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[A Doctoral Thesis]

EMBEDDING DESIGN IN LOCAL GOVERNMENT

Role of designers and public servants

By Inbo Kang

March 2021

EMBEDDING DESIGN IN LOCAL GOVERNMENT:
Role of designers and public servants

By

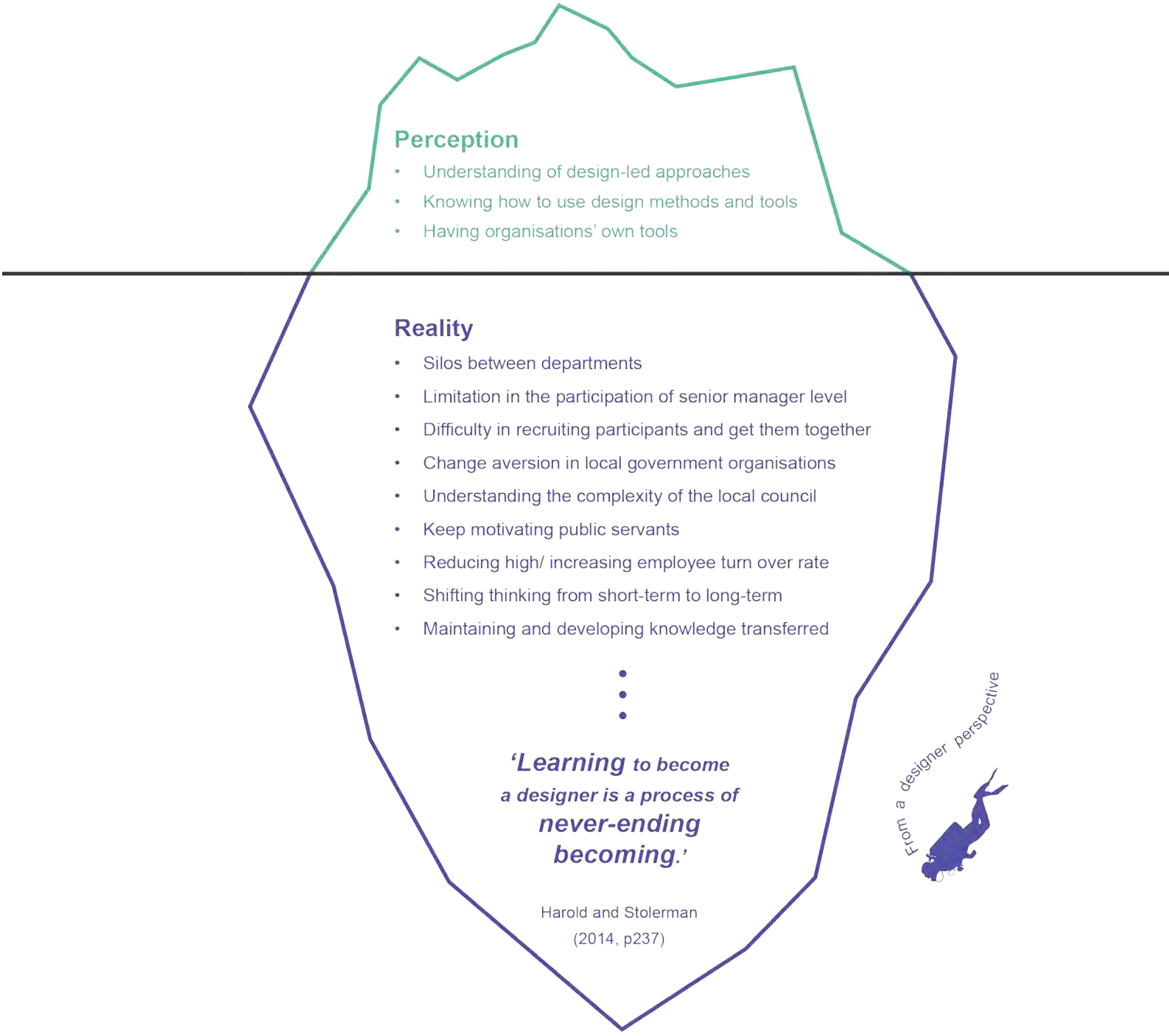
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Embedding design in local governent



ABSTRACT

Over the past decades in the private and public sector, value co-creation with users has emerged as a key to the success of products and services. Since the Design of the Time (DOTT) project launched in 2005 to improve public service under New Labour (1997–2010) in the UK, user-centred design has gained more traction as a strategic approach to public service reform. Moreover, it has recently been considered as a useful organisational capability to address challenges, so-called 'wicked problems', such as an ageing population, changing technologies, and growing demands for better services from citizens under austerity. Despite the growing attention to building design capability as an approach to service innovation and an enabler for change within local governments, there is a lack of understanding of how it is embedded as an organisational capability considering their unique contextual factors: political, structural, cultural, and economic aspects. Moreover, there has been relatively less attention paid towards the role of designers and public servants even though they are the main actors applying and building design capability. To explore this gap, a mix-method approach including preliminary survey and multiple case study was used to maximise data collection. The multiple case study examines the different journeys of four local councils in England towards embedding design as part of their service innovation and organisational transformation strategies in response to change, and the data is analysed and interpreted with a thematic analysis method. This thesis makes theoretical and practical contributions in the fields of design for local government innovation and organisational change. First, it proposes a conceptual framework as a structure and guide to identify and organise the elements of local government design capability as a combination of individual and organisational design competences. Second, it identifies the reasons for embedding design capability in local governments. Third, it also identifies challenges, necessary and desirable conditions which affect the application and embeddedness of design in the local government context. Fourth, it also articulates the roles of designers and public servants as main actors of applying design approaches and embedding design capability as part of organisational capabilities. By developing the understanding of user-centred design approaches to collaborative service innovations and organisational change in local government, this thesis not only provides a foundation for future research in the area of design for public sector change and innovation, but also induces other fields of study on this area to engage in the conversations.

Keywords: Design capability, Embedding design capability, Local government, Organisational change, Roles of designers, Roles of public servant

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ABBREVIATION

AEF	Aggregate External Finance
BRRS	Business Rates Retention Scheme
CAQDAS	Computer-Assisted Qualitative Data Analysis Software
DDM	Double Diamond Model
DIM	Design Intervention Model
DMSM	Design Management Staircase Model
DOTT	Design of the Time
DSG	Dedicated School Grant
EDII	European Design Innovation Initiative
GDS	Government Digital Service
HCM	Holistic Competence Model
ICT	Internet Communication Technology
LGA	Local Government Association
LGFS	Local Government Financial Statistics
LSSG	Local Services Support Grant
MHCLG	Ministry of Housing, Communities and Local Government
	(formerly Department for Communities and Local Government)
NPG	New Public Governance
NPM	New Public Management
PD	Participatory Design
ROD	Research Onion Diagram
RSG	Revenue Support Grant
SEE	Sharing Experience Europe
SME	Small and Medium-Sized Enterprise
SMF	Social Market Foundation
UX	User Experience

GLOSSARY

Double Diamond Model (DDM)

Double Diamond Model is a design process model having four phases - Discover, Define, Develop, and Deliver - developed by the British Design Council for designers and people who want to apply design approaches in order to systematise and generalise a range of design processes and methodologies for the development of ideas for products and services from a user-centred perspective.

Design Intervention Model (DIM)

In this thesis, Design Intervention Model represents different types of designer involvement in service development or organisation transformation projects. In other words, it means how design was employed and how designers were situated within the local government settings. Four recurring distinct ways of applying a design approach and embedding design capability were identified in this study depending on the position of design (a designer or a group of designers) in the organisation: Non-Designer; External Designer; Internal/External Designer; Embedded Designer.

Holistic Competence Model (HCM)

The Holistic Competence Model is a generic framework developed by Le Deist and Winterton (2005) building on the Model of Professional Competence which had been developed by Cheetham and Chivers (1996) in an attempt to develop a consistent and coherent typology of competence to assess professional job performance in the human resource management field. Le Deist and Winterton found it useful to have a holistic typology in understanding the combination of knowledge, skills and social competences that are necessary for particular occupations.

PROLOGUE: RESEARCH MOTIVATION

When I first went into design, I was an idealist and had a strong belief in design's power for good. Maybe the prevalent stereotypes about what designers do – creating ingenious and inspired things that attract customers – were created by the designers themselves who, like me, had a lack of awareness of the more complex impacts that design might have. However, my experience in the design industry and in the world of academia has changed the way I think about design and my belief in what I can and should do as a designer. The power of design is such that designers must consider both the impact and the implications of what they design. I now take a much more nuanced approach to the complexities of design. I now believe that design should not only be used commercially to develop products or services that few can afford, but that the power of design and design expertise must be considered in actual use and harnessed for the public good. I believe that an appropriate use of the power of design results from an awareness of the value of design and proper training in design theory and practice.

In the early 2000s, in my country, South Korea, design attracted the attention not only of private companies, but also of the public sector. This growing interest in designing public spaces, which lasted for about 10 years, was the case that clearly demonstrated the two-sided nature of the power of design. The emerging movement did raise awareness of the importance of design within industry and wider society. It also contributed to the improvement of many towns and cities in South Korea by allowing local governments to set up their own integrated design identity and apply it more consistently to their street furniture and equipment. However, on the other hand, it increased the number of problematic projects, which were the result of the undiscriminating use of design by those who applied design merely as a means of promoting their own achievements with little or no preliminary research or deliberation. In those days, design outcomes were often used as a quick way for politicians to show their constituents what they had done for an area during their period in office. Ambitious design projects may well benefit users, customers or citizens, but it remains true that misuse or abuse of design can result in irreversible disaster and it is this risk that must always be the primary concern for designers.

"There is the risk that too little knowledge can be dangerous, or that if the level of commitment is not serious enough, misappropriation of design approaches can lead to disastrous outcomes and a backlash" (Meyer, 2011, p217)

Over the last few years, in the face of emerging complex challenges, design – design approaches to business and organisational innovation, particularly in service design and design thinking – has again

attracted growing attention from private and public sector organisations internationally. Because of their creative, collaborative and democratic nature, design approaches are widely considered to be alternative ways to innovate services or organisations compared to the traditional top-down and waterfall ways of working. I would argue strongly that in these current trends there is the possibility of the misuse of design. This is because design approaches to service and organisational innovation are frequently applied in public sector organisations without the participation of designers or key stakeholders. The implications of any change in services, especially public services and their systems, are considerable and the costs of failure are immense. Therefore, it is important to understand how to use the design approaches appropriately and the ramifications of their application within and for public sector organisations. Moreover, it is crucial not only to distribute relevant design methods and tools, but also to develop a design mindset in people from the organisations and train them how to apply design approaches more effectively to their organisations depending on their own unique context. It is also imperative for a design community to create successful cases based on a better understanding of the unique context of public sector organisations and how to apply design approaches in that context.

"We need to fear the consequences of our work more than we love the cleverness of our ideas"
(Monteiro, 2017, para. 6)

Through my experience as a product designer and mainly as a design strategist in a design consultancy, I perceived that design approaches to problem solving and the way designers work can be of use in multiple ways to any organisation in addressing the problems or challenges they face. However, as I pointed out above, misuse or abuse of design with little knowledge or low levels of commitment can lead to disastrous consequences. In this sense, I used to doubt the outcome and effectiveness of design work by non-designers. This is because I, as a designer who had worked many years to become a better designer, believed that design is an exclusive discipline involving professional skill sets, knowledge sets and a certain 'design' mindset that takes time to develop. I think I had a 'victim mentality' or had a 'sense of danger' about design professionalism that came from a feeling that there were 'dangers' inherent in the popularisation of design. However, the more I learn about the nature of design and its core process in the course of design research and practice, the more I see the interdisciplinary features of design projects and understand its inclusive nature. Moreover, I have recognised that the boundaries of design disciplines and the barriers between design domains have fallen down as newly emerging complex issues require integrated solutions, which are built by a multidisciplinary team rather than as fragments generated by an exclusive team. The need for collaborative and open innovation has become obvious as industry and our society become increasingly complex with the development of digital, and Internet and information and

communication technology. I, therefore, now acknowledge and welcome the necessity of the active use of design by non-designers.

> "Design is the intentional solution to a problem within a set of constraints. To know whether you are properly solving those problems you need to meet the people who are having them"
>
> (Monteiro, 2017, para. 13)

Furthermore, I believe that this new phenomenon, the prevalence of design and the growing application of design by non-designers within public sector organisations, will not actually replace or endanger the job of designers, but would rather increase the need for professional designers. This is because the growing attention to the need of design in organisations will provide new opportunities to the design industry. Therefore, it is important to know what we, as designers, can do and cannot do to help government organisations to innovate because design is not a panacea or a silver bullet, and designers are not magicians or alchemists. I, as one of the designers, want to better understand what designers and public servants can do to maximise the benefits of design to innovate public services and how public servants' ability to use design approaches can be effectively developed in order for them to play a key role in applying and embedding design capability within and for organisations as partners of designers, especially in the local government context.

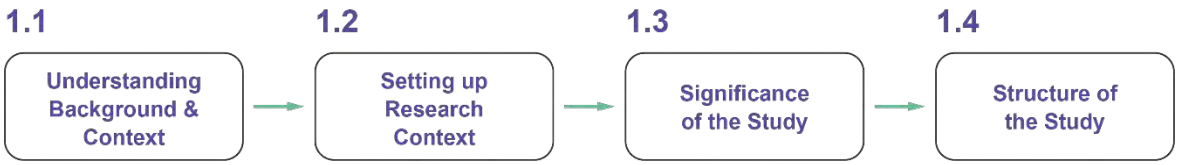
YOUR DESIGN
CAN

GIVE
LIFE

TAKE
LIFE



CHAPTER - 1 INTRODUCTION



1.1 Understanding Background and Context

The main aims of this chapter are to lay out the interdisciplinary nature of this study and briefly explore the different areas of literature – Design, Innovation, Organisational studies and Public management – which inform this thesis in order to provide a clear context and to position this study within it. However, rather than delving into each area to show their schools of thought or intellectual accumulations, the researcher tries to build a research background and context that link the causes of paradigm shifts in public management and governance, the need of innovation in the public sector and the emergence of design as an approach in the public sector.

1.1.1 The Changing Paradigm of Public Management and Governance

Over time, the dependence of governments on societal actors to achieve their goals has increased due to the growing complexity of the challenges they face (Klijn, 2012). This changing environment has required governments to change their roles. The trajectory of the evolution of public management and governance covered three paradigms; each paradigm had distinct features including main needs and problems, key concepts and actors.

Hartley (2005) organised and described the distinct features of the three different types of paradigm of governance and public management (see Table 1-1) based on the work outlined by Benington and Hartley in 2001. Public sector innovation has evolved in accordance with the overall path of changes in public management since the 1970s (Bason, 2010b). An exploration of public sector innovation from a historical perspective in line with changes in paradigm in public management and governance will be of help as issues around innovations in a different time and context are crucial sources for public sector innovations. Moreover, comparing the changes of every element in each paradigm and understanding differences between them will help comprehension of the changing nature and context

of innovation in the public sector, and identify challenges and opportunities for design in fostering innovations.

	Traditional public administration	New Public Management	New Public Governance (Networked governance)
Time	Post-war period ~ early 1980s	1980s ~ 1990s	1990s~ current
	All three conceptions still thrive (Bason, 2010b)		
Context	Stable	Competitive	Continuously changing
Population	Homogeneous	Atomized	Diverse
Needs/ Problems	Straightforward, defined by professionals	Wants, expressed through the market	Complex, volatile and prone to risk
Strategy	State and producer centred	Market and customer centred	Shaped by civil society
Governance through actors	Hierarchies Public servants	Markets Purchasers and providers Clients and contractors	Networks and partnerships Civic leadership
Key concepts	Public goods	Public choice	Public value
Innovation	Some large-scale, national and universal innovations	Innovations in organizational form more than content	Innovation at both central and local levels
Improvement	Large step-change improvements initially, but less capability for continuous improvement	Improvements in managerial processes and systems. Customer focus produces quality improvements in some services	Aiming for both transformational and continuous improvement in front-line services
Role of policymakers	Commanders	Announcers/ commissioners	Leaders and interpreters
Role of public managers	'Clerks and martyrs'	Efficiency and market maximisers	'Explorers'
Role of the population	Clients	Customers	Co-producers

Table 1-1 Changing ideological conceptions of governance and public management and innovation. Adapted from Bason (2010), Benington and Hartley (2001), Hartley (2005)

The traditional public administration paradigm pervaded governance and public management from the post-war period to the early 1980s. It is producer-centred strategic approach in which the needs and problems in relation to public service provisions are defined by service providers (Hartley, 2005). This paradigm is characterised as legal, bureaucratic and hierarchical because it is the period in which large-scale innovations were widely performed by government that had power and authority through

a rule-based approach (Hartley, 2005; Villanueva, 2015). Politicians as policymakers creating legislation played a key role in fostering innovation as if they were 'commanders' (Hartley, 2005). Public managers were described as 'clerks' or 'martyrs' who passively worked just to implement political decisions, whereas the public were considered 'homogeneous clients' (Hartley, 2005).

New Public Management (NPM) arose in the 1980s and developed up to the early 2000s in order to deal with the problems of modern public administration, such as over-regulation, inefficiencies and risk aversions (León, Simmonds, & Roman, 2012; Villanueva, 2015). NPM started as a political movement and became a subject of academic study; NPM focuses mainly on the development of organisational forms and business processes that put market and customers at the centre of management in order to overcome monopolies and increase efficiency (Hartley, 2005; León et al., 2012). In NPM, the role of politicians was changed to 'commissioners' of services or 'announcers' of change, whereas the role of public managers evolved into efficiency and market maximisers. Public managers improved the quality of service delivery for the public who were viewed as customers who have their own voices and express them (Hartley, 2005).

Newman (2001), in her book *Modernizing Governance: New Labour, Policy and Society*, stated that a type of networked governance, called New Public Governance (NPG), appeared as a new form of governance in 1997 as an alternative to state-centred and market-centred governance (Hartley, 2005). In the NPG paradigm, policymakers are required to take strong leadership to turn new ideas into actions, whereas public managers should become explorers to find public value and support organisations to build innovative and collaborative environments that enable value co-creation with citizens (Bason, 2012; Hartley, 2005; Sangiorgi, 2015).

1.1.2 The Increasing Importance of Innovation and Change in the Public Sector

Innovation has recently become a buzzword in the contemporary business world, since it is considered the key to success, helping private companies to develop their competitive edge by reducing costs, improving products or services, and expanding their markets (Cruickshank, 2014; Sørensen & Torfing, 2012). The changing contexts of society, such as the financial and economic crisis, changing technologies, and increasing social stratification and polarisation have also increased the need to develop strategic approaches to innovation in the public sector (Albury, 2005; Carstensen & Bason, 2012; Sørensen & Torfing, 2012).

According to Potts and Kastelle (2010), the public sector refers to the coordination, production and delivery of goods and services by publicly owned and accountable organisations. The economic output of the public sector includes education, health, social welfare and the provision of public goods that are not from the household or private sector. There are numerous shadings here, such as

public–private partnerships or institutions and services that underpin private markets, (e.g., legal systems and national innovation systems). The public sector thus refers to the civil service and public administration, which are funded by public revenues (i.e., taxes); the civil service and public administration are tasked with the coordination and delivery of policy mandates, a significant proportion of which are legacy policies.

1.1.2.1 What is public service innovation?

Although they use the same language in the course of the process and there are some similarities in the use of design tools and methods, there are clear differences between private and public sector innovation when it comes to the ultimate goal of bringing design into their organisations. Unlike in private sector organisations, in which innovation has been widely recognised as a strategy to achieve a competitive edge in the market, public sector innovation is usually not driven by an intention to achieve competitive advantages because, in the monopolistic context of the public sector, competition between organisations has generally been considered unnecessary (Potts & Kastelle, 2010). Moreover, unlike private sector organisations that require innovation to maintain their competitive edge and to survive, public sector organisations have an inherent resistance to change and innovation. This resistance often blocks attempts to break down walls not only between internal and external teams, but also between internal departments (Schaminée, 2018). Therefore, it is important to be aware of and understand the contextual differences between public and private sector organisations, while examining factors that influence innovation in the public sector. However, public sector innovation, particularly local government innovation, is relatively ill understood and has not been studied well in academia compared to private sector innovation.

Unlike private sector innovation that has been basically propelled by the purpose of profit maximisation, public sector innovation is fundamentally related to improving people's wellbeing and maximising efficiency (Bloch, Jørgensen, Norn, & Vad, 2009; Potts & Kastelle, 2010). Therefore, innovation in the public sector can be defined as the development of activities and practices that enhance understanding and solve social and economic challenges by meeting the needs of their targets (citizens and businesses) in order to provide better value for tax payers (Bloch et al., 2009). Thus, it is important to build organisational capability to enhance public sector's capacity for innovation to enable constant and systematic innovation in all public sector organisations (Sørensen & Torfing, 2012).

1.1.2.2 Challenges and barriers to change and innovation in the public sector

Unlike private companies that are able to use venture capital provided by investors who want a high reward in return for taking high risk, public sector organisations are mainly funded by government money. Therefore, there are many real risks attendant on implementing innovation in public sector

organisations because of their complex and sensitive environments, including various hurdles such as the legislative system, institutional autonomy, the culture of risk aversion and the skills and attitudes of public servants (León et al., 2012; Potts & Kastelle, 2010). In addition, apart from the lack of proper rewards for successful innovations and the lack of effort to foster innovations, the price of 'failure' is high because the opposition parties and the press are normally eager to find faults and reveal them (Borins, 2001); this has led to a culture of risk aversion. Public sector organisations are often unwilling to undertake experiments that involve taking a risk because they fear criticism of innovation failure by media and opposition parties, although it is true that innovation often occurs through trial and error (Potts & Kastelle, 2010). Therefore, it is important to strategically change this timid organisational culture, to build a supportive culture and a capability to effectively and quickly correct the errors, and to learn from them through systemic changes in order to facilitate innovations on a large scale (Borins, 2001). Requiring better services with less money is a strong reason for innovation in the public sector.

There is evidence of the growing need for innovation in the public sector: 1) a growing number of ministerial innovation units or innovation labs within public organisations such as Innovation Lab, Government Digital Service (GDS) in the UK Cabinet Office and Social Innovation Lab Kent (Bason, 2016; Design Commission, 2014; McNabola et al., 2013); 2) a growing number of white papers on innovation in public sector organisations (Osborne & Brown, 2011); and 3) an increase in training programmes aiming to build the innovation capability of public servants (Sørensen & Torfing, 2012). Three main factors drive the growing interest and focus on public sector innovation and change. Firstly, increasingly complex and demanding challenges, so called 'wicked problems', such as an ageing population, climate change and poverty (Sørensen & Torfing, 2012). Secondly, increasing expectations and demands for better services from citizens (Baek, Manzini, & Rizzo, 2010) who, as service users and taxpayers, continually press public sector organisations to provide better services at lower cost (Albury, 2011; Design Commission, 2014; Thorpe, Prendiville, & Oliver, 2016). Thirdly, globalisation encourages central and local government organisations to competitively pursue innovation (Sørensen & Torfing, 2012). Therefore, it has become essential for public sector organisations to adopt innovative approaches because of their structural and cultural limits: a bureaucratic and hierarchical structure, silos among departments and risk aversion (Carstensen & Bason, 2012; Mulgan & Albury, 2003; Sørensen & Torfing, 2012).

Although there are many organisations or groups that have achieved successful innovations in their organisations, there is a lack of a clear description of what they did, how they did it and even what their distinct features are (Hartley, 2005). It is therefore important to articulate how successful innovations could be achieved in public sector organisations because their processes and distinct features are not always automatically recognised by innovators or shared with others.

1.1.3 The Expanding Role of Design and Growing Interest in Design in the Public Sector

As the world changes, and becomes more interconnected and globalised, the problems that businesses and society face become more and more complex. Design has continuously evolved and matured as a profession; it has expanded its objectives in order to deal with newly emerging challenges and increasingly complex problems (Buchanan, 1992; Sanders & Stappers, 2008). There has been, therefore, a shift that redefines the role of design from dealing with problems in relation to the visual appearance of objects to understanding complex issues and better solutions to them. As a result of this expanding role of design, designers have been challenging the conventions of their profession (Buchanan, 2001). Although there are already many explanations and definitions of design, there is still quite a lot of confusion about the concept of design. In order to clarify the scope and purpose of this study, what design is, how design as a discipline has evolved, and how design is used in the public sector will be briefly explored. This will help to define what design capability is and what embedding design capability means to public sector organisations in this research.

1.1.3.1 What is design?

When we think of design, what first comes to mind might vary from the aesthetics of something, through to creativity, to problem solving. Over the past few years, based on increasing interest in design, the object of design has expanded from visible and tangible objects to invisible and intangible ones, and from an expert dependent process to one that engages a wide range of players from various disciplines (Beckman & Barry, 2007). However, in addition to this growing attention to design and its expansion, there has been misunderstanding and confusion about the concept and practice of design even among people in the design field (Kadam, 2018). The author, as a designer, has also noticed confusion and misunderstanding about the concept of design and, more seriously, about design expertise. The causes of this confusion may be the dissolving of the boundaries of design and easier access to the design profession because of the prevalence of design methods and tools due to technological developments, such as computing and internet communication technology (ICT). The well-known quote of Herbert A. Simon (1996, p. 130), “Everyone designs who devises courses of action aimed at changing existing situations into preferred ones”, stated in his seminal book, *The Sciences of the Artificial*, has long and widely been used to explain what design is and who a designer is. Although it clearly presents one significant role of design, which is to improve existing situations, his definition of design is too inclusive to describe specific roles of design and its expertise (Huppatz, 2015). Nelson and Stolterman (2012, p. 39) argued that “design is the ability to imagine that-which-does-not-yet-exist, to make it appear in concrete form as a new, purposeful addition to the real world”. The Cox Review, a report prepared for the Chancellor about creativity and business in the UK in 2005, defined design as “what links creativity and innovation. It shapes ideas to become

practical and attractive propositions for users or customers" (George, 2005, p. 2). Both of these descriptions highlight the role of design connecting creativity and innovation, and its contributions to the development and realisation of ideas for users and customers in the real world. However, Lawson and Dorst (2013) stated that it is still hard to give one exhaustive definition of design without missing some important features and it may be pointless to find a single exhaustive definition because of design's inherent nature, which can exist at many different levels. Design can be looked at through multiple lenses from different standpoints; therefore, definitions of design can vary depending on the context in which design is applied. In this sense, the model of four orders of design is useful to understand the changing role of design because it helps to clarify different contexts in which design is employed to solve problems and to see where public service innovation is positioned. So, rather than giving a descriptive definition of design, the four orders of design will be explored further in the next section.

