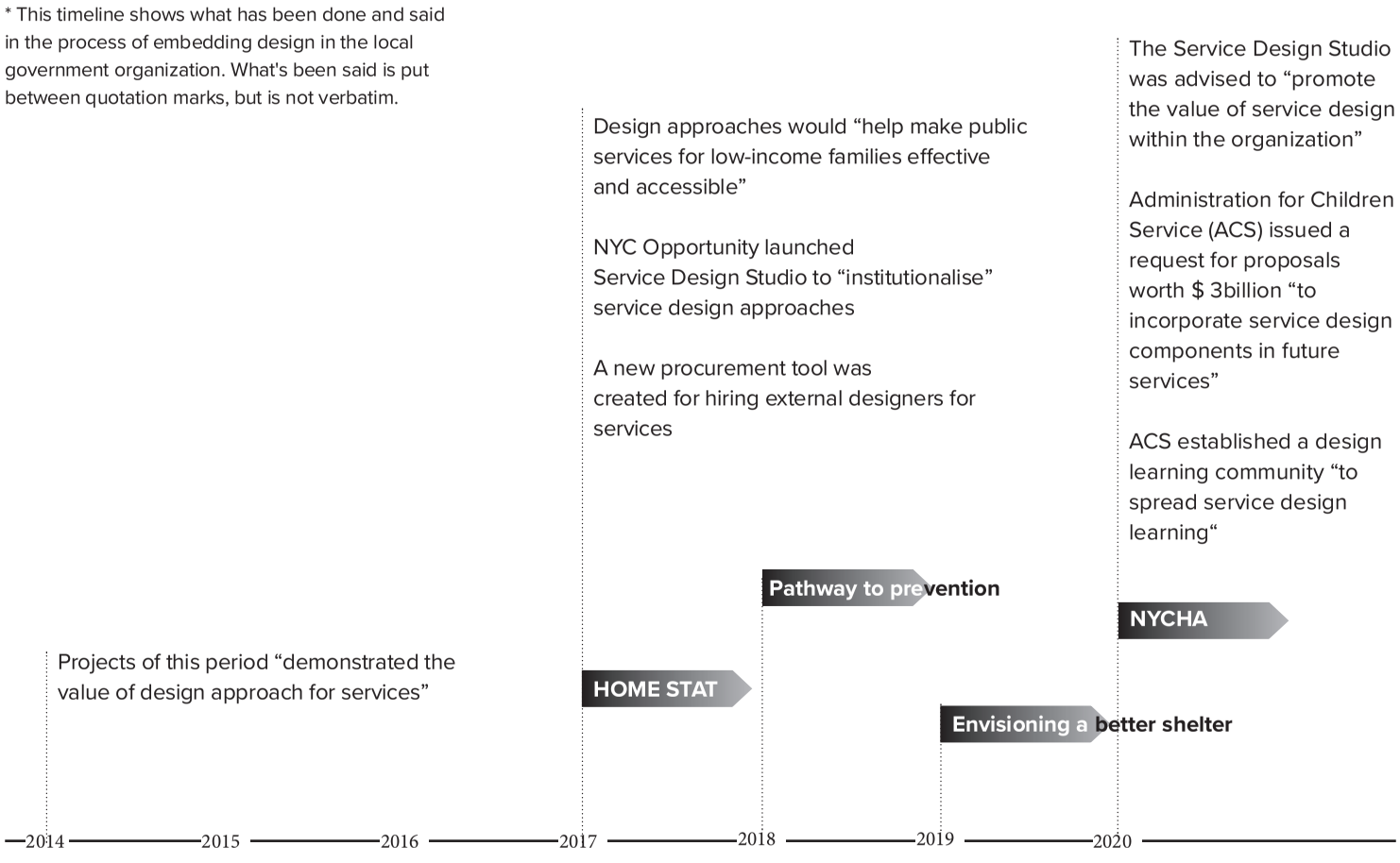


Figure 5. 3 Timeline of events in the process of embedding design in the New York City Council

5.2. Case 2: Auckland City Council

5.2.1. The Southern Initiative (TSI) and Co-Design Lab

Regarding why the Auckland Council introduced design practices within the organization, the Council has two units that could be engaged in building design capability in the organization: The Southern Initiative (TSI) and Co-Design Lab. TSI was established in 2012, but no information was found on since when and why they have been engaged in design practices. TSI was established as an initiative for the development of South Auckland with a social focus such as "stable homes and families, skills development, job growth and housing and environmental enhancement" (doc.03-2012). South Auckland is an area known for "disparities in key indicators, including income, education, employment, child and youth wellbeing and outcomes for Māori and Pacific communities" (doc.22-2018).

The Co-Design Lab was established in 2015 with the central government's support "to explore solutions to some of New Zealand's most complex and persistent challenges" (doc.04-2015). The Lab described their aims as "to use co-design principles and practice to work with, better understand and empower the people closest to the issues" and "to create a space for multi-agency teams to collaborate, work alongside citizens" (doc.01-n.d.). The Lab was placed with TSI in South Auckland. As described in doc.04-2015, during the first 27 months of the "Proof of Concept" period, the Lab "[would] support five project challenges, a number of which will focus on South Auckland". The relationship of TSI and the Co-Design Lab was described as "a partnership that combines an institutional structure focussed on implementation with an innovation engine that can design and test approaches" (doc.20-2020).

5.2.2. Co-design and systems change

Three projects were examined in the Auckland Council to understand what different design practices for different value creation have been implemented and whether new types of design practice have evolved over time in the organization: Healthy Home initiative, Facility Partnership policy project, and the Tamariki Wellbeing project.

The Healthy Home initiative (2015-18) was a project led by TSI in South Auckland. Low-quality housing had been causing health problems in the area, and the Ministry of Health asked TSI to "lead a co-design process to generate a sustainable supply of housing-related interventions" (doc.15-2019). Through a design process of about three years, "central and local government, whānau[1], frontline workers, community organisa-

tions and providers could come together to learn and understand connections between challenges and outcomes" (Ibid.). The project outcome was not only new housing-related interventions but also "a more holistic and connected framing of the issues" (Ibid.). There were also outcomes such as new relationships, better collaboration, and a review of relevant policies, as described below.

> "Greater trust and co-ordination exists between frontline providers such as assessment teams and those doing installations, increasing the likelihood that proposed interventions will be implemented in ways that achieve outcomes for families. Better information flows between the HHIs and local and central government agencies has resulted in increased ability to investigate severe housing issues and landlord inaction. There is now better understanding of which agency can assist depending on the legislative framework they are responsible for. In addition, insights from the work have been fed into relevant legislation reviews such as the Residential Tenancies Act Review and the development of proposed standards for the Healthy Homes Guarantee Act." (Ibid.)

The Facility Partnership Policy (2016-18) was "the first Auckland Council policy project to be fundamentally shaped by a design approach" (doc.12-2018). The Council had been managing community facilities with "community groups, sports organizations and schools through 'facility partnerships'" and wanted to make a "consistent policy" to support these partnerships (Ibid.). The participants in the design process included a "GM level sponsor, Policy team, Staff from key business units, Subject matter experts, Council facilities staff, Community partners, Marae[1], Māori organizations, Elected members, Design coach, [and] Graphic designer" (Ibid.). The project report stated that the design approach "helped … visualise the system as a whole" and "[p]roduced a more implementation-ready policy that sets the scene for service" as the outcome.

Design practices in these two projects had several commonalities. Both projects lasted more than a year, during which time a wide range of stakeholders were involved. As the project outcome, they came to a holistic understanding of the given problems. The difference was in their briefs: the Healthy Home Initiative was about designing service interventions, while the Facility Partner Policy was about the making of a new policy.

The lastly examined project in this organization was Tamariki[1] Wellbeing, another TSI project that has been running since 2018 in South Auckland. What differentiates this project from the two previous projects was that it aimed for "systems change" in South Auckland with infrastructures to support the aim. This systems change was described as addressing multiple intersecting challenges rather than discrete ones, as described below.

> "TSI is working in a complex domain (looking at multiple intersecting challenges and focused on systems change rather than siloed individual shift)." (doc.20-2020)

The Tamariki Wellbeing project was intended to help "all parents and whānau ... nurture their children's foundational brain development and wellbeing" (doc.19-n.d.). At the same time, this project was part of TSI's bigger plan for the community. The excerpt below describes how the Tamariki Wellbeing is connected to other activities by TSI in South Auckland.

> "... the work undertaken in Tamariki Wellbeing not only starts to address some of the fundamental challenges whānau and community face in helping their children thrive, it also reflects and creates conditions for approaches further upstream .... TSI seeks to progress better livelihoods, growing whānau and community wealth and thereby redistributing economic power, which in turn enables whānau and Tamariki to thrive." (doc.20-2020)

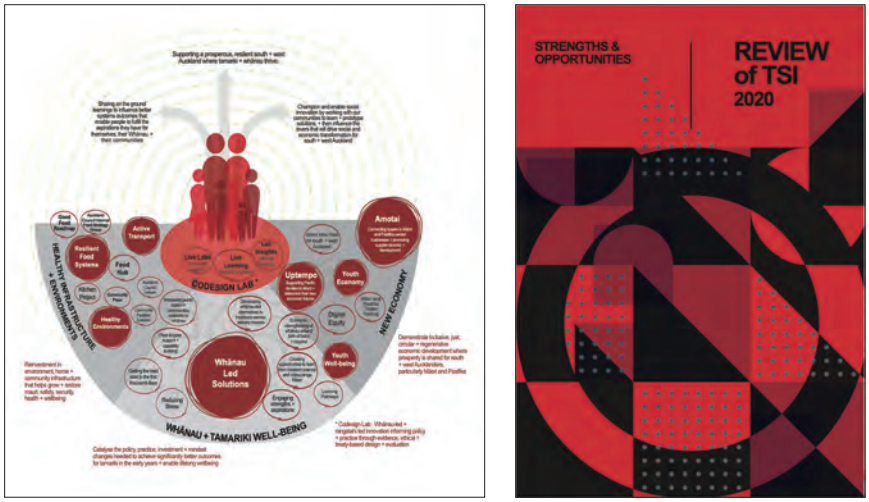


Figure 5.4. "TSI at a glance" (left) described in TSI's evaluation report (right) – the Tamariki Wellbeing project was described as being part of TSI's overall "interconnected" activities in South Auckland

In addition, Figure 5.4 shows that various projects and programmes at different levels are "interconnected" and together aim for a "transformative agenda held by TSI and their partners as a whole" (Ibid.).

To achieve the aim of systems change, through many years of co-designing with the community, TSI has built several infrastructures. Those were described as "support ecologies", explained below as a network of acts, spaces, relationships, capabilities, and opportunities.

> "What has emerged out of many of the experiments that TSI has undertaken are support ecologies: a weaving together of supportive acts, spaces, relationships, capabilities and opportunities." (Ibid.).

Regarding the capabilities of support ecologies, TSI has invested in building design capability in the community by providing design trainings to community groups and local schools. As a result, TSI reported that "[m]any groups are now applying this approach across a wide range of community-led innovations" (doc-14-2019). TSI has also developed "Niho Taniwha"," which is described as "a developing evaluative learning framework supported by an evolving set of tools" (doc.20-2020). It was stated that TSI intends to "embed [it] within all levels of TSI's innovation activities to scaffold and amplify transformation" (Ibid.).

5.2.3. Pragmatic and moral legitimacy

Regarding how the legitimacy of design practices has been established in this Council, two types of legitimacy of design practices were identified: pragmatic and moral legitimacies.

Co-design as a success factor in many projects

A document from the year the Co-Design Lab was founded (doc.06-2015) proposed that the organization should embrace "a council-wide approach to empowered communities". The "empowered communities approach" was explained as one that enables "communities [to] have the power and ability to influence decisions, take action and make change happen in their lives and communities" (Ibid.). In this document, co-design was promoted as one of such approaches: "Work with local boards to deliver Local Board Plans using a more empowered communities approach for initiatives such as co-design and delivery" (Ibid.).

As the empowered communities approach, co-design seems to be diffused among the employees. The I Am Auckland programme demonstrates this. This programme was "a strategic action plan for Auckland's children and young people", under which multiple goals such as "belonging, health & wellbeing … [career] opportunity" have been pursued (doc.10-2017). Since this plan was adopted in 2013, "the council and council-controlled organizations (CCOs) have delivered more than 200 discrete actions, policies or programmes" (Ibid.). Its programme report of 2017 stated that a "critical success factor" of many initiatives over the past years was "intentional co-design or robust engagement with young people, a range of internal and external stakeholders, businesses, iwi[1], schools and community groups" (Ibid.). This suggests that the usefulness of design

practices – i.e. the pragmatic legitimacy of design practices – has been established in the organization.

Co-design as community-empowering and inclusive practice

Since co-design was described as the empowered communities approach in 2015, design has been referred in multiple documents (written by designer or non-designer employees) as a community-empowering and inclusive practice. In design training, the Co-Design Lab taught "Whānau-centric co-design principles" that emphasize the indigenous community's decision-making power and autonomy in design processes (doc.11-2017). Co-design was described as a "good" practice for "putting a diversity and inclusion lens on … how we design and deliver services" in the City of Auckland, "home to people from more than 200 different ethnicities" (doc.13-2019). In addition, a couple of project reports (doc.14-2019, doc.15-2019) described stories of indigenous people experiencing subverted power relations with the Council through co-design practices, as seen below.

> "For some whānau and frontline workers the co-design process represented a profound shift in power dynamics creating an opportunity to be heard, exercise expertise and work more closely and on even footing with other stakeholders, policy makers and contract managers." (doc.15-2019)

Moral legitimacy is concerned with whether an organization's new practices meet the organization's "socially constructed value system" (Suchman, 1995, p. 579). In the ethnically diverse city of Auckland, design practices were described as community-empowering and inclusive practices in documents written by the organization's designer and non-designer staff over a number of years. These data suggest that the moral legitimacy of design practice has been established in this organization.

5.2.4. Expansion of place-based innovation model

Regarding what new processes and structures emerged in local government to support design practices, two types of change were identified.

One concerned commissioning, which can serve as a structure to support local government's co-design practices with civil society stakeholders. Since 2019, the Co-Design Lab and TSI have raised questions such as: "How might we set up contracting and commissioning processes for experimentation and learning" (doc.15-2019) and "how might we develop and test commissioning models that increase capacity and strengthen local infrastructure" (doc-16-2020). However, there were no indications that these discussions have taken shape yet.

Another change was the expansion of TSI to another area of Auckland City. TSI was described as a “place-based innovation hub” (doc.20-2020), as it was established and funded by the Auckland Council but situated in South Auckland. Their work is “grounded” in this place, and their mission is “tightly connected to the current and future well-being” of the place (Ibid). According to the 2020 TSI evaluation report, TSI had grown “from a relatively small team of a dozen or so people, to over 40 staff” (Ibid.). Additionally, the Council was extending the place-based innovation model of TSI to West Auckland. The authors of the evaluation report claimed that the relation of TSI to the Council organization could be a new structure of “networked organisation to undertake complex systemic work” as a dual operating system – TSI as “the networked structure can effectively focus on rapid and transformational change agendas, while [the Council as] the traditional hierarchy … can manage the day-to-day structured activities with efficiency, predictability and effectiveness” (Ibid.).

5.2.5. Summary

The Auckland City Council established the Co-Design Lab in 2015 to address complex problems through co-design practices. Design practices in this Council have developed notably in the activities of The Southern Initiative (TSI) and Co-design Lab in South Auckland.

An examination of three projects between 2015 and 2020 identified two types of design practices in this Council. One type of design practice was found in the first two projects. These were long-term projects in which the Council staff collaborated with a wide range of stakeholders, arriving at a project outcome such as a holistic understanding of problems. Another type of design practice was identified in the last project. In the practices of TSI in South Auckland, while the co-design practices with civil society stakeholders continued, the aim was to achieve systems change, and infrastructures such as stakeholder relationships and capabilities were built intentionally to support this aim.

While the pragmatic legitimacy of design seems to have become established in the organization, the moral legitimacy of design practices was also identified. Since 2015, design had been described in multiple documents from different years as a community-empowering and inclusive practice. As a new process or structure to support design practices, the place-based innovation model of TSI was expanding to another area of the city.

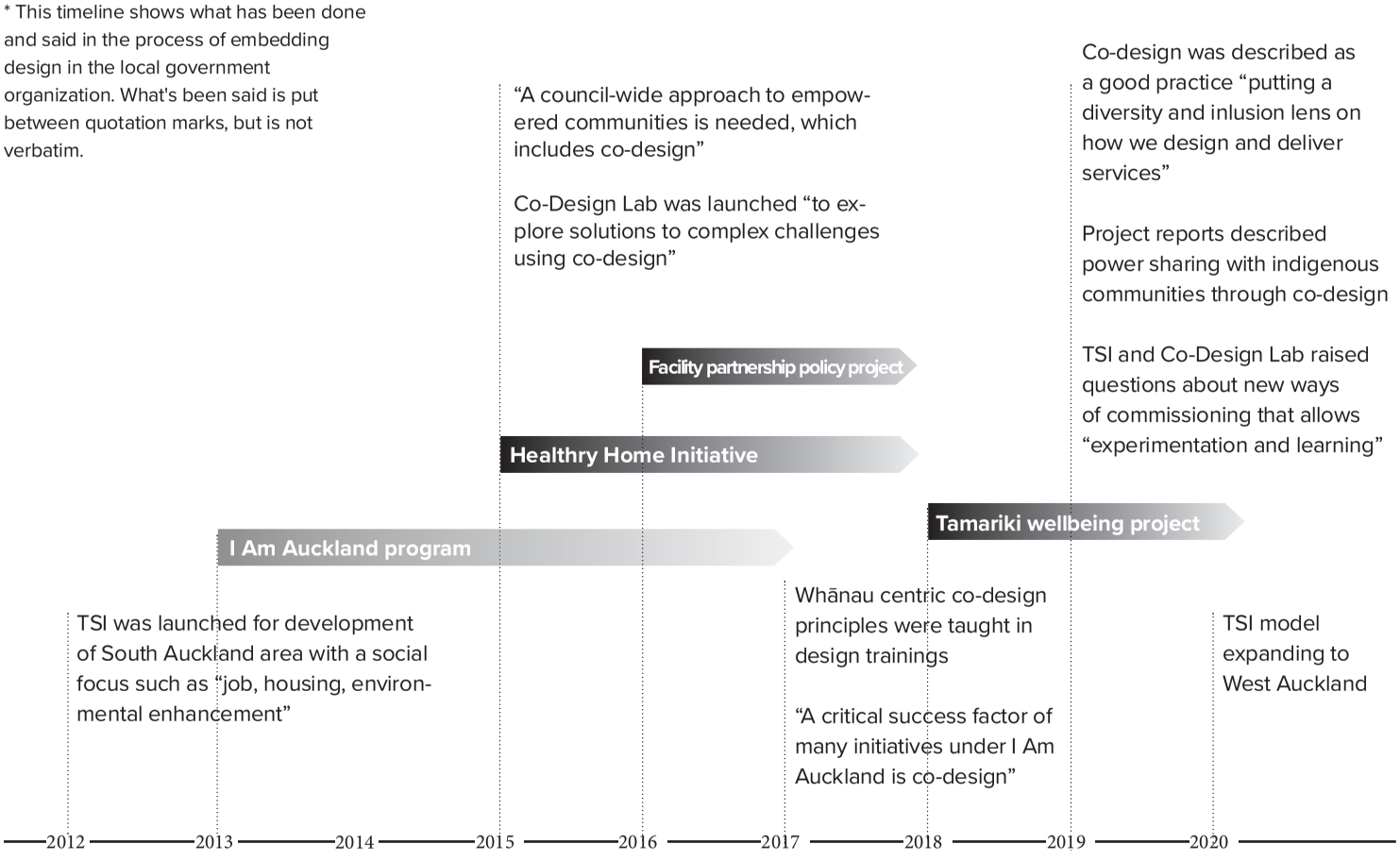


Figure 5. 5. Timeline of events in the process of embedding design in the Auckland City Council

5.3. Case 3: Austin City Council

5.3.1. Innovation Office (IO) and Office of Design and Delivery (ODD)

Regarding why the Austin Council introduced design practices within the organization, the Council has two units that could be engaged in building design capability within the organization: the Innovation Office (IO) and Office of Design and Delivery (ODD). When IO was launched in 2014, the relevance of design to their practices was unclear. The focus of IO at that time was described as "expanding the city's open data portals, increasing efficiency and cost savings in executing public projects, connecting city officers with tech field experts and offering grants to developers and entrepreneurs" (doc.05-2013). However, looking at a project carried out in the early years of IO, design practices were described as approaches for problems of homelessness and safety, focusing on interactions and services.