1.1.3.2 Four orders of design

As stated earlier, one of the main goals of this chapter is to clarify what embedding design capability means to local government in the context of public service innovation and organisational change based on the understanding of the concept of design rather than finding one complete definition of design. In this sense, the model, 'Four Orders of Design'(see Table 1-2), suggested by (Buchanan, 1998, 2001), will be useful in defining the meaning of design and design capability in this thesis.

	Communication Signs & Words	**Construction** Things	**Strategic Planning** Action	**Systemic Integration** Thought
Inventing	Signs, Symbols, & Images →	→	→	
Judging		Physical Objects →	→	
Deciding			Activities, Services, & Processes →	
Evaluating				Systems, Environments, Ideas, & Values

Table 1-2 Four orders of design. Adopted from Buchanan (1998, 2001)

This matrix displays the function of design practice and its outcomes (see intersection part; sign and symbol, physical objects, activities and services, systems and environments), based on designers' abilities (see vertical items; inventing, judging, deciding and evaluating) and expanding roles (see horizontal items; communication, construction, strategic planning and systemic integration). It illustrates how design has been shifting from the first order through to the fourth order of design.

The first and second orders indicate the communication and construction roles of design that design disciplines traditionally play, such as creating visual and tangible objects. The third order of design illustrates the role of coordinating user interactions and experiences, such as the works in user experience (UX) design and service design fields. Lastly, the fourth order of design represents a more strategic role of design that focuses on organising the ideas and principles of an organisation, it operates on or transforms organisational culture or systems (Buchanan, 2015). The focus has been expanded from 'objects' to 'ways of thinking and doing', in other words, from product-oriented design processes towards a process for designing solutions to complex and often intractable social, environmental and even political problems. In this sense, design in the public sector context can be positioned within the third and fourth orders of design where design approaches are employed to modernise services and support an organisation's cultural and systemic change by engaging diverse stakeholders and employees.

1.1.3.3 Growing interest in design in management

The contribution of design approach based on the user-centred design principles to value co-creation in the process of creating new products and services has been aware of by people in management. In 2002, there was a conference titled 'Managing as Designing' held at the Weatherhead School of Management in the USA that brought together a group of scholars, artists, architects, designers and managers to explore the applicability and implications of managing the way designers manage projects and approach problems (Boland, Collopy, Lyytinen, & Yoo, 2008). After experiencing a design approach to problem solving through a project working with architect Frank O. Gehry and his firm, Boland and Collopy (2004, p. 125) began to believe that "if managers approached their problem solving as the best designers do, that organisations, products, services, and process would be more functional and better able to create lasting value in society". They recognised the unique features of a design approach which reflects 'entrepreneurial spirit', seeks to think differently, and to experiment with various tools, methods and technologies to create new ideas. They found the design approach to problem solving, which they called a 'design attitude', was quite different from managers' approach to problem solving in organisations and what is taught to their students at management schools. The result of the considerable number of debates in the conference was to recognise the value of management that reflects a design attitude and to urge change in management practice and education (Boland & Collopy, 2004). Now, more 10 years later, the insights and recommendations

from the conference have been realised to some extent; for example, bringing design thinking into business organisations and integrating design into management or policymaking have already become mainstream in management and design studies. Moreover, there are many cases of successful stories about design-integrated management in the private and public sectors.

1.1.3.4 Growing interest in design for public sector change and innovation

Increasingly complex societal problems, technological innovations and financial pressures keep pushing local governments to be more efficient to be able to offer better services with lower costs in a time of austerity. Under these conditions, it is crucial to find new ways to deal with those challenges and to bring innovation to local governments.

Over the past decade, the value of a 'designerly' way of working in organisations, which was articulated in the 'Managing as Designing' conference, has been acknowledged; thus, design approaches have been applied as a tool to support innovation in public sector organisations in a number of countries, particularly across Europe (Bason, 2012; Thomson & Koskinen, 2012), while the public management paradigm shifted from a classic bureaucratic model to a more cooperative model (Bason, 2012; Junginger & Sangiorgi, 2011; Kelly, Mulgan, & Muers, 2002; Sangiorgi, 2015). Design approaches are widely considered to be creative, holistic and collaborative ways of working, which are based on human-centred design principles (Junginger, 2005; Meroni & Sangiorgi, 2011a; Muratovski, 2015). They have also been acknowledged as an effective change agent with a resilient process of decision making because they consider it important to understand the needs of not only users but also employees who actually design and deliver services to users (Yee, Jefferies, & Michlewski, 2017). They support better communications among stakeholders to build common ground for problems through various methods and tools which are visible, participatory and iterative. A growing number of initiatives, innovation labs or units inside public sector organisations that apply design approaches to innovation indicate that this is a worldwide trend, such as: EU Policy Lab, Innovation Lab, GDS in the Cabinet Office, and Social Innovation Lab Kent in the UK; Mindlab in Denmark; and Helsinki Design Lab (Bason, 2016; Design Commission, 2014; McNabola et al., 2013; Thomson & Koskinen, 2012) (see Table 1-3).

In the UK specifically, under New Labour (1997 ~ 2010), the UK Design Council launched the Design of the Time (DOTT) in 2005 to redesign the life of the public. With the beginning of this, a £50 million and 10-year initiative in 2007, design has been applied as a strategic approach to public service innovation (Thackara, 2007). The application of design approaches to innovation has been shown to be useful because it helps facilitate value co-creation through collaboration with various stakeholders (Kimbell, 2011; Meroni & Sangiorgi, 2011); it enables participants to express their needs and desires through diverse design methods and tools, and considers them as partners not subjects (Sanders & Stappers, 2008). The changing context for design in society has expanded the

role of design (Tan, 2012) and this has required different capabilities of designers to enable design-driven innovations (Sanders, 2008; Design Council, 2015). It is anticipated that more and more public authorities will try to develop their design capability in an attempt to increase their innovation capacity for service innovation and organisational change, by either bringing in external design capability, training internal staff or establishing internal design units.

Country	Innovation Labs
United Kingdom	• Policy Lab, Cabinet Office • Government Digital Service (GDS), Cabinet Office • Creativity Team, Scottish Government • Northern Ireland Innovation Lab, NI Executive • Service Design Shropshire, Shropshire County Council • Social Innovation Lab, Kent County Council • Innovation Lab, Monmouthshire County Council
Denmark	• MindLab, Danish Ministries of Business and Growth, Education and Employment
Sweden	• Experio Lab, Varmaland County Council
Finland	• Helsinki Design Lab (2009-13), Finish Innovation Fund SITRA • Lahti Design Lab, Lahti City Council
Poland	• Design Silesia, Silesia Government
France	• Design Creative City Living Lab, Saint-Etienne
Spain	• Barcelona Urban Lab, Barcelona City Council
Ireland	• The Studio, Dublin City Council

Table 1-3 Innovation labs in Europe. Adopted from Whicher (2015)

There are a number of studies about the applicability of design approaches to innovation such as service design (Bailey & Drummond, 2011; Junginger & Sangiorgi, 2011; Wetter-Edman & Malmberg, 2016), co-design and design thinking (Bason, 2010; Cook, 2011; Sanders & Stappers, 2008), and participatory design (Ehn, 2008; Sangiorgi & Clark, 2004), and the overall role of designers in private and public service design practices (Bailey, 2013; Mulgan, 2014; Tan, 2012; Wetter-Edman, 2014). Some research focused on the development of co-designing tools and methods

(Sanders & Stappers, 2008; Stickdorn, Schneider, & Andrews, 2011). Additionally, there are some practical guidebooks that support the distribution of design-led approaches to public sector innovation (IDEO et al., 2016; Nesta, 2011). However, the focus of previous research has been predominantly on the engagement of service users and the application of various tools and methods, with a lack of empirical research investigating contextual factors that affect the application of design approaches and embedding design capability, particularly in local government contexts.

The constant changes in society and ever growing complexity have increased the need for innovation and urged public leaders to find better ways to develop innovation capacity in their organisations. As shown in the shifts of public governance and management paradigm described above, under networked governance, it is critical for public sector organisations to create a collaborative environment in designing and delivering services in order to co-create value with various stakeholders, including other public and private sector organisations, their internal employees and citizens. This emerging perception of the importance of co-creation has led to growing interest in the use of design approaches based on human-centred design principles in public service innovations, which inevitably require organisational change or transformation. Moreover, the various challenges that local governments have recently faced, such as growing pressure for better services from citizens in the wake of national austerity, encouraged local governments to consider embedding design capability as part of their organisational capabilities to achieve public service innovation. Therefore, it is important for people involved in this journey, not only public leaders and managers but also frontline staff and designers, to better understand the value of a design approach and ways of applying it and integrating it into their approach to innovation as part of organisational capabilities.

1.2 Setting up Research Context

1.2.1 Research Problems and Opportunities

It has been identified how design can contribute to the development and innovation of service, and what roles designers can play in applying design approaches in the public sector. Interestingly, there are a few long-term PhD studies aimed at investigating how organisations build the capabilities to apply design practices in the public sector (Malmberg, 2017; Terrey, 2012) and integrate design management in the context of small and medium-sized enterprises (SMEs) (Acklin, 2013). Growing awareness of the benefits of the use of design and the introduction of design approaches, such as design thinking and service design, in the public sector has increased local government adoption of design approaches, in spite of the cost and prevalent perception that the implementation of the design outcome is difficult. Nonetheless, research on design for and with local authorities has gained scant

attention from the mainstream of academic research. The growing interest of GDS in design thinking and service design and the Design Council's 'Design in the Public Sector' programme have encouraged more and more local governments to try to build their own design capability. Despite much research that explored the applicability and potential of design practices as an organisational capability that could address organisational change and how it might be brought in organisations (Brown, 2009; Martin, 2009), the complexity of using design in public sector organisations, particularly in the local government context, has been less discussed. Therefore, there is still a lack of understanding of the contextual factors and internal issues around the use of design approaches in local government contexts, and how design is embedded as an organisational capability to be integrated into local governments' innovation processes considering their unique contextual factors. Additionally, the role of designers and public servants has not been thoroughly discussed, even though they are the main actors in applying design approaches to develop innovation in services and build design capability into the organisations.

1.2.2 Research Area and Scope: Nature of This Study

Leedy and Ormrod (2010) argued that defining the context of the research allows researchers to identify what things they will not cover in the research and to determine the broader relevance of the case study. Therefore, it is important to clearly define the context of the research as it helps a researcher to avoid setting too many or too broad objectives.

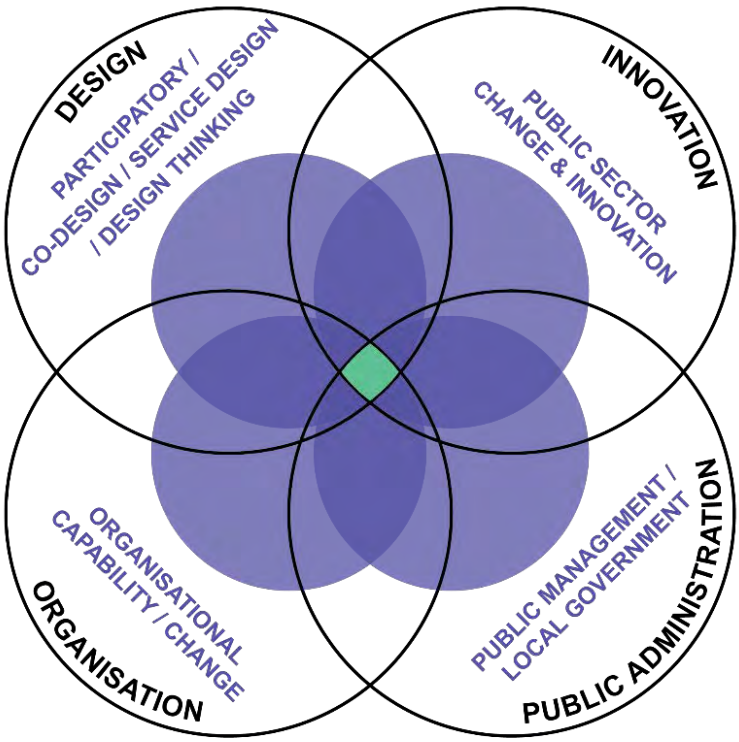


Figure 1-1 The overall area and scope of research

With this in mind, the study first sets out its broad area of studies in the fields of design, organisational studies, public sector innovation and public administration as a starting point to build a theoretical foundation before deeply investigating how design is embedded in local government (see Figure 1-1). However, the main focus of this study is in the field of design studies: theory and practice; in particular, participatory design (PD) and co-design for service innovation in relation to local government service innovation and organisational change (see Figure 1-2).

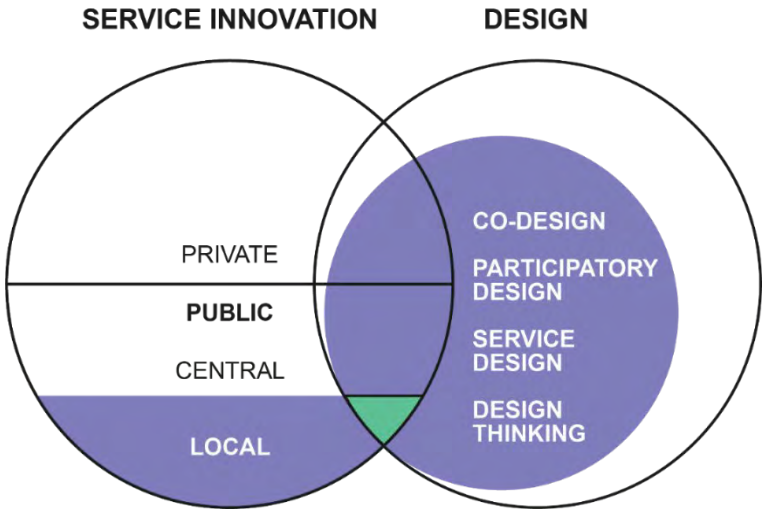


Figure 1-2 The scope and focus of research

1.2.3 Research Aim, Questions and Objectives

Although, as mentioned earlier, there are many case studies presenting proven benefits of design approaches to both private and public sector organisations and ways of bringing design approaches into those organisations, there still remains a lack of research based on empirical evidence on how to embed design capability into a strategic approach for change and innovation in the local government context as part of sustainable organisational capabilities. It is obvious that if local authorities have a better understanding of the necessities and the process of embedding design capability, they would be better able to prepare, and later implement it, before they actually embark on the long journey that requires great effort from initiatives and organisation-wide support.

This thesis, therefore, investigates how design capability is embedded and what roles designers and public servants play in embedding design capability, by exploring the different journeys of four local councils in England towards embedding design capability, through different modes of design intervention, as part of their innovation strategies in response to change under the government austerity programme. Through this, the study aims to identify the value of design approaches, define design capability, and build a clear understanding of the meaning of embedding design capability to

local governments and how it is embedded within their organisations depending on different modes of the design intervention model including challenges and barriers. Additionally, it also aims to articulate the role of designers and public servants as the main actors of applying design approaches and embedding design capability collectively. Throughout the quest, this thesis deals with the following key research question including two sub questions:

- **Key research question:**

How is design capability embedded in local governments as part of organisational capabilities?

- **Research sub-questions:**

1) Why do local governments try to use and embed design capability?
2) What roles can designers and public servants play in embedding design capability?

In order to answer these three research questions, five research objectives were established as follows:

1. To understand what local governments in the UK do and how they work.

2. To critically review literature on design for public service innovation and design capability in order to develop a conceptual framework for applying and embedding design capability.

3. To investigate why local governments in England try to apply and embed design capability, and how they do it.

4. To identify determining factors which influence the application and embeddedness of design capability in local government.

5. To identify the role of designers and public servants as main actors in facilitating the application and embeddedness of design capability in the local government context.

1.2.4 Research Methodology

To seek to find the answers to the research questions, this research is undertaken through a mixed methods research approach including a survey and a multiple case study approach. The mixed methods methodology was chosen to collect data within the period of time and limited access granted

from the case local councils where research continuity is difficult because of employees' high turnover rate. An online-based preliminary survey was conducted as a scoping study to frame the case studies. This offered an overview of local governments' use of design as an approach for collaborative innovation and informed the selection of the cases of local councils.

This research takes a case study approach which includes ethnographic workshop observations (Crabtree, 1998; Smith & Kjærsgaard, 2014) that enable researchers to explore the complexities of collaborative design practices; the case study approach allows researchers to collect context-specific and empirical data to help capture conditions of the environment, unique behaviours or reactions of participants, and the interactions between participants, including designers in the situation, based on the hands-on experiences of participants (Yin, 2003), in-depth interviews with designers and public servants, and participants' feedback on collaborative design workshops. One of the main reasons for choosing a case study approach is to gain a holistic understanding of cultural systems of action and a current phenomenon (Tellis, 1997; Yin, 2003) because the scope of this study is to investigate organisations and the design practice in their organisations, particularly in the local government context in England. Ethnographic observation and in-depth interviews are expected to create opportunities for the researcher to identify the value of collaborative design practices in embedding design capability into the organisational capabilities as a strategic approach to service innovation and organisational change. Moreover, they help the researcher to find out enablers and barriers which influence the process of applying design approaches and embedding design capability. Furthermore, it is also expected that they will enable the researcher to articulate the role of designers and public servants as main actors in applying and embedding design capability within local government. The data are analysed and interpreted using a thematic analysis method with the help of NVivo, which is qualitative data analysis (QDA) computer software.

1.3 Significance of this Study

The title of this thesis, *Embedding design in local government*, was named to reflect the ambition of this research study. Introducing design, let alone embedding design, in public sector organisations is, in fact, not an easy task because there are many things to be done to actually realise the integration of design capability in the process of innovation or management in public sector organisations. It requires the consistent effort of a dedicated team, long-term support from a senior level and awareness of the value of design across the organisation in order to overcome the attitude of risk aversion prevalent within public sector organisations, which prevents people from adopting and applying design approaches to their day-to-day jobs. Therefore, it is crucial that local governments allow their employees, who are in charge of designing and delivering services with and for citizens,

to effectively learn how to use design approaches and have more chances to practise them in person in order to embed design capability as part of organisational capabilities. In order to investigate how design capability can be embedded in local government through a case study approach, this study developed a conceptual framework as a structure and guide to identify and organise the elements of design capability in local government, by considering local government design capability as a combination of individual and organisational design competences. Moreover, this research adopts the Design Intervention Model (DIM) as a way of framing case studies. In this thesis, DIM represents different types of designer involvement in service development or organisation transformation projects. In other words, it means how design was employed and how designers were situated within the local government settings. This research also examines the application of design approaches and embeddedness of design capability in local governments depending on the mode of DIM. One of the core design activities in the process of the application of design approaches is interdisciplinary collaborative design workshops that involve multiple participants from different internal and external organisations. This collaborative design workshop is acknowledged as a main design engagement strategy because it is used as a crucial design research technique not only for coming up with solutions, but for sharing problems and building a common ground to deal with the problems (Holmlid, 2005; Mortati et al., 2014). This research is expected to contribute to the distribution of design approaches and design capability building, at least within local governments, by sharing the value of design approaches, the conceptual framework as a structure and guide to developing design capability in local government, and different modes of embedding design capability as part of local government organisational capabilities.

As a result of the use of multiple case studies, this research presents insights into why local authorities apply design approaches and try to embed design capability as an organisational capability, and provides better understanding of how design capability is embedded in local government by outlining four theoretical and practical contributions that emerged in the course of dealing with the research questions.

Firstly, this study articulates the meaning of embedding design capability to local governments and the elements that need to be secured in order to enable local governments to apply and, ultimately, embed design capability in their organisational processes of innovation and change. A conceptual framework is proposed as a structure and guide by considering local government design capability as a combination of individual and organisational design competences. It will help to identify and organise the elements of design capability in local government. Secondly, this research identifies the reasons why local governments are trying to embed design capability as part of their organisational capabilities and how they are applying design approaches for service innovation or organisational change through a multiple case study. A new version of the DIM is developed as a way to classify different ways of embedding design capability in local government. Thirdly, this study also identifies

challenges, necessary and desirable conditions, as enablers and barriers to the application and embeddedness of design capability as part an organisation's capabilities. They are determining factors that affect the application and embeddedness of design capability in the context of local government. Lastly, this research identifies the roles of designers and public servants in embedding design capability as main actors of applying design capability and transferring design knowledge and practice. These contributions will be of use to public servants, as well as designers, who are involved in the process of service innovation and organisational change through design by sharing necessary conditions, determining factors and the process of applying and embedding design capability within and for local governments; these contributions will enable them to develop their own design capability and distinct professionalism in the context of innovation and change in local government.

It is hoped this thesis will encourage governmental organisations to consider design capability as not just one of the alternatives, but as one of the core capabilities for realising innovation and organisational change, by contributing to the development of theoretical and practical knowledge that show how the embedding of design capability in local governments and collaborative design practice can be facilitated.

1.4 Structure of this Study

Chapter	Goals	Outcomes
CHAPTER 1 INTRODUCTION	Sharing an overview of research and setting up research context	• Research problems & aim • Research questions & objectives • Significance of the study
CHAPTER 2 LITERATURE REVIEW	Understanding contextual background and building a theoretical foundation	• Theoretical prepositions • A conceptual framework
CHAPTER 3 RESEARCH DESIGN & METHODOLOGY	Designing research and selecting research methods	• Research design
CHAPTER 4 A SCOPING STUDY	Framing case studies	• Case selection for case studies

CHAPTER 5 CASE STUDY A	Collecting and analysing primary data	• Research findings
CHAPTER 6 CASE STUDY B	Collecting and analysing primary data	• Research findings
CHAPTER 7 CASE STUDY C	Collecting and analysing primary data	• Research findings
CHAPTER 8 CASE STUDY D	Collecting and analysing primary data	• Research findings
CHAPTER 9 DISCUSSION & INTERPRETATION	Discussing and interpreting research findings from each case study	• Interpretation and answers to research questions
CHAPTER 10 CONCLUSION	Exhibiting contribution to design theory and practice, and presenting limitations and future work	• Research contributions, limitations, and suggestion of future work

Table 1-4 Thesis structure

CHAPTER 1: INTRODUCTION

The introductory chapter of this thesis describes the background and context of the research including changing paradigm of public management and governance, the increasing importance of change and innovation, and the expanding role of design and growing interest in design for innovation and change in the public sector. Moreover, it presents the research problems, the scope of this research, the aim and objectives, the research design and methodology as well as the significance of the study. The last section of Chapter 1 provides a brief overview of the structure and contents of this thesis (see Table 1-4)

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the literature in order to build a theoretical foundation and a conceptual framework that underpin this study, by reviewing multiple areas of research in relation to design for

public service innovation and organisational change: different types of design approaches and the value of design practices, design capability and its elements, design knowledge and learning, local government and public management, organisational capability. Moreover, this chapter discusses the current use of design approaches in public service innovation and organisational change. Furthermore, a conceptual framework is illustrated as a result of an in-depth literature review.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

In this chapter, the research methodologies employed in this research and their theoretical foundations are explained with a description of the research design and the process of methodological choice. Moreover, the strategies and methods of primary data collection and analysis are presented with a discussion on research quality.

CHAPTER 4: A SCOPING STUDY

This chapter explains the need for a scoping study and its contributions to this research. The full process and the result of the preliminary research based on a survey research approach for scoping the study and framing case studies are described.

CHAPTER 5 to CHAPTER 8: CASE STUDY A to CASE STUDY D

These chapters give a full account of the process of case studies and provide research findings of each case study based on the analysis of archival data, in-depth interview transcripts and ethnographic observation results corresponding to the research objectives.

CHAPTER 9: DISCUSSION AND INTERPRETATION

This chapter presents answers to research questions by interpreting and reflecting on key findings of the study through a series of discussions of research objectives with findings from each case study.

CHAPTER 10: CONCLUSION

Lastly, along with the presentation of the value and contribution of the research, the overall research conclusion is stated in this chapter. In addition, this last chapter also includes an evaluation of the limitations of the research and potential future work.

CHAPTER - 2 LITERATURE REVIEW

Introduction

As mentioned in Chapter 1, the topic of design for service innovation and organisational change in the public sector is not new; it is an established area with a number of recognised researchers proving the applicability, value and influence of design in public sector innovation and change.