> "The Innovation Office believed that implementing innovation tools of ethnography, design, prototyping, and iteration would complement …. They believed these tools could help identify and test possible changes in interactions, services, and possibly programs in order to create more sustainable, positive outcomes for the community, especially in addressing the intersection of safety and homelessness." (doc.01-n.d.)

In 2016, IO launched the Design, Technology, and Innovation (DTI) Fellows programme. In this programme, "[o]ver the next three years … over 70 design and technology specialists [collaborated] to improve services around permitting, recycling, homelessness, and public safety" (doc.03-n.d). This programme became a permanent part of the organization as the Office of Design and Delivery (ODD) in 2018.

The current IO website illustrates its job as follows: "Unlock outcomes for complex challenges facing Austin [;] Grow a culture of co-creation, research, and experimentation [;] Build sustaining networks inside and outside of government."

These data suggest that while it is unclear why the Austin Council introduced design practices within the organization, it currently practices design to tackle the problems of services and complex challenges through ODD and IO, respectively.

5.3.2. Distinct design practices

Two projects of the Office of Design & Delivery (ODD) and one project of the Innovation Office (IO) were examined to understand what different design practices for different value creation have been implemented and whether new types of design practices have emerged over time in the organization.

ODD's first project, Vision Zero Waste (2016), aimed to "come up with new approaches to reaching the city's goal of Zero Waste by 2040" (doc.07-2016). This "6 month partnership" of ODD with Austin Resource Recovery (ARR) consisted of two phases: "(1) Research, Discovery, and Synthesis and (2) Concepting, Prototyping and Testing" (doc.06-2016). ODD "spent 4 weeks doing in-home interviews with 48 residents and 4 property managers and owners across the city" (doc.07-2016). This project anticipated outcomes such as multiple solution ideas and recommendations for services, as shown below.

> "Deliverables will include: Design and testing plan, Extensive list of concepts generated, Testing protocols, Measurements and observations of behaviors after testing possible solutions, Recommendations for possible solutions based on research and testing, Recommendations for improvements to existing print and digital resources, Recommendations share-out sessions." (doc.07-2016)

ODD's another project, Garden Permit (2019), addressed the problem of "community gardens permit process and community building" (doc.13-2019). ODD consulted "city employees and the public on how to digitize services to best meet community needs, wants, and concerns" (Ibid.). The project outcomes consisted of several new insights into the permit process and a new website.

In comparison, IO's HOST & iTeam project was a multi-year (2015–2020) project tackling homelessness in the city with a wide range of community stakeholders. In 2015, this project was co-led with the Homelessness Outreach Street Team (HOST), which included "police officers, behavioral health specialists, a paramedic, and outreach social workers" (doc.01-n.d.). The iTeam consists of IO members, "backed by a $1.25 million grant from Bloomberg Philanthropies" (doc.12-2018). Additionally, in 2017, the Homelessness Advisory Committee was created, involving the Department of Public Health, a VCS organization, and people "who have previously or are currently experiencing homelessness" (doc.08C-n.d.). As seen in Figure 5.6, this project was described as making decisions with civil society stakeholders. By involving these diverse stakeholders, a more systemic approach was aimed as the project outcome, as described below.

> "'When we brought all the different departments together, that was really our aha moment,' says interim Assistant City Manager.... The city and ECHO (Ending Community Homelessness Coalition)'s new Action Plan to End Homelessness ... aims to produce a real system delivering rapid response, prevention, housing, and support, while addressing disparities and 'building community commitment from both the public and private sectors.'" (doc.12-2018)

It was evident from these three projects that there was a clear distinction between the design practices of ODD and of IO. ODD's projects were short term (less than a year), in which ODD consulted service users and service-responsible staff to design new service

outcomes. In comparison, IO's project continued over multiple years and involved a wide range of stakeholders. The project outcomes included new relationships like the Homelessness Advisory Committee and the aim of systemic response to the problem. In their design practices, no new types of design practices emerged over time.

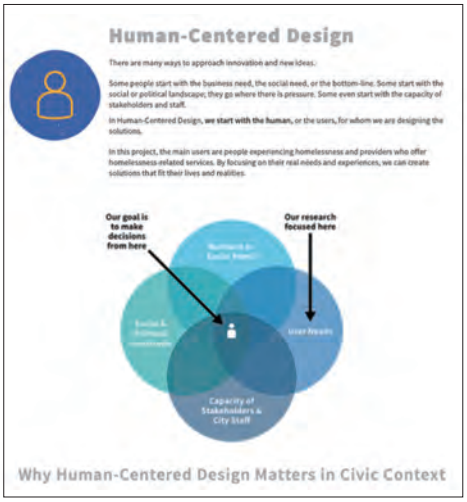


Figure 5.6. Website of the HOST + iTeam project explaining Human-Centred Design: The diagram describes, "Our goal is to make decisions from [the intersection of] user needs, social& political landscape, business or social needs, [and] capacity of stakeholders & city staff."

Figure 5.7. Blog post of the Office of Design and Delivery: a new manager position, Practices Lead, was mentioned as an approach for designing an agile organization.

5.3.3. Pragmatic legitimacy

As mentioned in 5.3.1, the Innovation Office (IO) launched the Design, Technology, and Innovation (DTI) Fellows programme in 2016, and this became a permanent unit in the organization, the Office of Design and Delivery (ODD), in 2018. The excerpt below describes that the experimental period of the DTI Fellows programme led to the launch of ODD "to scale" their new practices including design. This demonstrates that the design practices of ODD "for designing and delivering the best possible services" have been proven useful – i.e. pragmatic legitimacy has been established – among early proponents (e.g. IO and ODD).

> "We launched our Office of Design & Delivery in May 2018 to scale our capacity for designing and delivering the best possible services for our residents …. We started with an experiment …. We launched the City of Austin's Design, Technology & Innovation Fellow program in Summer 2016 …. Over the next three years, we hired over 70 design and technology specialists to improve

> services …. In May 2018, we became a more permanent and sustainable part of the City of Austin … where we lead design, development, and product strategy." (doc.04-n.d.).

However, there was no evidence that the value of design practices was widely recognized in the organization. All selected documents describing design practices in this organization were produced by IO or ODD (refer to Appendix 3).

5.3.4. Supporting cross-department collaboration

Regarding what new processes and structures emerged to support design practices, a new manager position was found in this Council. In a blog post from 2018, ODD discussed a project setting that is "flexible so that individuals could move easily between teams …. for achieving a project's desired outcomes for residents" (doc.11-2018). For this, they created a new manager position, Practices Lead, "who can provide technical guidance, mentorship, and career direction for employees within a given discipline … but doesn't necessarily work in the same department in which the employee is completing a project" (Ibid.). This new structure (position) was illustrated as one way to "scal[e] the City of Austin's capacity for design, technology, and innovation" (Ibid., also see Figure 5.7 above).

5.3.5. Summary

The Austin City Council has two units that seem to be engaged in fostering design practices in the organization: the Innovation Office (IO) and Office of Design and Delivery (ODD). There were no data with an exact date to indicate why they introduced design practices within the organization. Nonetheless, IO and ODD currently use design approaches for the problems of complex challenges and services, respectively.

The two PSI labs implemented distinct design practices. IO engaged in co-design efforts with a wide range of stakeholders for multiple years, leading to the aim of more systemic response to a given problem. ODD consulted service users and service-responsible staff and created service outcomes in project terms of less than a year. No particularly new types of design practices have been discovered over time in their design practices.

As ODD was launched to "scale" design practices after an experimental period of three years, the pragmatic legitimacy of design seems to have been established among early proponents (e.g. IO and ODD), but no evidence was found that the value of design was widely shared in the organization. As a new structure to support design practices, a new manager position was identified that promotes cross-departmental collaboration in the organization.

* This timeline shows what has been done and said in the process of embedding design in the local government organization. What's been said is put between quotation marks, but is not verbatim.

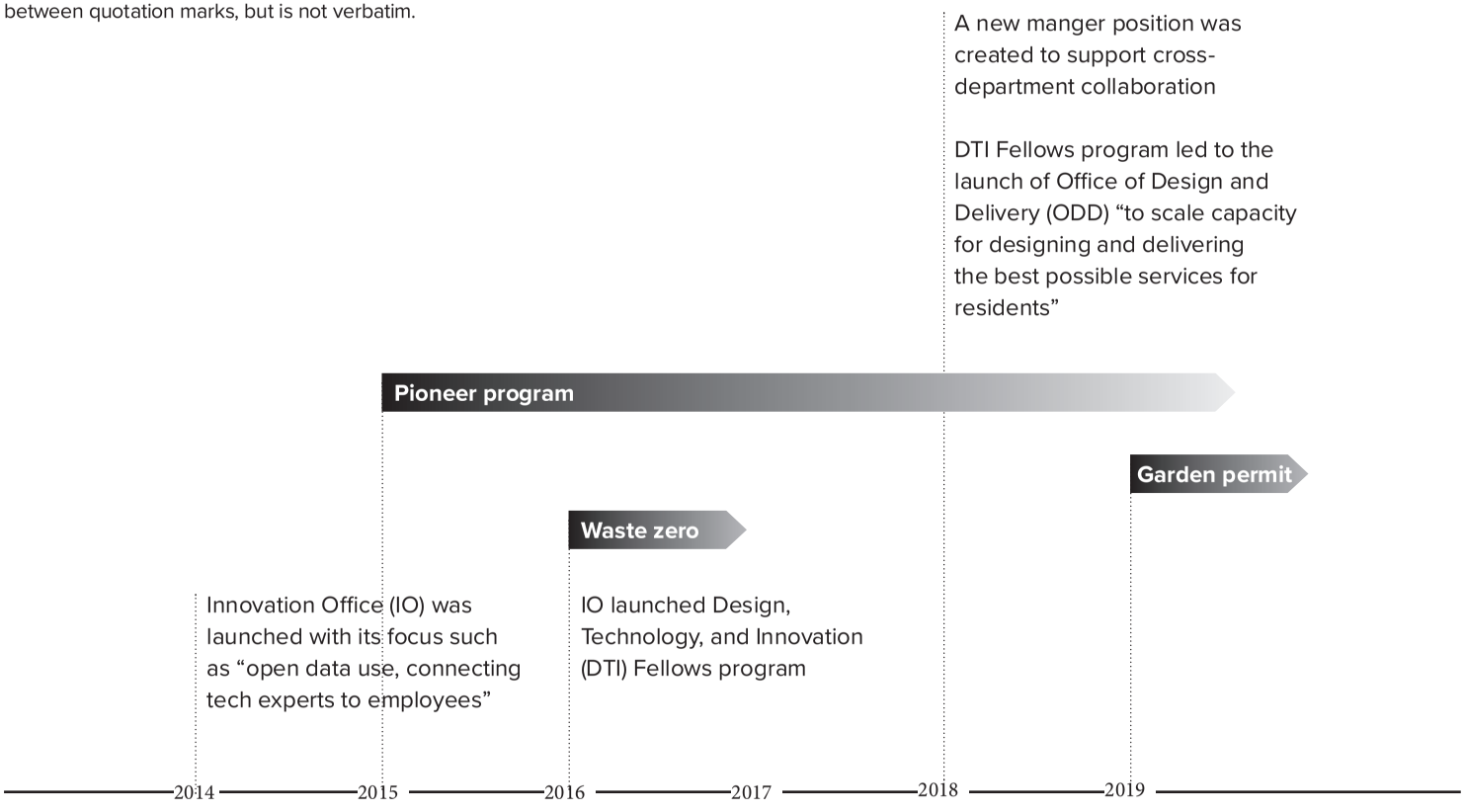


Figure 5. 8. Timeline of events in the process of embedding design in the Austin City Council

5.4. Case 4: Cornwall County Council

5.4.1. Public service transformation by design

The Cornwall Council, unlike the rest of the cases, introduced design practices within the organization by hiring strategic-level designers as in-house employees (refer to Table 5.1 for different approaches of embedding design in the five cases studied). In this respect, there were no explicit data on why the organization introduced design practices, unlike in the Auckland Council case, for example, but inferences can be made by drawing on several data.

In 2010, a document titled "Future Cornwall 2010-2030" (doc.01-2010) stated that "Cornwall is in a period of unprecedented change". The document continued: "In light of the financial crisis, now is the time to face the big issues for Cornwall and Government is looking for greater local leadership …. This is making Big Society real" (Ibid.).
The Big Society was an idea promoted by the central government at the time. It was about solving local problems with the hands of local people and building a big (civil) society ("Government launches Big Society programme", n.d.). According to Coote (2010), this idea went "hand in hand with deep cuts in public spending" (p. 2) in the UK government.

This document (doc.01-2010) proposed public service transformation as a way to make the Big Society. The proposed new service delivery model was that "[o]rganisations across Cornwall will pool resources" and "citizens, communities and public services will have the opportunity to work together to solve local issues" (Ibid.).

That same year, a programme called Designs of the Time (Dott) was held in Cornwall for a year. It was hosted by the UK Design Council and supported by the Cornwall County Council. In this programme, "local citizens, professionals, designers … co-create[d] new solutions to local issues" using design approaches (doc.02-2010). As seen on the cover of the programme report shown in Figure 5.9, the programme promoted "Big Society by Design". When the programme ended, to "internalise the Dott approach in the council" (doc.03-2010), the programme director was hired as a chief designer of the Cornwall Council (doc.06-2012). Also, a "cross-sector innovation unit" Thinking Room (TR) was created (doc.04-2011). The TR was described as "not a lab or a space … [but] an approach" (doc.06-2012)[2].

These data suggest that the Council decided to introduce design practices within the

organization to help with the public service transformation to deal with the financial issue. Figure 5.10 below also shows that the chief designer of the Council explained the design practices in relation to the financial cuts in the public sector.

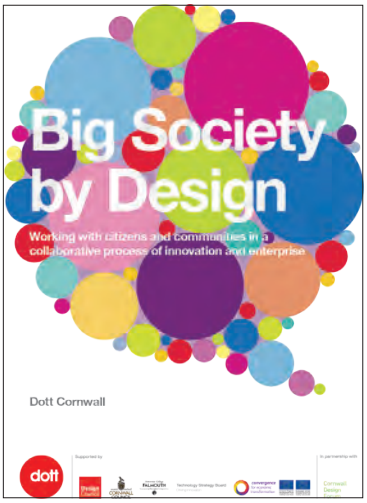


Figure 5.9. The Dott programme report (doc.02-2010) with its title "Big Society by Design"

Figure 5.10. A slide by the Chief Designer of the Cornwall County Council (doc.06-2012). Design practices are explained in relation to the financial cuts in the public sector.

5.4.2. Co-design and a whole system change

Regarding what different design practices for different value creation have been implemented, and whether new types of design practices have emerged over time in the organization, three projects are examined: Cornwall Works 50+, Pioneer programme, and One Vision programme.

The Cornwall Works 50+ project started during the Dott programme in 2010 and continued until 2013. This project was led by Inclusion Cornwall, a partnership of the Cornwall Council and community organizations that aimed "to address the barriers faced by older workers in entering the workforce" (doc.07-2013). The project progressed in the first year by "developing innovative ideas to support the agenda for people aged 50+" and in the second and third year by "testing these ideas" (Ibid.). Through this process, the stakeholders built new and deeper relationships and developed learning, through which new project developments *organically emerged*, as described below.

> "The development and implementation of the programmes has led to new and deepened networks, partnerships and relationships amongst key organisations working in this sphere and has acted as a catalyst for new developments. This catalytic role is also apparent in terms of the way in which the learning stemming from the projects and the activities developed have influenced the deployment of Jobcentre Plus" Flexible Support Fund." (Ibid).

In the Pioneer programme (2013-18), the organization's co-design practices with community stakeholders became more *intentional,* encompassing "the whole system" (doc.08-2013) of a given problem. This programme was held in Cornwall as part of a national programme for "developing and testing new and different ways of joining up health and social care services across England, utilising the expertise of the voluntary and community sector" (doc.08-2013). The programme was intentional in that it planned to evolve over a five-year period through co-design and testing processes, as described below.

> "We will take a measured approach to co-producing new changing lives models of delivery, each will go through five steps: co-design, testing in a locality with a group of people, a second trial with a larger group of people in more than one locality, roll out to the whole of Cornwall and the Isles of Scilly." (Ibid.)

In addition, aiming for "[c]o-producing whole system model for lifelong wellbeing", the programme involved "local people and communities … local councillors, town and parish councils, local voluntary organisations and other service providers" in addition to health organizations and individuals (Ibid.). For the stakeholder collaboration, the "engagement methods developed by the Design Council's 'Design of the Times' programme" (Ibid.) – i.e. the Dott approach – were used.

A similar design practice was found in One Vision, a programme for the health and well-being of children and young people in Cornwall, which has continued since 2017. This programme "co-design[ed] services with … voluntary and community providers" aiming for "a whole system change" (doc.12-2017). Under this aim, stakeholders had formal partnership agreements with the Council organization, through which they set out "the principles and the approach partner organisations have agreed, for the development and implementation of the 'One Vision'" (Ibid.). In 2019, the One Vision team also created a "Framework for Service Design" to "set out more detail about how [they] will design and plan service changes together … [and] govern the relationships and processes across all contributors to the service offer" (doc.16-2019).

Design practices in the examined three projects were in common long-term projects in which a wide range of stakeholders collaborated with the Council organization. While

the project development in the first project was organic and emergent, the latter two projects had more intentional approaches. The whole system change relevant to the problems were aimed with supporting infrastructures such as a long-term plan and networks of stakeholders supported by formal agreement.

5.4.3. Cognitive legitimacy

Regarding how the legitimacy of design practices is established, the cognitive legitimacy of design practices was likely to be established as a necessary practice for public service transformation in this Council.

In Section 5.4.1, it was inferred that the organization decided to embed design practices to facilitate the transformation of public services into a new public service model. However, in the early years of embedding design in the organization, the value of design practices for public service transformation was described only in documents by in-house designers. In later years, such remarks were also found in documents by non-designer employees. For example, the excerpt below illustrated co-design as a "require[d]" practice to better address complex needs of residents.

> "All agencies are reporting that people presenting to services have increasingly complex, multiple needs. Responding effectively requires partners to work together to address those needs holistically and provides opportunities for joint commissioning, co-design and delivery of services." (doc.10-2016).

A similar description on co-design was found in another document drafted by a non-designer employee in the following year. This document described a new service delivery model co-designed with partners in civil society, as shown below.

> "The Home Care and Supportive Lifestyle Commissioning Teams has been co-designing the new service delivery model, encouraging its partners to formulate new ideas and new ways of doing business." (doc.13-2017).

Cognitive legitimacy of a new practice concerns whether the new practice is perceived as inevitable or necessary based on broadly shared taken-for-granted assumptions in organizations (Suchman, 1995). The new public service model was one in which the Council staff collaborates with community stakeholders, and co-design was used for the collaboration. While the above data are not enough to conclude that the cognitive legitimacy of design practices has been broadly accepted by the members in the organization, they do suggest that the cognitive legitimacy of design can be established as an inevitable or necessary practice for public service transformation in the organization.

5.4.4. Supporting collaboration with community partners

This section concerns what new processes and structures emerged to support design practices in this Council.

A post on the Council organization's website in 2017 stated that they work with community partners to commission public services in various policy areas, such as "Children's Trust ... [;] Cornwall and Isles of Scilly Local Enterprise Partnership ... [;] Cornwall and Isles of Scilly Local Nature Partnership ... [;] Health and Wellbeing Board ... [;] Inclusion Cornwall ... [;] Safer Cornwall Partnership" (doc.14-2017). However, it was not clear whether these commissioning processes include design practices[3]. In 2018, the Council made a new commissioning toolkit to address the problem that "[t]he Council's [commissioning] processes vary within and across Directorates, with limited standardisation and alignment with partners" (doc.15-2018). This commissioning toolkit supported the following principles: "Away from silos and towards whole system thinking [;] Co-design and co-production [;] Including service users and lived experience in design and delivery" (Ibid). In other words, the organization sought to standardize their commissioning process as one that supports systems thinking, co-design, and user-centeredness.

5.4.4. Summary

In 2010, as a local government in the UK, the Cornwall County Council was under financial pressure and envisioned public service transformation into the Big Society model as a solution. The Design of the Time (Dott) programme in Cornwall showed that design could facilitate public service transformation, and the organization decided to internalize design practices.

An examination of three projects between 2010 and the present shows that they had commonalities in that they were long-term projects in which the Council staff collaborated with a wide range of stakeholders. The latter two projects in particular demonstrated the emergence of a new type of design practice, in which the aim was a whole system change with supporting infrastructures, such as a long-term plan and networks of stakeholders supported by formal agreements.

Considering the legitimacy of design, the cognitive legitimacy of design practices was likely to be established when design was considered broadly as a necessary practice for public service transformation in the organization. As a new process to routinize design practices in the organization, in 2018 a toolkit was found that standardizes the commissioning process that supports co-design and systems thinking in the organization.

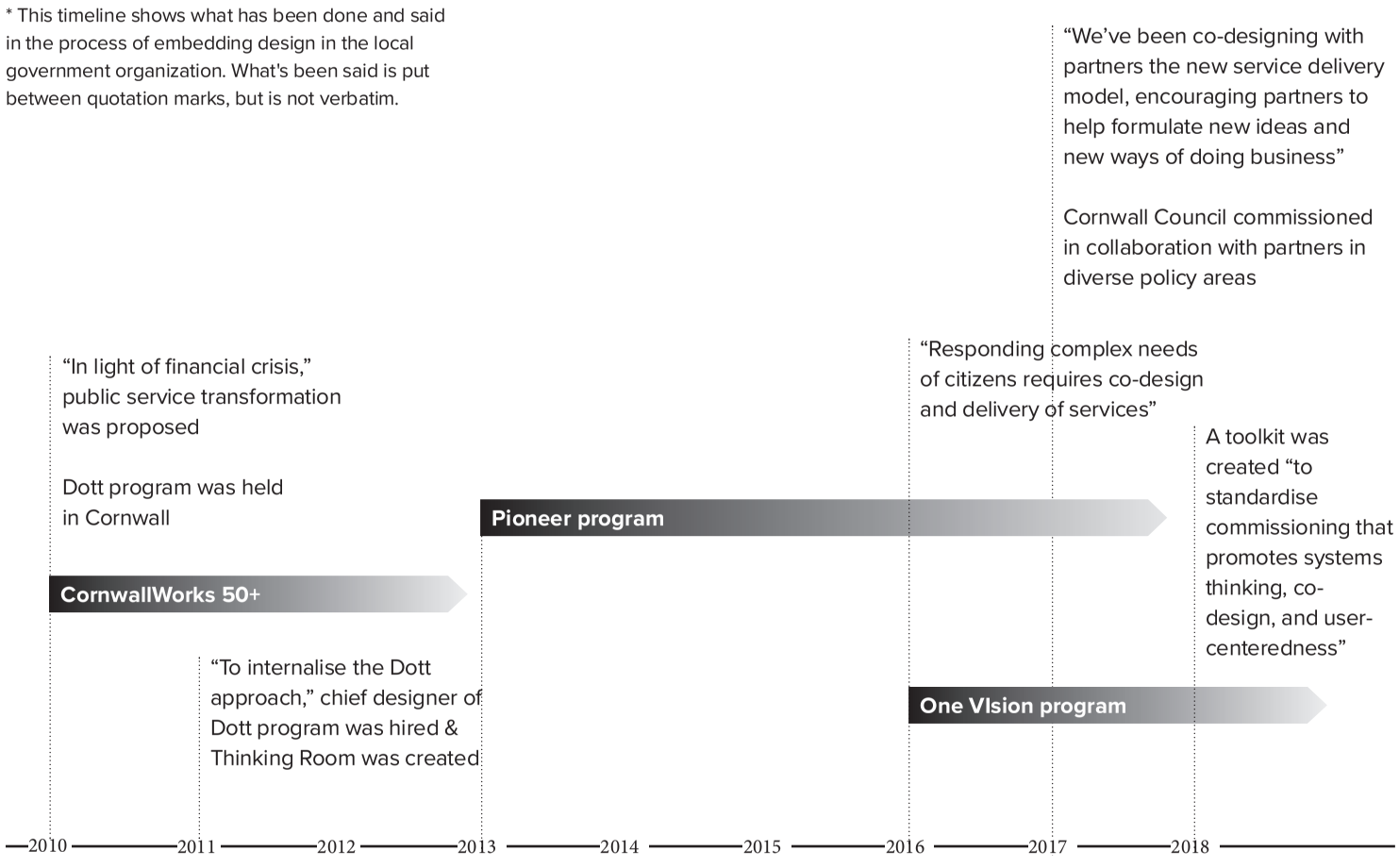


Figure 5. 11. Timeline of events in the process of embedding design in the Cornwall County Council

5.5. Case 5: Kent County Council

5.5.1. Social Innovation Lab Kent (SILK)

Regarding why the Kent Council introduced design practices within its organizations, the Council was the first local government in the UK that established a PSI lab, the Social Innovation Lab Kent (SILK). An interview article with the founder of SILK, Sophia Parker, who no longer works in the Council, showed that the adoption of design practices was rather exploratory at the time. In the excerpt below, she said that the organizational leaders were interested in "disrupting things" in the organization.

> "I think they were interested in doing policy differently, of disrupting things a bit. He [Assistant Director of the Council] had been aware of the work I'd been doing at Demos around co-production and service design and wanted to see how this could be applied in their context." (doc.11-2015).

When SILK was set up in 2007, its aim was described as below. One was to tackle social problems using a person-centred approach, and another was to diffuse this way of working in the organization.

> "Our ambition was to create a Lab that did two things. First, it would run projects around some of our most intractable social problems, using a 'person-centred' approach and involving our citizens in the innovation process. Second, it would build the whole organisation's capacity to start with people, rather than existing services." (doc.04-2009)

5.5.2. Co-design and systemic change

To understand what different design practices for different types of value have been implemented, and whether new types of design practices have emerged over time in the organization, the following three projects were examined: the Parkwood (Bulk Buy) project, Dementia programme, and HeadStart Kent programme.

In the early years, SILK had two "demonstration" projects "to understand how to make a person-centred approach work specifically in the context of local government" (doc.04-2009).

> "... we created a SILK prototype that tested our thinking in practice through two 'demonstration' projects. The first of these focused on families at risk in Kent, and the second on how people access information about social care." (Ibid.)

One of the demonstration projects described in the above excerpt was the Parkwood project. It was a series of projects – Just Coping in 2007, Bulk Buy in 2009, and Time Banking in 2010 – with families in the Parkwood estate in Kent that sought to "look at

low-income families and day-to-day life from their perspective" (doc.06A-2011). SILK worked with community organizations and residents in these projects. The project outcome of Bulk Buy was an open community space, in which the Parkwood residents could have "easier access to bulky products at a cheaper price" (Ibid.). Its project report stated, "This project [was] about exploring co-production in practice" (Ibid.). The cover of the project report in Figure 5.12 also illustrates this exploratory intent.

The Dementia programme was carried out from 2011 to 2015. It was initiated as a research project about the experiences of people living with dementia but evolved to "a whole systems programme of work to explore, co-design and test new models" (doc.10-2015). People who had been invited as a reference group by SILK evolved into the Dementia Action Alliance, including "fire and rescue services, local authorities, charities, community groups, businesses, care providers, health trusts, and people living with dementia and their carers ... [as] equal partners working together" (Ibid.). Regarding the project outcome, new developments emerged *organically* in the multi-year collaboration, as described below.

> "... qualitative insight gathering was carried out, to better understand the experiences of people living with dementia in Kent. This in turn led to a whole systems programme of work to explore, co-design and test new models in 'hot spots' identified by evidence .... The demonstrable evidence from this initial programme provided the foundations from which a Kent and Medway partnership of Clinical Commissioning Groups and the Local Authority was able to apply for Department of Health funding." (Ibid).

In the HeadStart Kent programme (2013-present), a design practice aimed at "systemic and long lasting change across Kent" (doc.12-2016), with infrastructures to support this aim, was identified. This programme promoted the "emotional wellbeing and mental health" of young people in Kent (Ibid.).

To support the aim of systemic and long-lasting change, firstly, the programme had enough budget – "£10 million of investment from the Big Lottery Fund" (Ibid). Secondly, "[u]sing a Theory of Change methodology ... [the programme had] aims, inputs, approaches, activities and outputs" (Ibid.) planned out. Thirdly, the programme involved a wide range of stakeholders of "homes, schools, communities" (Ibid.), and they shared responsibilities and resources through formal partnership agreements, as seen below.

> "Participating schools and community groups will enter into a Partnership Agreement with HeadStart Kent. This ensures schools are fully aware of their commitment to HeadStart Kent, and the commitment expected from HeadStart Kent in return, and resources required." (Ibid.)

Lastly, the programme supported the learning of stakeholders by means such as an

online platform and knowledge seminars, as described below.

> "The Resilience Hub is the collective name for combining resources, expertise, and learning in one shared universal platform. ... A series of Knowledge Seminars facilitated by Canterbury Christ Church University and the University of Kent have provided an opportunity for stakeholders to learn about the best approaches to support resilience." (Ibid).

Considering these three projects, the evolution of design practices in this organization was evident. In the first project, SILK explored co-design with community stakeholders in the short term in the Parkwood area. In the second project, the design process evolved over many years into a whole systems response involving a wider range of stakeholders. In the last project, the design practice involved systemic change with intentional approaches of infrastructures such as enough budget, plan, network of stakeholders with formal agreements and learning structures. This evolution of design practices in the Council is also shown in Figure 5.12 below. The descriptions of design practices in these two documents reveal the increased design capability in the organization.

Figure 5.12. These project documents show the organization's increased design capability from "how to create the conditions to enable people to do it for themselves" in the Parkwood project (2009) to "facilitating system changes in school and community" in HeadStart Kent (2019)

5.5.3. Cognitive legitimacy

Regarding how the legitimacy of design practices is established, the cognitive legitimacy of design practices was likely to be established as a necessary practice for public service transformation in this Council.

In 2010, a document described that the Kent County Council needs a "radical change in regard to how services are delivered,", faced with "aging population, increased personalisation and rising customer expectations … [as well as] financial crisis" (doc.05-2010). It stated that the "future will be focussed around the co-design of local services by individual users" (Ibid.).

In 2013, another document, "Facing the Challenge: Whole-Council Transformation" (doc.07-2013), proposed a new service delivery model. This model was about the organization "working with partners across the public, private and voluntary sector to improve the economic, social, health and environmental quality of life of Kent residents" as well as "[having] a greater customer focus with services organized around the needs of service users and residents" (Ibid.). It was also stated that "KCC (Kent County Council) will be a commissioning authority,", meaning that services would be commissioned to "the range of providers, either in-house or external, across the public, private and voluntary sector that have the capability to deliver these [service] outcomes" (Ibid.).

Again in 2014, describing the complex commissioning environment, doc.08-2014 stated that KCC "seeks to create integrated services that are co-designed with service users".

These data show that design practices – user-centredness and co-design – had been described as a practice for public service transformation over different years. These data are not enough to conclude that the cognitive legitimacy of design practices has been broadly accepted in the organization. However, these data do suggest that the cognitive legitimacy of design can be established as an inevitable or necessary practice for public service transformation.

5.5.4. Supporting collaboration with internal and external stakeholders

Regarding what new processes and structures emerged to support design practices, several processes and structures to support collaboration with internal and external stakeholders were found in this organization.

In 2015, a new division was created in the organization by bringing together multiple functions in one team – health and safety, business partners, engagement and counselling, organizational development, communication, human resources, etc. It was explained that this integration of functions sought "to ensure a clear and seamless alignment to support the principle of customer centric services …. [and] to facilitate better collaborative working" (doc.13-2016).

In 2016, the Design and Learning Centre for Clinical and Social Innovation was established. The Centre's goal was described as "promot[ing] new ways of working through co-design" and "work[ing] with voluntary and private services to achieve an integrated system that crosses the boundaries between primary, community, hospital and social work" (doc.17-n.d.).

In 2017, a new Strategic Commissioning division was launched within the Strategic and Corporate Services Directorate. The Directorate's goal for 2018-19 was described as "embedding cultural change and co-design principles into our new delivery models including the Strategic Commissioning operating model" (doc.14-2018). This means that the Kent County Council, like the Cornwall County Council, promotes commissioning that supports co-design practices.

5.5.5. Summary

In 2007, the Kent County Council established the Social Innovation Lab Kent (SILK) in the organization to tackle social problems with the citizen-centered approach.

Examining three projects that ran between 2009 to the time of the study, the evolution of design practices was evident in this organization. The first project was a "demonstration project" that served as a short-term experiment with the citizen-centred approach of SILK. In the second project, the design process evolved organically over many years into a whole systems response involving a wider range of stakeholders. The last project sought systemic change, with infrastructures intentionally built to support this aim, such as enough budget, plan, network of stakeholders with formal agreements, and learning structures.

Considering the legitimacy of design, the cognitive legitimacy of design practices was likely to be established when design was considered broadly as a necessary practice for public service transformation in the organization. Non-designer employees described design in several documents from different years as a practice for public service transformation. In addition, several structures have been created since 2015 to support design practices with internal and external stakeholders in the organization.

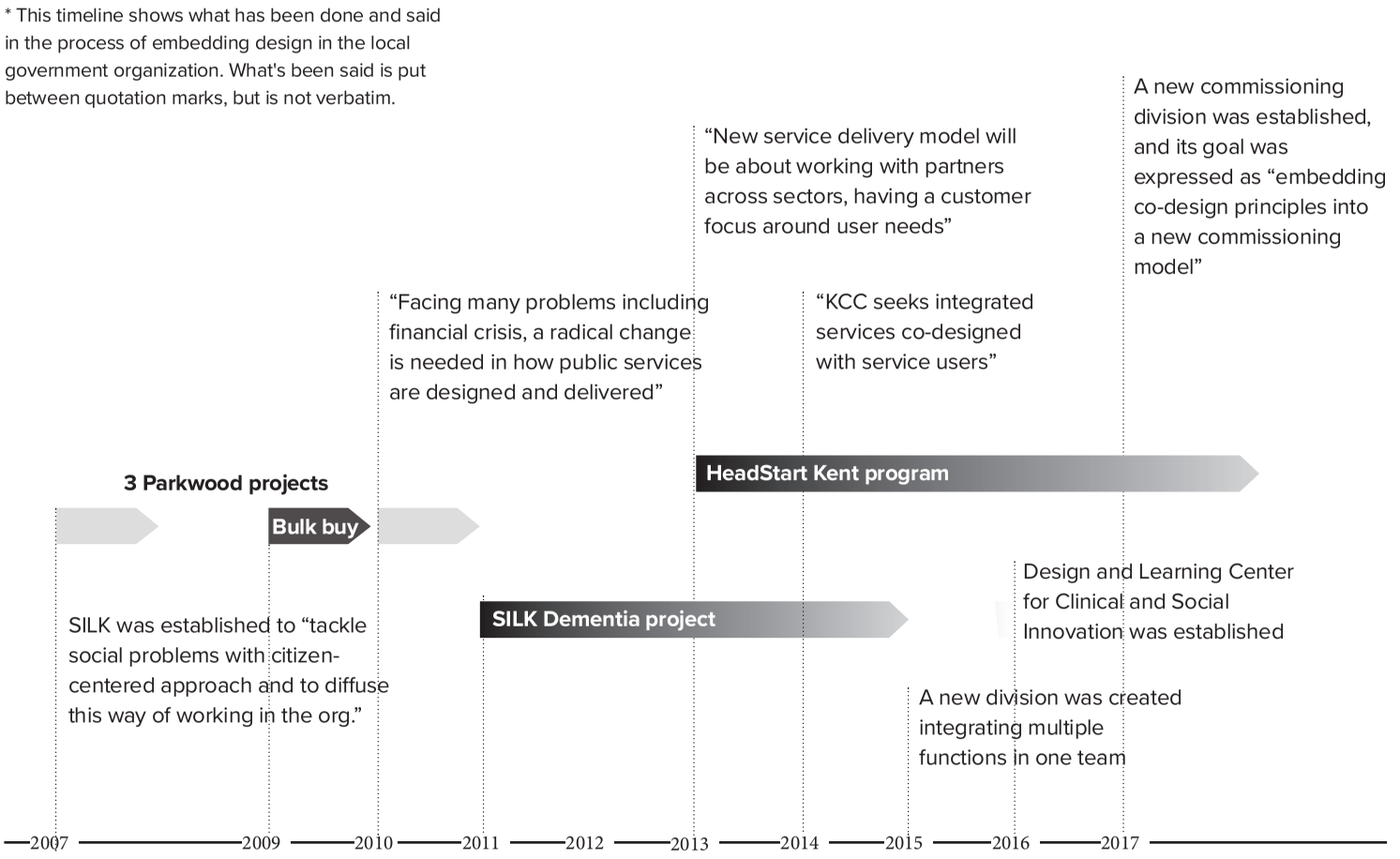


Figure 5. 13. Timeline of events in the process of embedding design in the Kent County Council

5.6. Conclusion

This chapter unveiled how design practices have matured over time in five different local government organizations. The maturing process was investigated from two perspectives: value creation and practice stabilization. Regarding value creation through design, two sub- research questions were explored: why local governments introduced design practices within the organization, and what different design practices for different types of value have been implemented and how they have evolved. For the stabilization of design practices, two sub- research questions were explored: how the legitimacy of design practices has been established, and what new processes and structures have emerged to support design practices in the organizations. The findings showed that design practices in local government organizations can take different paths of maturation.

In the following chapter, the findings in each case are compared and common and uncommon patterns of how design practices mature in the process of embedding design in local government are reported.

1 Maori terms explained ("Māori Dictionary," n.d.): "whānau" means extended family or family group; "marae" means courtyard, an open area where formal greetings and discussions take place; "tamariki" means children; and "iwi" means extended kinship group, tribe, nation.

2 This means that, as explained at the start of this chapter, the Cornwall Council introduced design practices in the organization by having a "[f]ull time strategic-level employee responsible for developing organisational design capacity" (Design Commission, 2013, Pp. 31) instead of setting up a public sector innovation lab like other local governments examined in this multiple-case study.

3 Commissioning is a typical way for government organizations to work with external actors such as "private sector firms … other public sector organizations, third sector organizations or cross-sector partnerships" (Loeffler & Bovaird, 2019, p. 243). Commissioning does not always include design practices. However, according to Mintrom and Thomas (2018), commissioning together with design practices can improve understanding of users and local contexts and narrow the gap between policy and its expected outcome.

Title: She Decides movement in the U.S.
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6. Comparing processes of embedding design

The previous and this chapter present the findings of a multiple-case study on how design practices mature in local governments. The previous chapter unveiled what different design practices for different types of value creation have been implemented in five individual local government organizations, and what legitimacy and new processes and structures have emerged to stabilize design practices over time in these organizations. These findings can be unravelled into repetitive and unique patterns in the process of embedding design in local government.

In this chapter, through a comparative analysis of the five cases, the patterns in the process of embedding design in local government are presented in five themes. Four themes respond to the sub- research questions restated below, and the last theme synthesizes the previous themes and reports how the aspects of value creation and stabilization are related in the process of embedding design in local government.

Research question 2. How do design practices mature in local government?

2.1. Why do local governments introduce design practices within their organizations?

2.2. What different design practices for different value creation do local governments implement, and how do they evolve over time?

2.3. How is the legitimacy of design practices established in local governments?

2.4. What new processes and structures emerge to support design practices in local governments?

6.1. Narratives of the embedding processes

There were various narratives about why local governments introduced design practices within their organizations (research question 2.1). In the New York Council, where it was stated that 44 per cent of city residents live at or near poverty line, design was

described as a new practice that had been introduced in the provision of public services for low-income residents. In the Austin Council, design was described as one of the innovation methods employed by the PSI lab. In the Auckland Council, where the city has diverse ethnicities including aboriginal tribes, design was described as a community-empowering and inclusive practice. The UK has made massive budget cuts for local governments, and thus for the Cornwall and Kent County Councils, public service transformation to a new model in which they collaborate with civil society stakeholders was an urgent matter. In this context, design was illustrated as a practice to facilitate public service transformation.

While the narratives varied, they revealed two understandings on the value of design practices that local government organizations had early in the process of embedding design. One is that design practices improve public services. Another is that design practices help deal with complex problems. Depending on the organization, one of these two understandings prevailed, or both coexisted in a rather ambiguous way.

To improve public services or to deal with complex problems

In the NY Council, as seen below, the value of design practices as practices for improving public services was highlighted.

> "With the launch of this new Service Design Studio and toolkit, [the NY Council are working to] institutionalize a replicable approach, which directly harnesses the unique insights and experiences of public services users to design and deliver efficient, inclusive, and responsive public services." (doc.19-2017, NYC Council)

By comparison, in the Auckland and Cornwall Councils, the value of design practices was illustrated as an approach to tackle complex problems, as seen in the excerpts below.

> "… the (Co-Design) Lab was established to develop fresh ideas in response to complex social issues." (doc.01-n.d., Auckland City Council)

> "As our world becomes simultaneously less predictable and more complex …. If we open up innovation to citizens and stakeholders we have a greater chance of success – we call this co-design." (doc.02-2011, Cornwall County Council)

Ambiguity in the understanding of value of design

In the Kent Council, at the launch of its PSI lab, the value of design practices was expressed rather ambiguously, as seen in the excerpt below. The PSI lab's job was described as running projects for "intractable social problems", but using a "person-cen-

tred approach". Although the term "intractable social problems" seems to suggest the use of design for complex problems, the person/user-centred approach of design is often associated with the value of improving public services, as discussed in Section 2.1.3.