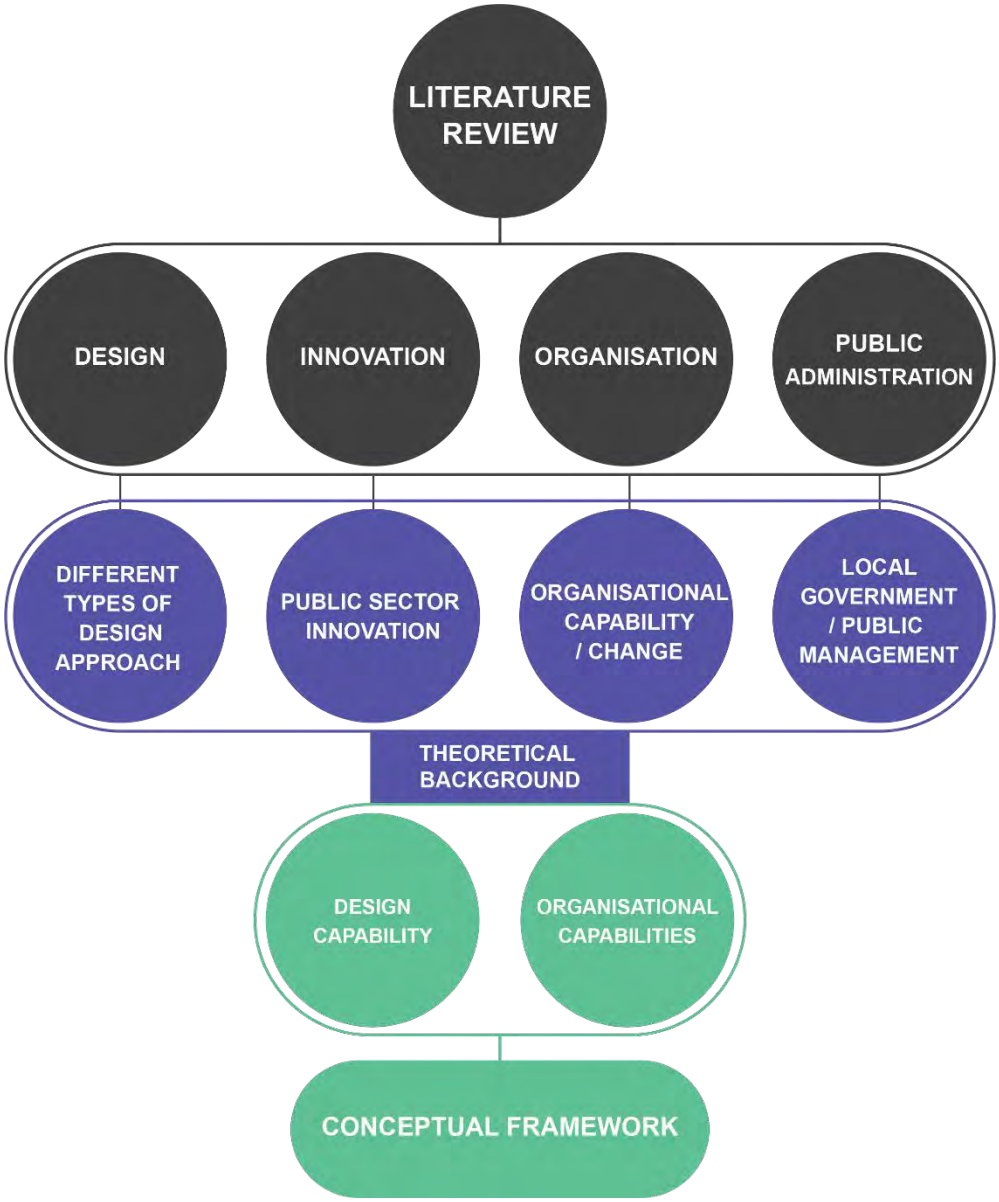


Figure 2-1 Literature review outline

However, it falls short of understanding how design is adopted and design capability is embedded into the process of service innovation and change in local government specifically, which has quite different purposes from the purposes of private sector organisations and central government.

The main research problem that this study focuses on is to articulate how design capability can be embedded in the organisations as part of their capabilities, particularly in the local government context. To do so, understanding what design capability is, what it means to local government and identifying the elements of design capability are essential before investigating how it is built. Therefore, the purpose of this chapter is to carry out a literature review on: 1) local government in the UK including its structure, role and current challenges, 2) design practices in the public sector with regard to the process and activities of various design approaches to public service innovation and organisational change and different modes of applying the design approaches, and 3) the concept of design capability in the public sector in order to build a theoretical background and create a conceptual framework to guide this study (see Figure 2-1). The central focus of this study is placed on design capability. Therefore, the literature reviews on organisational capabilities are not as extensive or deep as that of design capability.

In order to find relevant literature, a systematic literature review was initially carried out using the advanced search function on journal websites (see Table 2-1).

Journal	Keyword	Number of articles
Design Issues	Design, capability	53
	Design, capacity	40
Design Studies	Design, capability	97
	Design, capacity	9
CoDesign	Design, capability	77
	Design, capacity	79
Total	Design, capacity or capability	355

Table 2-1 The result of an initial literature search

From the initial keyword search, a total of 355 articles were automatically found based on the advanced search setting as described above. Literature that was closely related to the topic of this study and thus necessary to be reviewed was selected from the 355 articles after checking the title and abstract by the author (see Appendix A). Literature with regards to design expertise and design

culture, and PhD research about design capability were also reviewed and analysed together in order to complement a lack of information and discussion from the three selected journals. Moreover, a literature review on organisational capabilities was carried out separately to build a theoretical foundation before exploring design capability.

2.1 Local Government in the UK

An improvement in customer experience is one of the important factors that affect service performance (Johnston & Kong, 2011). Customer experience is usually affected by organisational performance, processes and actions (Edvardsson, Gustafsson, & Roos, 2005). Therefore, service innovation is closely connected with the features of organisations (Karpen et al., 2017; Kowalkowski et al., 2015). In other words, service innovation inevitably requires organisational change (Karpen, Bove, & Lukas, 2012). The major contribution of a design approach to service innovation is often related to an improvement in customer experience (Edvardsson et al., 2005; Karpen et al., 2017; Yu & Sangiorgi, 2018).

However, government organisations are often perceived as the least likely places to adopt design approaches because of their structural characteristics: low flexibility and compliance with laws and procedures (Junginger & Sangiorgi, 2011). Therefore, it is important to understand the organisational structure, which is closely related to the decision-making processes of local governments. In addition, learning about the contextual features of local governments and how they work is essential in order to investigate ways to apply design approaches and embed design capability for service innovation and organisational change.

2.1.1 Structure of Local Government in the UK

Despite public reform carried out in 1974 by The Local Government Act 1972, in some areas of England, local government is divided into a county council (the upper tier) and a district council (the lower tier), which are responsible for different services; however, in Scotland, Wales and Northern Ireland there is a single unitary authority (see Figure 2-2). Apart from parish and town councils, there are 418 local authorities in the UK which include unitary, upper and lower tier councils. District, county and unitary councils are sometimes referred to as ‘principal councils’ to distinguish them from parish and town councils. Therefore, there are five types of local authority in England: county councils, district councils, unitary authorities, metropolitan districts and London boroughs. Out of 418 local authorities, 353 are in England, of which 27 are county councils, 201 are district councils, and 125 are unitary authorities. Of the latter, 32 are London boroughs and 36 are metropolitan

boroughs. These local governments in the UK are the minimum unit; they have autonomy to create services and make policies to support the services by themselves (Chandler, 2001).

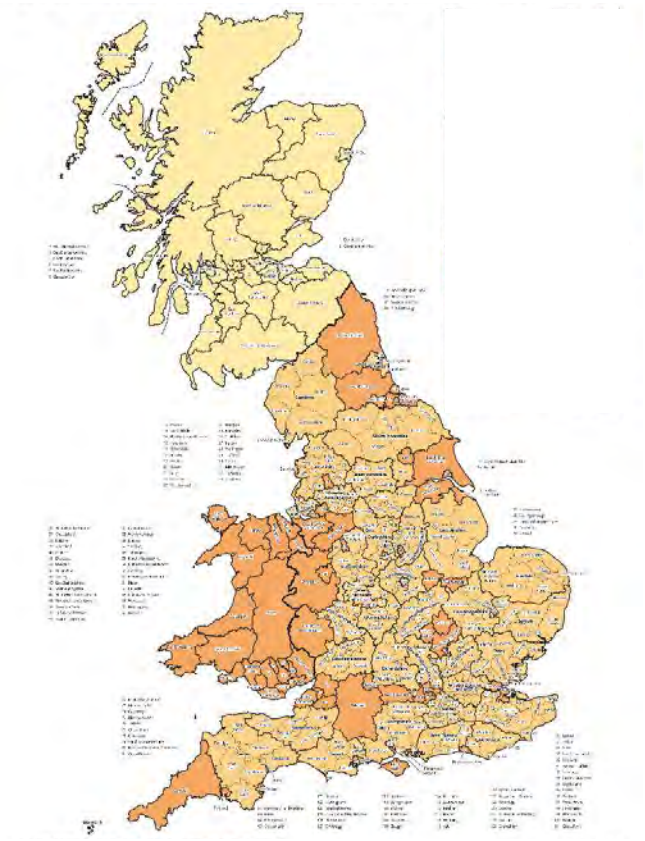


Figure 2-2 Local authority districts, counties and unitary authorities, 2015

Since the adoption of the Localism Act 2011 in England, there have been two types of executive arrangements which determine the way local governments make decisions. They are 'Leader and cabinet model' and 'Elected mayor and cabinet model' (Department for Communities and Local Government [DCLG], 2011). Some principal authorities in England use the 'Committee system'; they make decisions by committees made up of councillors under the Localism Act 2011 (ibid.). Under the 'Leader and cabinet model', a leader of the council is chosen, and a cabinet is formed by a single majority party or a coalition in the local government to serve for four years (see Table 2-2). The leader decides on the deputy leader, size of the cabinet and appoints cabinet members (London Council, n.d.). The Leader of the council also appoints and allocates different areas of the Council's services, called 'portfolios', to each member of the Cabinet and the portfolio holders have the authority to make key decisions with regards to the issues on the services for which they are responsible (Chandler, 2001). On the other hand, under the 'Elected mayor and cabinet model', a Mayor is directly elected by voters to serve four years and he/she appoints a Deputy Mayor and members of the cabinet from elected councillors (ibid). The leader and cabinet are responsible for policies, plans and strategies, which must be within the budget adopted by the full council. The decisions made by them are scrutinised by scrutiny committees made up of councillors who are not cabinet members.

The Council hires people, called 'officers', to implement decisions and manage the day-to-day delivery of its services and activities and the main role of the officers is to provide information and professional advice in order to provide an appropriate basis for decision making (ibid). The Chief

Executive is the Head of Paid Service and he/she is responsible for all staff in the authority. The relationship between officers and councillors is governed by a code of practice (ibid.).

LEVEL	TYPE	POSITION & ROLE		
Policy ↑	Elected Councillors Council Members	Leader of the Council / Mayor		
		Cabinet Up to 10 Councillors	Deputy of leaders Portfolio holders	1) appointed by a Leader or a Mayor or 2) formed by ruling party
		Deputy Cabinet members		
Strategy		Committees		
Monitoring	Hired Officers	Senior Management	Chief Executive	Head of the Council's paid service & Corporate governance
			Deputy Chief Executive (Director of services)	
			Assistant Director Corporate Governance	
		Assistant Director of services		
Operational ↓		Head of services		
		Leader of the team		
		Back office manager		
		Front-line staff		

Table 2-2 The general structure of local government

2.1.2 Role of Local Government in the UK

Councils work with local partners and residents to determine and deliver on local priorities and they provide a wide range of services, either directly through their employees or by commissioning services from outside organisations (Local Government Association, 2011). They largely work within the powers laid down under Acts of Parliament but, since the Local Government Act 2000, they also have responsibility for the economic, social and environmental 'wellbeing' of their area. Most council services are mandatory. This means that the council must do them because they are under a duty to do so by law (e.g., to operate an alcohol licensing regime under the Licensing Act 2003). Some mandatory functions are tightly controlled by central government, resulting in a similar

level of service across the country. For other mandatory requirements, councils have some discretion over the level and type of service they provide.

Some council services and functions are discretionary (i.e., a council can choose to provide the service or function but does not have to). Council services and functions are varied, ranging from large economic regeneration projects at one end of the scale, to the removal of wasp nests at the other. The Local Government Act 2003 introduced a general power to charge for discretionary services provided they are not prohibited by other legislation and the council does not make a profit. Councils were already allowed to charge for some discretionary services, including arts and entertainment activities, sport and recreational facilities and some pest control services, under earlier Acts of Parliament. Councils provide over 700 services. Table 2-3 provides a summary of their main services and responsibilities.

Principle services	What is included
Children's services	• Schools – nursery, primary, secondary and special • Pre-school education • Youth, adult and family and community education • Student support • Children's and families' services – including welfare, fostering and adoption and child protection • Youth centres • Youth justice – secure accommodation and youth offender teams
Highways, roads and transport	• Highways – non-trunk roads and bridges • Street lighting • Traffic management and road safety • Public transport – discounted travel schemes and local transport coordination • Airports, harbours and toll facilities
Adult services	• Services for older people including nursing, home, residential and day care and meals • Services for people with a physical disability, learning disability or mental health need • Asylum seekers • Employment support services
Housing	• Social housing • Housing benefit and welfare services • Homelessness • Housing strategy
Cultural services	• Culture and heritage, including archives and museums and galleries • Recreation and sport, including facilities and sports development • Open spaces – parks and playgrounds, the countryside and allotments • Tourism – visitor information, marketing and tourism development • Libraries and information services

Environmental services	• Cemetery, cremation and mortuary services • Community safety – including consumer protection, coastal protection and trading standards • Environmental health – including food safety, pollution and pest control, public toilets • Licensing – including alcohol, public entertainment, taxis • Agricultural and fisheries services • Waste collection and disposal, recycling and street cleaning
Planning and development	• Building and development control • Planning policy – including conservation and listed buildings • Environmental initiatives • Economic and community development
Protective services	• Fire and rescue services • Court services such as coroners
Central and other services	• Local tax collection – council tax and non-domestic rates (business rates) • Registration of births, deaths and marriages • Elections – local and national, including registration of electors • Emergency planning • Local land charges

Table 2-3 Local government principle services (Local Government Association, 2011)

In this research study, the total number of 353 unitary, county and district councils in England were initially selected as the sample of the survey as Scotland and Wales have a different system to operate local authorities. Additionally, parish and town councils were excluded as their functions and units have been combining to upper or unitary tiers.

2.1.3 Local Government Expenditure and Main Sources of Income

Resource allocation is a very important issue in the compilation of public sector budgets, particularly in revenue and expenditure budgets, due to the limitations of resources (Kuntari, Chariri, & Prabowo, 2019). In England, a financial report, 'Local Government Financial Statistics (LGFS) England', has been annually published by the Ministry of Housing, Communities and Local Government (MHCLG: formerly Department for Communities and Local Government) based on the data provided by local governments in statutory statistical returns since the 1930s in order for monitoring public expenditure, informing resource allocation, and developing local government financial policy (Ministry of Housing, Communities and Local Government [MHCLG], 2020). In the rest of this section, local government expenditure and its main sources will be more explored based on the LGFS England reports.

2.1.3.1 Revenue Expenditure and Service Expenditure

'Revenue Expenditure' is generally the expense for local governments to provide services and operate administrative functions within a financial year, while 'Capital Expenditure' is used to develop or improve fixed (non-current) assets such as land, buildings and equipment (Department for Communities and Local Government, 2017). This local government expenditure accounts for over a fifth of all government spending. Revenue Expenditure is equal to the sum of net current expenditure and capital financing costs plus some minor adjustment, but it does not include expenditure financed by grants outside Aggregate External Finance (AEF) and income from interest receipts (ibid). In addition, the sum of government grants, redistributed non-domestic rates and council tax usually does not exactly match with Revenue Expenditure because of the use of reserves (MHCLG, 2018a).

£ million - adjusted for inflation, in 2018-19 prices

	2014-15	2015-16	2016-17	2017-18	*2018-19*
Education	36,927	36,271	34,680	32,856	32,229
Highways and transport	4,860	4,602	4,169	4,071	3,854
Social care	24,192	24,121	24,300	24,607	25,461
of which: Children's Social Care	8,666	8,822	8,806	8,996	9,348
Public Health	2,931	3,349	3,615	3,427	3,284
Housing (excluding Housing Revenue Account)	1,983	1,709	1,567	1,564	1,675
Cultural, environmental and planning	9,548	9,242	8,773	8,445	8,399
Police	11,662	11,616	11,479	11,370	11,426
Fire & rescue	2,190	2,108	2,037	2,009	2,005
Central services	3,285	3,211	3,282	3,122	3,006
Other Services	98	74	58	-20	58
Total Service Expenditure	**97,677**	**96,302**	**93,960**	**91,450**	**91,396**
% Difference Year-on-year	-1.9%	-1.4%	-2.4%	-2.7%	-0.1%
Total Service Expenditure excluding Education	**60,751**	**60,032**	**59,280**	**58,594**	**59,168**
	0.1%	-1.2%	-1.3%	-1.2%	1.0%
Total Service Expenditure excluding Education & Public Health	**57,820**	**56,682**	**55,664**	**55,166**	**55,884**
	-0.2%	-2.0%	-1.8%	-0.9%	1.3%
Revenue Expenditure	**102,758**	**100,441**	**97,205**	**94,812**	**94,203**
% Difference Year-on-year	-1.8%	-2.3%	-3.2%	-2.5%	-0.6%

Table 2-4 Service expenditure net of sales, fees and charges and of other income, 2014-15 to provisional 2018-19, real term (MHCLG, 2019, p. 4)

Most of the local government expenditure is used to provide services and the sum of the cost of it is 'Total Service Expenditure' (MHCLG, 2019). Service expenditure is classified into twelve main categories of service type, such as Education, Social Care, Public Health, and an 'Other services' category, which captures all expenditure that local governments cannot allocate to specific areas (ibid). Table 2-4 (see Appendix B for more information) shows the major expenditure areas of service for all local authorities in England for the five fiscal years from 2014-15 to provisional 2018-19. While overall service spending continues to decline between 2014-15 and 2018-19 fiscal years from

around £97.6 billion to £91.3 billion, the total expenditure on Education and Social Care services still accounts for more than half of total local government service expenditure.

2.1.3.2 Main Sources of Income

Local governments are legally required to secure the necessary funds in order to finance their operations (MHCLG, 2018a). According to the 30th edition of LGFS England, the main sources of income for local government in England can be divided into three main categories: Government grants; Locally-funded income; Other income and adjustments (MHCLG, 2020a).

£ million	2014-15	2015-16	2016-17	2017-18	2018-19
Grant income:					
Revenue Support Grant	12,675	9,520	7,188	3,978	1,379
Police Grant	7,784	7,423	7,387	7,114	7,125
Specific and special grants inside Aggregate External Finance (AEF)	40,805	40,119	39,218	39,330	39,549
Local Services Support Grant (LSSG)	48	29	19	35	22
Grants outside AEF	18,655	18,296	21,608	20,478	19,127
Housing subsidy	-692	-734	-767	-776	-733
Grants towards capital expenditure	9,760	10,863	10,184	8,109	9,115
Total grant income	**89,035**	**85,516**	**84,838**	**78,268**	**75,585**
Locally-funded income:					
Council tax	23,964	24,734	26,083	27,641	29,563
Retained Income from Rate Retention Scheme	11,331	11,855	11,735	15,162	17,973
External interest receipts	865	1,047	1,088	1,169	1,507
Capital receipts	1,879	2,196	2,327	2,769	3,160
Sales, fees and charges	11,741	11,666	12,103	12,732	13,181
Council rents	7,439	7,468	7,110	7,010	7,154
Total locally-funded income	**57,218**	**58,966**	**60,445**	**66,483**	**72,539**
Other income and adjustments	18,469	19,390	18,305	19,511	19,553
Total income	**164,722**	**163,871**	**163,588**	**164,262**	**167,676**
Grants as a percentage of total income	54%	52%	52%	48%	45%

Table 2-5 Summary of local authority income 2014-15 to 2018-19 (MHCLG, 2020, p12)

The government grants is the biggest source of funding for local government income accounting for more than 50 percent of local government income of around £164 billion up until 2016-17 financial year, although its proportion is constantly being reduced up to 45 percent in 2018-19 fiscal year as local authorities are financing increasingly more of their spending from locally-raised income by the government support reduction policy (see Table 2-5 and see Appendix C for more information). It is made up of Revenue Support Grant (RSG), Police Grant, Specific and special grants inside AEF, Local Services Support Grant (LSSG), Grants outside AEF, and Grants towards capital expenditure and as of fiscal year 2014-15 and each grant accounts for approximately 14 percent, 9 percent, 52

percent, 0.05 percent, 21 percent, and 11 percent of the government grants respectively (see Table 2-5). These central government funding is mainly used to pay not only for revenue spending such as employee salaries and the cost of providing services, but also for capital projects, such as school buildings or roads (MHCLG, 2018a). The RSG is known as a fund given to local governments in order to support revenue expenditure on any service and it mainly consists of business rates revenue. Business rates is a property tax levied on business premises such as shops, offices, pubs, guest houses, warehouses, and factories (MHCLG, 2020c). The initial business rates retention was up to 50% of the collected business rates when the Business Rates Retention Scheme (BRRS) was first introduced in 2013 (MHCLG, 2018b). The proportion of the business rates retention has been expanded since 2017 with an ultimate goal of securing 100 percent of local financing through 100 percent of the business rates retention and council tax rather than government grants (MHCLG, 2017, 2020b). This means that the central government in England is aiming to ultimately replace RSG with business rates retention by 2020 (ibid.). The AEF is generally known as the total amount of grant that the central government provides to local governments and the amounts are determined ahead of every new financial year as part of the Local Government Financial Settlement (MHCLG, 2018a). Additionally, the specific grants inside AEF are funds paid to local authorities by individual government departments to support the provision of core services. They include Dedicated School Grant (DSG), Public Health Grant, Pupil Premium Grant, and New Homes Bonus (ibid). Local governments, however, usually only serve as ‘middleman’ as the grants are passed on to third parties managing the services.

The locally-raised fund is the second biggest source of funding for local government income and its proportion continues to grow. There are several income sources that local authorities can raise on their own, including council tax, council rents, sales, fees and charges (see Table 2-5). Council tax is the primary source of locally-raised income used to meet the gap between the amount of money that local governments wish to spend and the amount they receive from other sources including government grants (MHCLG, 2018a). The amount of council tax is determined by the number of dwellings on the valuation list liable for council tax and historically the 'Band D' has been used as a standard measure to calculate the levels of council tax (ibid). Sales, fees and charges which are received as a result of service provision are also the important part of locally-raised income (ibid). As the statistics above clearly present, the government grant is a major part of a local government finance to provide services and serve administrative functions, although its volume is downturn.

2.1.4 Short- and Long-term Challenges Facing Local Governments in the UK

According to the Local Government Association (LGA), by 2020, local governments in England will have lost 77% of central government funding compared to 2015 (Bounds, 2017). This means that

almost half of all councils in England will no longer gain any core financial support from central government by 2020. According to news reports, serious concerns over the quality of local public services that arose in response to budget cuts are already becoming a reality in many local areas of the UK as follows:

- *Councils are facing bankruptcy – is this the end of public service* (Wilby, 2017)
- *Tory county council runs out of cash to meet obligations: Northamptonshire is first to admit financial disaster for two decades in £10m shortfall* (Butler, 2018)
- *In Corby, life without local services is set to become a grim reality* (Khomami, 2018)
- *There used to be a bus every hour. Now we hardly leave the house* (Bawden, 2018)
- *Deprived northern regions worst hit by UK austerity, study finds: Poorest areas bearing brunt of council spending cuts, according to thinktank analysis* (Butler, 2019)

The Social Market Foundation (SMF), an independent British public policy think-tank based in Westminster, published a report of a study in 2017 amid huge short-term political and societal uncertainties faced by the UK (Corfe & Keohane, 2017). This report identified six challenges facing local councils over the next 20 years that would probably have an impact on the demand for and supply of local public services:

1. A growing and ageing population which will put increasing pressure on social care and health services.
2. A growing number of nuclear families based on social and lifestyle changes will impact on the quality and affordability of housing and social care service.
3. Regional economic performance and variations grow disparities across regions.
4. Applying technological innovation such as robot and big data offer challenges (workforce redundancy) as well as opportunities (productivity improvement and economic benefits).
5. Climate change and energy issues increase localised environmental risks such as flooding and extreme weather which require local governments' individual as well as collective intervention.
6. The fiscal devolution requires local councils to develop innovation capability and resilience of their local tax bases.

In the face of those challenges under financial crisis, as well as rapid evolution in technologies and political changes, innovation in local government has become imperative as it is closely related to maintaining an accessible public sector organisation that is beneficial to the everyday life and wellbeing of citizens (Kang & Prendiville, 2018). Therefore, it is crucial for local governments to build sustainable organisational capabilities to enhance their capacity for innovation to enable constant and systematic innovation and change in the entire organisation.

Design has been increasingly considered an alternative approach to drive innovation, organisational change and inform policymaking by public sector organisations across the globe (Bason, 2013, 2016). This is because the traditional ways of working no longer address all the complex challenges mentioned above (Sørensen & Torfing, 2012).

Then,

- *What are design approach and design capability and what can they do for local government service innovation and change?*
- *How can local governments, which are hierarchical and bureaucratic organisations that have a complex system, enable design to be adopted and embedded as part of their organisational capabilities?*

2.2 Design Practices in Public Sector Organisations

There is a growing body of evidence which shows the benefit of design approaches in saving costs, reducing risks and increasing efficiency in public sector innovation through various case studies (Junginger, 2017; McNabola et al., 2013; Thomson & Koskinen, 2012; Thorpe et al., 2016). Over the past few years, various design approaches such as participatory design (PD) (Ehn & Badham, 2002; Spinuzzi, 2005), Co-design (Cook, 2011; Steen, 2013), design thinking (Brown, 2009; Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013) and service design (Meroni & Sangiorgi, 2011; Stickdorn et al., 2011) have been applied in public sector organisations to support them to achieve their different goals from improving food services for senior citizens, through to the issue of housing and unemployment, to policymaking. Therefore, there have been attempts to codify the processes of those different approaches so that non-designers can understand and apply them to their works (Blomkamp, 2017).

This section explores the different types of design intervention in the application of design practices and describes the different types of design approach that support design practices in public sector organisations. It aims to understand the value of design practices in public sector innovation and change and to identify essential components of the approaches including activities, methods and tools

that are required to carry out design practices to achieve intended objectives. The identification of essential components of the approaches will then inform the organisation of necessary knowledge and skills for the development of design capability.