> "Our [PSI lab's] ambition was to create a Lab that did two things. First, it would run projects around some of our most intractable social problems, using a 'person-centred' approach and involving our citizens in the innovation process. Second, it would build the whole organisation's capacity to start with people, rather than existing services." (doc.04-2009, Kent County Council)

Ambiguity in the understanding of the value of design is also found in the Austin Council. In this Council, there were no data with an exact date on why design practices were started by the PSI lab, the Innovation Office (IO). Yet, if we look at an excerpt describing a project in IO's early years, design was described as involving approaches to deal with problems of homelessness and safety, as seen below. While this seems to suggest that the value of design was considered for addressing complex problems, the excerpt also describes using design to change interactions and services around the homeless and safety problem. This suggests that the value of design was understood as a means to improve services in this organization.

> "The Innovation Office believed that implementing innovation tools of ethnography, design, prototyping, and iteration would complement …. They believed these tools could help identify and test possible changes in interactions, services, and possibly programs in order to create more sustainable, positive outcomes for the community, especially in addressing the intersection of safety and homelessness." (doc.01-n.d., Austin City Council)

These data suggest that the value of design was not clearly defined in these two local government organizations when they introduced design practices, as compared to the preceding three organizations.

6.2. Different design practices for different value creation

This section addresses research question 2.2, what different design practices for different value creation local governments implement and how do they evolve over time. To understand what different design practices have been implemented for different value creation, three to four projects were examined in each local government organization. Table 6.1 summarizes all the projects examined in the five cases. These projects were examined in three aspects: project brief, ways of civic participation (who, for how long, and the roles of the participants), and project outcome. Two distinct types of design practices were identified in the early years of embedding design in the five local government organizations, namely design for service practices and design for complexity practices. In addition, over time, an additional type of design practices emerged in some of these organizations, namely design for systemic change practices.

case	projects	project brief
New York City Council	HOME-STAT	Improving services for homeless people
	Pathways to prevention	Creating family-centred pathways into incidents-prevention services
	Envisioning a better shelter	Exploring how to apply a Trauma-Informed Care perspective to shelter-related policies and practices
	NYCHA recertification	Improving the process of recertification of public housing
Auckland City Council	Healthy Home Initiative	Healthy housing-related intervention
	Facility partnership policy	Developing a new policy for facility management in partnership with communities
	Tāmariki wellbeing	Wellbeing of babies and parenting
Austin City Council	Vision zero waste	Finding new approaches for the goal of zero waste by 2040
	Garden permit	Improving community garden permit process and community building
	HOST & iTeam	Designing & delivering a solution for the homeless
Cornwall County Council	Cornwall Works 50+	Employment for people over 50
	Pioneer program	Integration of health & social care
	One Vision program	Health & well-being of young people
Kent County Council	Parkwood bulk buy	Providing low-income households in Parkwood with easier access to bulky products at cheaper prices
	Dementia project	Developing a whole system approach to dementia friendly communities
	HeadStart Kent	Developing knowledge and lifelong skills for emotional health and wellbeing of young people

Table 6. 1 List of all projects examined in the five cases

* Light grey: design for service practices/ mid grey: design for complexity practices/ dark grey: design for systemic change practices were identified in these projects.

6.2.1. Design practices early in the embedding processes

Two distinct design practices were identified in the early years of embedding design in the five local governments: namely, design for service practice and design for complexity practice. These two design practices showed differences in the approaches to civic participation and project outcomes, but no substantial differences in the project brief. This section examines the former two aspects, and the project brief will be examined in Section 6.5.

Characteristics of design for service practices

One type of design practice shown early in the process of embedding design in local government was *design for service* practices. Table 6.2 summarizes the characteristics

Project	Project duration	Stakeholders involved	Role of participants	Project outcome
Code	**1 yr or less**	**service users, service-responsible staff, and/or subject expert**	**participating as informants**	**service products or recommendations to hand over**
Pathways to Prevention (NY Council)	2018	families and front-line staff (doc.07-2019)	Pathways to Prevention team worked hard to listen to, advocate for, and bring the voices of families and front-line staff into the process of designing and delivering the next generation of ACS Prevention services (doc.07-2019)	communication materials such as brochures that describe preventive services in plain language, and service checklists... (doc.07-2019).
Envisioning a Better Shelter (NY Council)	2019	Department of Homeless Services (DHS), Deputy Mayor's Office of Health and Human Services (subject expert), Non-Profit Families with Children Shelter Providers (doc.09-2019)	Talking to people is perhaps what we consider one of the most important steps of service design. Capturing the real-lived experiences of residents and service delivery staff and centering their voices in the design process...(doc.09-2019).	help all staff see the relevance of TIC (Trauma Informed Care) to their role and hand over our recommendations in a meaningful and actionable way (doc.09-2019).
Zero Waste (Austin Council)	Sept 2016-Feb 17	48 residents and 4 property managers and owners across the city... ARR (Austin Resource Recovery) supplied subject matter experts (doc. 07-2016)	We [PSI lab] spent spent 4 weeks doing in-home interviews with 48 residents and 4 property managers and owners across the city (doc. 07-2016).	Design and testing plan; Extensive list of concepts generated; Testing protocols ... Recommendations for improvements to existing print and digital resources; Recommendations share-out sessions (doc. 07-2016)
Garden Permit (Austin Council)	N/A	city employees and the public (doc.13-2019)	The lab consults with city employees and the public on how to digitize services to best meet community needs, wants, and concerns (doc.13-2019).	the site has an updated map of Austin area gardens and farms including location, contact, and open availability of community gardens, urban farms... (doc.13-2019).

Table 6. 2 Characteristics of design for service practices

of this type of design practices. This type of design practices was identified in short-term – less than a year – projects. Participating stakeholders were service users, service-responsible staff, and sometimes subject experts. In design processes, these stakeholders assumed the role of *informants* providing information for the Council employees – in-house designers alone or teamed with the service-responsible department – to design the services. Since the Council employees interviewed or consulted the stakeholders, the stakeholders were described as *voices,* as seen in the excerpts in the table. In terms of the project outcome, the design for service practices produced service products or recommendations by in-house designers to be handed over to the department responsible for the problem.

Characteristics of design for complexity practices

Another type of design practice shown early in the process of embedding design in local government was *design for complexity* practices. Table 6.3 summarizes the characteristics of this type of design practices. This type of design practice was identified in projects lasting multiple years. Participating stakeholders were multi-sector stakeholders such as public, private, and voluntary sector organizations, often in diverse subject areas – see the Healthy Home Initiative, which included stakeholders of health, housing, social works, etc. These stakeholders took on the role of *partners* who co-led the projects with the local governments. The outcome of the design for complexity practices was richer than the outcome of design for service practices. Over the multi-year design processes, problem understanding, project development, and new relationships have co-evolved. The co-evolution in project outcomes of design for complexity practices is further explained in the next section.

Co-evolution of project outcomes in design for complexity practices

In the design for complexity practices, bringing in diverse stakeholders in the design process allowed stakeholders to understand who are involved and what their experiences are with the problems, as described below. This enhanced the understanding of given problems.

> "When we brought all the different departments together, that was really our aha moment.... The most important part was us recognizing who was spending what and how much and when. Internal departments were all spending dollars on important things, but not everyone knew who was doing what."" (doc.12-2018, Austin Council)

> "Taking a design approach enabled us to hear directly from people in the facility partnerships 'system' and understand the experience from diverse perspectives." (doc.12-2018, Auckland Council)

Project	Project duration	Stakeholders involved	Role of participants	Project outcome
Code	**multi-year**	**multi-sector stakeholders**	**participating as partners**	**new relationships, systematic understandings, and project d evelopment**
Healthy Home Initiative (Auckland Council)	4 years (2015-18)	TSI, Beacon Pathway, Turuki Healthcare and the Auckland and Waitemata District Health Boards, who brought a collective knowledge of health, housing, community, social work and design (doc.15-2019).	TSI had the role of an 'innovation partner', providing a neutral platform for collaboration. The process was led and held together by a multi-disciplinary co-design team from ... (doc.15-2019).	insights from the work have been fed into relevant legislation reviews such as the Residential Tenancies Act Review and the development of proposed standards for the Healthy Homes Guarantee Act(doc.15-2019).
HOST & iTeam (Austin Council)	5 years (2015-20)	Current Project Partners are Homeless Outreach Street Team (HOST), the Dell Medical School, and the Homelessness Advisory Council of Austin (HACA) (doc.08B-n.d.)	The city and ECHO (Ending Community Homelessness Coalition)'s new Action Plan to End Homelessness ... aims to produce a real system delivering rapid response, prevention, housing, and support, while addressing disparities and "building community commitment from both the public and private sectors" (doc.12-2018).	a real system delivering rapid response, prevention, housing, and support, while addressing disparities and "building community commitment from both the public and private sectors"(doc.12-2018).
Cornwall Works 50+ (Cornwall Council)	4 years (2010-13)	Cornwall Citizens Advice Bureaux; United Response (charity); Lizard Pathways; Pentreath (charity); Daisi; Cornwall Fire and Rescue Service; and Surf Action (doc.07-2013)	The development and implementation of the programmes has led to new and deepened networks, partnerships and relationships amongst key organisations working in this sphere ... (doc.07-2013).	The success of these Innovation Projects was not just in their delivery of activity but as a key part of the knowledge development process – identifying what works and how (doc.07-2013).
Dementia project (Kent Council)	5 years (2011-15)	fire and rescue services, local authorities, charities, community groups, businesses, care providers, health trusts, and people living with dementia and their carers (doc.10-2015).	The Kent Dementia Action Alliance is a collection of stakeholders brought together to improve the lives of people with dementia in their area.... All members of an Alliance are equal partners working together (doc.10-2015).	a whole systems programme of work to explore, co-design and test new models in 'hot spots' identified by evidence (doc.10-2015)

Table 6. 3 Characteristics of design for complexity practices

The *problem understanding* also developed as the stakeholders implemented solution ideas. The excerpts below describe how initial projects were used to develop knowledge of "what works and how" and paved the way for new developments in projects. The second excerpt especially illustrates how the knowledge gained through various implementations led to "a whole system solution.".

> "The success of these Innovation Projects was not just in their delivery of activity but as a key part of the knowledge development process – identifying what works and how. The understanding generated from the initial round of projects during Phase One paved the way for the projects developed during subsequent years of delivery." (doc.07-2013, Cornwall Council).

> "… the coproduction projects at grassroots level gave evidence for this new conversation to happen …. Collectively these projects provide solutions that if implemented together could offer a whole system solution." (doc.10-2015, Kent Council).

During multi-year design processes, the stakeholders involved in projects also developed new and deeper *relationships of stakeholders* involved in projects. The two excerpts below describe the formation of such relationships as well as how these relationships led to new *developments in projects*.

> "The development and implementation of the programmes has led to new and deepened networks, partnerships and relationships amongst key organisations working in this sphere and has acted as a catalyst for new developments." (doc.07-2013, Cornwall Council).

> "Greater trust and co-ordination exists between frontline providers such as assessment teams and those doing installations, increasing the likelihood that proposed interventions will be implemented in ways that achieve outcomes for families. Better information flows between the HHIs and local and central government agencies has resulted in increased ability to investigate severe housing issues and landlord inaction …. insights from the work have been fed into relevant legislation reviews such as the Residential Tenancies Act Review and the development of proposed standards for the Healthy Homes Guarantee Act." (doc.15-2019, Auckland Council).

Notably, regarding the project developments, the Healthy Home Initiative of the Auckland Council (the second excerpt above) showed that a project started "to generate a sustainable supply of housing-related interventions" (Ibid., Auckland Council), leading to legislation reviews as an outcome. This was an example of design practices at the policy implementation stage affecting the front end of the policy process. The implication of this finding will be discussed in Section 7.2.1.

In conclusion, in design for complexity practices, stakeholder relationships, problem understanding, and project development have co-evolved over a long project term. This long design process, as seen in the example of the Healthy Home Initiative, can influence the front end of the policy process, i.e. changes in related policies.

The two distinct design practices as archetypes

This section reported on two distinct types of design practices found in the early years of embedding design in the five local government organizations. The design for service practices had characteristics of a short-term design process in which service users, service-responsible staff, and sometimes subject experts participated as informants and produced service products and recommendations as outcomes. The value of this type of design practices is the improvement of public services. On the other hand, the design for complexity practices involved long-term design processes in which multi-sector stakeholders were engaged in the role of partners. The project outcomes were problem understanding, project development, and new stakeholder relationships, which co-evolved in the long-term design processes. The value of this type of design practices is that it opens up problem and solution spaces to policy problems through the design process of co-evolving problem understanding and project development. It also allows stakeholders from different sectors to work together as partners, promoting democracy and better addressing the complexity of policy problems.

However, it should be noted that design practices in the local governments did not always fall into one of these two types of design practices. For example, the Bulk Buy project of the Kent Council was one of three projects carried out over a three-year period that explored the problems of low-income families in the Parkwood area of Kent. The Bulk Buy project produced a service outcome called R Shop, a shop run by the residents selling bulky items to the community in an easier and less expensive way. The PSI lab of the Kent Council (SILK) co-led the design process with the families but they aimed for "a self-sustaining project with strong and sound [local] infrastructure" (doc.06A-2011, Kent County Council). The three projects as a whole brought to light systemic challenges facing these families, such as mental health issues, lack of healthy food options, rigid benefits system for the families, and many others (doc.16B-2008, Kent County Council). However, there was no evidence of the involvement of multi-sector stakeholders. Taking all these points into account, this project fell into neither the design for service practice nor the design for complexity practice. In other words, there are heterogeneous design practices in local governments, and the two distinct design practices reported in this section can be seen as archetypes rather than strict categories.

6.2.2. Design for systemic change practice

Research question 2.2 also investigated whether design practices evolve, and new types of design practices emerge over time in local governments. Findings showed that a new type of design practices emerged over time in Auckland, Cornwall and Kent

Councils, namely design for systemic change practices, while not in NY and Austin Councils. This new type of design practice, namely design for systemic change practice, was similar to the design for complexity practice in that the local government collaborated with multi-sector civil society stakeholders for long term. Yet, the difference was in that systemic change is explicitly aimed with intentional approaches to support the aim.

The aim of systemic change

The Auckland, Cornwall, Kent Councils have been implementing design for complexity practices for several years. As their design practices mature, design practices that aim at systems or systemic change emerged in these organizations, as shown in the excerpts below.

> "TSI is working in a complex domain (looking at multiple intersecting challenges and focused on systems change rather than siloed individual shift)." (doc.20-2020, Auckland Council)

> "All the partners to the Plan are agreed that the 'One Vision' Children and Young People's Transformation Plan 2017 – 2020 will require a whole system change programme." (doc.12-2017, Cornwall Council)

> "… the groups as they are rolled out will become the building blocks to achieve the systemic change across Kent." (doc.12-2016, Kent Council)

While these documents do not define what systems change (or systemic change) means, it is defined in the literature as below:

> "… an intentional process designed to alter the status quo by shifting the function or structure of an identified system with purposeful interventions…. Systems change aims to bring about lasting change by altering underlying structures and supporting mechanisms which make the system operate in a particular way." (Abercrombie et al., 2015)

Given this definition, it can be inferred that local governments in the above projects aimed to achieve more fundamental and lasting change in given policy problems. As we will see in the next section, to support the aims, these local governments built several infrastructures in their communities during the design process.

Infrastructures set up in the design process

Regarding the infrastructures built during design processes, firstly, there were plans to support systemic change. These were plans that sought greater change through multiple projects or activities. For example, in South Auckland, The Southern Initiative (TSI) developed a comprehensive plan for the "better livelihoods" of the local community. As seen in the excerpt below, they had a plan in which one project is interconnected with

other projects and programmes at different *levels* to jointly achieve the goal of "transformation" (also refer to Figure 5.5 in Ch. 5 that depicts the overall plan of TSI).

> "… the development of a 'Theory of Transformation' at the level of TSI might help to articulate the intersection between the levels in which TSI is engaging, the various programs and projects and the transformational agenda held by TSI and their partners as a whole." (doc.20-2020, Auckland Council).

The Kent Council's HeadStart programme also had a three-level plan, in which "[e]ach Level comprises specific activities and interacts with the other Levels to create a whole system approach and longer term sustainability" (doc.12-2016, Kent County Council).

The second type of infrastructure comprised strong networks of stakeholders. The networks implied relationships among stakeholders as well as resources involved in the relationships. In South Auckland, such networks were described as "support ecologies: a weaving together of supportive acts, spaces, relationships, capabilities and opportunities" (doc.20-2020, Auckland Council). These support ecologies are identified to be strong in that they had been formed through multiple years of activities by TSI (PSI lab in Auckland Council) based on the area of South Auckland. In the Cornwall Council's One Vision and the Kent Council's HeadStart, the Councils made formal agreements with stakeholders to share goals, responsibilities, and resources, as shown below.

> "Participating schools and community groups will enter into a Partnership Agreement with HeadStart Kent. This ensures schools are fully aware of their commitment to HeadStart Kent, and the commitment expected from HeadStart Kent in return, and resources required." (doc.12-2016, Kent Council)

> "The goal is engagement and ownership at this stage so that work can start on Phase 2 from a common starting point. The Plan sets out the principles and the approach partner organisations have agreed, for the development and implementation of the 'One Vision' Children and Young People's Transformation Plan 2017 – 2020." (doc.12-2017, Cornwall Council)

The last kind of infrastructure to support the aim of systemic change consisted of set-ups to support the learning of stakeholders. In South Auckland, its PSI lab (TSI) developed its own learning framework called Niho Taniwha, which TSI intended "to embed … within all levels of TSI's innovation activities to scaffold and amplify the transformation" (doc.20-2020, Auckland Council). Similar set-ups were found in the Pioneer programme of the Cornwall Council and HeadStart programme of the Kent Council. In particular, the description below from HeadStart Kent shows that the learning was designed as a loop so that the lessons learned in the previous phase fed into the activities of the next phase.

> "From our learning through our HeadStart Kent journey throughout Phase 2, Kent is now in a strong position to successfully establish approaches to support system change …. This learning, with continued input from young people and professionals through our co-production channels, workshops, local project groups and Knowledge Seminars has informed our plans for Phase 3." (doc.12-2016, Kent Council)

Distinction from design for complexity practices

In the previous section, concerning the project outcome of design for complexity practices, the co-evolution of problem understanding, project development, and new relationships was reported. This co-evolution was also found in design for systemic change practices, as the above excerpt showed that learning from one phase fed into the project development of the next phase. However, design for systemic change practices were distinct in that infrastructures were intentionally deployed to support the aim of systemic change. In this respect, while the value of design for systemic change practices is similar to design for complexity practices – opening up problem and solution spaces, promoting democratic value, and better addressing complexity – but differs in that infrastructuring is put in place to support systemic change in policy problems. The implications of infrastructuring for public policy will be further discussed in Chapter 7.

6.3. The legitimacy of design practices

Regarding how the legitimacy of design practices is established in local government (research question 2.3), based on the theory of Suchman (1995) introduced in Chapter 4, the pragmatic, moral, and cognitive types of legitimacy of design practices were identified in the five local government organizations.

Pragmatic legitimacy of design practices in the early years of embedding design

Suchman (1995) described that pragmatic legitimacy depends on "self-interested calculations of an organization's most immediate audiences" (Ibid., p. 578). This type of legitimacy seems to have been established in all five local government organizations. Design practices had proven useful within the organizations through an experimental period in the early years of the process of embedding design.

Both the NY Council and Cornwall Council experimented with external designers on a project basis before establishing a PSI lab or hiring in-house designers. In the NY Council, five projects in which NYC Opportunity confirmed "the value of using human-centered design methodology to inform service" (doc.02-2017, NYC Council) were described (refer to Sec. 5.1.1). The Cornwall Council had a design programme called the

Design of the Time (Dott) programme in the region for a year and decided to "internalise the Dott approach in the council" (doc.03-2010, Cornwall Council). The rest of the local governments first set up a PSI lab and carried out an experimental period. In the Auckland Council, this period was described as a "Proof of Concept" period, in which its PSI lab worked on five projects for 27 months (doc-04-2015, Auckland Council). In the Kent Council, its PSI lab had two "demonstration" projects in which they "tested [their] thinking in practice" (doc.04-2009, Kent Council). In the Austin Council, a programme called DTI Fellows was launched to experiment with design practices, and in three years it became a permanent part of the organization "to scale [the] capacity for designing and delivering the best possible services" (doc.04-n.d., Austin Council). After the experimental periods, these Councils decided to internalize (NY and Cornwall Councils), to scale (Austin Council), or to continue (Auckland and Kent Councils) design practices within their organizations. This suggests that the pragmatic legitimacy of design practices has been established in these organizations, at least among early proponents.

In terms of narratives concerning pragmatic legitimacy, in the NY and Austin Councils, as seen in the above paragraph, the usefulness of design practice was described as a practice to improve public services. In the rest of the councils, however, narratives about the pragmatic legitimacy of design practice – i.e. for what purposes design is useful – were not found.

Moral legitimacy of design practices

The moral legitimacy of a new practice in organizations concerns whether the new practice meets "the audience's socially constructed value system" (Suchman, 1995, p. 579). This type of legitimacy of design practices was identified only in the Auckland Council.

In the Auckland Council, design was described as a community-empowering and inclusive practice in several documents from different years. Co-design was first encouraged as a community-empowering approach in the organization (doc.06-2015, Auckland Council). In design training programmes, its PSI lab taught "Whānau-centric co-design principles" that emphasize the indigenous community's decision-making power and autonomy in design processes (doc.11-2017, Auckland Council). Co-design was described as a "good" practice for "putting a diversity and inclusion lens on … how we design and deliver services" in Auckland, "home to people from more than 200 different ethnicities" (doc.13-2019, Auckland Council). Project reports (doc.14-2019; doc.15-2019, Auckland Council) described stories of indigenous people having experienced subverted power relations through co-design practices with the Council.

These overall data showed that design practices have been perceived as the *right thing to do* in the organization – that is, the moral legitimacy of design practices has been established. The narrative concerning the moral legitimacy of design practices was that design is a community-empowering and inclusive practice.

Cognitive legitimacy of design practices

The cognitive legitimacy of a new practice in organizations concerns whether the new practice is perceived as "necessary or inevitable based on some taken-for-granted cultural account" (Suchman, 1995, p. 582) in these organizations. In the Cornwall and Kent Councils, the possibility is shown that the cognitive legitimacy of design practices can be established as a necessary practice for public service transformation in this Council.

These two organizations, as local governments in the UK, were experiencing a financial crisis. To cope with this, they discussed public service transformation in 2010, as seen below.

> "In light of financial crisis … Cornwall Council will work with partners across the whole public sector.… Public Service Transformation Programme [:] Organizations across Cornwall will pool resources and work together to commission major changes in the design and delivery of services." (doc.01-2010, Cornwall Council)

> "Local authorities have been well aware of the need for radical change in regard to how services are delivered for some time.… The financial crisis only provides a new spur to push the transformation agenda further, faster and deeper." (doc.05-2010, Kent Council)

In the years since then, both organizations published documents describing a new public service model in which local governments co-design public services with civil society stakeholders, as can be seen in the excerpts below.

> "The Home Care and Supportive Lifestyle Commissioning Teams have been co-designing the new service delivery model, encouraging its partners to formulate new ideas and new ways of doing business." (doc.13-2017)

> "Complex commissioning seeks to create integrated services that are co-designed with service users and take a more collaborative approach." (doc.08-2014, Kent Council)

In these organizations, there were insufficient data to conclude that cognitive legitimacy has been established in these organizations. Nonetheless, the data did suggest that the cognitive legitimacy of design practices in local government can be established as a necessary and essential practice for public service transformation. The cases of Cornwall and Kent Councils, both facing financial crises, demonstrate how the need

for radical change in service delivery became imperative. It is evident that these organizations recognized the importance of design practices in reimagining and improving public services.

6.4. Processes and structures to routinize design practices

Regarding what new processes and structures emerge to support design practices in local governments (research question 2.4), three types were identified. The first was new processes and structures to gain traction for design practices, the second was new processes and structures to support collaboration between departments within an organization – in other words, collaboration with internal stakeholders – and the last was new processes and structures to support collaboration with external stakeholders.

Gaining traction for design practices

In Section 4.1.2, it was discussed that when a new practice is introduced in organizations, it is tested on a small scale and then begins to gain traction (Roehrig et al., 2018). Nicolini (2010) argued that traction can be created due to luck, intentional effort, or a combination of both.

In the NY Council, it was found that new structures and processes were set up to gain traction for design practices. This Council created a "new procurement tool for hiring and working with outside design firms .... [to] allow City agencies to more easily create and deliver effective, efficient, and equitable public services" (doc. 04-2017, New York Council). In addition, a department in the Council issued a request for a proposal to "ensure that the service design is incorporated into [the department] but also the providers with which they work" (doc.10-2020, New York Council). Additionally, "a design learning community" was created within this department. All these changes were intended to attract more people into design practices in the early years of the process of embedding design in the Council. For this reason, these new processes and structures were identified as being intended to gain traction for design practices, not to routinize design practices later in the embedding process.

Supporting collaboration between departments within local government

The second type of new processes and structures to support design practices in local governments comprises collaboration across departments within the organizations. In the Austin Council, the PSI lab created a new position for a manager "who can provide technical guidance, mentorship, and career direction for employees within a

given discipline … but doesn't necessarily work in the same department in which the employee is completing a project" (doc-11-2018, Austin Council). This new position was presented as a way to "scal[e] the City of Austin's capacity for design, technology, and innovation" (Ibid.). In the Kent Council, a new division was created by bringing together multiple functions in one team – health and safety, business partners, engagement and counselling, organizational development, communication, human resources, etc. This integration of functions was explained as being intended "to ensure a clear and seamless alignment to support the principle of customer centric services…. [and] to facilitate better collaborative working" (doc.13-2016, Kent Council). In other words, this new team was created to support collaboration between departments to design better public services. While the Austin Council created the new manager position four years after the launch of its PSI lab, the Kent Council established a new division eight years after the launch of its PSI lab. These new structures are identified as being intended to routinize design practices, as they emerged after design practices had been implemented for several years in the organizations.

Supporting collaboration with external stakeholders.
The last type of new processes and structures that emerged to support design practices in local governments promoted collaboration with external stakeholders. Regarding this, two discussions were found within local governments: one about new ways of commissioning and another about a new structure of local government.

In the Auckland, Cornwall, and Kent Councils, new ways of commissioning that support the local government's co-design practices with external stakeholders were discussed. In the Auckland Council, how to set up new "commissioning processes for experimentation and learning" (doc.15-2019, Auckland Council) and "that strengthen local infrastructure" (doc.16-2020, Auckland Council) was discussed by its PSI labs. In the Cornwall Council, a new toolkit was created to standardize the commissioning that supports "whole system thinking … [and] co-design and co-production" (doc.15-2018, Cornwall Council) within the organization. In the Kent Council, a new team was created to "[embed] co-design principles into … [the Council's] Strategic Commissioning operating model" (doc.14-2018, Kent Council).

In the Auckland Council, the relationship between the Council organization and its PSI lab, The Southern Initiative (TSI) was described as a new structure of the local government. The "place-based innovation hub" (doc.20-2020, Auckland Council) model of TSI was a unique structure that was not found in other local governments – it is established

and funded by the Council but is located in South Auckland and deals with the problems of the area. In an evaluation report of TSI written by external researchers in 2020, the authors claimed that the relationship of TSI and the Council can be a new structure of "networked organization to undertake complex systemic work" (Ibid.). They explained the relationship as a dual operating system: TSI as "the networked structure can effectively focus on rapid and transformational change agendas, while [the Council as] the traditional hierarchy … can manage the day-to-day structured activities with efficiency, predictability and effectiveness" (Ibid.). Although this was an opinion of the authors of the evaluation report, considering the trend of networked governance in the public sector, the dual operating system may be a new type of "networked polity". Ansell (2000) described networked polity as "a distinctive form of modern polity that is functionally and territorially disaggregated, but nevertheless linked together and linked to society through a web of interorganizational and intergovernmental relationships" (p. 303).

The new ways of commissioning and the expansion of TSI as a new structure of local government are identified as a new process and structure to routinize design practices in these organizations. They emerged later in the process of embedding design in the organizations, after co-design practices with civil society stakeholders had been implemented over a period of several years.

6.5. Processes of embedding design

This section synthesizes the findings from the previous sections to distil the overall patterns identified in the process of embedding design in local governments. In the process of embedding design in local governments, relations are found between the understanding of the value of design at the time of the introduction of design practices, what types of design practices are implemented, and how design practices become stabilized in local government organizations. Based on these findings, three distinct processes of embedding design in local government are described.

Relations between the early understanding of the value of design, types of design practices implemented, and stabilization of design practices

In the process of embedding design in the five local governments, relations were found between the early understanding of the value of design, types of design practices implemented, and stabilization of design practices in these organizations.

To explain the relation between the early understanding of the value of design and

types of design practices implemented, we should go back to Table 6.1 (in Sec. 6.2), which showed all projects examined in the five local governments. As described in Section 6.2, two distinct types of design practices were identified in the early years of embedding design in these local governments. Differences between the two types of design practices were evident in ways of civic participation and project outcomes. However, in terms of project briefs, the difference was not very noticeable. For example, comparing the briefs of the Envisioning a Better Shelter project of the NY Council and the Healthy Home Initiative in the Auckland Council in the table, it is hard to discern how complex these problems are and which stage of policy processes they are in. Yet, two different types of design practices are identified in these projects. This reveals that what types of design practices are implemented in local governments is not influenced by the project briefs – in other words, by the complexity of problems. The types of design practices implemented in local governments are influenced by how the organizations understand the value of design at the time of the introduction of design practices within the organizations. In the NY Council, where the value of design for public service improvement was emphasized, public officers collaborated with service users and experts for less than a year to achieve service outcomes – that is, the "design for service" practices were implemented in the early years of embedding design in the organization, even for projects with briefs involving seemingly complex problems. In comparison, in the Auckland and Cornwall Councils, where the value of design to address complex problems was highlighted, public officers collaborated with multi-sector stakeholders over a period of several years to gain the outcome of co-evolution of problem understanding, project development, and stakeholder relationships – that is, the "design for complexity" practices were implemented in the early years of embedding design in the organizations. In the Austin and Kent Councils, where an ambiguity was noticed in how the value of design was understood in the organizations when design practices were introduced, both design for service and design for complexity practices, or a hybrid of the two are implemented (e.g. the Bulk Buy project in the Kent Council). These findings suggest that the understanding of the value of design at the time of the introduction of design practices influences what types of design practices are implemented in local government.

Another relation was found between what types of design practices are implemented and how the design practices become stabilized in local governments. In organizations with design for service practices, the pragmatic legitimacy of design was established with the narrative that it is a useful practice for service improvement. New processes and structures emerged to support cross-department collaboration for better designing

of services. In comparison, in organizations with design for complexity practices, not only was the pragmatic legitimacy of design found, but also the moral and cognitive legitimacies were identified. The moral legitimacy of design was established with the narrative of a community-empowering and inclusive practice. The cognitive legitimacy of design was likely to be established with the narrative that it is a necessary practice for public service transformation. New processes and structures emerged to support collaborative design practices with external stakeholders, such as new ways of commissioning that support systems thinking and co-design principles.

Three distinct processes of embedding design

Considering the relations between the early understanding of value of design, types of design practices implemented, and stabilization of design practices, three distinct processes of embedding design in local government are identified: evolution of design for service practices, evolution of design for complexity practices, and evolution of pluralistic design practices.

The first type of embedding process, namely *evolution of design for service practices,* is visualized below. This type of embedding process was seen in the NY Council. At the time of the introduction of design practices in the organization, the Council understood the value of design as a practice for service improvement. This understanding led to design for service practices. The pragmatic legitimacy of design was established as a useful practice for service improvement. New processes and structures to gain traction for design practices were identified in the early years of the embedding process. Given the short history of design practice in the NY Council, processes and structures to routinize design practices into the organizational system were not found yet. However, considering the evolution of design for service practices in the Office of Design and Delivery of the Austin Council, it is likely that processes and structures will emerge that support collaboration with internal stakeholders for better service designing in the NY Council in the long run.

Figure 6. 1 Evolution of design for service practices

The second type of embedding process, namely *evolution of design for complexity practices,* is visualized below. This type of embedding process was seen in the Auckland and Cornwall Councils. At the time of the introduction of design practices in the organizations, the local governments understood the value of design as a practice to deal with complex problems. This understanding led to design for complexity practices. In addition, as the design for complexity practices matured, a new type of design practice emerged – design for systemic change practices. The pragmatic legitimacy of design as a useful practice was established through an experimental period in the early years of the embedding process. The moral legitimacy of design was established as an inclusive, community-empowering practice. Cognitive legitimacy was likely to be established when the organizational members perceive design as a necessary, inevitable practice for public service transformation. To routinize design practices, new processes or structures emerged that support collaboration with external, civil society stakeholders.

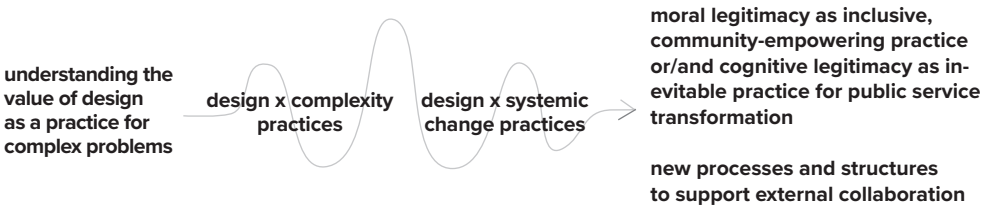

Figure 6. 2 Evolution of design for complexity practices

The last type of embedding process, namely *evolution of pluralistic design practices,* is visualized below. This type of embedding process was seen in the Austin and Kent Councils. At the time of the introduction of design practices in the organization, the local governments had an ambiguous understanding of the value of design. Due to this ambiguity, both design for service and design for complexity practices – or a hybrid of the two – were explored. As the design for complexity practices matured, design for systemic change practices emerged. The pragmatic legitimacy of design as a useful practice was established through an experimental period in the early years of the process of embedding design. Moral or cognitive legitimacy was likely to be established as seen in the *evolution of design for complexity practices.* To routinize the pluralistic design practices, new processes or structures emerged that support collaboration with both internal and external stakeholders. In the Austin Council, the embedding process was at the stage before moral or cognitive legitimacy would be established and design for systemic change practice would emerge. In the Kent Council, cognitive legitimacy seemed to be building, design for systemic change practices had emerged, and several structures to

support collaboration with internal and external stakeholders were found.

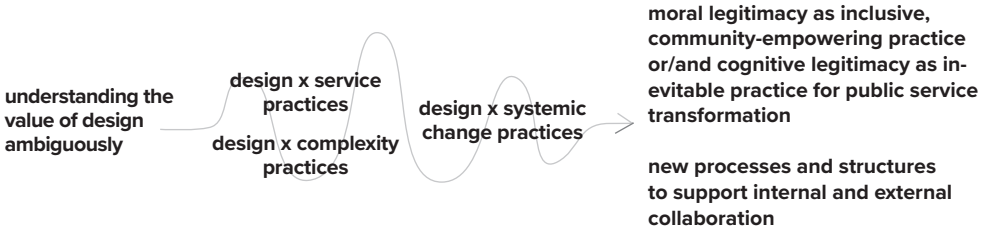

Figure 6. 3 Evolution of pluralistic design practices

6.6. Conclusion

The past two chapters presented the findings of a multiple-case study on how design practices mature in local government. While the previous chapter reported how design practices have matured in five individual organizations, this chapter revealed the patterns in the process of embedding design in local government through a comparative analysis of the five cases.

This multiple-case study investigated how design practices mature in terms of value creation and stabilization within local government. In terms of value creation, three different design practices were identified: design for service practices, design for complexity practices, and design for systemic change practices. In the design for service practices, service users and subject experts participated in the design process with local government as informants for a project term of less than a year, leading to project outcomes such as new service products and recommendations. In the design for complexity practices, multi-sector stakeholders participated in the design process with local government as partners for a project term lasting several years, leading to project outcomes such as the co-evolution of problem understanding, new stakeholder relationships, and project development. Design for systemic change emerged as the design for complexity practices matured in some organizations. As compared to the design for complexity practices, the design for systemic change practices were more intentional in that there were infrastructures to support the aim of systemic change – such as specific plans to achieve the systemic change, strong networks of stakeholders, and set-ups for the learning of stakeholders.

In terms of the stabilization of design practices, the pragmatic, moral, and cognitive legitimacy of design practices in local governments were revealed. In all the studied local

government organizations, the pragmatic legitimacy of design practices was established during the experimental periods. In two of them, the pragmatic legitimacy of design practices was described as a useful practice for public service improvement. In one local government, the moral legitimacy of design practices was established as a community-empowering and inclusive practice. In two local governments, the cognitive legitimacy of design practices was likely to be built as a necessary practice for public service transformation. In addition, with regards to new processes and structures that have emerged to routinize design practices in local governments, processes and structures to support collaboration with internal and external stakeholders emerged in later years of the embedding process.

Finally, in the process of embedding design in local government, relations were revealed between early understanding of the value of design, types of design practices implemented, and stabilization of the design practices. That is, how the value of design is understood at the time of the introduction of design practices by a local government influenced what types of design practices are implemented in the local government, and what types of design practices are implemented in the local government influenced how design practices become stabilized in the organization. Considering these relations, three distinct processes of embedding design in local government were identified.

In the next chapter, these findings, together with the findings from the study in the Municipality of Eindhoven (presented in Ch. 3), will be summarized and discussed in terms of their implications in relation to the existing knowledge on the phenomenon of embedding design in government.

Title: Hands voting
Creator: Florian Ziegler
Source: fundaciodc.org/en/citizen-participation/
License: CC by 4.0

7. Discussion and conclusions

In the introduction chapter, it was mentioned that despite the increasing popularity of design for policy practices globally, various barriers to design for policy practices have been reported. In particular, a small study interviewing several designers in the public sector at the beginning of this doctoral study revealed that a key barrier to design for policy practices is the lack of knowledge about organizational changes in government created by design practices and how to facilitate such changes. As a result of this interview study, this doctoral study aimed to investigate the process whereby design practices are embedded into government organizations in the context of local government.

Following a review of the current literature in Chapters 2 and 4, embedding design in government was defined as the process through which an organizational design capability matures in terms of value creation and practice stabilization. It was also revealed that this process is influenced by stakeholder efforts to foster design practices and organizational change. With this understanding as a framework, two empirical studies were conducted to answer the following research questions:

Main research question.: How do design practices become embedded in local government?
1. How can actors in local government foster the process of embedding design?
2. How do design practices mature in local government?

The first research question was addressed through a single-case study in the Municipality of Eindhoven, presented in Chapter 3. The second research question was investigated through a multiple-case study in five local government organizations, presented in Chapters 5 and 6.

This last chapter of the dissertation summarizes the findings of these two empirical studies and discusses the implications of the findings and newly arising questions. Then, the

contributions and limitations of this doctoral study are discussed, and recommendations for the practice and education of design for policy are made.

7.1. Summary of findings

This section summarizes the findings of two empirical studies responding to the research questions of this doctoral study. The research questions are restated, and the findings are presented.

> Research question 1. How can actors in local government foster the process of embedding design?

In the case study of the Municipality of Eindhoven, this research question was explored through the lens of design management, which is defined as using design knowledge and resources to create value for the management of an organization. Three design management strategies were identified in the practices of in-house designers: communicating and providing learning about design, connecting design and organizational needs, and reflecting on and revising strategy to create more value with design. As a result of these strategies, the awareness of design practices has changed, design has been recognized as a strategic practice, and some employees have gained design capabilities in the organization. However, despite these positive changes, in-house designers described design practices as "fragile". In addition, it was found that the process of embedding design in the organization was influenced by external factors, such as the increasing need for stakeholder collaboration in the public sector and the context of Eindhoven as a design city. These last two findings – design practices being fragile and the complexity of the process of embedding design in the municipality – led to a re-examination of the conceptual framework and research method of this doctoral study in Chapter 4. In Chapter 4, by adding an organizational study perspective, the phenomenon of embedding design in government was re-defined as the process through which an organizational design capability matures in terms of not only value creation but also stabilization of design practices. In addition, a document-based research method was developed to embrace the complexity of the phenomenon of embedding design in government.

> Research question 2. How do design practices mature in local government?

With the updated conceptual framework and new research method, a multiple-case study was conducted in five local governments regarding the above research question. Following the conceptual framework, this question was explored in terms of value cre-

ation through design practices and the stabilization of design practices in local government.

Regarding the value creation through design practices in local government, three different design practices were identified: design for service practices, design for complexity practices, and design for systemic change practices. Design for service practices were characterized by a short-term design process in which service users, service-responsible staff, and sometimes subject experts participated as informants and produced service products and recommendations as outcomes. The value of this type of design practices was the improvement of public services by engaging service users in the service designing. Design for complexity practices were characterized by a long-term design process with multi-sector participants as partners, which produced a richer project outcome such as problem understanding, project development, and new stakeholder relationships. Design for systemic change practices were characterized by design processes aiming at systemic change supported by the intentional act of infrastructuring – building infrastructures to support the aim such as plans to achieve the systemic change, strong networks of stakeholders, and set-ups to support the learning of stakeholders. While the value of both these design practices was to open up problem and solution spaces in policy problems, promote democracy, and better address complexity in policy problems, design for systemic change practices have also created infrastructures to support the aim of systemic change in communities.