2.2.1 Types of Design Intervention in Design Practice

The Design Commission is a research organisation of a cross-party coalition of parliamentarians and design sector organisations in the UK, called 'All-Party Parliamentary Design & Innovation Group' (Policy Connect, n.d.). It consists of parliamentarians and representatives from industry and the public sector; it investigates the implications of design policy for economic and social improvement (ibid.). After focusing on the strategic importance of design education as a driver of economic renewal and growth, they published a subsequent project, 'Restarting Britain 2' (Design Commission, 2014), which discussed the potential of design for public service renewal in the context of politics and governing as part of their 'Restarting Britain' series, which studies the relationship between design policy and economic growth in the UK. In that report, six different types of design intervention were presented (see Table 2-6) and they illustrated how public sector organisations in the UK bring design into their organisations to employ its benefits in their public service reform.

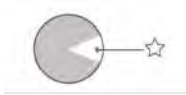
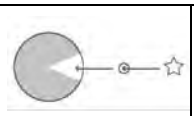
					
Embedded designer	**Internal agency**	**External agency**	**Brokered intervention**	**Design-led start-up service**	**No-designer design work**
Full time strategic-level employee responsible for developing organisational design capacity, as well as for specific service redesign programmes.	A service design unit (normally multi-disciplinary) works with other parts of the organisation on a project-by-project basis.	Consultancy from an independent design practice on a project-by-project basis	Organisations such as the Design council, or Nesta in the UK. In order to address perceived market failure, broker design work for a public sector body.	Design-led teams move outside traditional public service institutions to start a service that meets a specific public need independently.	Public service managers deploy design methods without professional design input.

Table 2-6 Different types of design intervention. Adopted from Design Commission (2014)

First, the embedded designer type of design intervention describes a way of applying design in which full-time strategic-level employees are responsible for developing organisational design capacity, as well as for specific service redesign programmes (Design Commission, 2014). The internal agency represents a style in which a service design unit works with other parts of the organisation on a

project-by-project basis (ibid.). In an external agency approach, an external independent design agency applies design on a project-by-project basis (ibid.). This is a typical type of design intervention in industry. The brokered intervention type of design intervention is one in which organisations, such as the Design Council or Nesta in the UK, broker design work for a public sector body (ibid.). In a design-led start-up service approach, design-led teams move outside traditional public service institutions to start a service that meets a specific public need independently (ibid.). Lastly, in no-designer design work, public servants apply design methods without professional design input. The six models are adopted and adapted in this research as a starting point to investigate how design has been applied and is being applied to public services innovation to deal with changes in the local government context in the UK, particularly in England. For a detailed explanation of their use in this thesis, please refer to Chapter 4, A Scoping Study.

2.2.2 Design Approaches to Service Innovation and Change

One of the most significant parts of carrying out a design project is to define main problems and reframe them to gain insights based on the data collected within a certain given period of time (Cross, 2011). Therefore, each design approach has a standard model of an ideal process with structured approaches and methodologies; these models were developed for designers to follow in order to efficiently carry out a project and to avoid missing important information during the process (Adams, Daly, Mann, & Dall'Alba, 2011; Cross, 2001, 2011; Johansson-Sköldberg et al., 2013). Despite their different origins and uses in practices, there are many similarities between design approaches used in the public sector in terms of the principles, for example, putting humans at the centre stage of the process, the process they follow, and the tools and methods they apply. As a result, in local governments, people often confuse design thinking and service design, and use them interchangeably as a designerly way of working or a new way of working based on a human-centred design process (Kang & Prendiville, 2018).

Therefore, this section will explore different types of design approach that are being used for public service innovation and organisational change in order to better understand the phases of the process and the activities of each phase, including their different and similar features. It aims to identify crucial principles and conditions, common phases of the process, and important tools and methods for successful application of the design approaches in the public sector. This exploration will, in turn, help the researcher to identify essential conditions and elements of design capability and match them with the vital phases of the process of applying design and embedding design capability, including necessary activities that require and develop those essential elements of design capability.

2.2.2.1 Participatory design

PD as an approach in design practice emerged in Scandinavian countries in the early 1970s out of concern for the rapid development of technology and its implications for people in the workplace (Bjerknes & Bratteteig, 1995; Clement & Besselaar, 1993; Muller & Kuhn, 1993). Theoretically, it was built on constructivism, admitting the value of workers' practical tacit and craft knowledge – Metis called it cunning intelligence, that is, an ability to act quickly, effectively and prudently within ever-changing contexts (Johnson, 1998) – accumulated from their activities and experiences throughout their work lives in contrast to rationalist studies; it aimed to bridge participants' tacit knowledge and researchers' analytical knowledge (Kensing, 1993). This Scandinavian collective system design aimed for the development of system design and human–computer interaction, and, thereby, democratisation of the workplace in order to fit information technology to people and vice versa, by involving users and system designers in the phase of system design development (Blomberg & Henderson, 1990; Kensing & Blomberg, 1998). Despite some limitations with regard to the distribution of power between workers and management, the range of participants and the point at which their participation started in the system development processes, the initial forms of PD projects contributed to the development of PD practices (Bjerknes & Bratteteig, 1995; Ehn & Badham, 2002; Holmlid, 2009). In particular, the initial form of PD project contributed to formulating a process and developing tools such as mock-ups, prototyping and a design game to effectively help the process (ibid). The PD process has become more flexible in the USA than the early Scandinavian version, which involved large direct interaction between users and designers, but the three basic stages are followed in almost all PD research (Spinuzzi, 2005) (see Table 2-7).

Process & Activities & Methods			
Process	**Stage 1**	**Stage 2**	**Stage 3**
	Initial exploration of work	Discovery	Prototyping
Activities + Methods & Tools	• Observations • Interviews • Walkthroughs • Organizational visits • Examinations of artefact	• Organisational games • Role-playing games • Organisational toolkits • Future workshops • Storyboarding • Workflow models • Interpretation sessions	• Mock-up • Paper prototyping • Cooperative prototyping • A room with diagrams and prototypes posted on the walls so that stakeholders can see the state of the project in progress

Table 2-7 The process and methods of participatory design

The aim of the first stage, 'Initial exploration of work', is to make designers themselves familiar with the ways users work. This stage is usually performed on site, during a normal workday. It encourages designers to explore how users work, including users' workflow, routines, the technologies they use and teamwork. The 'Discovery' stage is the stage where significant interactions between designers and users occur. It is usually carried out in the form of workshops involving users. This stage allows designers to understand and prioritise the issues and problems of the workplace, and to envision the future workplace through various techniques. In the 'Prototyping' stage, designers and users are asked to iteratively create artefacts which can fit into the workplace envisioned in Stage 2 (Spinuzzi, 2005).

These design-by-doing methods and tools, visualising hidden and intangible thoughts and knowledge of participants, have been developed in order to enhance active engagement of participants, by encouraging effective communication and mutual learning among participants, including designers, during the design process (Simonsen & Robertson, 2012). However, most of all, it made a great contribution by raising awareness of the importance of user involvement in producing design outcome (Kensing, Simonsen, & Bodker, 1998; Sanders, 1992). Sanders (1992) stressed the direct and proactive participation of users and stakeholders in a design development process, by claiming that the primary reason for the failure of 80% of products newly launched to the marketplace is lack of understanding of the different and real needs of users. In addition, she argued that this newly emerging area of design, which she called 'Post-design', is changing the nature of design activity from designing for users by designer's individual creativity to designing with users by collective generativity, with changes to users' and designers' roles occurring in the design process (Sanders, 1999). Issues on what kind of PD methods and how designers can encourage participants to be empowered and, hence, actively participate in the processes have become important for PD designers; PD designers seek ways of synchronising the views or thoughts of different people in order to set up a collaborative environment, and to access and understand people's different experiences with the limited resources available (Kimbell, 2010; Sanders, 2002). Therefore, the initial goal of PD changed during the period of the 1990s and early 2000s from designing relevant systems to fit people to co-designing with people by enabling them to actively participate in the process (Bødker, Ehn, Sjögren, & Sundblad, 2000). This is now also called co-operation, co-creation or co-design (Holmlid, 2009; Sanders & Stappers, 2008a).

2.2.2.2 Design thinking

Design thinking is a concept which is adopted both in theory and practice. Johansson-Sköldberg et al. (2013) found two distinct discourses on design thinking: the academic discourses of 'designerly thinking' and design thinking within the management discourse. They also identified five sub-discourses of the 'designerly thinking' discourse and three origins of the management discourse on

'design thinking' (see Table 2-8) after a critical review of the literature in relation to design thinking. They claimed that the 'design thinking' discourses in practice can be developed by closer connections with the 'designerly thinking', the academic discourses, as the "firm academic links will preserve valuable parts of the practice for managerial use and provide designers with fresh insights into how to make connections with the management world" (p. 131).

This research will view design thinking as a way of reasoning or making sense of things based on the academic discourses of designerly thinking and link it to the management discourse in order to identify the essential elements of design capability necessary to be developed by public servants to actually apply design thinking into practices. One popular definition of the concept of design thinking is *"*Thinking as a designer would*"* (Martin, 2009, p. 57). However, it is too broad to specify its features and share them with others from non-design fields.

	Academic discourses of designerly thinking	**Design Thinking within the management discourse**
Features	Five sub-discourses categorised based on the theoretical perspectives having clear roots and a substantial academic following	Three different origins of the design thinking discourse in the management area
	1. Design and designerly thinking as the creation of artefacts (Simon, 1969). 2. Design and designerly thinking as a reflexive practice (Schön, 1983). 3. Design and designerly thinking as a problem-solving activity (Buchanan, 1992 based on Rittel and Webber, 1973). 4. Design and designerly thinking as a way of reasoning/making sense of things (Lawson, 2006; Cross, 2006, 2011). 5. Design and designerly thinking as creation of meaning (Krippendorff, 2006).	1. Design thinking as design company IDEO's way of working with design and innovation (Kelley, 2001, 2005; Brown, 2008, 2009). 2. Design thinking as a way to approach indeterminate organisational problems, and a necessary skill for practising managers (Dunne & Martin, 2006; Martin, 2009). 3. Design thinking as part of management theory (Boland & Collopy, 2004a).

Table 2-8 Two distinct discourses on design thinking. Inspired by Johansson-Sköldberg et al. (2013b)

Tim Brown (2009), a CEO of IDEO, defined it a as "a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity" (p. 2). It is quite detailed and

clearer when it comes to the objectives of the design thinking, but there is still a lack of clarity in what designers' sensibility is and how they work. Roger Martin (2009), a professor at Rotman School of Management, argued that using design thinking in organisations is to apply a "designer's most crucial tool to the problems of business. That tool is abductive reasoning" (p. 26) based on the argument of one of the American pragmatist philosophers, Charles Sanders Peirce, who was interested in the origin of new ideas. Peirce argued that no new idea could be proved deductively or inductively using past data and new ideas arose when a thinker observed data that did not fit with the best explanation, and he coined this new form of reasoning as 'abductive logic' (Martin, 2009). Unlike deductive reasoning, which is "the logic of what must be; reasons from the general to the specific", and inductive reasoning, which is "the logic of what is operative; reasons from the specific to the general", which are grounded in the scientific tradition, abductive reasoning is described as the "logic of what might be" (Martin, 2009, p. 27). It does not aim to declare a conclusion to be true or false, but it aims to posit what could possibly be true. Consequently, design thinking is a logical way of best guess based on the observed phenomenon, data collected and experience accumulated (Kolko, 2010). Therefore, it is necessary to embrace abductive logic in order to become design thinkers or for organisations that want to thrive through design thinking. The concept can be better understood when it is supported by an accompanying process.

The advantages of applying design thinking in the public sector are a human-centred approach that starts with user needs including both public servants and citizens based on their lived experiences, a visual communication method allowing participants to effectively build common ground on the problems, and a prototyping method enabling people to quickly develop ideas and test them. However, as Kadam (2018) argued, there is a significant misunderstanding of what design thinking is in practice:

> More and more, 'design thinking' is described as a process in 4-5 steps, mostly with an emphasis on brainstorming, ideation, and tons of multi-colour post-it notes. And this is where the problem starts. (…) the design thinking framework is (…) certainly not some magic formula you can just learn, apply, and then get results from. Any process followed blindly starts to be a problem (Kadam, 2018).

Learning how to use the methods and tools of design thinking is not enough to successfully apply design thinking to practices as a creative problem-solving approach. Moreover, design thinking is often identified with creativity or as a way to boost people to think more creatively, but these aspects are just part of what design thinking can contribute to. Therefore, it is crucial for practitioners to have knowledge and skills which come with training (Brown, 2008; Johansson-Sköldberg et al., 2013), in order to properly apply design thinking with relevant tools and methods. Tim Brown (2008), a CEO

of IDEO, suggested that the design thinking process constitutes three spaces: inspiration, ideation and implementation. He highlighted that the design thinking process is a set of iterative activities that belong to each space rather than a predefined series of orderly steps. The 'inspiration' space represents the process of defining problems and identifying opportunities based on human-centred exploration, and the 'ideation' space is where idea generation, development and testing happen. The last space, 'implementation', describes the process of further developing and applying the solutions to problems. The objectives and key activities of the process introduced by Tim Brown are all included in the five stages of a design thinking process proposed in the practical guide, *'Designing for Public Services'*, published by IDEO, Nesta, and Design For Europe in 2016 (see Table 2-9). This guide is used to describe the overall process of design thinking and its key activities for this section as it is detailed in terms of what to do and how to do in applying design thinking.

Process & Activities & Methods			
Stage	**Stage 1**	**Stage 2**	**Stage 3**
	Setting up for success	Getting inspired	Developing insights & ideas
Activities + Methods & Tools	• Exploring the challenge • Creating a challenge brief • Planning your project • Assembling your team • Setting up team roles • Setting up your foundations • Running workshops	• Kickstarting your research • Influencing forces • Recruiting interview participants • Creating interview discussion guides • Interviews • Observations • Analogous research	• Downloading your learnings • Sharing stories • Creating themes • Identifying insights • Generating opportunities • Generating ideas • Creating concepts • Co-creating concepts
Stage	**Stage 4**	**Stage 5**	
	Testing ideas through prototyping	Preparing for implementation	
Activities + Methods & Tools	• Paper prototype • Roleplaying • Simulation • Wizard of Oz • Interactive prototype • Minimum viable product (MVP) • Randomised control trial (RCT)	• Creating a pitch • Capabilities quicksheet • Staffing your project • Creating a roadmap • Building partnerships • Measuring and evaluating	

Table 2-9 The process and methods of design thinking. Adopted from IDEO et al. (2016)

In the first stage, ‘Setting up for success’, it is important to set up the foundations, such as creating a challenge brief, planning a project and setting up a team before starting the project. The ‘Getting inspired’ stage aims to collect data through various methods, such as an interview and observation, to gather new perspectives and get inspired for the next stage. In the following stage, ‘Developing insights & ideas’, ideas for the development of solutions are generated based on the insights identified from data collected and stories shared. ‘Co-creating concept’ is also a key activity of this stage. The main goal of the ‘Testing ideas through prototyping’ stage is to turn ideas generated in the previous stage into tangible artefacts that can be tested. In the last stage, ‘Preparing for implementation’, the plan for implementation of the ideas is made and the ideas are launched in the real world.

2.2.2.3 Service design

The service economy has grown in response to technological advances and the service sector has become increasingly important in domestic and international economies; this is because a company’s competitive edge is increasingly dependent on service and its quality, as there is little difference in the physical products of different companies from a customer’s viewpoint (Kandampully, 2002). Furthermore, this has led to the emergence of new services and thereby new service channels requiring the transformation of the producer–consumer interface and its interaction such as self-service, and online and mobile services (Maffei, Mager, & Sangiorgi, 2005). Hence, the need for ‘service design’ has emerged as a strategic business tool (Tether, 2008) in order to deal with complex service problems involving multidisciplinary issues, and to achieve design-driven service innovation. The main focus of service design is on the experience of the users when they are interacting with other actors and resources, so-called touchpoints, in service systems. This variety of touchpoints is generally designed from the perspective of the customer throughout the whole customer journey rather than as a distinct product or transaction (Voss & Zomerdijk, 2008). A structured discourse about service design was started in the early 1990s mainly by two design scholars (Segelström, 2010): Ezio Manzini, a professor of Politecnico di Milano in Italy, and Birgit Mager, a professor of Köln International School of Design in Germany. This new design discipline began to be practically used by the UK-based design consultancy live/work in 2001, and it was broadly applied to projects related to service in the private and public sector as a human-centred and PD methodology by the USA-based consultancy IDEO in 2002 (Moritz, 2005). The outcome of a service design practice has been acknowledged as co-created value because of the active participation of users and stakeholders throughout the whole process of service design (Mager, 2008), which is considered an important and distinguishing characteristic of the object of service design (Holmlid & Evenson, 2007).

The British Design Council developed the Double Diamond Model (DDM) (see Table 2-10) for designers and people who work in service-related areas to systematise and generalise a range of design processes and methodologies for the development of services (Design Council, 2011).

The beginning of the process is the phase of 'Discover'. In this first part of the DDM, service designers strive to gather as much information as possible to clearly understand the big picture and details of the problems facing users, by using specific methods such as user journey mapping, user diaries, service safari and user shadowing. The most important feature of this phase is experience. Participants, including service designers, service providers and experts such as psychologists, sociologists and anthropologists come to understand the negative or positive experiences of users and customers by observing their activities or experiencing various situations in person (Stickdorn et al., 2011).

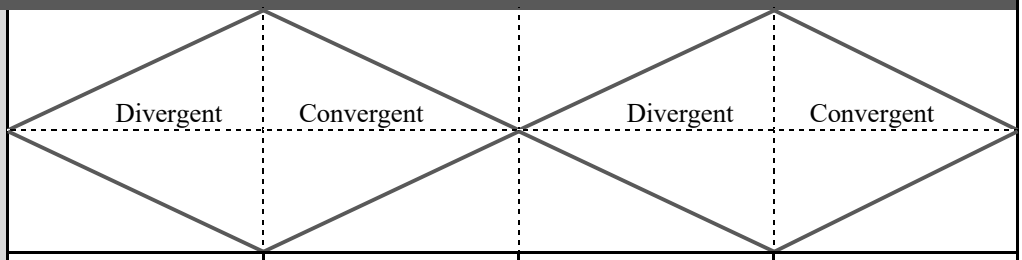
Process & Activities & Methods				
Phase				
	Discover	Define	Develop	Deliver
Activities	• Introducing and understanding issues and identifying problems and needs	• Synthesising key factors • Prioritising opportunities • Outlining aims	• Visualising ideas • Prototyping ideas • Testing ideas	• Finalising deliverables • Preparing for presentation
Methods & Tools	• User Journey Mapping • User Diaries • Service Safari • User Shadowing	• User Personas • Brainstorming • Design Brief	• Service Blueprinting • Experience Prototyping • Business Model Canvas	• Scenarios

Table 2-10 The Double Diamond Model for service design (Design Council, 2011)

In the second, 'Define phase', participants try to identify and analyse large masses of collected data to make a clear design brief to deeply explore the underlying problems. During this phase, designers align findings with users' priority and providers' business goals by conducting brainstorming and discussion with people from different departments to comprehend diverse perspectives and clearly define the fundamental problems (Design Council, 2011). The third phase is a period of 'Develop'

to create possible alternatives through an iterative process of developing and testing. This part accelerates the innovation by converting intangible problems into tangible materials to help the discussion between managers and decision makers. In addition, this process enables designers and providers to develop solutions in detail, by repeating experience prototyping and testing process (Stickdorn et al., 2011). The purpose of the last, 'Deliver', phase of the DDM is to verify the feasibility and viability of services through a design scenario that shows future situations by allowing people to predict how the service environment may change in the future (Design Council, 2011).

Service design is fundamentally a multidisciplinary approach requiring a clear understanding of people in the service systems. This takes a user-centric perspective and requires empathy to better understand users' behaviours, the interactions with service touchpoints and service employees; this is a very important feature of the service design approach in order to provide a strategic outcome rather than a fragmentary solution such as a single product (Kimbell, 2008). The main strengths and distinctive features of service design as an alternative approach are its methods and tools. The visible and fast prototyping way of describing the big picture of a service system and its touchpoints enables organisations, people in the organisation and service designers to quickly identify problems, and effectively share their opinions and ideas with each other (Segelström, 2010). In addition to the benefit of visualisation of tangible and intangible service problems, it allows service designers to envision future service systems by conducting reconfiguration of resources and actors through service design tools, such as a service blueprint, scenarios and storyboards (Grönroos, 2011).

2.2.2.4 Governmental Digital Service

The Government Digital Service (GDS) is a unit of the UK government's Cabinet Office formed in 2011 to implement the 'Digital by Default' strategy which aims to improve the interaction between GDS, Directgov, and citizens based on the suggestions recommended by Digital Champion, Martha Lane Fox (Laja, 2012). In a report called '*Directgov 2010 and beyond: revolution not evolution*' which reviewed the government's digital strategy (Corydon et al., 2016), she suggested the need for making the GDS an integrated platform to better communicate and interact with citizens and businesses by setting up standards and helping departments with coherent digital service transformation based on user-centred design principles (Lane-Fox, 2010).

GDS, which is made up of multidisciplinary teams, is in charge of transforming government's online public services by developing the processes of building services for citizens and supporting departments and local governments to transform (Corydon, et al., 2016; Sinni, 2017). GDS use an agile delivery model which was first used to develop software and now is applied more widely in various areas as an alternative to the traditional waterfall methods. Unlike the sequential process of the traditional approach, which goes through the process of gathering requirements, making plans, going through procurement, and then designing and building services, the agile approach is to do all

those processes together including testing. It consists of four phases: Discovery, Alpha, Beta and Live (see Table 2-11).

GDS follows design principles and applies a mixture of service design's and design thinking's methods and tools to put users on the centre stage of the service development process (Downe, 2016). The Discovery and Alpha phases aim to understand users, including their needs and unique context, and identify opportunity and develop ideas by prototyping and testing them before building real services in the Beta phase. The agile approach is not a one-off process, but an iterative process. Its phases continue to have enough feedback to be able to make sure that the service developed can meet users' needs.

Process & Activities & Methods				
Phases	Discovery	Alpha	Beta	Live
Activities	• Set a team • Set a goal • Understanding users and their context • Understanding constraints • Define the problem • Identify opportunities	• Prototyping and testing • Meeting the standard at alpha • Solving a whole problem for users • Deciding whether to move on to beta	• Take a best idea from alpha and start building it for real • Thinking about how your service will integrate with (or start to replace) existing services • Preparing for the transition to live	• Running services • Supporting the service in a sustainable way, and continuing to iterate and make improvements
Methods & Tools	• Interview • User Journey Mapping • Service map • Personas • User stories	• Prototype • Test	• Assessment • User research	• User research • Survey • Feedback

Table 2-11 The process and methods of Government Digital Service

The GDS also keeps updating its approach and distributes it across the nation with a service standard which consists of 18 points as criteria to support governmental teams tasked with creating and running better public digital services in order to integrate their digital services and provide citizens with coherent experiences (Sinni, 2017).

2.2.2.5 Co-design

Steen et al. (2011) argued that co-design is often used as a buzzword just to emphasise the importance of collaboration without a clear understanding of its definition and contributions to design projects. Chisholm stated "co-design is often used as an umbrella term for participatory, co-creation and open design processes" (Chisholm, 2015, para. 1). Sanders and Stappers (2008) pointed out the different uses of the term 'co-design' and its confusion with the term, 'co-creation', by practitioners and academics and they clarified this issue in their seminal paper, 'Co-creation and the new landscapes of design'; they found that co-design originated from PD which highlights the importance of the participation of users and co-creation with them. In order to avoid confusion, Sanders and Stappers (2008, p. 3) took 'co-creation' as a broad term to refer to "any act of collective creativity, i.e. creativity that is shared by two or more people". On the other hand, they used the term 'co-design' to refer to the "creativity of designers and people not trained in design working together in the design development process" (Sanders & Stappers, 2008, p. 3). In this thesis, the term 'co-design' will be used in this sense, that is: a process in which designers and non-designers work creatively together during all the phases of design development regardless of its approach.

2.2.3 Essential Components of Design Approaches in Public Sector

There are different design approaches in relation to innovation and change, although only the five most used approaches were discussed earlier; they have different origins but share human-centred design principles and processes. Design practitioners have occasionally applied the design processes together. For this reason, people in local governments often use different types of design approach interchangeably, as a new way of working, without distinguishing between them, in particular, design thinking and service design. Therefore, instead of distinguishing them and their different uses, the term 'design approach' will be used in this research as an umbrella term to indicate a way of working that applies a practical set of collaborative design methods and tools based on human-centred design principles in the process of public service innovation and organisational change. Considering their similarities and differences, the formation of a representative model of the design approach (see Table 2-12), including an ideal process, activities, tools and methods, will be discussed in the rest of this section. Then the model will be used as a scaffold to develop a conceptual model to identify and organise the elements of design capability. The conceptual model will be discussed later in this chapter.

Although each approach has its own process made up of a different number of stages with different names, the ways they approach problems and come up with solutions are similar in terms of exploring problem areas, defining main problems, developing ideas and testing the ideas. Assuming that the aim is to create a step-by-step guidebook for beginners, the author started with the idea of which

processes do practitioners need to follow to apply a design approach based on the discussion of different types of design approaches. In this sense, the British Design Council's DDM (see Table 2-10) has a clear structure for beginners to follow, and thus it has been used as a scaffold for the model.