In terms of stabilization of design practices, different types of legitimacy of design practices that can be established in local government, and new processes and structures to routinize design practices, were revealed. In all local government organizations, the pragmatic legitimacy of design practices was established after an experimental period. In one local government, the moral legitimacy of design practices was established as a community-empowering and inclusive practice. In two local governments, the cognitive legitimacy of design practices was likely to be established as a necessary practice for public service transformation. New processes and structures that have emerged to routinize design practices in local governments sought to support collaboration with internal and external stakeholders.

Lastly, a relation between value creation through design practices and the stabilization of design practices in the process of embedding design in local government was uncovered. How the value of design is understood at the time of the introduction of design practices in a local government influenced what types of design practices were imple-

mented in the organization, and what types of design practices were then implemented influenced how design practices become stabilized in the organization. Based on this finding, three distinct processes of embedding design in local government were identified: namely, evolution of design for service practices, evolution of design for complexity practices, and evolution of pluralistic design practices.

In the evolution of design for service practices, at the time of the introduction of design practices, a local government understood the value of design as a practice for service improvement. This understanding led to design for service practices. The pragmatic legitimacy of design practices was established as a useful practice for service improvement. To routinize this type of design practices, new processes or structures emerge that support collaboration with internal stakeholders for better service designing. In the evolution of design for complexity practices, at the time of the introduction of design practices a local government understood the value of design as a practice to deal with complex problems. This understanding led to design for complexity practices were implemented. As the design for complexity practices matured, a new type of design practice emerged – design for systemic change practices. The moral legitimacy of design was established as an inclusive, community-empowering practice. Cognitive legitimacy was likely to be established when the organizational members perceived design as a necessary, inevitable practice for public service transformation. To routinize these types of design practices, new processes or structures emerged that support collaboration with external civil society stakeholders. Lastly, in the evolution of pluralistic design practices, when design practices were introduced, local governments had an ambiguous understanding on the value of design. Both design for service and design for complexity practices – or a hybrid of the two – were explored. Moral or cognitive legitimacy was likely to be established as seen in the previous type of embedding process (i.e. evolution of design for complexity practices). To routinize the pluralistic design practices, new processes or structures emerged that support collaboration with both internal and external stakeholders.

7.2. Implications of the findings

As summarized above, this doctoral study uncovered new understandings on the phenomenon of embedding design in government in the context of local government. This section will discuss what the new understandings imply and what they contribute to the existing knowledge in the field in terms of design maturity and design management in local government. Then, research questions are proposed, which newly arise from this

doctoral study or remain unanswered by it.

7.2.1. Design maturity in local government

This doctoral study provided new understandings of embedding design in local government from the perspectives of value creation through design practices and the stabilization of design practices in local government. What these findings mean for design maturity in local government is discussed, and a new public sector design maturity model is proposed.

Value creation through design practices

This doctoral study uncovered three distinct types of design practices that can lead to different types of value in local government: design for service, design for complexity, and design for systemic change. These findings shed new light on the discussion of design practices at different stages of the policy process and provide an important insight into design maturity in local government.

In Chapter 2, we arrived at an understanding that design practices at different stages of the policy process lead to different types of value. For example, design practices at the front end of the policy cycle enabled the exploration of new futures and visions, while design practices at the policy implementation stage helped solve the given policy problems while being less daring in terms of policy innovation (for further examples, see Ch. 2). Junginger (2017) argued that design practices in the policy implementation stage, where the policy problems have already been defined, are used as "not so much tools to create future experiences but rather tools to regulate experiences of the past" (p. 33).

However, this doctoral research revealed that regardless of the policy stage in question, what types of design practices local governments implement leads to different types of value. A good example was the Auckland City Council's Healthy Home Initiative. This project sought to create service interventions for healthy housing – i.e. design practice at policy implementation stage – but the Council employees collaborated with multi-sector civil society stakeholders including housing, health, social work, and community over a period of three to four years. Through this long-term design process, new relationships were formed, a deeper understanding of the problem was developed, and the initiative not only led to new housing service interventions but also prompted changes in relevant policies (see Sec. 5.2 for details). This was an example of how design practices in the policy implementation phase influence the policy-making phase going backwards in the

policy cycle, a result that rather contradicts Junginger's (Ibid.) claim that design practices in the policy implementation phase are primarily used to solve policy problems that have already been defined in the policymaking phase.

This result suggests that how a policy problem is framed in the design process is just as important as at which stage of the policy process design approaches are used. Rein and Schön (1993) described framing as "a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading, and acting" (p. 146). As we saw in the example of the Healthy Home Initiative, this means that the design practice which frames a given policy problem as a complex one rather than a service one can open up the problem and solution spaces and lead back to the front end of the policy cycle.

However, the findings of this doctoral study also showed that not all local governments are capable of implementing different types of design practices. For example, design for complexity practices were found only in the Austin, Auckland, Cornwall, and Kent Councils, but not in the New York Council. Design for systemic change practices emerged only after the design for complexity practices had matured in the Auckland, Cornwall, and Kent Councils. This finding suggests that the types of design practices adopted by a local government to create different types of value in the public policy context are closely tied to its organizational design capability.

Nonetheless, regarding the three types of design practices identified in the multiple-case study, none of them was inherently superior or inferior to the others. In other words, it is difficult to say based only on their design practices that the New York Council, which implements design for service practices, have less mature organizational design capabilities than the Auckland, Cornwall, and Kent Councils, which implement design for complexity practices. However, if a local government is aware of different types of design practices for different value creation and is able to select and implement a specific type of design practice to deal with given policy problems, its organizational design capability will be mature. This suggests that it is important to consider design maturity when discussing design practices in local government to increase value creation through design practices. This doctoral study refers to the ability of a local government to have access to a variety of design practices and (re)frame policy problems as the *versatility* of design practices and argues that it is one indicator of design maturity in local government organizations.

Stabilization of design practices

This doctoral study also uncovered how design practices become stabilized in local government. In addition to the versatility of design practices discussed in the previous section, this finding adds *stability* as a new aspect of our understanding of design maturity in local government.

In Chapter 2, we reviewed various models of organizational design capability, all of which focused on value creation through design practices in organizations. For example, the Public Sector Design Ladder described that design practices in a government organization evolve from being used in a one-off mode to being internalized as an organizational capability, and finally to being used by policymakers (Design Council, 2013). It asserted that "the higher up a public sector body goes, the more value it can create" (Ibid., p. 30). In contrast, as discussed in Chapter 4, organizational theory posits that when a new practice such as design is embedded in an organization, the new practice evolves towards stabilization.

Regarding the stabilization of design practices in local government, this doctoral study uncovered how the legitimacy of design practices is established, and which new processes and structures emerge to integrate design practices into the organizational systems. These findings go beyond the value-oriented framework of existing organizational design capability models and provide a new aspect of *stability* of design practices regarding design maturity within government organizations. For example, if we reflect on the case of the Municipality of Eindhoven, the municipality used design in its organizational strategy. Even though this organizational design capability was mature in terms of value creation, the in-house designers of the municipality described the design practices as "fragile". This could be explained in terms of the stability of design practices: the reason could be that design practices were not stabilized in the municipality. Based on this finding, this doctoral study argues that the stability of design practices is another indicator of design maturity in local government organizations.

A new design maturity model

Synthesizing the findings on the versatility and stability of design practices in local government, this doctoral study proposes a new public sector design maturity model, as shown on the next page. This model describes four areas where local government organizational design capabilities can be after the design capabilities are built inside the government.

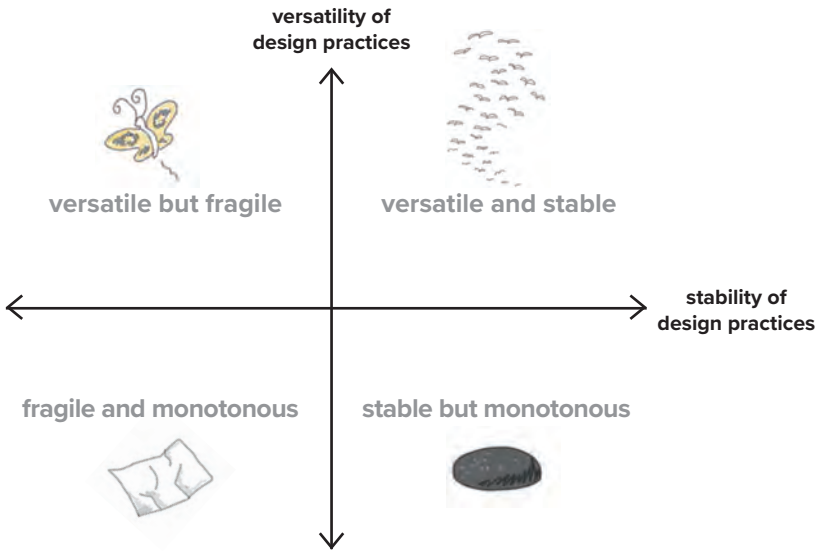

Figure 7. 1 A new public sector design maturity model

In this figure, local government organizations with *versatile and stable* design practices (top right area) have the most mature organizational design capability. In these organizations, different types of design practices are selected and implemented according to the needs of given policy problems, and resistant types of legitimacy (i.e. moral or cognitive legitimacy) and new processes and structures to routinize design practices are found. In this doctoral study, the organizational design capabilities in the Auckland, Cornwall, and Kent Councils (as of 2020) belong to this area. In these Councils, design for complexity and design for systemic change practices were identified, and signs of moral or cognitive legitimacy and new processes and structures supporting co-design practices with external stakeholders were found.

In local government organizations with *versatile but fragile* design practices (top left area), different types of design practices are selected and implemented according to the needs of given policy problems, but design practices are not yet stabilized in the organizations. In this doctoral study, the organizational design capabilities of the Municipality of Eindhoven (as of 2019) and Austin Council (as of 2020) fall into this area. In the Austin Council, design for service and design for complexity practices were identified, while in the Municipality of Eindhoven, design was used for individual projects and as a strategic practice. However, in the Austin Council, no resistant types of legitimacy and only a new manager position to support design practices with internal stakeholders were

found. In the Municipality of Eindhoven, no new processes and structures to routinize design practices were found, and in-house designers described the design practices as "fragile".

In local government organizations with *stable but monotonous* design practices (bottom right area), design practices are a routine part of the activities of these organizations, but the types of design practices implemented are uniform. No local governments in this doctoral study had a design capability that falls into this area.

Lastly, local government organizations with *fragile and monotonous* design practices (bottom left) have the least mature organizational design capability. In these organizations, uniform design practices are implemented, and design practices are not stabilized. In this doctoral study, the design capability of the New York Council (as of 2020) belongs to this area. Only design for service practices were found, and the pragmatic legitimacy of design was established, but the value of design was not broadly recognized in the organization. No processes or structures had as yet emerged to routinize design practices in the organization.

Compared to the existing Public Sector Design Ladder (Design Council, 2013), this model adds a new dimension to organizational design capability – the stability of design practices – and shows that there are various design capabilities even at the *design for policy* stage, which the Public Sector Design Ladder described as the most mature stage of design capability in government organizations. This new public sector design maturity model provides a more detailed guide than the Public Sector Design Ladder for local governments to reflect on their organizational design capabilities.

7.2.2. Design management in local government

This doctoral study also sought an understanding of how to foster the process of embedding design in local government. The study on the Municipality of Eindhoven in Chapter 3 focused on this research question. In this single-case study, we saw three strategies of in-house designers that fostered design practices in the organization. Two insights were drawn based on the findings. The first insight was that in-government designers play a role as change managers, as they can engage in reflexive practices – that is, observing the changes created by design practices in the organization and acting on them to create greater impact with design practices. The second insight was that *adapting* design practices to the organizational context is an important design management strategy.

The multiple-case study in Chapters 5 and 6 provides additional insights into design management in local government, based on the findings about how design practices have matured in several local government organizations. The first insight is that exploring the value of design in the context of local government organizations early in the embedding process is an important design management strategy.

The multiple-case study showed that the initial understanding of the value of design played an important role in determining the types of design practices implemented within local government. The types of design practices that were implemented then influenced how the design practices were stabilized within the organization. While Kimbell et al. (2010) argued that the value of design in an organization is "not predefined, but emerges through practice" (p. 4), this multiple-case study demonstrated that the initial understanding of the value of design in local government has a significant impact on the process of embedding design in organizations.

The exploration of the value of design in an organizational context has parallels with the activities of in-house designers in the Municipality of Eindhoven. They spent the first two years understanding the organizational context and identifying "anchor points" for design practices. In the discussion section of Chapter 3, I described this practice as being equivalent to Dorst's (2015) concept of "adaptation". Drawing on the findings of Chapters 5 and 6, I argue that adaptation is more precisely a design management strategy for finding the value of design practices in the context of government organizations. Furthermore, while such adaptation can take place throughout the process of embedding design in government, it is an especially important design management strategy in the early phase, given the impact that it has on the embedding process.

Secondly, another important design management strategy in local government is to stabilize design practices in the organization. This involves creating a narrative that legitimizes design practices in the organization and creating new organizational processes and structures to routinize design practices. While cognitive legitimacy may be challenging to manipulate, pragmatic and moral legitimacy can be actively constructed within an organization, as noted by Suchman (1995). In terms of the processes and structures to routinize design practices, various scales can be considered: from a new managerial role, as seen in the case of the Austin Council, to a new form of local government, as mentioned in the case of the Auckland Council. Of particular interest is infrastructures that can be built in communities across individual policy domains such as health, safety,

transportation, etc.

In the multiple-case study in Chapters 5 and 6, we saw that stakeholders involved in a policy problem engaged in long-term collaboration with the local government through design processes where the stakeholder relationships, problem understanding, and project development co-evolved. As their co-design practices matured, so-called *infrastructuring* was identified, which Hillgren et al. (2011) described as "a continuous process of building relations with diverse actors and by a flexible allotment of time and resources" (p. 180). With the aim of systemic change, local governments built infrastructure such as plans for this change, strong stakeholder relationships, and set-ups to support their learning. According to Gherardi (2012), innovation is understood as an innovation system consisting of a network of actors, and the core of an innovation system is knowledge. In light of this, infrastructuring can be interpreted as the construction of innovation systems pertaining to individual policy domains within communities. In this respect, design management to stabilize design practices in local governments is not limited to the organizations themselves but also extends to the communities.

In summary, the design management strategies in local government identified and discussed in this doctoral study are as follows:

- Communicating and providing learning about design in within the organization
- Reflecting changes entailed by design practices within the organization and revising strategies to create more value with design practices
- Connecting design and organizational needs, or finding the value of design in the organizational context – i.e. adaptation – especially early in the embedding process
- Creating narratives to legitimize design practices within the organization
- Creating new organizational processes and structures to gain traction and routinize design practices within the organization
- Infrastructuring to support systemic change in individual policy domains

7.2.3. Updated conceptual framework and new research directions

This doctoral study investigated the phenomenon of embedding design in government in six different local government organizations. As a result, this doctoral study has uncovered many common and unique patterns in the embedding processes. Based on these findings and the discussion in the previous sections, the framework for embedding design in government has been updated as shown below.

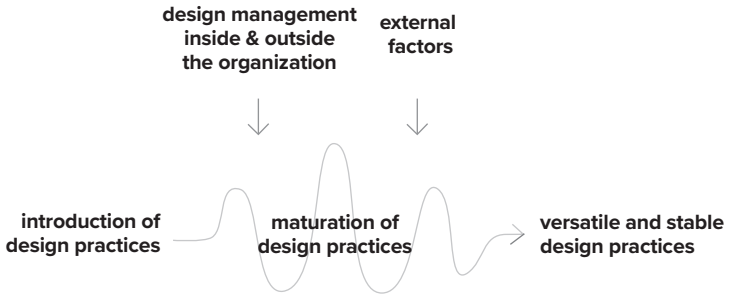

Figure 7. 2 Updated conceptual framework to understand embedding design in local government

In local government, embedding design is the process through which design practices mature into a more versatile and stable state. This process is influenced by external factors and design management within and outside the organization. In the case study of the Municipality of Eindhoven, external factors, such as the city's status as a design city and the growing demand for stakeholder collaboration, played roles. In the case study of five local governments, it was revealed that design management includes not only strategies to foster design practices within the organization, but also strategies to foster design practices in external stakeholder networks related to policy problems.

Nonetheless, this doctoral study leaves questions unanswered as well as raises new ones. Firstly, based on the study findings, this doctoral study proposed a new model for design maturity in local government (Figure 7.1). However, more empirical studies will be needed to corroborate this model. For example, more empirical cases and discussions are needed to investigate the minimum level of versatility and stability of design practices in a local government.

Second, I argued earlier that organizational design capability is important for local governments to implement heterogeneous design practices of different frames on policy problems. However, public policy is a political and contested process involving a wide range of actors, as we saw in Chapter 2. Therefore, the organizational design capability is unlikely to be the sole determinant of how a policy problem is approached in government. We will need a better understanding of how a government organization's design capability affects the framing of policy problems, what other factors influence this, and what role designers play in it.

Finally, the aforementioned infrastructuring needs to be studied further in the context of government. The phenomenon of infrastructuring has been studied primarily in the

context of social innovation. There are many questions to be answered, such as how governments create and maintain infrastructures, what constitutes the infrastructures for systemic change in policy problems, and what the roles of governments, civil society actors, and designers are in the infrastructuring.

7.3. Contribution and limitations of this doctoral study

7.3.1. Contribution

As discussed in the previous sections, the contribution of this doctoral study to the design for policy field is that it uncovered new understandings of the phenomenon of embedding design in the context of local government. It revealed how design practices mature in local government in terms of value creation and practice stabilization. It also provided new insights on how to foster the process of embedding design – i.e. design management – in local government. This new knowledge can serve to guide professional designers and organizational leaders in the public sector, helping them to reflect on and guide their practices to create more impact with design in government organizations. Further recommendations for practitioners are provided in Section 7.4.

An additional contribution of this doctoral study is the document-based research method described in Chapter 4. It is an approach that collects data on events – what has been said and done – related to design practices within an organization to construct a plausible explanation of how design practices have evolved within the organization. Through the data collected from public documents published in different years, an attempt was made to understand the patterns of change over time regarding the research phenomenon of embedding design in local government. As discussed in Section 4.2.2, while the use of a document-based research approach is not new in the field of design for policy research, what distinguishes this doctoral study is its utilization of document-based data spanning multiple years to track the evolution of design practices within government. Unlike ethnographic approaches, which may face limitations in collecting data from multiple years, this document-based approach proves valuable for researchers engaged in longitudinal studies aimed at understanding the development of design practices in government organizations.

7.3.2. Limitations

This doctoral study consists of two empirical studies. Each study had limitations due to the research method used.

The single-case study in the Municipality of Eindhoven was conducted through in-

terviews with organizational members engaged in design practices. This study was somewhat biased by the selection of its participants – relying on in-house designers and design sponsors to select the study participants was problematic. In addition, the study design, which involved interviewing those who are already engaged in design practices, may have created a more favourable view on the research phenomenon.

The multiple-case study in five local governments used public documents to collect data about events related to internal design practices over time. While data collection through documents was advantageous for collecting data covering many years in a short research time, it also had some limitations. Firstly, the documents released to the public by the government reported on results and achievements rather than processes and failures in government projects. For example, interviews in the study on the Municipality of Eindhoven revealed the concerns of in-house designers and the burden of project managers (e.g. time pressure) regarding design practices. In comparison, public documents in the study of five local governments did not reveal such tensions. This suggests that there might be insights and information undocumented in the public records. These could include experiences, struggles, and concerns of in-house designers and other stakeholders involved in design practices. Second, according to Kierkegaard (2009), the practice of open data by government organizations differs from country to country and from government to government. This suggests that many government documents may remain undisclosed, depending on the context of the country and organization. In addition, during the data collection in 2020, it was noticed that recent data had not been updated in the public database depending on the organization in question. In these respects, there is a possibility that the document-based research method may have missed important data in understanding the research phenomenon. Given these two limitations, for the future research, it would be ideal to combine document analysis with other research methods, such as interviews and surveys, to gain a richer understanding of human experiences and ensure a more comprehensive exploration.

Third, as explained in Section 4.2.2, the documents examined in each local government organization were selected through iterative keyword searches. However, the keyword search process had several limitations. The iterative search, which involved the discovery of new keywords, was conducted within each organization without specific criteria for determining the search duration or ensuring equal time investment across organizations. Consequently, this approach may have resulted in imbalanced data collection among the cases. Furthermore, the search primarily focused on design terms and keywords utilized by internal design units (or PSI labs). This approach may have excluded design practices that occurred beyond the purview of these design units, especially in

larger organizations such as the New York City Council, or design practices conducted without explicit usage of design-related terms. Nicolini (2010) suggested the possibility that as a new practice becomes routine within organizations, the specific terms used to refer to the practice could fade away. Given these limitations in the keyword search process for document analysis using public documents, future research in this domain may benefit from adopting a more systematic approach to document collection.

Lastly, this doctoral study investigated the research phenomenon of embedding design in local government in six local government organizations in four countries – the Netherlands, the United Kingdom, New Zealand, and the United States. These local governments are organizations located in each country's political and cultural system, and factors originating from these contexts may have influenced the research phenomenon. This doctoral study attempted to describe the context of each organization as much as possible, but there may have been limitations in the understanding of organizational contexts that influenced the phenomenon of embedding design. Aware of these limitations, researchers could consider strategies such as limiting the number of cases or dedicating ample time to investigate country contexts when conducting comparative studies across countries.

7.4. Recommendations

7.4.1. Recommendations for design for policy practice

Based on the findings from this doctoral study, some insights are shared here with professional designers and public organizational leaders engaged in design for policy practices.

First, introducing design practices in government needs a strategic approach. Building design capabilities in government means more than teaching design to public officers and doing projects with them. In particular, designers need to be positioned inside government so that they can engage in the design management of diffusing design practices, making sense of the value of design in the organizational context, and stabilizing design practices according to the organizational context over time. This is not only a task for in-government designers – it should also be shared with design sponsors and employees. However, as experts in the design discipline, the designers play an important role in sensing and fostering the government organizational change created by design practices.
Second, in-government designers need to understand how change takes place and

evolves in organizations in order to engage in design management. As we have seen in this doctoral study, organizational phenomena involve uncertainty but also have some repetitive patterns. When in-government designers understand the dynamics and patterns of organizational change, reflect on what is happening with design practices in their organizations, and compare with the known dynamics and patterns of organizational change, they can revise their strategies to achieve a greater impact with design practices in the organizations. Designers in local government can make use of the patterns in the process of embedding design revealed in this doctoral study for their reflexive practices.

Third, designers in the public sector need to understand the context of the public sector. Designers should be open to learning about the public sector or from policymakers. Mulgan (2014) once criticized that designers can hardly accept the idea that "they might have something to learn from policymakers" (p. 5). This includes knowledge ranging from basic understanding of public policy and public organizations to recent trends in the public sector. This knowledge will help designers make sense of, for example, how design practices generate synergies with existing or new policy tools such as the policy cycle and AI. The understanding of how design can be mixed with other practices in the policy context can increase the legitimacy of design practices as well as create more value in the public sector.

Lastly, professional designers and public organizational leaders should be aware of the role of civil society stakeholders in organizational change in government. In this doctoral study, we have seen some design practices in which civil society stakeholders are the partners of local governments. In Section 7.2.1, it was discussed how infrastructuring – the act of building infrastructures such as relationships, knowledge, and resources in stakeholders' networks – is connected to changes in local government. More attention should be paid to how to use the civil society stakeholders as agents of change influencing innovation in local governments.

7.4.2. Recommendations for education

As we have seen in this doctoral study, design practices can create various types of value in the public sector. The competencies that design education institutions need to build in students to produce public sector designers will not be all that different from what is proposed in the previous section, such as a strategic mindset and understanding of the public context and organizational dynamics. However, considering the reality of how public policy is made and implemented in the public sector, as we have seen in this

doctoral study, two ideas are proposed here to educate future policy designers.

The first idea has to do with the format of the semester. I have experience of teaching bachelor and master of design students in projects involving social and public sector innovation. What I have found from this experience was that a semester is too short for students to understand the complexity of societal problems and develop design intervention ideas. In particular, a semester provides little time for learning loops where students can try things out and get to know the systems relevant to the problems. The design process that these students experienced in a semester is far from the long-term design process required to deal with complex problems in the public sector, as addressed in this doctoral study. An alternative idea would be for students to work with local governments and relevant civil society stakeholders to address persistent local problems over an extended period of time, e.g. one to two years. In the long term, students will be able to interact with and learn alongside public officers and civil society stakeholders going through multiple learning loops. As the field of design expands into the realm of complex problems, the long-term format should be considered in design education.

Another idea is to provide design for policy education to students of different disciplines together rather than teaching design to policy students or teaching policy to design students. The latter approach would have value, but it is not very different from what we are doing in the public sector now – teaching design to policymakers and designers picking up policy knowledge. The tensions between the two different fields have been reported as a barrier to design practices in several studies. Teaching young college students to address societal problems in collaboration with peers from other disciplines may mitigate the tensions between different disciplines later in the field.

7.5. Epilogue

In the introduction, I mentioned that I started my Ph.D. with the following questions in mind: What are better ways to deal with societal problems? How can governments and civil society stakeholders collaborate better for social innovation? Now, having completed this doctoral journey, I can say with confidence that design is a viable approach for governments to better address societal problems in collaboration with civil society stakeholders.

This dissertation has shown how local governments in some countries are using design approaches to collaboratively tackle problems such as waste management, health,

social care, and safety with community stakeholders. While this doctoral study did not prove or measure the impact of these design practices on citizens' lives, it has unquestionably demonstrated that design approaches can help transform governments into more citizen-centred and collaborative ones.

However, there are many obstacles to making design a routine practice in governments. Apart from the difficulties of embedding design practices in government organizations explored in this book, long-term commitment and investment from various stakeholders across different sectors will be necessary, including educational institutions producing public sector designers, civil society organizations capable of co-designing with governments, and governments that are open to civic engagement.

In this regard, diffusing design as a routine practice in governments seems like a formidable mission, particularly in South Korea, where the field of design for policy has not yet fully developed. It is my hope that this book and my future career can be fruitful for that change.

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Appendices

1. Codes and themes list, 1st empirical study

Themes	Codes		Exemplary quotes	Ps
Experiments in the design city led to the decision to hire an in-house designer	Eindhoven as design city		Design has been in Eindhoven for six decades…. Phillips already founded the design academy Eindhoven in like sixty years ago…. We have a lot of designers in the city, so design has been in the city for much longer.	4
	Visionary leaders to use design for problems in the city		We made this book to become the World Design Capital in 2012…. But what the creating a caring society (slogan of Eindhoven when bidding for WDC) is exactly what we meant to do, to use design to tackle our own problems.	4
	Experiments with design		That was a time that we had a design program that was granted by the city council…. We were working on the societal challenges and how could designers, especially external designers, student designers, how can they help us solve it.	5
	Decision to hire an in-house designer	They saw the need	They (org. leaders) saw that they needed to develop the capacity	1
		Budget cut leading to hiring one designer	But that is really a budget problem. And what we hoped with [first in-house designer], which is still difficult because there are a lot of changes within the organization, but our hope is really to have a better snowball effect.	4
Three strategic activities to foster design practices	Communicating about design	Making design visible	She very often, uh, was presenting the idea of design thinking also within the municipality as just externally…. She almost was the personification, you know, the person of design thinking herself.	9
		Demonstrating value of design	I mean, there are results. Very good projects, especially those projects with multi stakeholders, multi-interest, projects that went completely broke down. And with another approach got back on track. I mean, these are very good examples to say, well, it's not only because we have to. She's good at it, but it also delivers results.	5
	Provide learning	Coaching than training	He heard of design thinking, but never worked with it. But he came to [first designer] and me to ask about it. And then he hired external designers.	2
		Limitations of trainings	I'm not giving many trainings anymore because we see that it works well to create an understanding of design thinking and different principles. But it doesn't help people to, they cannot transfer the learned stuff into their daily jobs.	2
	Connecting design to organisational needs	Anchor points	What they didn't take into account is where. So is it the spatial domain? Is it the social domain? Is it the people in the execution? Is it the managers? Who are actually the people that need to work with these tools? That's something. So by doing all this, this is how we found out, we kind of more made the connection with the problems of the organization.	1
		The anchor points not shared broadly	The thing that really [two in-house designers] and the other designers added is they are really good at creating really co-creation sessions. They are really good in facilitating them.	9
	Reflecting on and revising strategy	Ongoing reflections	During this whole process, we are continuously reflecting together with the designers to compare what is happening in the different projects...	2
		Insights from reflection	I think where design can do a lot is by, this is where the reframing usually starts in these kinsd of organizations and the projects that we were hired for were all in this (lower stages in hierarchy). So this is the top. This is the bottom. So this was going really well. So a lot of people on the, but it was not where the really big change is happening.	1
		Revising strategy	So we did after two years is that we stopped the whole, all this and we just took a couple of projects, three projects where we could really make a difference.	1
New design capabilities in the organization, but design	Increased awareness of design	Awareness of design before and after hiring designers	I guess what I meant by the pilot project then, it was something completely new. No one knew what design thinking was. And now I think almost everybody within the municipality knows about design thinking. They know it's a process. They know we have designers hired. So that's not a	10

practices are still "fragile"			pilot anymore. That's just a way of thinking that we sometimes use as a technique in our projects.	
		Design is an official function	And now we have we have kind of a design stronghold at one place. It's kind of an official function, the official position in the organization. And then you can you have a kind of a coordination point and oversee point and then you have something.	5
	Design recognized as a strategic practice	In-house designers involved in strategic project in recent months	something else I noticed the last few months is that we are working on a different level, like we're working with the management of the whole organization more. Or more in the, you have four great departments, and they have a management as well. So we're working in a higher level management level.	2
		Examples of design used in projects strategically important	we have some insights of how Eindhoven is developing and what are the big challenges in the future. But how can we use that by use those insights for also our partners? ... So we have to work together with different parties like also the companies here in the city. And we wanted to use the insights of that trends and stuff like that for the conversation with our partners. And then we asked for [a design firm] to help us with that by using design approach. Because from a design approach, you start with the user actually the stakeholders.	9
	Different design capabilities in organizational members	Understanding mindset vs. only using tools of design	one of the people we worked with, she actually facilitated quite some sessions. But every time they had to implement what she what they actually did, the stakeholders were not involved anymore. So they didn't really want to participate. It means that , OK, you applied, you did the post-it thing …	1
		Employees practicing design by themselves	I use some things in the way I look at things, I think. And sometimes when I have a session, I use techniques, for example, to reach my goal in a design kind of way. But it's not like I'm transformed into a designer.	7
		Design sponsors with understanding of design	supporting it is something different from not being against it. Supporting it is for me, it's also understanding the principles…. At least five of them (department heads) are really able to explain and to do that, our understanding and really able to explain, to sponsor it.	3
	Design practices are described as "fragile" by in-house designers	Fragile	it's in one way, good that they know where to find us but, in another way, it's really fragile.	2
		No structural support to design practices	It should be like a conscious choice, whether to go for a conventional subcontractor or whatever? .... there's a scarcity of time and money. And so there's always pressure on the deliverables to parties we would like to deliver. Then it feels like more easy to go for what you know already because it's like more comforting, and maybe you can be pretty sure of [and] expect what to get in the end.	6
Growing need for stakeholder collaboration drives design practices	Searching for new ways of working		We wanted to change the way we work in the municipality. So we work with people who live here. And how do we use each other's ideas and visions about how we can make the city work better? So we wanted to get the people in the city involved in what we do and how to do it…. all the things we tried didn't really work out. Uh, the alderman wasn't really satisfied with what we did…. And then I came about [first in-house designer] and, um, he said maybe we should try design approach to find a new way. And that made the Samenmaken - together we make community work. It was the project we started together then.	7
	Design is useful for stakeholder collaboration		When the problem is sometimes complex and there are many different kinds of people involved from different themes or policies or and the subject is at the same time, so sometimes quite abstract. So like it's about liveability, could be anything. And then it's it's really hard to get on the same page.	10
	Change in society requires us to change		I think it also has to do with changes in society. And that makes organizations need to change, too. And I think the design thinking helped us in achieving these new ways of approach. But I don't know whether the change wouldn't have been there if we didn't have the designers because it's also from a society wants us as a government to fit, uh, people the way we want to interact with, with municipality, for example.	7

2. Online data base addresses searched, 2nd empirical study

New York City Council

Council https://council.nyc.gov

Council meeting minutes https://legistar.council.nyc.gov/Calendar.aspx

Service Design Studio https://civicservicedesign.com

Blog of NYC Opportunity https://nycopportunity.medium.com

Auckland City Council

Council https://www.aucklandcouncil.govt.nz/Pages/default.aspx

Council meeting minutes https://infocouncil.aucklandcouncil.govt.nz

Co-Design Lab https://www.aucklandco-lab.nz

The Southern Initiative https://www.tsi.nz

Austin City Council

Council https://www.austintexas.gov

Council meeting minutes https://www.austintexas.gov/edims/search.cfm

Innovation Office https://cityofaustin.github.io/innovation/

Office of Design and Delivery (ODD) https://odd.austintexas.io

Blog of ODD https://medium.com/civiqueso

Cornwall County Council

Council https://www.cornwall.gov.uk

Council meeting minutes https://democracy.cornwall.gov.uk/ieDocSearch.aspx

Kent County Council

Council https://www.kent.gov.uk

Council meeting minutes https://democracy.kent.gov.uk/ieListMeetings.aspx?CId=113&Year=0

Social Innovation Lab Kent https://socialinnovation.typepad.com/silk

3. List of documents analysed, 2nd empirical study

Case 1: New York City Council

Doc. no.- Year of production	Document title	Type	Produced by
01-2017	Equity, Evidence & Innovation	NYC Opportunity annual report	NYC Opportunity
02-2017	NYC Opportunity News: The Launch of the Nation's First-Ever Municipal Service Design Studio Dedicated to Improving Services for Low- Income Residents	website post (NYC council)	Not specified
03-2017	Working with the Service Design Studio at the Mayor's Office for Economic Opportunity	website post (Civic Service Design Studio)	Not specified
04-2017	Get more help: procuring design services via the Design Master Contracts	website post (Civic Service Design Studio)	Not specified
05-2018	NYC Opportunity News: Mayor's Office for Economic Opportunity's "Designing for Opportunity" Initiative Announces Winner of First Agency Competition	website post (NYC council)	Not specified
06-2018	Approach to preventive services gets ACS some recognition	commentary, NYN Media	N/A (external source)
07-2019	Pathways to Prevention	website post (Civic Service Design Studio)	Not specified
08-2019	NYC Design Champion: Daniel Herrera	website post (Civic Service Design Studio)	Not specified
09-2019	Case Study: Envisioning a better shelter system for families	website post (Civic Service Design Studio)	Not specified
10-2020	Final report for the NYC Service Design Studio evaluation	PSI lab evaluation report	N/A (external source)
11-2021	NYCHA's Blueprint for Change: Transformation Plan	strategy report	Not specified
12-2021	Redesigned annual recertification portal opens for all NYCHA residents	employee bulletin article	Not specified
13-2017	Case study: HOME-STAT	website post (Civic Service Design Studio)	Not specified

Case 2: Auckland City Council

Doc. no.- Year of production	Document title	Type	Produced by
01-n.d.	No title	website post (The Auckland Co-design Lab)	Not specified
02-n.d.	Practice development	website post (The Auckland Co-design Lab)	Not specified
03-2012	Auckland Plan 2012	strategic report	Not specified (Foreword by Mayor)
04-2015	Community Development and Safety Committee OPEN AGENDA, 18 February 2015	Committee meeting material	Not specified
05-2015	Community Development and Safety Committee OPEN AGENDA, 5 August 2015	Committee meeting material	Not specified
06-2015	Empowered Communities Approach	strategic report	Not specified
07-2015	Council news: Empowering Auckland's communities	website post (Auckland Council)	Not specified

08-2016	Māngere-Ōtāhuhu Local Board OPEN MINUTES	meeting minutes	Māngere-Ōtāhuhu Local Board
09-2016	Working together to achieve whānau wellbeing in Waitematā	project report	Not specified
10-2017	I Am Auckland Status report 2017	project report	Not specified
11-2017	Co-design Experience	project report	Co-design Lab & The Southern Initiative
12-2018	Policy by design, exploring the intersection of design & policy in Aotearoa NZ: 7 case studies	symposium booklet	Auckland Co-design Lab, Community and Social Policy, Springboard Ideas, Policy by Design co-organisers
13-2019	Inclusive Auckland Framework	strategic report	Not specified (Foreword by Chief Executive)
14-2019	A Relational Approach	lab report	The Southern Initiative
15-2019	Learning in complex settings: A case study of enabling innovation in the public sector	project report	The Southern Initiative
16-2020	Level 4 Snapshot: early and emerging impressions from South and West Auckland	project report	Co-design Lab & The Southern Initiative
17-n.d.	Our work/ Tamariki Wellbeing/ Our philosophy: whānau-led, experimenting to learn, systems change	website post (The Southern Initiative)	Not specified
18-n.d.	Our work/ Tamariki Wellbeing/ Our work with partners	website post (The Southern Initiative)	Not specified
19-n.d.	Our work/ Tamariki Wellbeing	website post (The Southern Initiative)	Not specified
20-2020	Review of TSI 2020	PSI lab evaluation report by Ingrid Burkett and Cathy Boorman (The Yunus Centre at Griffith University)	N/A (External)

Case 3: Austin City Council

Doc. no.- Year of production	Document title	Type	Produced by
01-n.d.	What We're Doing/ Design, Technology, and Innovation Projects (HOST project)	website post (Innovation Office)	not specified
02- n.d.	Becoming an open and smart city, Technology, and Innovation Projects	website post (Innovation Office)	not specified
03-n.d.	City of Austin Office of Innovation (landing page)	website post (Innovation Office)	not specified
04-n.d.	About Us, Office of Design and Delivery	website post (Office of Design and Delivery)	not specified
05-2013	Austin Launching 'Office of Innovation' Later This Year, Radio station (Austin's NPR station)	Radio station broadcasting	N/A (External)
06-2016	What We're Doing/ Design, Technology, and Innovation Projects (Zero waste project)	website post (Innovation Office)	not specified
07-2016	no title (Zero Waste project)	project report	Austin Resource Recovery & Innovation Office
08A-n.d.	iTeams project/ About	website post	not specified

08B-n.d.	iTeams project/ Team	(City of Austin)	
08C-n.d.	iTeams project/ Homeless Advisory Group		
09-2016	Office of Innovation Timeline	website post (City of Austin)	Innovation Office
10-2016	Partnership Agreement, Prepared for Austin Resource Recovery	project related document	Technology, and Innovation Fellows
11-2018	5 Fundamentals for Designing an Agile Organization	blog post (Innovation Office)	Office of Design and Delivery
12-2018	Austin's Next Shot at Ending Homelessness	newspaper article, The Austin Chronicle	N/A (External)
13-2019	Move earth before planting seeds: How Austin's residents tilled the community garden permit process	blog post (Innovation Office)	Office of Design and Delivery
14-2019	Open Government Partnership Local Governments Program: 2019-2020 action plan	strategic report	Innovation Office

Case 4: Cornwall County Council

Doc. no.- Year of production	Document title	Type	Produced by
01-2010	Future Cornwall 2010-2030	strategy report	Not specified
02-2010	Big Society by Design - interim report	project/program report	Dott Cornwall
03-2010	Joining up the dotts	article in online magazine, Design Week (Oct.7)	N/A (external)
04-2011	Thinking Room mini book	brochure	Thinking Room
05-2012	Workforce development strategy 2012-2014	strategy report	Chief Executive's Directorate
06-2012	Embedding design in local government	slides for House of Lord	Chief Designer
07-2013	Final evaluation of Cornwall Works 50+	project/program report	Social Inclusion Manager
08- 2013	Cornwall and the Isles of Scilly: Expression of Interest to be a pioneer in integrated care and support	Expression of Interest	Not specified, foreword by Leader of Cornwall Council
09-2015	The case for Cornwall (draft version)	document for Cornwall (devolution) Deal	Not specified, foreword by Leader of Cornwall Council
10-2016	Safer Cornwall Kernow Salwa partnership plan 2016-2019	project/program report	Community Safety Intelligence Team
11-2016	Report to health and adult social care overview and scrutiny committee (24 February 2016)	report for committee	Devolution and Integration Lead
12-2017	One Vision: The partnership plan	project/program report	One Vision Team
13-2017	Home care and supportive lifestyles services stakeholder engagement and co- production report	project/program report	Adults Transformation and Commissioning Team
14- 2017	Working in partnership	site (Cornwall council)	Not specified
15- 2018	Commissioning toolkit	guidance booklet	Children, Schools and Families Directorate &

			Adult Social Care and Health Directorate
16-2019	Framework for Service Design	project/program report	One Vision Team
17-2019	Introduction to the Commissioning Toolkit	website post (Cornwall council)	Not specified
18-2019	Commissioning	website post (Cornwall council)	Not specified
19-2019	Safer Cornwall partnership plan 2019-2022	project/program report	Safer Cornwall Team
20-2020	Devolution within Cornwall	website post (Cornwall council)	Not specified