Phases		Divergent	Convergent	Divergent	Convergent
	Set up	**Discover**	**Define**	**Develop**	**Implement**
Objectives	• Understanding issues • Creating a challenge brief • Creating interview discussion guides • Recruiting interview participants	• Kickstarting your research • Identify the problem, opportunity or needs to be addressed through design • Define the solution space • Build a rich knowledge resource with inspiration and insights	• Analyse the outputs of the Discover phase • Synthesise the findings into a reduced number of opportunities • Define a clear brief for sign off by all stakeholders	• Develop the initial brief into a product or service for implementation • Design service components in detail and as part of a holistic experience • Iteratively test concepts with end users	• Taking product or service to launch • Ensure customer feedback mechanisms are in place • Share lessons from development process back into the organisation
Activities	• Introducing issues • Planning your project • Assembling your team • Setting up team roles • Setting up your foundations	• Interviews • Observations • Analogous research • Workshops to visually identifying problems and needs	• Synthesising key factors • Prioritising opportunities • Outlining aims	• Visualising ideas • Prototyping ideas • Testing ideas	• Finalising deliverables • Preparing for presentation
Methods & Tools	• Documentation • Presentation • Workshop	• User Journey Mapping • User Diaries • Service Safari • User Shadowing	• User Personas • Brainstorming • Design Brief	• Service Blueprinting • Experience Prototyping • Business Model Canvas	• Scenarios

Table 2-12 The common process and methods of design approach

Then, the first stage of the design thinking process (IDEO et al., 2016) proposed by Design for Europe in conjunction with IDEO and Nesta was placed as a first step (Set up) to set up basic

conditions necessary before deploying a design approach, for example, planning a project, assembling a project team, and setting up the roles of the team. In the Discover phase, the team aims to better understand issues from users' point of view by interviewing them or observing their emotional reactions and behaviours in using services. The Define phase is for synthesising the findings and prioritising opportunities by inviting various stakeholders and discussing problems and opportunities with them. The Develop phase is an iterative process in which idea generation and testing happen actively based on various visualisation tools such as prototyping, service blueprinting, and Business Model Canvas. The last, Implement, phase is to launch the new services developed and tested during the development phase and evaluate them in order to develop them further. It is not a waterfall, linear and one-off process, but an open-ended, collaborative and iterative process and therein lays the value of a design approach in public sector innovation and change.

Each design approach has its own vantage point in specific roles respectively, for example, to discover problems, engage with participants and generate ideas. Design approaches share characteristics that drive innovation and change within organisations, they:

- Put people (users, stakeholders, frontline staff) first
- Create a creative and experimental culture in an organisation that encourages trial and error
- Facilitate collaboration and co-creation with various stakeholders
- Enable a systematic and holistic approach to problems
- Boost creativity and idea generation with various tools and methods
- Can quickly build common ground through visualisations
- Help to avoid expensive risk through prototyping and testing

Public sector organisations are motivated to apply design approaches and try to embed design capabilities within their organisations. Design approaches start by understanding users from their perspectives to come up with solutions appropriate to their needs. Empathy is, therefore, a key to the success of its application (Brown, 2009; McNabola et al., 2013; Thackara, 2007). Design approaches also help to create a creative and experimental culture of an organisation and provides a collaborative process involving multidisciplinary teams and different stakeholders through various activities, such as prototyping and role-playing games, which help breakdown silos (Brown & Wyatt, 2010; Jahnke, 2009; Yee et al., 2017). It is also a holistic approach that helps practitioners and participants to look at the entire system and create integrated solutions with the help of co-creating activities and tools, such as a stakeholder map, a user journey map and blueprint (Stickdorn et al., 2011; Stickdorn et al., 2018). Furthermore, it helps to avoid risks by allowing organisations to test ideas quickly and iteratively from an early stage of the development process through to simple prototypes (Coughlan,

Suri, & Canales, 2007; Holmlid & Evenson, 2007; Nesta, 2011). Those values of a design approach have encouraged public sector organisations to consider the design approach as a new way of working to overcome the complex challenges they face and to drive change and innovation. Therefore, a successful embeddedness of design capability in local government can mean to establish a suitable condition that removes barriers and enables the design characteristics listed above during the application of design approaches in the course of embedding design capability as part of their organisational capabilities.

2.3 Design Capability in Public Sector Organisations

As the importance of the strategic use of design grows among public sector organisations, thanks to a growing number of successful stories of the implementation of design approaches, embedding design capability into the organisations has gained more attention in the public sector. However, despite growing interest, there is still a lack of clear understanding of what design capability exactly means and how to develop it in public sector organisations. For example, many public organisations still understand design as an approach to develop aesthetics or a workshop itself applying various design tools. They do not adequately recognise the broader and strategic aspects of design in public sector innovation and change. This limited understanding of what design is has led to confusion and conflict in the meaning of design capability and created a gap between perception and reality in applying and embedding design capability within and for public sector organisations. Therefore, it is essential for this study to define the concept of design capability as part of an organisation's capabilities and identify its elements in order to investigate how design capability is embedded and facilitate its accomplishment in the local government context.

2.3.1 Identifying and Understanding Perspectives on Design Capability

2.3.1.1 Different ways of defining the ability of applying design approaches

The concept of design capability might be directly translated to 'the ability to use design' based on the Cambridge and Oxford dictionaries' definition of the word of 'capability' which means 'the power or ability to do something'. However, it does not seem to always hold true in practice and academia. Mortati et al. (2014) pointed out in their paper, 'Design Capability for value creation', the fact that the concept of design capability has been inconsistently used in practice; thus, they argued that empirical studies need to develop an agreed definition of 'design capability'. Malmberg (2017) appealed to empirical studies to avoid confusion in using the term 'design capability'. She identified the conflicting use of the concept in her PhD thesis, *'Building Design Capability in the Public Sector:*

Expanding the Horizons of Development', based on an extensive literature review in relation to design capability in the field of design and management.

Furthermore, there is the mixed use of the terms, capability and capacity, in different literature. Although they are synonyms, they have been used differently and, in some ways, contradictorily, depending on scholars in the design field. For example, Storvang et al. (2015) used 'capacity' in their framework developed to assess an organisation's ability to bring in design and apply it into its innovation process instead of 'capability'. They then used 'capability' as one of the five dimensions in their framework in order to indicate the quantitative dimension of an organisation's ability to mobilise internal and external designers, in other words, as the amount of design competence recourses available to employ in the organisation (Malmberg, 2017; Storvang et al., 2015). By contrast, Kootstra (2009) and Hesselmann and Walters (2013) used design capacity as a quantitative measure to evaluate available human resources with design competence in an organisation. Even in management studies, the words 'capability', 'ability' and 'competence' are also often used interchangeably (Dosi, Nelson, & Winter, 2001; Ulrich & Smallwood, 2004).

As interest in adopting design in organisations, such as integrating design in an organisation's innovation process (K Michlewski, 2007) and transforming towards a design-minded organisation (Lockwood, 2009), increase, there has been growing research interest in the understanding of and the development of design competence and design management of organisations (Bason, 2017; K Michlewski, 2007; Mutanen, 2008; Terrey, 2009), and identifying factors which determine an organisation's level of design maturity (Fraser, Moultrie, & Holdway, 2001). The growing discourse on the topic of an organisation's ability for design application has been discussed under not only the concept of design capability (Body, 2008; R Boland, Collopy, Ball, & Neff, 2003; Lin, 2014; Mutanen, 2008) but also other terms such as design capacity (Hesselmann & Walters, 2013; Storvang et al., 2015), design competence (Vazirani, 2010), design readiness (Bailey, 2012), design maturity (Westcott et al., 2013), design-minded (Lockwood, 2009), and design culture (McLean, Scully, & Tergas, 2010; K Michlewski, 2008) (see Appendix D). These different concepts have been mostly used to evaluate an organisation's design maturity (in other words, the level of design use in an organisation from an external viewpoint), resulting in limitations with regards to what and how to develop an organisation's design capability, in spite of their usefulness in judging at which level an organisation is in the use of design. Moreover, these different ways of defining an organisation's ability to apply design show a need for understanding what embedding design capability means to local governments and a clear definition of design capability for this study.

2.3.1.2 Different ways of evaluating organisational design capability

As stated earlier, there has been much research looking at the readiness of organisations to use design. The research evaluated organisations' present perceptions of design, understanding of the potential

of design, and their current use of design as a driver to innovation and change from internal and external viewpoints in order to define the level of design maturity. In doing so, the 'Danish Design Ladder' and the 'Public Sector Design Ladder' are often used as a way or a tool to measure organisations' design maturity.

The Danish Design Ladder was developed by the Danish Design Centre in 2011 as a tool to assess a company's use of design. It consists of four steps: Non-design, Design as styling, Design as process and Design as strategy (see Figure 2-3).

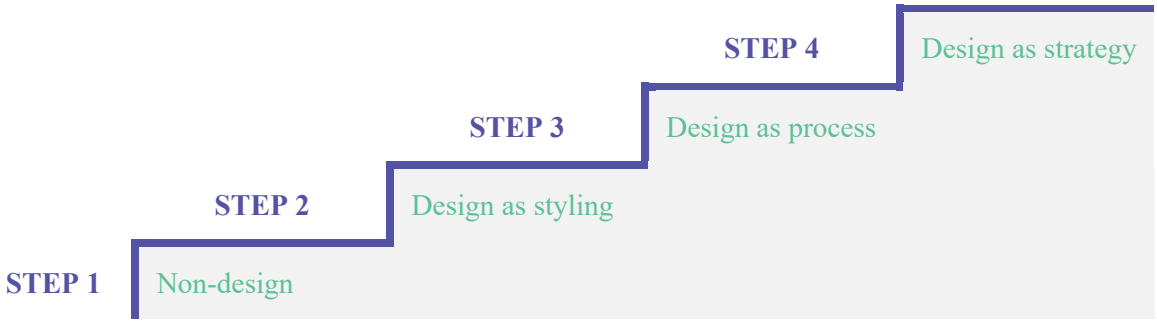


Figure 2-3 Danish Design Ladder (Design Commission, 2014)

In 2012, the European Design Innovation Initiative (EDII) in the European Commission carried out a project called 'Sharing Experience Europe' (SEE) by bringing together 11 partners from across Europe in an effort to create an evidence base in order to encourage public sector organisations to integrate design into their innovation policies and programmes (Design for Europe, 2015). They proposed a visual diagnostic tool, 'Public Sector Design Ladder' (see Figure 2-4), building on the Danish Design Ladder, for public sector bodies and nations to determine their level of design use and define a roadmap for progress based on 98 case studies (McNabola et al., 2013).

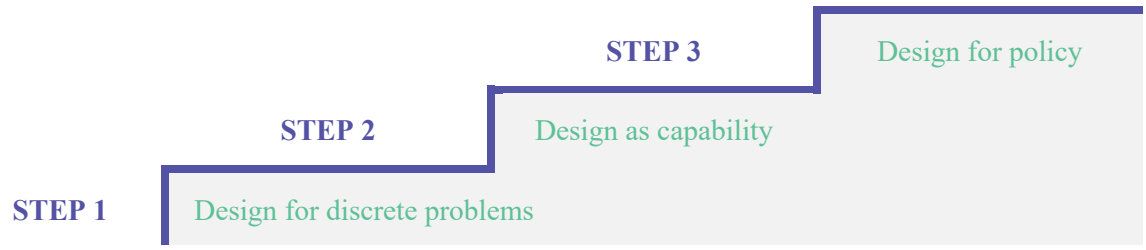


Figure 2-4 Public Sector Design Ladder (McNabola et al., 2013)

These two models (Danish Design Ladder and Public Sector Design Ladder) are useful to measure the status of the use of design in an organisation as they offer a standard in relation to the levels of design maturity in the private and public sector context, respectively. However, they are limited in

their understanding of various factors that can affect the use of design and design management of an organisation. Additionally, they do not discuss how to move up to the next level as they are only available to measure integrated outcomes at an operational level (Acklin, 2010; Nusem, Wrigley, & Matthews, 2017). This means that they do not display what elements of design capability are needed to acquire or to further develop an organisation's design capability.

In an attempt to clarify a range of design management aspects that can influence the way in which design is integrated and managed by a company, Kootstra (2009) developed a Design Management Staircase Model (DMSM) based on the Danish Design Ladder, which particularly focuses on the maturity of design management instead of the use of design. The model is made up of four steps, and each step has five factors (see Figure 2-5) – Awareness, Planning, Resources, Expertise, and Process – which need to be considered when defining a company's design management capability (Hesselmann & Kootstra, 2012).

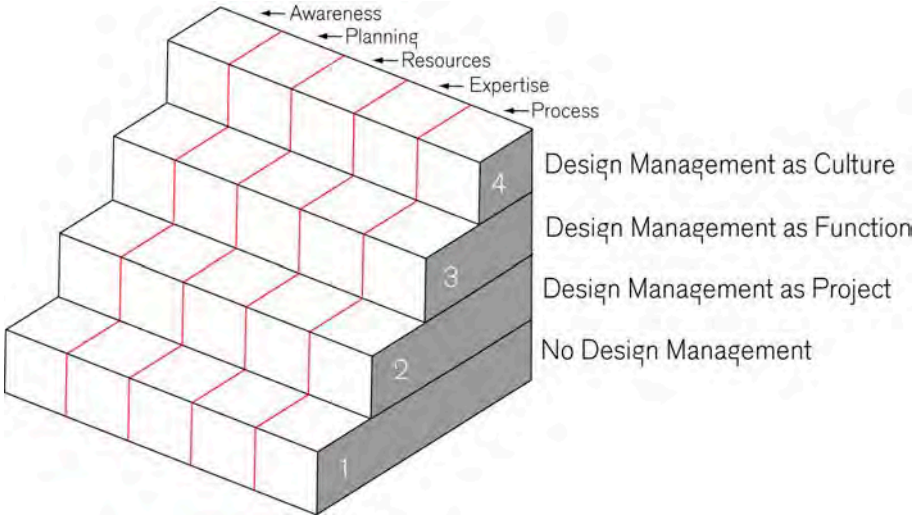


Figure 2-5 Design Management Staircase Model (Kootstra, 2009)

On the first level, 'No design management', there is little or no knowledge and experience available to handle design activities; so, design is rarely or not employed as a differentiator. On the second 'Design management as project' level, design is only used to meet business needs mainly as a marketing tool. It is applied as an ad-hoc approach to style change rather than a significant approach to a new product or service development. Companies on the third, 'Design management as function', level have a dedicated team involving specialised expertise with formal responsibility for design management over the innovation process in the organisation. The highest level of the DMSM is 'Design management as culture'. Companies on this level are very much design-driven. The features that distinguish the four levels are similar to those of other models that assess the use of design in an organisation, although this model mainly focuses on the maturity of design management. In order

for a clearer description and distinction of the four levels of design management, Kootstra (2009) identified five factors that each level entails. They are as follows:

- **Awareness: a degree of awareness of benefits**

  This factor indicates the extent to which companies are aware of the benefits and the potential value of design and design management. The attitude towards design heavily influences the actual and effective use of design in the organisations. It is all about employees' belief in the value of design, and the cultural background, design training, and technical and business knowledge of the senior managers, as well as their attitude towards "so-called 'soft' assets, i.e. brands and reputation" (Kootstra, 2009, p. 14).

- **Planning: whether design plans and objectives are developed**

  The extent to which businesses have developed a strategy for design, which is articulated in business plans and communicated widely. Another factor to look at is the capability of a company to dovetail design target with its business and market targets to carry out design activities. Without a clear understanding of what design can do, it is impossible to develop a design strategy in line with business strategy (Hesselmann & Kootstra, 2012).

- **Resources: people, budgets and means of facilities**

  This aspect is to evaluate to what extent a company invests in design. When measuring the design or design management capability of organisations, resources are often considered an important factor. This includes human and non-human resources, such as the number of designers, budget for design projects, and hardware and software for design and production. "One of design management's jobs is to ensure the best possible use of the means available within an organisation" (Hesselmann & Walters, 2013, p. 51).

- **Expertise: the level of design management experience, skills and expertise**

  This factor is all about the quality of the staff available to be mobilised, such as design experts, trained designers and design managers. It is also about the range of tools and methods available.

- **Process: whether an effective process is followed**

  The extent to which businesses follow a professional and effective design management process, which is embedded in core business processes. This checks whether design management is part of a formal programme of design activities rather than ad hoc design activities. "Design management at process level has a formal set up, meaning that it is part of a company's wider policy-making process and that it interfaces with other areas of the business" (Kootstra, 2009, p. 14).

Although not every organisation needs to aim for the highest level of the model, focusing its strategy on the role of design or design management as a driving force for innovation and organisational change, it is crucial for those who aim to build design capability to understand the factors that can affect the effective use of design and how organisations carry out design practices. The author will take the features of these three assessment models and their criteria factors into account when discussing and constructing the elements of an organisation's design capability and in the process of building it.

2.3.2 Locating Design Capability as Part of Organisational Capability

Change is an inseparable feature of organisational life in today's complex and volatile external environment (Burnes, 2004). Moran and Brightman (2000) argued that organisations should continually renew their directions, structures and capabilities, in order to successfully respond to changing needs. Therefore, current organisations in both the private and public sector are required to constantly develop capabilities that enable them to address challenges in order to effectively respond in a timely manner to changing needs and thus secure the organisation's competitive edge (Stojković et al., 2014). In this respect, organisational change cannot be separated from organisational strategy and capabilities which guide and help organisations to succeed (Helfat & Peteraf, 2015). Dosi et al. (2001) claimed that organisational capabilities are dynamic assets which should be always in the state of development and improvement in order to adjust to changing internal and external environments. Moreover, they underlined the importance of systematic development based on a well-structured process and management as the development and improvement of organisational capabilities are affected by many factors and require long-term and consistent support. This means that only possessing capabilities alone cannot create value. The creation of value is facilitated by how organisations manage and utilise their capabilities already established. This may involve revisioning: the business model and processes; people's skills, competencies and behaviours; and organisation's structure, facilities and reward systems (Gill, 2006; Thorp, 2011).

2.3.2.1 Two dimensions of organisational capabilities

According to Ulrich and Smallwood (2004), the concept of 'capability' has been interchangeably used with the words 'ability' and 'competence' without clear distinctions between them. Although there is no single exhaustive definition, organisational capability has been generally acknowledged to be an organisation's ability to perform a coordinated task through organisational resources (O'Regan & Ghobadian, 2004). Namely, organisational capability simply represents an organisation's ability to carry out activities and accomplish objectives.

Ulrich and Smallwood (2004) distinguished the words ‘competence’, ‘ability’ and ‘capability’, which are often used interchangeably both in theory and practice, by adopting them in their explanation of the features of organisational capabilities. They applied two dimensions for this: 1) technical and social skill; 2) individual and organisational level (see Table 2-13). They, then, defined the intersection of the technical and the individual as in the technical-individual cell as an ‘individual’s functional competence', and the intersection of the technical and organisational as in the technical-organisational cell as ‘an organisation’s core competencies’.

	Individual	Organisational
Technical	(1) An individual’s functional competence	(2) An organisation’s core competencies
Social	(3) An individual’s leadership ability	(4) An organisation’s capabilities

Table 2-13 Classifications of organisational capability (Ulrich & Smallwood, 2004)

The social-individual cell and social-organisational cell refer to ‘an individual’s leadership ability’ and ‘an organisation’s capabilities’, respectively. An individual’s functional competence (1) indicates technical expertise, for example, expertise in marketing, finance or manufacturing; an individual’s leadership (3) represents the ability to set up direction, communicate a vision or motivate people (Ulrich & Smallwood, 2004). Moreover, an organisation’s core competencies (2) refers to an organisation’s competency of management, for example, risk management (ibid.). In addition, an organisation’s capabilities (4) represents ‘an organisation’s underlying DNA, culture, and personality’ (ibid.). Furthermore, Ulrich and Smallwood (2004) proposed 11 capabilities, which ‘well-managed companies’ are likely to possess, as criteria to gauge an organisation’s capabilities: Talent, Speed, Shared mindset, Coherent brand identity, Accountability, Collaboration, Learning, Leadership, Customer connectivity, Strategic unity, Innovation and Efficiency. They, then, argued that an organisation’s capabilities emerge when the organisation brings its combined competencies and an individual’s abilities together, although the organisation as a whole may or may not represent the combination of their employees’ abilities and competencies as they are. Moreover, organisational capabilities enable an organisation to put its technical expertise into practice to be able to add value. In other words, organisational capabilities are dependent on one another (Ulrich & Smallwood, 2004). Therefore, the development of any of the capabilities will inevitably require the development of other capabilities or concomitantly result in the evolution of other capabilities. They, then, asserted that well-managed and competitive companies usually have more than three of these outstanding

capabilities while ‘maintaining industry parity’ in the others. Furthermore, if an organisation has any of the 11 capabilities below the norm, they would suffer operation difficulties.

As Ulrich and Smallwood (2004) demonstrated, it seems to be important to have both a strategic plan and structure to systematically develop and manage the individual-technical and individual-social, and organisational-technical and organisational-social aspects all together. When considering the interconnectivity of the organisational capabilities discussed above, design capability can play a supplementary role to help an organisation to create value and develop a competitive advantage with the 11 organisational capabilities, rather than be an exclusive element that emerges and works independently.

Therefore, it appears to be important that organisations which aim to embed design capability, distribute a design mindset across the organisation in order to foster a design culture and structure that support the unification and application of individuals’ design competences in conjunction with organisation’s competencies, as well as to nurture individual’s design competences themselves.

2.3.2.2 Holistic Competence Model (HCM)

Ulrich and Smallwood (2004) broke down organisational capabilities into four aspects and used the term ‘competence’ to describe an individual’s functional competence and ‘competency’, as in organisation’s core competencies, as one of the aspects of organisational capabilities indicating technical expertise, such as expertise in marketing, finance or manufacturing and an organisation’s competency of management.

The terms ‘competence’ and ‘competency’ have also been widely employed to discuss a person’s work-related performance in the management and human resource development field (Cheetham & Chivers, 1996; Le Deist & Winterton, 2005). However, it is difficult to present a single definition because the terms have been used inconsistently. There have been three distinct approaches to defining the concepts of ‘competence’ and ‘competency’: the behaviour-oriented approach in the USA; the function-oriented approach in the UK; and a multidimensional and holistic approach in France, Germany and Austria (Le Deist & Winterton, 2005). The terms are used as predictors to assess and predict a person’s job performance, by focusing on a person’s behavioural characteristics which may affect his/her job performance, functional performance and their applicability to the workplace, such as applying knowledge and skills, or multidimensional and holistic approach considering both an individual and collective approaches (ibid). Le Deist and Winterton (2005) developed a HCM that was built on the Model of Professional Competence which had been developed by Cheetham and Chivers (1996) based on the three approaches. It was created in an attempt to develop a consistent and coherent typology of competence (see Table 2-14) to assess professional job performance in the human resource management field. Le Deist and Winterton

(ibid.) found it useful to have a holistic typology in understanding the combination of knowledge, skills and social competences that are necessary for particular occupations.

	Occupational	Personal
Conceptual	(1). Cognitive competence	(3). Meta competence
Operation	(2). Functional competence	(4). Social competence

Table 2-14 Typology of competence (Le Deist & Winterton, 2005)

The model is highly cited in human resource development studies(Kang, Chung, & Nam, 2015). Le Deist and Winterton (2005) argued that occupational competence requires both 'conceptual' and 'operational' competences, and there are competences which are more associated with individual effectiveness having both 'conceptual' and 'operational' aspects.

Cognitive competence (1) represents the "possession of appropriate work-related knowledge and the ability to put this to effective use" (Cheetham & Chivers, 1996, p. 24). Functional competence (2) is defined as "the ability to perform a range of work-based tasks effectively to produce specific outcomes" (Cheetham & Chivers, 1996, p. 21). Meta-competence (3) represents personal and professional values and attitude in relation to facilitating the acquisition of the other substantive competences (Kang et al., 2015; Le Deist & Winterton, 2005). Lastly, social competence (4) indicates relational and communication skills (Kang et al., 2015; Le Deist & Winterton, 2005). The HCM is a generic framework; so, there is a limitation to distinguishing the level of design expertise. Nonetheless, the use of the HCM and the classification of organisational capability will be of use in defining an organisation's design capability and organising specific elements of design capability as one aspect of organisational capabilities or as a catalyst to connect or boost organisational capabilities.

The identification and classification of design capability in the public sector will be further discussed later in this chapter.

2.3.3 Defining Design Capability as Part of Organisational Capabilities

Instead of creating a single exhaustive definition, Malmberg (2017) identified patterns from the inconsistent uses of the concept of design capability in different literatures and presented three different aspects of design capability: awareness of design, design resources, and structures that enable the use of design.

However, these aspects are only able to analyse design capability at an organisational level because they do not clearly distinguish the individual design capability and organisational capability (e.g., 'design resources' that are available to be possessed both at an individual and organisational level and the ones that can only be provided at an organisational level). Moreover, although Malmberg's (2017) three aspects of design capability displayed many necessary components to develop an organisation's design capability, there are still limitations, particularly in adequately explaining mindset (Kadam, 2018), design leadership and design management, which Acklin (2010), Mortati et al. (2014) and Bason (2017) highlighted as crucial aspects of design capability.

In this section, the potential elements of an organisation's design capability will be reorganised and categorised based on the individual and organisational competences of the organisational capabilities as a scaffold for developing a conceptual framework for embedding design capability in organisations.

2.3.3.1 Meaning of design capability from an organisational capabilities perspective

Mutanen (2008) identified four basic approaches to design in business organisations in the literature. They were classified by two notions of how to see design in business organisations (see Figure 2-6).

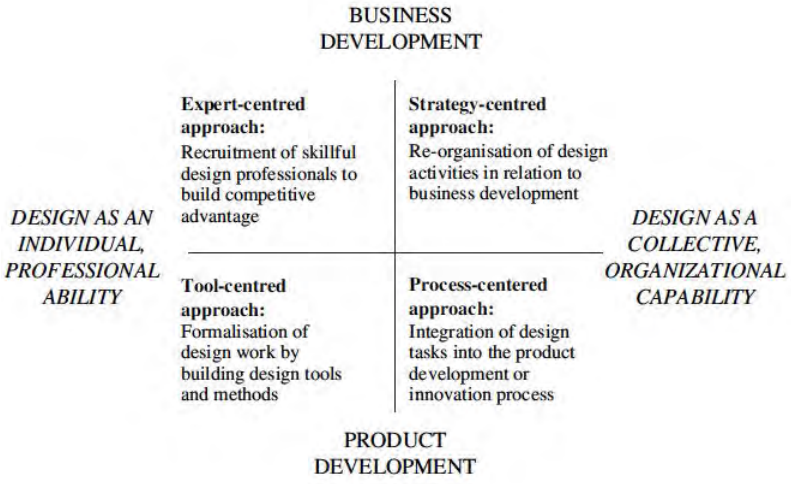


Figure 2-6 Four developmental dimensions of design in organisations (Mutanen, 2008)

The first aspect to consider in design is either to regard it as a professional ability of individual designers, or as "distributed, multidisciplinary, situated, and subject to change" (p. 502), so it is a collective design capability formed by various actors (Mutanen, 2008). This aspect acknowledges "designerly ways of knowing, thinking and acting" (Mutanen, 2008, p. 502). The second aspect is to differentiate design based on how it is contextualised. In this way, there are two major groups; each group discusses design differently. The first group discusses it in the context of new product development, while the other group considers it in relation to 'brand management' and 'overall business development'.

Mutanen (2008) analysed almost 30 years of history of a Finland-based company's development of design activity in order to understand the emergence and development of organisational design capability. As a result, he captured the overall movement of capability from expert-centred, through to tool-centred, through to processes-centred, to strategy-centred approach. This trajectory of the evolving role of design in organisations helps us to understand the changing role of design and changing aspects of design capability in organisations, from individual and expert-centred to more joint and co-creative activity which requires organisation-wide support and management.

Acklin (2010) pointed out the crucial role of design management in the innovation process, particularly in SMEs context. She argued that design and design management could make various contributions throughout the whole process of innovation management. The contributions were divided into four categories: Design, Design research, Design management and Design leadership (Acklin, 2010). She then displayed them and the deliverables that correspond to each contribution, by positioning them in an innovation process map (see Figure 2-7). In other words, they are the necessary abilities that design-minded organisations need to have in order to achieve design-led innovation.

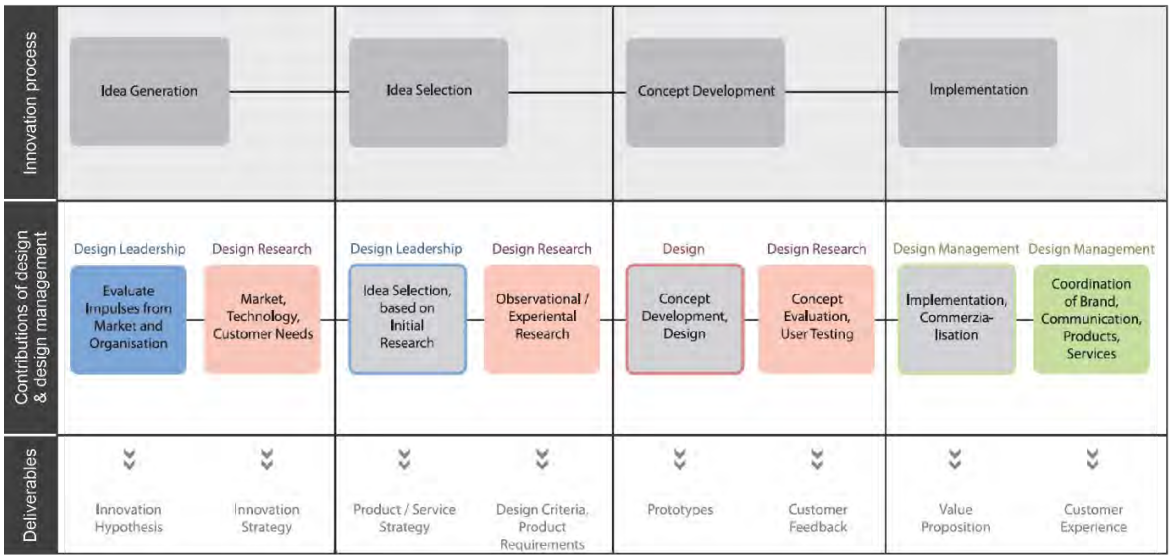


Figure 2-7 Design management capabilities and outcomes in the innovation process (Acklin, 2010)

'Design leadership' was considered one of the main contributions in a design-led innovation process as it helps to evaluate internal and external desire and decide which ideas to choose based on the initial research.

Body (2008), the former Assistant Commissioner of the Australian Taxation Office, supported the view that a knowledge base of design, such as techniques and methods, was needed and, more importantly, the need of practice management in implementing a design approach, in other words,

human resource and project management. Many scholars, such as Acklin (2013), Bailey (2012), Mutanen (2008), and Terrey (2009), also emphasised the importance of managerial and operational support in the effective use of design in an organisation based on their long-term studies about the establishment of design management and distribution of design capability either in private or in public sector organisations. Furthermore, they all agreed that design capability is not something that can be obtained at once and persists, but it is a thing that requires constant effort to develop as it evolves steadily in accordance with organisational growth and changes in external conditions. They, thus, highlighted long-term and consistent efforts from a dedicated group of people and organisation-wide support because design capability needs to be sustained by adjusting to continually changing external conditions.

Considering the aspects discussed above, the concept of design capability can be interpreted as an organisation's perception of design, its resource of design such as different types of design division and the number of designers in each division, and its practical ability to be able to access and mobilise relevant design resources to address challenges and create value. Moreover, it is something that requires consistent development and maintenance to adjust to a changing environment in order to work as an organisational capability.

2.3.3.2 Two dimensions of organisation's design capability

As discussed previously, many scholars in design and management highlighted that only being aware of the benefit of design or having design knowledge itself is not enough to create real value. They then emphasised the importance of the structures which bring different aspects together and enable the actual use of design in organisations. Acklin (2010) categorised the contributions of design and design management into four types: design, design research, design management and design leadership. Although the four categories do not directly describe the elements of design capability, they work as clusters on their own. Malmberg (2017) and Acklin (2010) identified the 'design resources' and 'design' as designing ability, and the 'structures' and 'design management' as an aspect which enables the use of design to achieve design-led innovation and change in organisations. They both thought that facilitating organisations to create real value that serves user needs through proper use of design requires an organisation's managerial support. There is much research underpinning the importance of managerial and operational support, what they called 'design management', in applying design for innovation and change based on their long-term empirical studies on the establishment of design in private organisations (Acklin, 2013) or public organisations (Bailey & Drummond, 2011; Body, 2008a; Terrey, 2013). Mutanen (2008) also supported this argument based on research presenting the overall movement of design capability from expert-centred to the recent strategy-centred approach which requires "structure of the object-oriented joint

activity" (p. 512). These perspectives of organisational design capability in the design management field can be linked with the way in which Ulrich and Smallwood (2004) defined organisational capability (see Table 2-11) in the previous section. In this sense, an organisation's design capability can be divided into two dimensions — individual and organisational design capability (see Table 2-15) — since they play different roles and are constructed in different ways in organisations. Moreover, design practices are carried out by a person or a group of people who know how to apply design approaches, which means that the individual design competence of the members of an organisation are brought together and collaborate with the support of the organisational design competence, such as design management and design leadership.

Design Capability of Local Government	1) Individual Design Competence
	2) Organisational Design Competence

Table 2-15 Two dimensions of an organisation's design capability

Therefore, the successful embeddedness of design capability in organisations requires the development of both individual and organisational design competences. Keeping the interpreted concept of organisation's design capability in mind, the elements of each individual's and organisational design competence of the organisation's design capability will be reorganised and further discussed.

2.3.3.3 Elements of individual design competence

There is no guarantee that an individual employee who has the relevant competence will be able to bring all their competences to carry out design practices to come up with solutions and deliver the desired outcomes. However, as Ulrich and Smallwood (2004) argued, the function of an organisation's capabilities is closely interdependent with individuals' competence. Moreover, design practices can only be performed by an individual or a group of individuals within organisations (Badke-Schaub, Lauche, & Neumann, 2007). There is an interest, and the author has also long wondered, in how much design expertise design managers should have. Although, as Nelson and Stolterman (2012) argued, it is always not adequate to exactly define what people need to master to become designers because it is context-specific and constantly changing, it is important to understand how to develop individual-technical and individual-social competence in order to build organisational capabilities as they constitute an organisation's capabilities. The literature shows the many potential aspects of individual design competence necessary to be able to properly apply design approaches in accordance with an external and internal environment.

The HCM consisting of four categories of individual competence was adopted as a structure to organise the elements of individual design competence (see Table 2-16 and section 2.3.2.2). Although this generic framework does not provide any standards for distinguishing different levels of design expertise and differences between design domains, it is of help in organising and understanding what goes into the development of individual design competence as one dimension of an organisation's design capability.

Categories	Description
Cognitive competence	The possession of appropriate work-related knowledge and the ability to put this to effective use
Functional competence	The ability to perform a range of work-based tasks effectively to produce specific outcomes
Social competence	Relational and communication skills
Meta competence	Personal and professional values and attitude in relation to facilitating the acquisition of the other substantive competences

Table 2-16 Necessary abilities of individual design competence organised based on Holistic Competence Model (Le Deist & Winterton, 2005)

The necessary abilities of the each of the four categories were organised based on the essential components of design approaches service innovation and change in the public sector which was reorganised and discussed in the previous section (see 2.2.3).

1. **Cognitive competence**

   Cognitive competence, in this context, describes the possession of proper work-related design knowledge and the ability to put this into design practice in order to address challenges. Design knowledge in the context of local government innovation and change may entail knowledge of design language, principles and value; knowledge of design practice, such as design processes (i.e., discover, define, develop and deliver), design tools and methods; and contextual knowledge about the features of users, stakeholders and public sector organisation, in particular local governments. Moreover, it also includes the cognitive abilities of creative, intuitive, holistic and integrative thinking.

2. **Functional competence**

Functional competence, here, represents the ability of a person to perform a range of work-based tasks in relation to design to produce specific outcomes through design approaches. This is related to the skills necessary to actually carry out design practices. They may include interviewing and observing, analysing and interpreting data collected, visualising and sharing the result of the data analysis and interpretation, prototyping to test, making visual stories to share, and project management skill.

3. **Social competence**

   Social competence indicates the relational and communication skills that are a generic, but an essential competence required by managers in almost every industry. In the context of this study, it may imply skills of creating and sharing vision and brand stories, engaging stakeholders in design processes, facilitating design activities and collaborations, including various participants with different knowledge and from different cultural backgrounds.

4. **Meta competence**

   Meta competence represents the personal and professional values and attitudes in relation to facilitating the acquisition of the other substantive competences. It may be design leadership and initiative to be able to embrace complexity and uncertainty, and carry out iterative design practices pursuing better quality. In other words, it is a design mindset including empathy, confidence, flexibility and persistence, which are required to execute design practices under demanding conditions.

Acquisition and development of these four competences mean that a person or team can apply design by his or herself or themselves to the process of service innovation or organisational change, and create value from it. However, it should be noted that depending on the size of the organisation, its financial situation, or its strategic direction, experts who specialize in each competence, such as design facilitators, visual communication designers and user researchers, can be hired individually. In fact, the formation of an ideal design team is multidisciplinary involving a variety of experts.

Michlewski (2008) presented five attitudes that inform fostering a design culture in an organisation based on in-depth interviews with senior designers and managers from design-led organisations in the private sector. They can be used in a way to understand design capability at an individual level and to identify its elements. The five attitudes are: ‘Consolidating multidimensional meanings’, ‘Creating, bringing to life’, ‘Embracing discontinuity and open-endedness’, ‘Embracing personal and commercial empathy’ and ‘Engaging polysensorial aesthetics’. On the basis of this study, Michlewski (2016) statistically tested different dimensions of design attitude through a survey of designers and non-designers, and found a significant difference between them. An amended version

of the five design attitudes was presented. Understanding these five design attitudes he identified will be of help in organising the elements of individual level design capability because they are, as he argued, crucial aspects for designers or design-minded organisations to successfully apply to a design approach in the process of design projects. The first dimension, 'Embracing uncertainty and ambiguity', describes the willingness of designers to engage in ambiguous problems, as well as their confidence towards uncertainty of the problems and outcomes. It is an essential attitude in order to deal with complex challenges. Junginger (2008) also identified that designers are comfortable with unfinished products and with imperfect information. Nelson and Stolterman (2012) underpinned this notion, arguing that becoming a designer is not only to engage in learning processes to master the essential design skills or expertise consisting of adequate design competence, but also to balance it with developing a person's characteristics as a designer. It can mean that the development of a cultural aspect, such as the mindset and attitude of a design learner or public servants, is crucial to develop design capability. The second dimension, 'Engaging deep empathy', is one of the already well-known aspects of designers and the most significant factor for the success of design projects. Designers need to put themselves in others' shoes to better understand people's needs and interactions with design outcomes, such as products, services and systems. Michlewski (2008) also pointed out that designers mobilise their aesthetic sense and judgement while interacting with the environment (Bason, 2017) in order to come up with best possible solutions, by not only visualising them, but also combining form and function to be able to work well for users. He defined this feature as 'Embracing the power of the five senses'. In the same sense, Nelson and Stolterman (2012) argued that the outcome of design learning or inquiry, design knowledge, cannot be tested, but only emerges and proves its value in application. 'Playfully bringing to life' is defined as the third dimension of design attitude. This aspect somehow explains what makes designers embrace uncertainty and ambiguity. According to Michlewski (2008), designers have a desire to create value and affect change. So, they enjoy the activity of visualising ideas and prototyping them because they are the ways to realise their desire. It is a kind of motivation for designers to explore and experiment. He also identified that designers are good at consolidating and reconciling multiple meanings, which are often contrary to each other, and turning them into something meaningful that works. This reflects an ability to frame and reframe problems (Dorst, 2015) and an ability to view situations from multiple lenses. He argued that this aspect is the core of designerly ways of working, by defining it, 'Creating new meaning from complexity', as the fifth dimension of the design attitude.

Michlewski (2008) looked at the ability of design as a result of learning and cultural and social activities. He argued that the culture of an organisation is the social collectives and, thus, the attitude of individual designers is important in shaping the design culture of organisations. Nelson and Stolterman (2012) also highlighted the importance of the development of the design ability of individuals. They claimed that becoming a designer requires not only learning to use existing design

knowledge produced by design professionals and scholars, but also engaging in the development of one's own design philosophy in order to create change in response to the increasing complexity and ever-changing environment. Therefore, organisations aiming to become design-minded organisations with the development of an organisational design capability need to keep engaging in the development of their intellectual ability.

"Learning to become a designer is a process of never-ending becoming"

(Nelson & Stolterman, 2012, p. 237)

2.3.3.4 Elements of organisational design competence

- **Design Management**

Acklin (2010) and Turner and Topalian (2002) characterised design management as reactive and they characterised design leadership as proactive so as to distinguish design management and design leadership, considering the main role of design management is to manage human and non-human resources, such as time, people and money, that are required to carry out design practices in organisations. The terms 'structures' and 'design management' were both adopted in the studies of building design and design management within an organisation in order to explain their intermediate roles in relation to operation and management of practices. However, the word, 'structures', itself tends to confine its role to the arrangement or construction of resources in an organisation. Moreover, the term 'structure' is often used as a component of what is necessary to apply design management in organisations. In this study, 'design management' will be taken as one of the core components of design capability, which indicates things that enable an organisation to actually carry out design practices. In other words, it is management of an organisation's human and non-human resources to mobilise and apply them in problem solving, and to facilitate collaborations between design and other functions in the process of problem solving.

There was a long-term project to embed design in management within the Australian Taxation Office. Based on their hands-on experience of the project, Body (2008) and Terrey (2013) argued that methods, routines, processes, roles, resources and structures are necessary to allow the organisation to use an integrated design approach and enable the approach to become legitimated as normal management work through projects and work. In this sense, design management may need to set up these factors to embed design capability: methods for distributing design tools and techniques across the organisation; routines for developing a guide which helps people to use and keep developing the design process; processes for developing an integrated process to follow when applying a design approach; resources for facilitations and equipment, such as a designated space for design activities, design software and printer; roles for distributing design teams to allow the

organisation to learn, teach and share new approaches each other; and structure for the organisational structure of the design manager and the team to allocate roles and manage projects or work.

Acklin (2013) asserted that there is another important aspect of design capability which she called 'Socialisation of design knowledge' apart from design management and design leadership. She claimed that it works as a vehicle to introduce design approaches and as a mediator to link design leadership with design management. From an organisational learning perspective, this implies activities of absorbing new design knowledge, transferring tacit design knowledge into explicit knowledge, and creating a design culture within the organisation, by the exploitation of design knowledge, such as design tools and methods, by multiple employees other than the CEO or senior members. However, in this study, the author incorporates this role into the design management role (see Table 2-17). Multiple research studies looking at the adoption of design approaches also emphasised the need of a wide distribution of design mindset and understanding of the roles and benefits of design tools and methods alongside the development of design competence in order to develop design capability (Acklin, 2013; Bailey, 2012b; Meyer, 2011). According to Hesselmann and Walters (2013), management's perception of design and management support are crucial not only in adopting design practices and connecting them with other practices, but in making efficient and consistent contributions to organisations. This notion is directly related to the design mindset.

Roles of design management	Tactics
Increasing awareness of the benefits and the potential value of design	• Distributing design mindset across organisation • Building trust • Training design knowledge and practice • Sharing ongoing projects and success stories
Developing a strategy for design and a plan for design activities in line with a vision of an organisation	• Developing a strategy for design in line with a vision • Making a plan for design activities to realise the strategy
Securing and managing design resources	• Securing and mobilising experienced-designers or trained-designers • Securing and allocating budget to support design activities • Securing and managing facilities and equipment for supporting design activities • Developing tailored design tools and methods

Developing design expertise	• Hiring external experts • Training internal employees to develop and maintain design expertise
Setting up effective design management process and adjusting it to changing environment	• Developing design management process to effectively apply design practices • Aligning the design management process with organisation's innovation or change management process • Adjusting the process to changing internal and external environment

Table 2-17 Roles of design management

- **Design mindset**

Nelson and Stolterman (2012) argued that because every design activity is intertwined with a cultural environment, design practices and designers will receive better support from an organisation when the organisational environment accepts design as a legitimate approach. One of the common barriers to the introduction of a design approach to public sector organisations is a sense of antipathy caused by the cultural difference between the way designers work and the way public servants work (Bailey, 2012a; Pirinen, 2016). The bureaucratic and hierarchical culture of public sector organisations tends to hamper the development of new ideas (Mulgan, 2014) and the relatively stable organisational environment often leads to risk aversion (Bason, 2010a; Mager, 2008). As Sanders and Stappers (2008) argued, it is not an easy task for "the principles and practices of participatory design/co-designing to make an impact on the man-made world" (p. 9) in which the traditionally accumulated organisational culture is entrenched, because accepting design approaches requires belief that all people are creative and experts from their own experience, and trust in the value of design approaches. These cultural characteristics of public sector organisations often come into play as obstacles to accommodating different approaches (Bailey, 2012a; Terrey, 2009). Therefore, the distribution of a design mindset across the organisation in order to raise awareness and understanding of design, such as its human-centred design principles and an open-ended approach to idea generation and problem solving, has been considered critical (McNabola et al., 2013; Sangiorgi, 2015; Thomson & Koskinen, 2012). Sharing stories of ongoing and successful projects and knowledge of design-led public sector innovation and change with people in organisations, not only senior managers but every public servant, is crucial to be able to embrace this new way of working because it helps to build trust. This cultural issue, which requires change in the perceptions and mindset of people inside the organisation, relies heavily on the leadership role as there are limitations to external interventions (Wrigley & Bucolo, 2012).

- **Design leadership**

Design leadership has been defined in two ways: 1) as a means to lead design and 2) as a means to lead business by design (Muenjohn et al., 2013). Muenjohn et al. (2013) consider it to be an individual's ability to carry out discrete design practices and an organisation's competency to lead the business of the organisation. Multiple scholars (Acklin, 2013a; Joziasse, 2011; Muenjohn et al., 2013; Turner, 2016) acknowledged design leadership as a critical factor in creating a company's competitive edge, as one of the design capabilities, because they thought it makes a significant contribution to the process of design and innovation. Additionally, they stated that the design leadership role is to guide and set up the agenda for an organisation. However, it is hard to find and sustain design leadership in public sector organisations because the designerly way of working is very different from the way they traditionally work. Acklin (2010) claimed that design leadership capability is directly related to the acquisition and assimilation of design knowledge absorption out of the four stages of new knowledge absorption process to build organisational capabilities. This means that recognising design, awareness of its value and actual use of it are the roles of design leadership based on an understanding of an organisation's vision and objectives. Turner (2016) developed six elements of design leadership in design-led innovation:

- **Envisioning the future:**

  Design leadership plays a key role in envisioning and setting a vison, and selling it to key stakeholders and decision makers in order to obtain buy-in. Although local government organisations need to follow a national vision that the central government created, in parallel, they should also develop their own detailed local vision and plan.

- **Manifesting strategic intent:**

  In order to consistently maintain high quality of design in a company's products, services and operations, it is essential to share strategic intention, such as vision, principles and value, with employees at all levels regardless of central or local governments.

- **Directing design investment:**

  Design leadership plays a key role in directing the funding to achieve a vision based on an understanding of the value of design. This aspect is really important as it makes the application of design in the organisation actually happen.

- **Managing corporate reputation:**

  The leadership style determines the climate of the organisation which heavily affects the relationship between stakeholders. A good relationship also influences the quality of

offerings that interact with customers. However, this aspect of design leadership is rarely identified in the public sector context because the public sector needs to accommodate both central government and the party to which each local government belongs, unlike in private companies.

- **Creating and nurturing an environment of innovation:**

An organisation's culture and internal environment are critical elements of companies' success in innovation. Design leadership often plays an important role in fostering an innovative environment within an organisation.

- **Training for design leadership:**

As the need for design leadership grows, each organisation wants to develop its own design leadership programme that fits well with the unique culture and needs of the organisation. Design leadership helps organisations to do it, by raising awareness of the need and value of design within the organisation and allocating a budget. Design leaders need to play an important role to realise these six elements of design leadership. However, they require support from design management to accomplish them. The features of each leadership element will be used as a basic source in organising the elements of design capability necessary in local government organisations.

However, as discussed in the previous section, design mindset and design leadership also belong to the meta competence of the individual design competence, as they work individually and collectively to mobilise organisational design capability because they also play a mediator role to link and boost individual and organisational design and other competences.

In conclusion, the potential elements of an organisation's design capability that have been discussed so far can be organised in Table 2-18, which consists of individual and organisational design competences.

Design Capability of Local Government	1) Individual Design Competence	Cognitive
		Functional
		Social
		Meta
	2) Organisational Design Competence	Management
		Mindset
		Leadership

Table 2-18 Organisation's design capability

Conclusion: A Conceptual Framework

In the previous section, different models designed to evaluate the level of design maturity of organisations both in the private and public sectors were discussed. They are the Danish Design Ladder, the Public Sector Design Ladder and the Design Management Staircase Model, which was developed in an attempt to complement the limitations of the two former models to articulate the elements of each level required to move up to the next levels. However, despite the suggestion of five factors – awareness, planning, resources, expertise, process – to evaluate and distinguish the level of design maturity, there still remained limitations to the existing models from a methodological perspective on how to develop design capability.

Since design has been recognised as an alternative approach to public service reform and organisational transformation, building design capability in organisations has become important for innovation and change in the public sector (Cooper et al., 2011; Design Commission, 2014; McNabola et al., 2013). The most common ways that public sector organisations try to develop and embed design capability identified in the literature are, overall, three types: 1) establishing a design unit or lab within the organisation (Kimbell & Bailey, 2017; McNabola et al., 2013); 2) conducting a design project including a series of training programmes in conjunction with external design agencies or academic institutions (Bailey, 2012; Salinas et al., 2018); 3) involving employees in external design training programmes (Design Commission, 2014). These ways of developing design capability are a 'learning by doing' style of training which generally focuses on increasing an awareness of design and transferring knowledge of how to use design tools and methods during the process of conducting case projects. This means that they mainly focus on developing an individual's design competence by encouraging public servants to actively participate in design practices. Although the first way, establishing an internal design unit or lab, affects the development of organisational design competence to a certain degree, for example, the establishment of a structure that enables the application of design and the setting up of a dedicated space, the three ways all have been acknowledged to have limitations for the development of organisational design competence. Furthermore, it is commonly accepted that these three traditional ways of building design capability in public sector organisations have limitations not only in developing organisational design competence, which enables the actual application of design, but also in providing systematic development of individual design competence based on the theoretical understanding of design knowledge.

The main aim of this study is, therefore, to provide an overview of how design capability is embedded in local governments as part of their organisational capabilities based on an understanding of the reasons for embedding design capability into their organisations, with an identification of the role of designers and public servants in applying and embedding design capability as a secondary aim. In

order to achieve these goals, the author has defined the concept of design capability and identified the elements of design capability as part of organisational capabilities based on an exploration of the different ways of discussing an organisation's design capability in the literature, such as an organisation's design maturity, design readiness, design competence and the ability of design use. In doing so, it has been recognised that the three aspects of design capability — awareness of design, design resources, structures that enable the use of design — which Malmberg (2017) identified have limitations in explaining design mindset, design leadership and management; however, many scholars considered design mindset, design leadership and management to be important. In practice, a typical way of embedding design in a public sector organisation is to build individuals' design capability through training programmes; the training programmes consist of a series of co-design activities which allow individual participants to learn situated and relevant design knowledge, skills and mindset, by enabling them to experience various design methods and tools (Holmlid & Malmberg, 2018; Kang & Prendiville, 2018).

However, as discussed earlier, embedding design capability in an organisation is directly connected to organisational management, mindset and leadership, which allow access to relevant design resources and enable delivery of a valuable result. As various scholars argued, organisational design capability cannot be directly established by bringing in external resources (Body, 2008; Malmberg, 2017; Terrey, 2012). Therefore, the application and development of design capability requires the organisation's managerial and operational support (Acklin, 2013; Body, 2008; Malmberg, 2017; Mortati et al., 2014; Mutanen, 2008).

For this reason, this study discussed design capability as a combination of individual and organisational design competences, by identifying and reorganising their potential elements, respectively. Furthermore, a conceptual framework was developed to investigate the inquiry of the research.