Case 5: Kent County Council

Doc. no.- Year of production	Document title	Type	Produced by
01-2008	The Social Innovation Lab for Kent: Starting with people	SILK brochure	SILK
02-2008	Accessing democracy: You can do it. Real politics for real people.	Strategic paper	select committee, KCC
03-2009	Gateway: Insight to Idea	Website post (SILK)	SILK
04-2009	People's lives as sources of innovation: the story of the Social Innovation Lab for Kent (SILK)	Website post (SILK)	Chief Executive of KCC & Founder of SILK
05-2010	Bold Steps for Radical Reform	Strategic paper	Not specified, foreword by Leader of KCC
06A-2011	Parkwood bulk buy	Project report	SILK
06B-2008	Just coping: A new perspective on low-income families	Project report	SILK
07-2013	Facing the Challenge: Whole-Council Transformation	Strategic paper	Leader of KCC
08-2014	Findings of the Commissioning Select Committee: "Better Outcomes, Changing Lives, Adding Social Value"	Strategic paper	select committee, KCC
09-2014	Kent Pioneer Programme - Profile	Project report	The Pioneer Team
10-2015	SILK Dementia Programme 2011-2015	Project report	SILK
11-2015	Lab Notes interview with Sophia Parker, founder of Social Innovation Lab for Kent	Website post (Nesta blog)	N/A(external source)
12-2016	HeadStart Kent Phase 3: Case for Investment	Project report	HeadStart Kent Team
13-2016	No title, subject: The Engagement Organisation Design and Development Division, directed to the Policy and Resources Cabinet Committee	committee meeting material	Cabinet Member for Corporate & Democratic Services
14-2018	Strategic and Corporate Services Directorate Business Plan (2018-19)	committee meeting material	Strategic and Corporate Services Directorate
15-2019	Forward Pulse #5	Organizational newsletter	N/A (external source)
16-2019	Kent County Council: The benefits of co-designing change	Website post (Local Government Association)	N/A (external source)
17-n.d.	Design and Learning Centre for Clinical and Social Innovation	Website post (KCC)	Not specified
18-n.d.	FAQ on SILK	Website post (SILK)	Not specified

4. Codes and themes list, 2nd empirical study

Themes	Codes		Exemplary excerpts	Documents	Case
Various narratives of why local governments started to embed design	Design as one of innovation methods of Innovation Office		What innovation process is needed? Lean six sigma? Design thinking? Social Innovation? Open innovation?	doc.09-2016	AUS
	SILK set up for people/citizen centred innovation (2007)		... through drawing upon cutting edge practice in the sectors of business, design and the social sciences, SILK set out to embed a way of working across the council that puts people – citizens – at the centre.	doc.01-2008	K
	Dott approach for public service transformation toward Big Society		We believe there are clear parallels in our work to the concept of Big Society.... We believe Design can make this process of transformational change both exciting and practical.	doc.02-2010	C
	To tackle New Zealand's most complex and persistent challenges		The Auckland Co-Design Lab has been set up to explore solutions to some of New Zealand's most complex and persistent challenges.	doc.04-2015	AUK
	Effective and accessible services for low-income families		... the nation's first-ever Service Design Studio and toolkit dedicated to making public services for low-income New Yorkers as effective and accessible as possible.	doc.02-2017	NY
Underlying two understandings on the value of design practices	Design for service improvement		Service design actively involves all stakeholders of a service—including and especially those who receive it—making it a highly collaborative approach. The process aims to fully capture how a service is delivered and used, identify opportunities for improvement, and explore and test potential solutions.	doc.02-2017	NY
	Design to deal with complex problems		There are lots of compelling reasons why empowering citizens and communities to innovate makes good sense. Set against a backdrop of escalating costs of socio-economic change, there is a growing sense that the problems of climate change, population growth, health and food security are too big to be tackled by governments alone and that they will require our collective creativity.	doc.02-2010	C
			Set up in January 2015 the Lab was established to develop fresh ideas in response to complex social issues. Our aim is to use co-design principles and practice to work with, better understand and empower the people closest to the issues.	doc.01-n.d.	AUK
	Ambiguity in the understanding	SILK for intractable problems	Our ambition was to create a Lab that did two things. First, it would run projects around some of our most intractable social problems, using a 'person-centred' approach and involving our citizens in the innovation process.	doc.04-2009	K
		for service design	Greater engagement with service users in the design and delivery of services to meet their actual rather than perceived need, thus helping to manage demand by reducing over-specification of services.	doc.07-2013	
Design for Service practices	In short term projects (1 yr or less)		Sep.2016-Feb.17	doc.07-2016	AUS
	Involving service users, service responsible staff, and sometimes subject experts		48 residents and 4 property managers and owners across the city.... ARR (Austin Resource Recovery) supplied subject matter experts	doc.07-2016	AUS
	Role of civic participants as informants		Over the past year, the Pathways to Prevention team worked hard to listen to, advocate for, and bring the voices of families and front-line staff into the process of designing and delivering the next generation of ACS Prevention services…	doc.07-2019	NY
	Project outcome	Service products	Deliverables will include: Design and testing plan[;] Extensive list of concepts generated[;] Testing protocols[;] Measurements and observations of behaviors after testing possible solutions	doc.06-2016	AUS

		Recommendations to hand over	The objectives of this retreat were two-fold: help all staff see the relevance of TIC (Trauma Informed Care) to their role and hand over our recommendations in a meaningful and actionable way.	doc.09-2019	NY
Design for Complexity practices	In multi-year projects (3-5 years)		2015-18	doc.15-2019	AUK
	Involving multi-sector stakeholders of different domains		TSI, Beacon Pathway, Turuki Healthcare and the Auckland and Waitemata District Health Boards, who brought a collective knowledge of health, housing, community, social work and design.	doc.15-2019	AUK
	Role of civic participants as partners		The process was led and held together by a multi-disciplinary co- design team from TSI, Beacon Pathway, Turuki Healthcare and the Auckland and Waitemata District Health Boards, who brought a collective knowledge of health, housing, community, social work and design.	doc.15-2019	AUK
	Project outcome: co-evolution of new relationships, problem understandings, and project development		"When we brought all the different departments together, that was really our aha moment…. The most important part was us recognizing who was spending what and how much and when. Internal departments were all spending dollars on important things, but not everyone knew who was doing what."	doc.12-2018	AUS
			The success of these Innovation Projects was not just in their delivery of activity but as a key part of the knowledge development process – identifying what works and how. The understanding generated from the initial round of projects during Phase One paved the way for the projects developed during subsequent years of delivery.	doc.07-2013	C
			The development and implementation of the programmes has led to new and deepened networks, partnerships and relationships amongst key organisations working in this sphere and has acted as a catalyst for new developments.	doc.07-2013	C
What types of design practices are implemented is influenced not by the complexity in project brief	Project brief explicitly about service problems		NYCHA implemented a new online recertification process in 2017. Since then, there have been multiple resident and employee complaints about the system. Both residents and employees find the system difficult to navigate, often leading to miscalculations of rent…. In January 2020, NYCHA initiated a project with the Service Design Studio (SDS) from the Mayor's Office of Economic Opportunity. The SDS scope of work was focused on how both residents and employees could be successful with this process.	doc.11-2021	NY
	Project brief seemingly complex problems but with design for service practices		the Service Design Studio set out to explore how applying a perspective rooted in Trauma-Informed Care (TIC) might influence shelter-related policies and practices.	doc.09-2019	NY
Not all projectss fit into the two types of design practices	Community-led design process but short term project	community-led design process	whānau wellbeing in Waitematā project focused on community-led and owned initiatives and how we could support this through mutually-reinforcing activities.	doc.09-2016	AUK
		short term	We developed a novel temporary project and team structure to support this project, and work within our geographical, time and resource constraints. • Five months between June - November 2016.		
Design for systemic change emerged over time	Aim of systemic change		All the partners to the Plan are agreed that the 'One Vision' Children and Young People's Transformation Plan 2017 – 2020 will require a whole system change programme, led collaboratively and increasingly subject to an existing, multi-agency governance process.	doc.13-2017	C
	Intentional approach of setting up infrastructures	Multi-level plan	the work undertaken in Tamariki Wellbeing not only starts to address some of the fundamental challenges whānau and community face in helping their children thrive, it also reflects and	doc.20-2020	AUK

			creates conditions for approaches further upstream …. TSI seeks to progress better livelihoods, growing whānau and community wealth and thereby redistributing economic power, which in turn enables whānau and Tamariki to thrive …. the development of a 'Theory of Transformation' at the level of TSI might help to articulate the intersection between the levels in which TSI is engaging, the various programs and projects and the transformational agenda held by TSI and their partners as a whole.		
		Strong networks of stakeholders	The goal is engagement and ownership at this stage so that work can start on Phase 2 from a common starting point. The Plan sets out the principles and the approach partner organisations have agreed, for the development and implementation of the 'One Vision' Children and Young People's Transformation Plan 2017 - 2020	doc.12-2017	C
		Set-up to support learning of stakeholders	The evaluative framework that has been developed and is still being developed by TSI - Niho Taniwha … Niho Taniwha is a developing evaluative learning framework supported by an evolving set of tools. Niho Taniwha reflects a deep commitment to cultivating a culture of 'learning in complexity' within and across TSI by embedding evaluative mindsets and activities within (rather than separate to) all levels of TSI's innovation activities to scaffold and amplify transformation.	doc.20-2020	AUK
	In contrast to organic development in design for complexity practices		... there has been a change in focus away from seeing these Innovation Projects as individual, standalone projects towards seeing them as an overall programme of activity. Indeed the models of activity that have emerged through the Innovation Projects have shown evidence of linking together, providing a greater sense of joined up activity across the 50+ agenda. In addition, a number of the initial Innovation Projects funded during Phase One have received additional 50+ grant funding to expand and grow: the small have had more investment to become a little bigger.	doc.07-2013	C
Pragmatic, moral, and cognitive legitimacies of design practices in local governments	Pragmatic legitimacy: design proved useful through experimentation period		In 2014, NYC Opportunity began hiring designers to work on initiatives including ACCESS NYC, Growing Up NYC, Queensbridge Connected, and HOME-STAT. Collectively, these initiatives demonstrate the value of using human-centered design methodology to inform services.	doc.02-2017	NY
	Moral legitimacy: design had been described as community-empowering and inclusive practice	Mayor proposed empowered communities approach including co-design	Under the Long Term Plan 2015-2025, the Mayor's proposal challenged Auckland Council to develop and apply a more empowered communities approach to its work. To do this well, it is critical that a council-wide approach to empowered communities is embraced that highlights the importance of being an enabling council…. An empowered community is one where individuals, whanau and communities have the power and ability to influence decisions, take action and make change happen in their lives and communities…. Work with local boards to deliver Local Board Plans using a more empowered communities approach for initiatives such as co-design and delivery, community placemaking, asset transfer and social enterprise	doc.06-2015	AUK
		Co-design shifting power dynamics with indigenous community	For some whānau and frontline workers the co-design process represented a profound shift in power dynamics creating an opportunity to be heard, exercise expertise and work more closely and on even footing with other stakeholders, policy makers and contract managers.	doc.15-2019	

	Cognitive legitimacy of design is likely to be established as a necessary practice for public service transformation	Public service transformation is needed because of financial crisis	Local authorities have been well aware of the need for radical change in regard to how services are delivered for some time – the challenges of an aging population, increased personalisation and rising customer expectations have been at the forefront of the sector's thinking. The financial crisis only provides a new spur to push the transformation agenda further, faster and deeper.	doc.05-2010	K
		Co-design had been described as part of the public service transformation over time	Where once services were designed by professionals in order to support an ethos rather than individual need, the future will be focussed around the co-design of local services by individual users.	doc.05-2010	K
			There is an increasingly complex commissioning environment with challenges and opportunities for commissioners and providers … Complex commissioning seeks to create integrated services that are co-designed with service users and take a more collaborative approach.	doc.08-2014	K
			Strategic and Corporate Services Directorate Priorities 2018-19 … 9. Delivering … change programmes to provide a platform for service transformation, embedding cultural change and co-design principles into our new delivery models including the Strategic Commissioning operating model…	doc.14-2018	K
New processes and structures emerged over time to support collaboration with internal and external stakeholders	To gain a traction for design practices		The Government x Design Master Contracts (GxD) is a new procurement tool for hiring and working with outside design firms. The Department of Information Technology and Telecommunication (DoITT) and the Mayor's Office are developing the contracts, which will allow City agencies to more easily create and deliver effective, efficient, and equitable public services.	doc. 04-2017	NY
	To support collaboration with internal stakeholders		Lessons learned from building, iterating, and scaling the City of Austin's capacity for design, technology, and innovation … With this flexible structure, we also introduced a new type of manager position at the city — a "Practices Lead" who can provide technical guidance, mentorship, and career direction for employees within a given discipline (for example, content strategy), but doesn't necessarily work in the same department in which the employee is completing a project….	doc.11-2018	AUS
	To support the collaboration with external stakeholders	New ways of commissioning that supports co-design and systems thinking	The Commissioning Toolkit is designed to support: -Away from silos and towards whole system thinking -Moving away from competition and towards collaboration -Place based approaches -Co-design and co-production -Including service users and lived experience in design and delivery	doc.15-2018	C
		TSI and Council as a networked organization	Effectively TSI, as a unit inside Auckland Council engage in what Kotter refers to as a 'dual operating system' (2012), where the networked structure [of TSI] can effectively focus on rapid and transformational change agendas, and the traditional hierarchy [of Council] it sits within and alongside can manage the day-to-day structured activities with efficiency, predictability and effectiveness.	doc.20-2020	AUK

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It's been a long journey. The doctoral process was an intellectual and mental battle. There are many people to whom I am grateful for this fight. First and foremost, I would like to thank my family and friends, who encouraged me to take on this new challenge at a late stage in life. Mom, dad, sister, brother, and auntie thank you for silently supporting me through this arduous journey. To my friends who listened to my complaints from the time I applied for the PhD - Jean, Eunhye, Hyewon, Sooyoung, Hyunjin-Lawrence family (including Namoo), Hyeyoon, my ex-boss at CAN, Saeco, and Hyunsoon - your moments of encouragement and chats were of great help for my mental health. I am also grateful to my only friends in The Hague, Makiko and Ken, for making my life in the Netherlands less lonely.

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When I started my PhD, I didn't fully grasp what it meant to be a researcher. I am still more interested in being a change-maker based on research than a pure researcher. I hope to continue the relationships with the people I met in Delft in my ongoing journey as a researcher and change-maker.

About the author

Ahmee Kim was born in Seoul, South Korea, in 1980. She completed her undergraduate studies at Ewha Womans University, majoring in Environmental Design. Afterward, she worked in the field for a year before deciding to further her education by enrolling in the Master's program in Interior and Living Design at the Domus Academy in Italy. Following the completion of her study in Italy, she joined Studio 63, an interior and architectural firm specializing in fashion retail spaces. Upon her return to Korea, she worked as an architectural lighting designer at Bitzro and Partners. In 2010, drawing on her architectural design experience, she co-founded a design studio, Ellfo Design, with a partner, focusing on creating residential and retail designs for small business owners.

In 2014-15, her career underwent a significant transformation when she was inspired by clients in the non-profit sector. This newfound passion led her to explore design-driven social innovation. She worked in a social enterprise, CAN Foundation, for two years and discovered the impact design-led approaches could have on the public and social sectors. This experience led her to begin her doctoral study to further explore the design practice for social and public sector innovation.

Publications by the author

Kim, A., van der Bijl-Brouwer, M., Mulder, I., & Lloyd, P. (2023). Empowering change: Infrastructuring as a vital design management strategy in local government. (In progress)

Kim, A., van der Bijl-Brouwer, M., Mulder, I., & Lloyd, P. (2023). A multiple-case study on the stabilization of design practices in local government. (In progress)

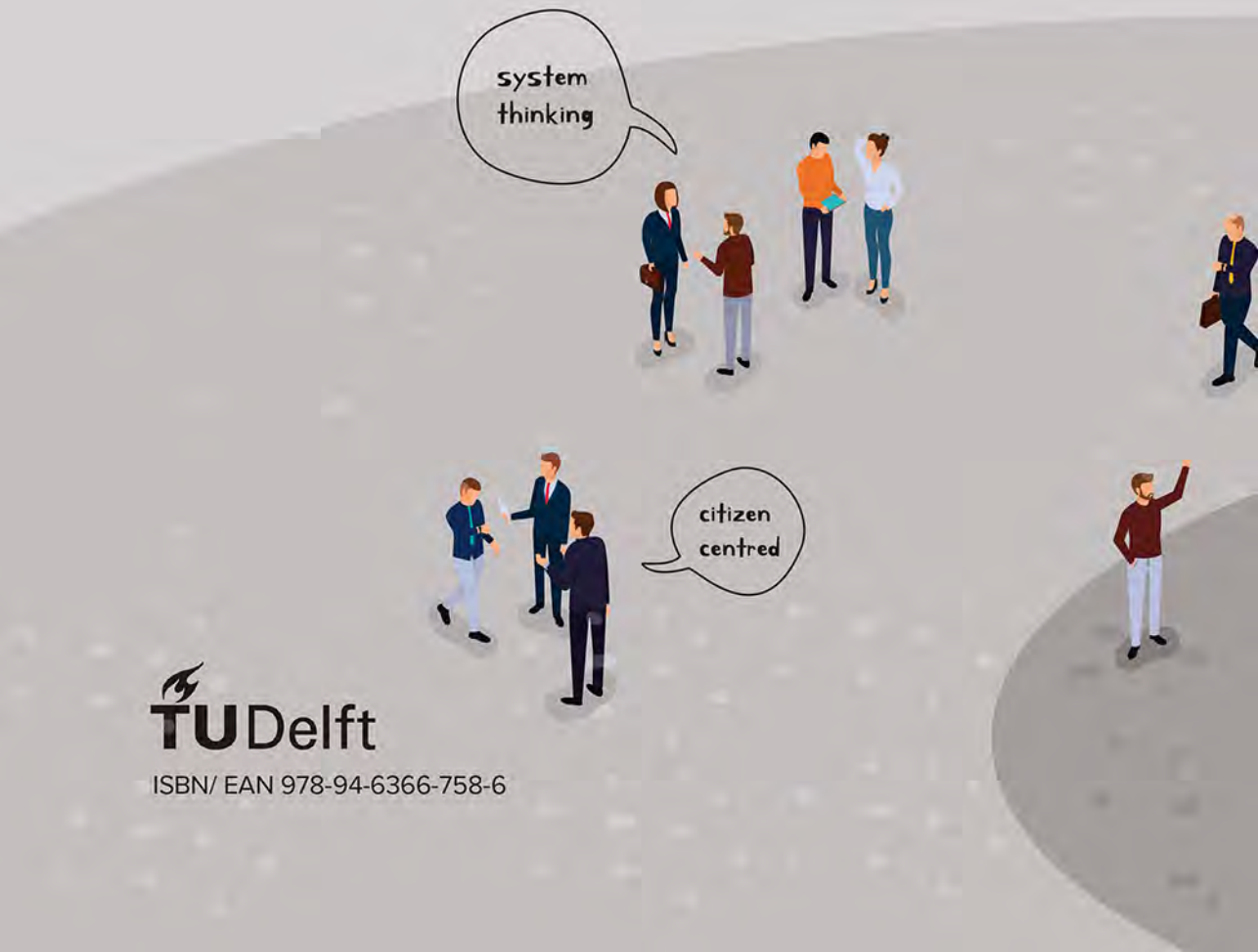
Kim, A. (2023). A multiple-case study on the evolution of design practices in local governments [paper presentation]. *IPPA - International Conference on Public Policy 6.* 27-29 June, Toronto Metropolitan University.

Kim, A., van der Bijl Brouwer, M., Mulder, I., & Lloyd, P. (2022). A study on strategic activities to foster design practices in a local government organization. in Lockton, D., Lenzi, S., Hekkert, P., Oak, A., Sádaba, J., Lloyd, P. (eds.), *DRS2022: Bilbao,* 25 June - 3 July, Bilbao, Spain. https://doi.org/10.21606/drs.2022.528

Kim, A., van der Bijl Brouwer, M., Mulder, I., & Lloyd, P. (2022). A document-based method to study the evolution of design practices in public organisations. in Bruyns, G., Wei, H. (eds) *[ ] With Design: Reinventing Design Modes. IASDR 2021.* Springer, Singapore. https://doi.org/10.1007/978-981-19-4472-7_195

Kim, A., & van der Bijl-Brower, M. (2019). Understanding the current practice of e design in government. *Conference Proceedings of the Academy for Design Innovation Management (pp.1035-1044).* London: The Academy for Design Innovation Management. https://doi.org/10.33114/adim.2019.01.301

Design approaches are increasingly being employed by governments worldwide to address public service and policy issues. This book explores the evolution of these design practices within the context of local government, shedding light on the value they can create and how they become stabilized in six different local government organizations.



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