A conceptual framework to organise design capability in local government

A conceptual framework is a logical structure that best explains how a research problem could be explored (Liehr & Nursing, Smith, 1999) and is linked with empirical data collected and theories used in developing knowledge (Peshikin, 1993). It is also described as a visual representation (Grant & Osanloo, 2014) or narrative form (Miles, Huberman, & Saldaña, 2014) that illustrates the presumed relationship between the key variables in a study.

The literature review on various types of design approaches, organisational capability and design capability in this chapter informed the development of a conceptual framework (see Table 2-19) which illustrates the process of service design development including a design training session before applying a design approach to service development: Learn; Set-up; Discover; Define; Develop;

Implement. It also shows the different elements of a local government design capability. The elements of a local government design capability can be divided into two overall competences: individual design competence and organisational design competence. Moreover, the individual design competence can be divided into four elements including cognitive and functional, and social and meta competences, respectively, based on the HCM discussed earlier. The elements of organisational design competence can also be divided into three elements based on the literature review: Management; Mindset; Leadership.

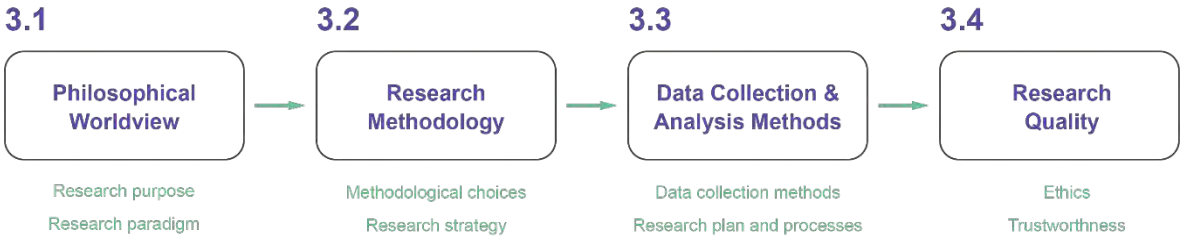
Elements of a local government design capability		Before	During applying a design approach				
		Learn	Set-up	Discover	Define	Develop	Implement
1) Individual Design Competence	Cognitive						
	Functional						
	Social						
	Meta						
2) Organisational Design Competence	Management						
	Mindset						
	Leadership						

Table 2-19 A conceptual framework to organise design capability in local government

This matrix of the conceptual framework to organise design capability in local government will be used as a structure and guide in a multiple-case study approach; the multiple-case study approach includes in-depth interviews and ethnographic observation to investigate what and how each case local council tries to apply design approaches and embed design capability as part of organisational capabilities. The matrix will also help to identify and organise the elements of design capability for local governments to successfully apply design approaches and articulate what role designers and public servants can play respectively during the process of the application and embeddedness of design capability.

CHAPTER - 3 RESEARCH DESIGN AND METHODOLOGY

Introduction



This chapter outlines the research design and methodological approaches adopted in this study and presents the rationale for the chosen approach and specific methods. This chapter also reviews the purpose of this research in order to describe its research paradigm and position the researcher's philosophical stance. The chapter also presents the research methodology and methods of data collection and data analysis, as well as the discussion of research quality. Using a combination of Crotty 's (1998) four research design elements and Saunders et al.'s (2009) Research Onion Diagram (ROD), the chapter is organised into four main sections (see Figure 3-1).

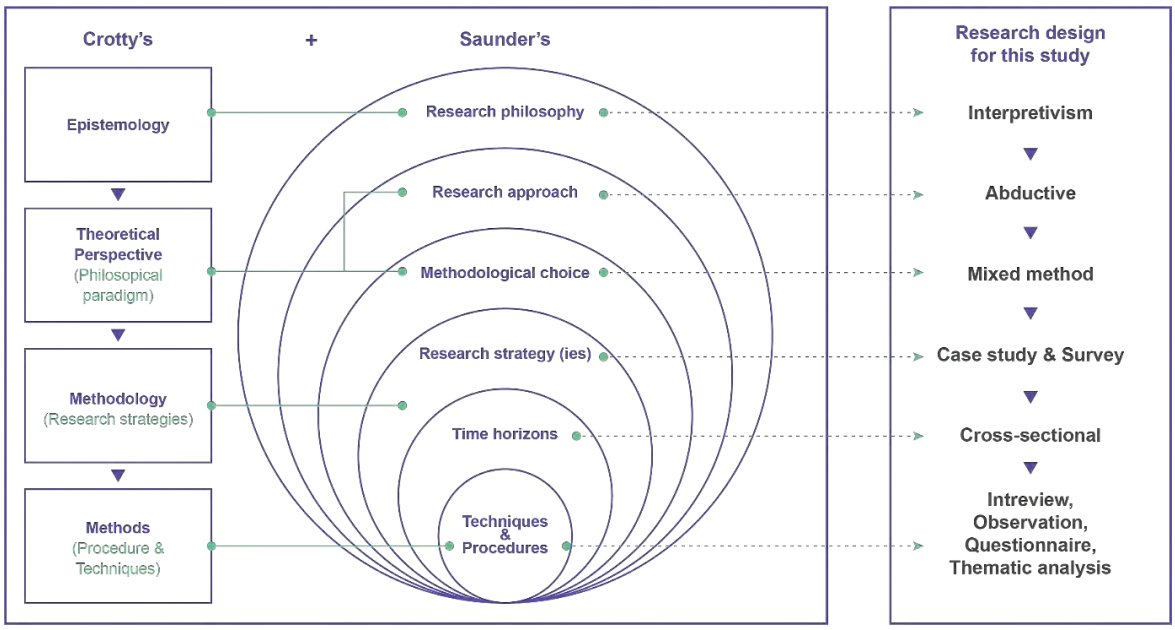


Figure 3-1 Developing research methodology. Adapted from Crotty (1998) and Saunders et al. (2009)

Crotty (1998) suggested four research design elements – Epistemologies, Theoretical perspectives, Methodologies, Methods – that represent the distinct hierarchical levels of decision making in the research design process. Saunders et al. (2009) developed the ROD – Philosophy, Approach to theory development, Methodological choice, Strategy(ies), Time horizons, Methods (techniques and procedures) – which is structured in multiple layers and presents different stages in formulating a research methodology. Although, as Crotty admitted, the four research design elements do not include a level for establishing the ontological position that ultimately affects the epistemological stance, his four-step guide is useful in designing research (Creswell & Poth, 2017). These two research design guides were used in discussing and determining a route from the different choices available in each layer to design the research of this study.

3.1 Philosophical Worldview

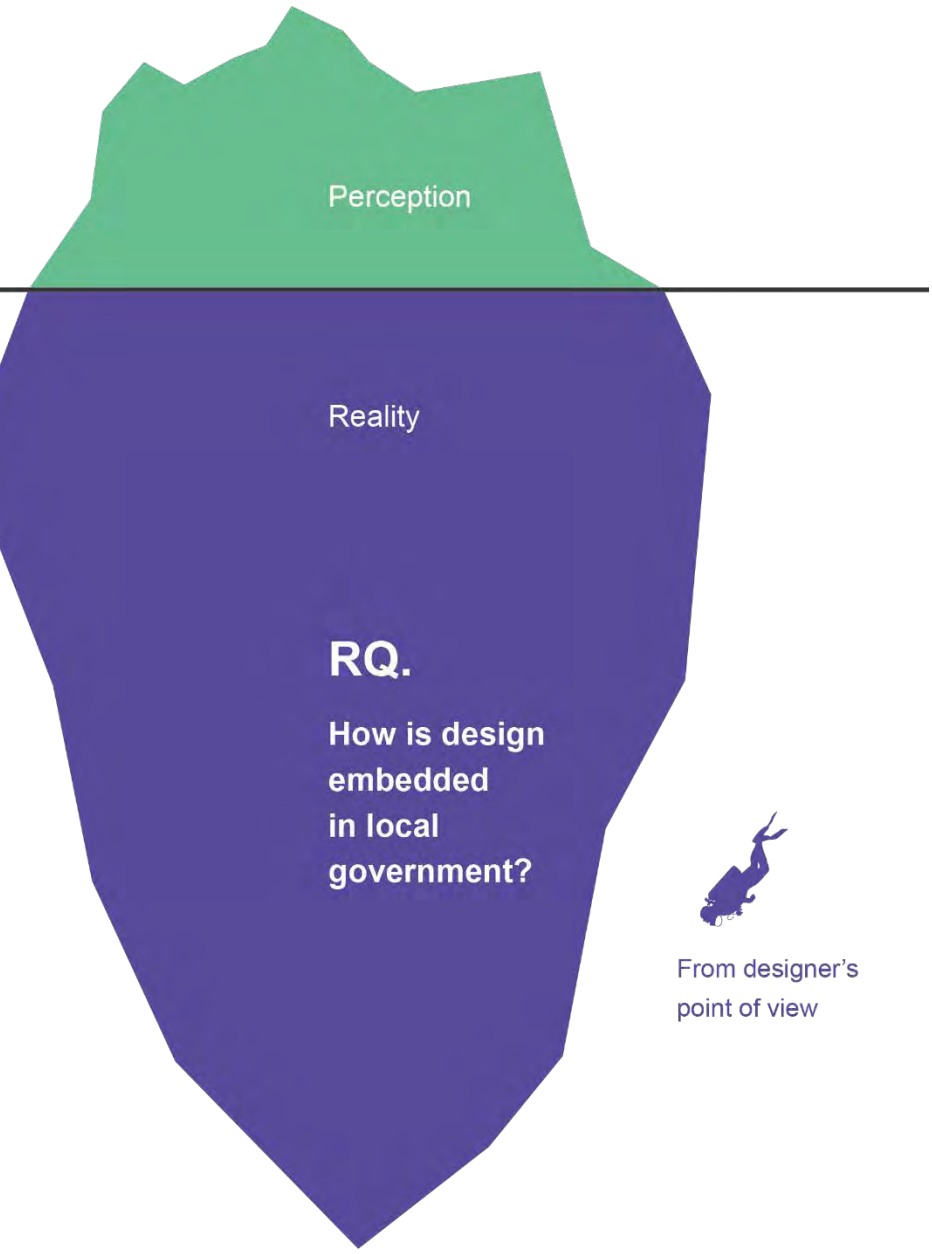
Purpose	Features
Exploratory	• To find out what is happening, particularly in little understood situations • To seek new insights • To ask questions • To assess phenomena in a new light • To generate ideas and hypothesis for future research • Almost exclusively of flexible designs
Descriptive	• To portray an accurate profile of persons, events or situations • Requires extensive previous knowledge of the situation to be described and to define aspects on which to gather information • May be of flexible or fixed designs
Explanatory	• Seeks an explanation of a situation or problem, traditionally but not necessarily in the form of causal relationships • To explain patterns relating to the phenomenon being investigated • To identify relationships between aspects of the phenomenon • May be of flexible or fixed designs
Emancipatory	• To create opportunities and the will to engage in social action • Almost exclusively of flexible designs

Table 3-1 The classifications of the purposes of inquiry (Robson, 2011)

Academic research is carried out in order to develop knowledge (Collins, 2010); there are a number of methodological approaches available to the researcher (Denscombe, 2014). According to Robson (2011), the purpose of the research determines the philosophical position, which is also known as the research paradigm. It is this philosophical stance of the researcher that directly influences the selection of the research methodology for the entire process of a research study. The research purpose refers to the area of inquiry and objective of the investigation, and it is classified into four different

types in qualitative research (Robson, 2011): exploratory, descriptive, explanatory, and emancipatory (see Table 3-1). It is, therefore, important to set out what the research inquiry is in order to design a research framework because the research purpose has a strong relationship with the research problem that has been defined (Denscombe, 2014).

As stated in the 'Prologue: research motivation', this study began with a personal motivation to find answers to questions and clarify thoughts about the way to use and develop design capability and design professionalism that arose from my experiences as a designer. This quest has been refined and redefined as an inquiry into how design capability is embedded through co-design workshops and support from designers and public servants that requires an understanding of what design capability means to local governments. It is also carried out from the perspective of the researcher as a designer to reduce the gap between perception and reality when applying and embedding design capability within and for local authorities. The researcher proposes a conceptual model to support an effective embeddedness of design capability. This study seeks answers to the key research question and sub-questions below.



- **Key research question**

How is design capability embedded in local governments as part of organisational capabilities?

- **Research sub-questions**

1) Why do local governments try to apply design approaches and embed design capability?

2) What roles can designers and public servants play in embedding design capability?

Each sub-question above has different goals which characterise the purpose of the research.

3.1.1 Research Purpose

In order to accomplish the purpose of this research, an exploratory approach has been chosen because this research aims to gain new insights into phenomena currently occurring in local governments regarding the application and development of design capability through the analysis of observations, interviews and archival data. There are few studies on how design can be applied to public management and governance and the development of design capability in public sector organisations (Bason, 2017; Lima & Sangiorgi, 2018; Malmberg, 2017). Design capability in the context of local government is relatively unexplored and is thus less understood.

3.1.2 Research Paradigm

Creswell and Poth (2017) argued "whether we are aware of it or not, we always bring certain beliefs and philosophical assumptions to our research" (p. 15), and this so-called philosophical paradigm that implies a philosophical orientation of the world and the nature of research is studied by researchers. Understanding and choosing a research paradigm is a crucial phase in designing and carrying out research because selecting a certain philosophy means that the researcher accepts certain assumptions about how to view the world and think about the research process (Collins, 2010). It also becomes the basis for determining research strategy (ibid.). Ontology is defined as how we view social reality; there are two ontological positions we can adopt in social research: objectivism and constructivism (Bryman, 2003). Objectivism presents the position that social phenomena and their meanings have an existence that is independent of social actors, while constructivism implies that social phenomena and their meanings are continually being accomplished by social actors (Collins, 2010; Creswell & Poth, 2017). Moreover, the epistemological position identifies how we gain knowledge informed by ontological positions. There are several perspectives that can be defined as epistemological paradigms, and they can be categorised into two different philosophical stances: positivism (which includes realism and objectivism) and interpretivism (which includes constructivism and pragmatism) (Patton, 2002). Positivism supports a research approach that tests theories and hypotheses that are mainly quantitative in nature and in which the researcher maintains objectivity towards the subject matter (ibid.). Conversely, interpretivism is about generating theories and hypotheses and can be both qualitative and quantitative in nature, although qualitative research is more common and often requires the researcher to be closer to their subject matter as a participant and/or observer (Bryman, 2003; Patton, 2002). This research takes an interpretivist position because there is a lack of accepted and established theories in the study of emerging design practice, which reveals that there are gaps in design knowledge and a lack of literature about embedding design

capability and the role of designers and public servants in embedding design capability in the context of local government.

3.2 Research Methodology

3.2.1 Methodological Choice: Mixed Methods Approach

There are three types of methodological choice: qualitative, quantitative and mixed methods; the choice of which to adopt is driven by the research purpose and is aligned to the research paradigm (Creswell, 2014). In presenting their different characteristics in collecting data, Robson (2011) described qualitative and quantitative research methodologies as flexible and fixed strategies, respectively. Qualitative research (flexible design) is aligned to an interpretivist paradigm which investigates social or cultural events based on the perspectives and experiences of the observer, through open-ended questions (Robson, 2011). This strategy of inquiry employs various methods to collect qualitative data. The research design may also change and evolve in the course of study (Creswell, 2014). Quantitative research (fixed design), on the other hand, is aligned to a positivist worldview and pursues structured research techniques to objectively and systematically investigate observable phenomena through statistical, mathematical, or computational techniques (ibid.). A mixed methods approach lies between qualitative and quantitative research and includes elements of both approaches (Creswell & Poth, 2017). The mixed methods approach was built on "the idea that all methods had bias and weaknesses" (ibid, p. 14), and thus it was developed to complement the weaknesses of each form of data gathering (ibid.).

One of the main aims of this research is to develop a deeper understanding of why local governments want to apply design approaches and embed design capability in their organisations, and what they are actually doing to identify their purposes and processes in applying and embedding design capability. The intention of the research, then, is to reduce the gap between perceptions and reality in applying and embedding design capability in the local government context for those who want to undertake it within their organisations. Therefore, it is important for this study to identify appropriate cases that meet the selection criteria. However, there are difficulties in finding suitable organisations for case studies and in gaining permissions from them to collect data, and these difficulties often delay the process of data collection or even the entire research process (Yin, 2017). While seeking to develop an understanding of the phenomena happening in a real-life setting, recruiting local authorities for the case studies was one of the most challenging parts of conducting this research. This is because the cases needed not only to have ongoing projects in which design capability was being applied and embedded, but also to be able to openly share their experiences about why they are applying design capability and what they have been doing to embed design capability. The limited

time and access to the case studies granted by the councils, and the difficulties of research continuity caused by the high employee turnover rate also guided the selection of the mixed methods approach. Additionally, a mixed methods approach employs diverse methods to gather multiple sources of evidence (Creswell, 2014), thus maximising data collection and enhancing the validity of research findings.

3.2.2 Research Strategy: Case Study Approach

According to Creswell and Poth (2017), there are different views as to how to define 'case study'. Stake (2005) argued that case study research is a choice of what is to be studied bounded by time and place, whereas Denzin and Lincoln (2011) claimed it was a strategy of inquiry. Yin (2017) has developed a definition of a case study over five editions of his renowned book, *Case Study Research*, and defined it as "an empirical inquiry that investigates a contemporary phenomenon (the case) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p. 16). He argued that case study research is most relevant to the 'how' and 'why' forms of research questions (ibid.). This research aims to investigate how design capability is actually applied and embedded within local governments based on the understanding of why local governments are currently trying to embed design capability within their organisations. This inquiry is bounded by time and place; in other words, it aims to deeply understand the contemporary phenomenon of the application of design approaches and capability and ways of embedding them within a real-world context: local governments in the UK, particularly in England. The works of Yin (2017) and Creswell (2009) indicate that a case study approach is suitable as a main research strategy.

Yin (2017) presented four types of designs for case studies that reflect different design situations (single-case or multiple-case) and displayed different ways of analysis (unitary or multiple units) through a 2 × 2 matrix; these are single-case holistic design (Type 1), single-case embedded design (Type 2), multiple-case holistic design (Type 3), and multiple-case embedded design (Type 4) (see Figure 3-2).

According to Yin (2017), the 'Type 1' single-case holistic design can fit up to five cases: a critical, unusual, common, revelatory, longitudinal case. For example, it can be used to test a significant theory and determine the validity of theoretical propositions, or to gain insights from common or unusual single cases (Yin, 2017). A holistic case study is interested in understanding a global phenomenon and tries to draw conclusions about the phenomenon as a whole (Stake, 2013). If a researcher has an opportunity to become involved in a previously inaccessible case, the single case can be revelatory (ibid.). Additionally, studying the same single case for a long time or at two or

more different points in time can also contribute to the development of an understanding of how certain conditions and processes change over time (ibid.).

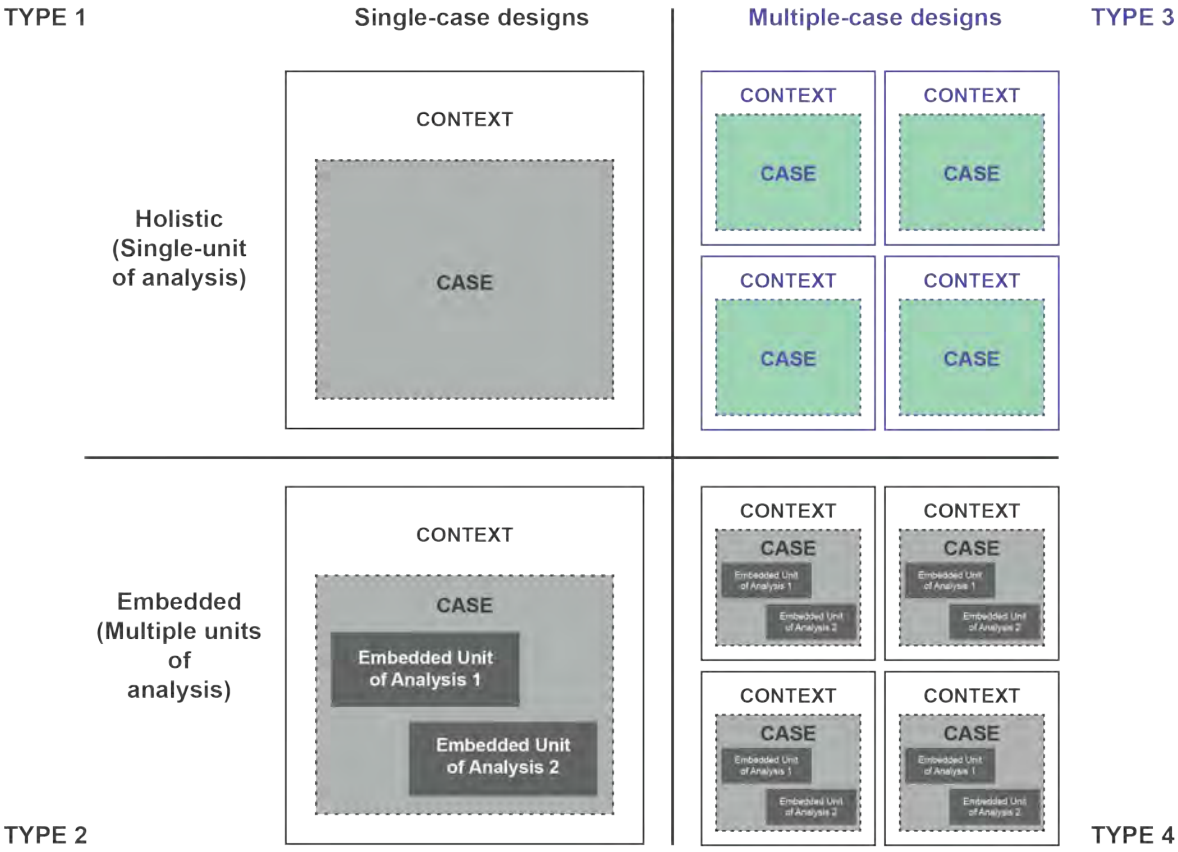


Figure 3-2 Basic types of designs for case studies. Adopted from Yin (2017)

If a single-case study involves multiple units of analysis, then it would be Type 2, single-case embedded design which can enhance the insights into a single case by offering more chances for a broader analysis under the premise that the holistic aspects are not disregarded (ibid.). On the other hand, a multiple-case design is particularly applied to an investigation of something that has many parts which each have their own problems and relationships (Stake, 2013; Yin, 2017). Stake (2013) argued that a benefit of a multiple-case study is the development of a more thorough understanding of the whole – he calls it 'quintain', an entity having cases – or phenomenon presented from each case. Moreover, it can have more than one research question in common and particular questions to each case exclusively. Therefore, it requires the separate organisation of data collection and reporting for individual cases (ibid.). Multiple-case study design can also be divided into either holistic or embedded cases depending on the how individual cases are analysed (Yin, 2017).

The case studies for this research were designed as a multiple-case holistic design (see Figure 3-2). The rationale for this choice can be explained in accordance with the research questions. First, this

study aims to examine how design is actually applied and embedded as a capability in local governments based on the understanding of underlying reasons for it. This was because there was a gap between the reality and the perception of those who want to embed design capability or have just started doing it. To answer this key question, it was necessary to investigate more than two local government contexts that have been trying to apply and embed design capability under similar or different conditions and through the same or different approaches. The different contexts that potential cases might have, such as the political parties to which they belong or regions in which they are located, called for multiple-case design, even though all cases were going to be studied under the same research topic with respect to the application and embeddedness of design capability through design practices. One of the important reasons for adopting multiple-case studies is to examine the results of the performance of the programme or phenomenon conducted in different environments (Stake, 2013).Second, it also aims to identify the role of designers and non-designers (specifically, public servants in this study) as main actors of executing design practices and transferring design knowledge and practice to realise design capability embeddedness. This required a global understanding about the issue as a whole. Third, this study also aims to understand different features of applying and embedding design capability through a conceptual framework that facilitates embedding design capability within local governments to support both designers and public servants. Developing a conceptual framework calls for a deeper understanding of the different conditions and processes of the different routes for embedding design capability, which is called the DIM in this thesis, that local councils apply in order to combine the strengths and complement the weaknesses of each approach. Details about what DIM means in this study can be found in chapter 4 (see Section 4.3.1.1).

For those reasons, a multiple-case holistic design was considered a suitable case studies design for this study. Moreover, it was expected to give the researcher an opportunity for an in-depth study about the meaning of design capability, and its application and embeddedness within local governments depending on which DIM they belong to. This allowed the researcher to identify conditions, challenges and barriers, and to recognise the common patterns and differences between the approaches that each local council employs under a different DIM. Furthermore, each single case of this multiple-case design was studied thoroughly on the basis of the case study protocol (see Appendix E), which guides case studies and enhances reliability by allowing investigators to keep focusing on the topic of the case study and recognise potential problems with regard to reporting the study in advance. Yin (2017) argued it is essential to have a case study protocol which provides the procedures and general rules to be followed when conducting a multiple-case study as there is no uniformly acceptable outline for a case study report. It was developed based on the suggestions that Yin (2017) presented and includes four sections: An overview of the case study; Data collection procedures; Protocol questions; A tentative outline for the case study report.

According to Stake (2013), the cases for multiple-case studies are generally known or assigned in advance by a research director or a third party, such as the funding agency in the social sciences and human services. However, there was no predetermined direction and cases for this individual PhD research study. Consequently, four local councils were (see Table 3-2) chosen for multiple-case holistic studies based on the result of a scoping study. A detailed description of the case selection process can be found in Chapter 4, A Scoping Study.

Case of local Government	Council A	Council B	Council C	Council D
Design Intervention Model (DIM)				
	Internal /External Designer	Embedded Designer	Embedded Designer	Non-designer
 : Local government organisation			 : Designer(s)	

Table 3-2 Cases selected for this study

The name of each council as well as participants of workshops and interviews were anonymised and disguised because of confidentiality issues. The type of DIM for each council was classified by how public servants from the councils defined themselves in response to a follow-up based on the DIM. The Council A adopted the Internal/External Designer Model. They organised a dedicated team in the council consisting of designers brought from an external design agency and internal public servants. The Council B took the Embedded-designer Model and tries to spread Design Thinking across the organisation through training workshops and direct supports for the internal use of design approaches in developing services with people from different departments. The Council C also the embedded designer model. They established an internal service design team made up of three service designers and two business analysts hired directly by the council. Council D adopted the non-designer model to embed design capability within their organisation by themselves.

Creswell (2014) argued that qualitative research can change and evolve during the research. The original research design of a multiple-case approach for this study initially included three councils (Councils A, B and C) but was changed due to the unequal amount of data collected from each case. In an attempt to complement the sources of collecting data and thereby enhance the validity of the research findings, Council D was added later during the data gathering process of the other three councils selected at the beginning of the case studies based on the result of the scoping study. The

details of how those four cases were selected and what their features were can be found in Chapters 4.

Theories or theoretical propositions play a pivotal role in case studies by helping researchers to generalise findings, 'lessons learned', from empirical studies, as well as guiding design of a case study (Yin, 2017). This exploratory research did not have either a hypothesis or theoretical propositions to check through case studies. Instead, a conceptual framework and a case study protocol were developed based on an extensive literature review, a preliminary survey, and pilot interviews for testing the initial survey questionnaires as methodical procedures so as to systematically guide the research for an analytic generalisation of findings from case studies results. The multiple-case embedded design for this study was framed by the conceptual framework, outlining the range of appropriate data to be collected and initially providing sources to develop criteria for the selection of cases. The criteria and detailed process of case selection is described in Chapter 4, A Scoping Study.

3.2.3 Research Strategy: Survey Approach as a Scoping Study

In this research, a survey approach was strategically chosen as a scoping study method to achieve, originally, three main purposes. Firstly, it aimed to develop an overview of local governments' actual use of a design approach as a collaboration tool for innovation. There was an intention to better understand what local governments expect from applying and embedding design capability including its benefits, how they actually use it, and what common challenges and barriers there are during the process.

Survey target	**Public servants**	**Designers**
Sample	Public servants of 352 local councils in England who are working in strategic change, or transformation or innovation team	Designers who have worked and are working with local authorities in England
Survey period	30/09/2016 ~ 31/03/2017	
Response (completion) rate	8.69%	9.56%

Table 3-3 Description of the preliminary survey

Secondly, this preliminary survey also aimed to help select the local councils in framing a multiple-case study by generating criteria for case selection through a survey questionnaire; this was necessary

because this research began without the selection of cases or any contacts with local councils assigned as potential cases for data collection.

In reality, finding relevant cases which had ongoing projects was as difficult as securing a proper amount of credible data. Consequently, the first purpose of the survey was not fully accomplished since the total number of respondents to each survey questionnaire was not enough to have strong validity (see Table 3-3 and see Appendix K for the result of the survey).

3.3 Data Collection and Analysis Methods

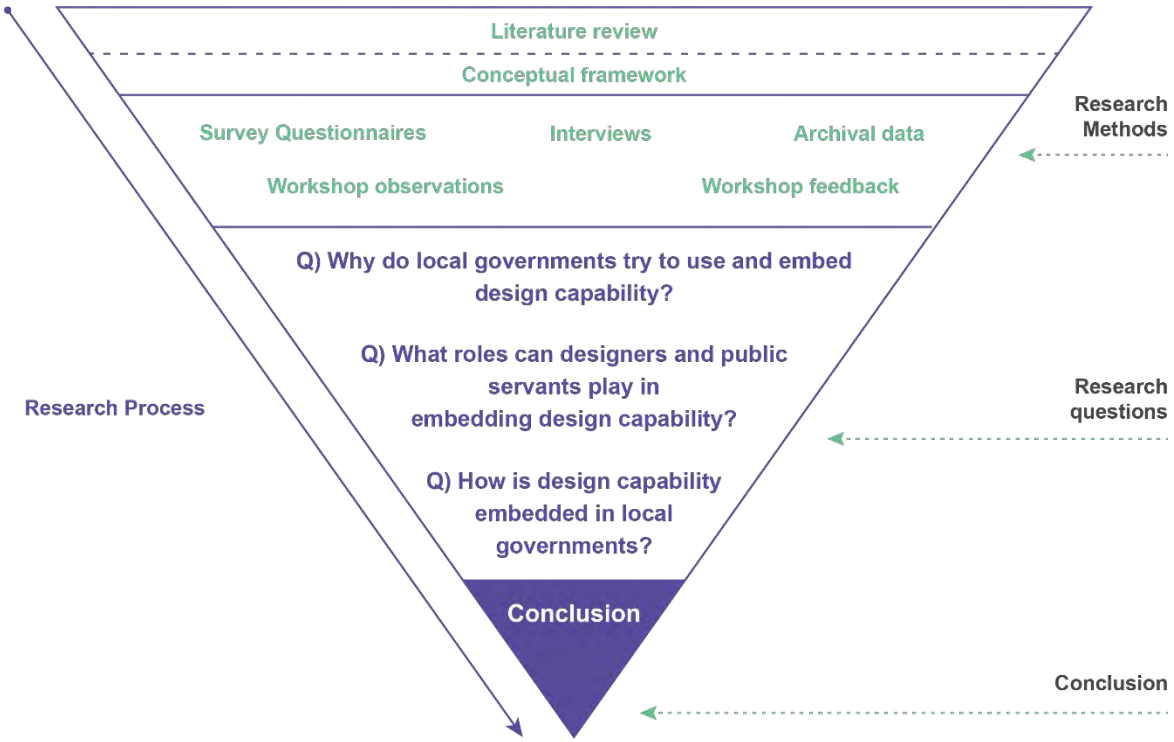


Figure 3-3 Research questions and data collection methods

Case studies for this research include various methods to collect empirical data, such as ethnographic workshop observations, semi-structured in-depth interviews with designers and public servants, participants' feedback in relation to their experience of co-design workshops ran as part of an organisational transformation programme to innovate public services, and archival data. Figure 3-3 illustrates the research methods used in this research and the corresponding research questions. The following sections present the multiple methods chosen for this research study and the rationale for their selection.

3.3.1 Data collection methods

One of the prominent features of the mixed methods approach adopted for this research study is to apply multiple methods to gather as much data as possible in order to add to the sources of evidence and enhance the quality of findings. While gathering data seeking to answer the key research question, 'How is design capability embedded in local governments as part of organisational capabilities?', the data to address the research sub-questions were also collected concurrently. Each question requires some complementary methods to avoid a lack in data collection and to enrich the quality of data sources (see Table 3-4).

Research questions		Data collection methods
How is design capability embedded in local governments as part of organisational capabilities?	1) Why do local governments try to use and embed design capability?	• Literature review • Online Survey Questionnaires • Semi-structured Interviews • Workshop Observations • Archival data
	2) What roles can designers and public servants play in the course of embedding design capability?	• Literature review • Semi-structured Interviews • Workshop Observations • Workshop feedbacks • Workshop materials and outcomes

Table 3-4 Data collection methods addressing research questions

The details about the features and execution of each method including its procedure and key steps can be found in Chapters 4 and 5.

3.3.1.1 Online survey questionnaire for a scoping study

As mentioned earlier, a survey was conducted in this research as a scoping study. Two types of online survey questionnaires for designers and public servants in local governments were designed and developed through three pilot tests. The final version of online survey questionnaires were developed through the online survey software, 'SoGoSurvey' and distributed to collect data. The development procedures and the final version of the questionnaire can be found in the following chapter, 'Chapter 4, A Scoping Study'.

3.3.1.2 Semi-structured in-depth interviews

Face-to-face semi-structured in-depth interviews based on an open-ended questionnaire were conducted with designers and public servants from the four councils between December 15 in 2016

and October 16 in 2017 (see Table 3-5 and see Appendix H). Each interview lasted around one hour on average. They were voice-recorded with the interviewees' consent and transcribed to analyse why, what and how local governments try to embed design within their organisations, and what kind of challenges they encounter in the course of applying and embedding design. Five interviews were conducted with Council A: three of the five interviewees are public servants, and the others are service designers. One public servant and one service designer in Council B and two service designers in Council C were interviewed. Three public servants in Council D were interviewed.

Organisation (DIM)	Name (anonym)	Department or Team	Position (role)	Work experience (years)
Council A  Internal/External Designer	CAS01	Service Transformation	Service designer (Head of product)	24
	CAS02	Service Transformation	Service designer (Lead of the project)	13
	CAP01	Service Transformation	Digital Services Delivery Lead	38
	CAP02	Service Transformation	Digital Services Delivery Lead	8
	CAP03	Service Transformation	Digital Services Delivery Lead	15
Council B  Embedded Designer	CBP01	Innovation and Improvement Team	Team leader	12
	CBP02	Innovation and Improvement Team	Service redesign lead officer	5
Council C  Embedded Designer	CCS01	Service design team, Corporate Development	Service designer	33
	CCS02	Service design team, Corporate Development	Service designer	5
Council D  Non-designer	CDP01	Transformation and Change department	Head of the department	22
	CDP02	Transformation and Change department	Service Design and Engagement officer	5
	CDP03	Transformation and Change department	Project manager	25
 : Local government organisation			 : Designer(s)	

Table 3-5 Interviewee profile

While face-to-face interviews were carried out, interviewees were tasked to complete the template (see Figure 3-4) which aims to identify the typical process of service development through a design approach in local governments and the level and range of stakeholder involvement during the process.

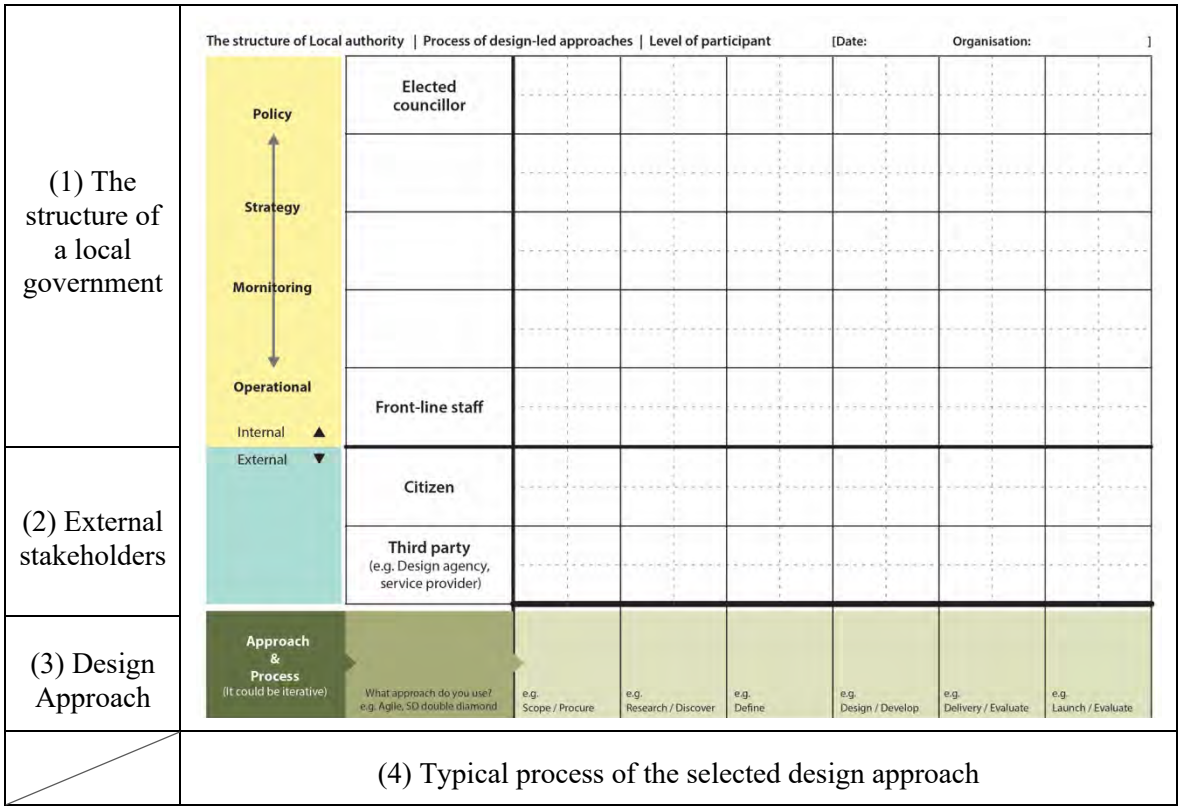


Figure 3-4 The process of a design approach and the range of stakeholder involvement of council

The rows of the template are divided into three parts: (1) The structure of a local government; (2) External stakeholders; (3) Design approach. The first part of structure of the local council illustrates the hierarchy and different roles and positions, ranging from front-line staff in the operational level, through to the monitoring and strategy level, then up to the elected councillors in the policy level. The second part, external stakeholders, includes citizens and third-party agencies that collaborate with local government to deliver services to residents on behalf of the council. The third part is the section for the interviewee to describe which type of design approach their council selected and its typical process. The six stages was provisionally set up in the template as a guide based on the literature review on different types of design approaches to service innovation and change, and their common processes and activities. In addition, the adequacy of the template to identify the process of design approach and participants' level of involvement could be indirectly verified through the 'Organisational structure of collaboration' presented by by Thorpe, Prendiville, Salinas, and Rhodes (2017) as part of a study on the potential and value of strategic collaboration between the local government and design educational institutions in the UK, although its context is slightly different.

The interviewees were asked to complete this form by marking who is involved at each phase on the template so that the form displays the type of design approaches, the general process of the approach, and the level of involvement of each position of the council.

3.3.1.3 Workshop observations

The multiple-case studies for this research included ethnographic observations. The researcher participated in workshops as an observer like "the fly on the wall" (Preissle & Research, 2003, p. 188) to study a phenomenon without affecting the study subject. In total, 14 co-design workshops and a meeting were observed (see Table 3-6 and see Appendix P for sample observation field notes).

Organisation (DIM)	Date (Day)	Time (Duration)	Topic of the workshop
Council A  Internal/External Designer	20/02/2017 (Monday)	13:10 - 15:50	To come up with solutions to improve reporting and maintenance system
	14/03/2017 (Tuesday)	13:45 - 16:20	How might we showcase the progression of candidates and prove workplace can support skilled candidates?
	16/03/2017 (Thursday)	09:30 - 15:40	To create a web-based platform for a community of families feeling secure, healthy, happy, engaged and supported by the council.
	17/03/2017 (Wednesday)	09:15 - 15:40	To prototype service for families having disabled children
	21/03/2017 (Tuesday)	14:00 - 15:20	Pilot testing about prototyped website
	18/04/2017 (Tuesday)	09:30 - 15:50	To improve council tax & benefit reporting system
	19/04/2017 Wednesday	09:41 - 16:10	The second day of the three-day sprint. It aims to understand residents' better understanding of benefits / Rents / Status and Changes
	24/04/2017 (Monday)	10:03 - 16:45	To develop touch points for citizen to make the process of council tax issues easier
	12/06/2017 (Monday)	12:00 - 15:00	To improve digital service for adult social care, especially the services provided through the website.
	21/06/2017 (Wednesday)	14:00 - 16:30	Adult social care - Disabled facilities grant workshop
Council B  Embedded Designer	29/06/2017 (Thursday)	09:45 - 15:30	Training workshop for teaching how to apply design thinking into individual projects
Council D  Non-designer	27/09/2017 (Wednesday)	14:30 - 16:30	Design and Innovation board meeting - An update on the impact and evaluation of the refreshed council website - Review of challenges and decision making for implementation of Hunch buzz. - Review of the projects that are underway regarding the possibility of further support

	12/10/2017 (Thursday)	14:00 - 16:35	To share the knowledge about design thinking and service design, and to train participants to be able to better understand the new way of working and how to apply them into participants' day-to-day work.
	16/10/2017 (Monday)	14:00 - 16:00	To develop three concepts for how Junior Citizen could operate in the future to present back to the Design and Innovation Board.

Table 3-6 Observation list

Some workshops were performed for real projects as collaborative tools and others took place to train people how to use design thinking and service design approaches. A gap often occurs between proposed solutions and what design practitioners find more effective because of the complexity of the design process (Lopez, Haesen, & Luyten, 2015). Moreover, it is evident that designers frequently tailor the design tools depending on the context and conditions of workshops. Therefore, a set of the observation documentation sheets (see Appendix O) was created and applied as part of the case study protocol in this study so the researcher could systematically observe co-design workshops and consistently record the observations based on the same components. They enabled the researcher to efficiently and systematically capture various aspects, including activities and behaviours in relation to collaborations and roles of designers and non-designers, and consistently compare the results of the different observations in the analysis phase by more clearly describing their common and unique activities and interactions. Additionally, various physical artefacts, such as handouts and materials distributed and used during the workshops, were also collected and analysed in order to complement the observation data.

3.3.1.4 Workshop participants' feedback

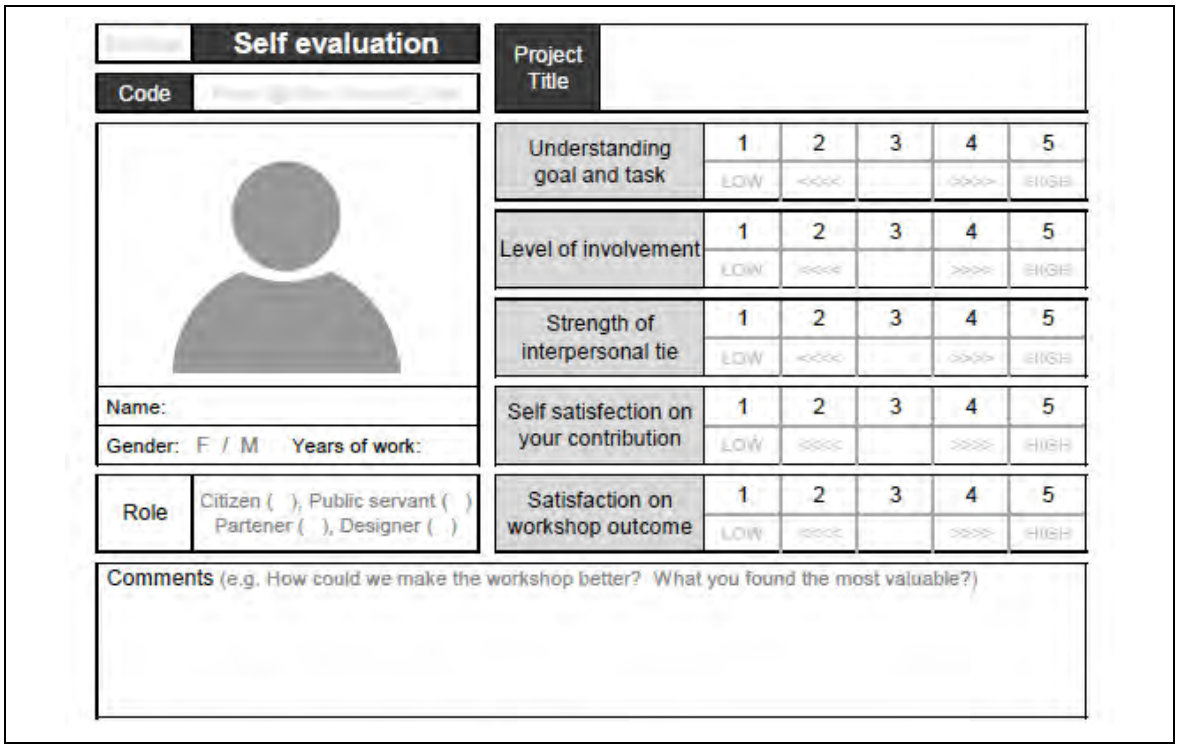


Figure 3-5 Feedback form for workshop participants

The participants' feedback on collaborative design workshops was also collected through a half of B4 paper-sized audit form (see Figure 3-5). The form was designed to collect participants' insights and experiences about the workshops they attended; it enabled them to quickly note their thoughts and opinions based on their experiences through questions that were rated numerically. This was expected to identify factors that are likely to affect the process of co-design workshops, including participants' emotional status, and thus indicate improvements to facilitate co-design workshops.

A total of 35 participants of the co-design workshops responded to the feedback form circulated before the end of the workshop session (see Table 3-7).

Council	Data Collection Period	Total number of feedback
Council A	19/01/2017 ~ 21/06/2017	21
Council B	14/06/2017 ~ 29/06/2017	6
Council C	15/12/2016 ~ 01/06/2017	-
Council D	23/08/2017 ~ 16/10/2017	8

Table 3-7 Workshop participant feedback list

3.3.1.5 Archival data

This study also collected and analysed different types of available archival data such as an annual report, project documents for communications, presentation slides for co-design workshop or internal conference, and project reports for sharing progress or outcomes of the projects. They were accessed with the help of public servants or designers who were participating in the projects. The archival data played a significant role in the case study analysis as written evidence, providing information about the purposes and strategic, historical and political background of the projects, including specific events and activities.

3.3.2 Research Plan and Data Collection Process

Table 3-8 displays the research plan and investigation process for data collection. In the phase of the preliminary research, a conceptual framework was outlined as a result of the literature review and it was developed through the scoping study that was conducted through a survey method. Four local councils were selected as cases for a multiple-case study. The primary data were collected through semi-structured in-depth interviews with service designers and public servants, and the ethnographic observations of co-design workshops from each case.

<table>
<tr><th>Preliminary research</th><th>Case selection</th><th>Secondary research</th><th colspan="2">Primary research</th></tr>
<tr><td>1) Literature review</td><td rowspan="6">Council A
Council B
Council C
Council D</td><td rowspan="6">Archival data
• Annual report
• Programme FAQ document
• Blog post</td><td colspan="2">1) Case study</td></tr>
<tr><td rowspan="3">Conceptual framework</td><td>Interview</td><td>Observation</td></tr>
<tr><td rowspan="2">1. Public servants
2. Service designers</td><td rowspan="2">Workshop & Meetings</td></tr>
<tr><td>2) Survey (Scoping study)</td><td colspan="2">Workshop participants' feedbacks</td></tr>
<tr><td>Case study protocol</td><td colspan="2">Physical artefacts from workshops</td></tr>
</table>

Table 3-8 Research plan and data collection process

A detailed timeline of the data collection from the four local councils and other data sources can be found in Figure 3-6.

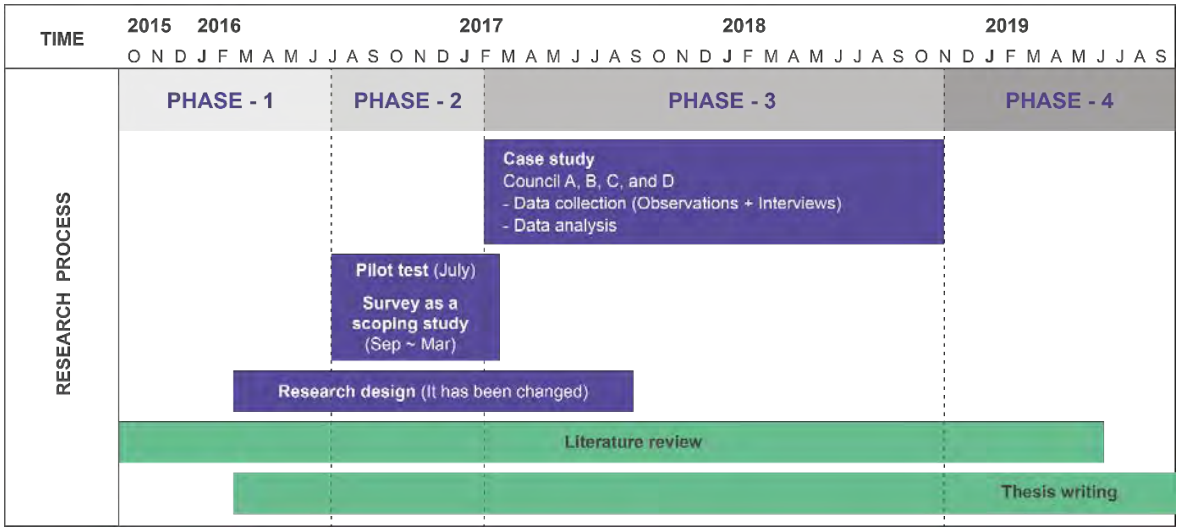


Figure 3-6 Research phases and timeline

3.3.3 Data Analysis Methods

The quantitative data which were gathered through the survey approach were statistically analysed. However, its findings were mainly used as a supplementary data source to develop the conceptual framework outlined as a result of the literature review because its response rate was not enough to be applied as a single data source. Additionally, the result of the survey was used to specify the DIM for local government in England and to select cases for case study. The qualitative data collected through various methods from multiple sources were analysed through thematic analysis, which Braun and Clarke (2006) defined as a method for identifying, analysing and reporting patterns of meaning within data, under a hermeneutic perspective based on the framework approach to thematic analysis (Bryman, 2016). The thematic analysis for this study followed the six steps of thematic analysis developed by Braun and Clarke (2006, p. 87):

1. Familiarising yourself with your data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

The data collected from the in-depth interviews and ethnographic observations were documented and transcribed in order to code text in the transcripts (ibid.). Therefore, the transcription was a basic and

essential step on the way to the interpretation of data in qualitative research (Flick, 2018). Bernard (2006) clearly stated that analysis "is the search for patterns in data and for ideas that help explain why those patterns are there in the first place" (p. 452). Coding is a method that enables researchers to organise and group similarly coded data into categories or 'families' because they share some characteristic (Saldaña, 2015). Richards and Morse (2012) clarified that "Categorising is how we get 'up' from the diversity of data to the shapes of the data, the sorts of things represented. Concepts are how we get up to more general, higher-level, and more abstract constructs" (p. 157).

Figure 3-7 shows how themes were constructed from the data for this qualitative research. The themes and subthemes were constructed based on the codes identified from the transcripts (see Appendix Q), and then they were categorised in relation to the variables of the conceptual framework (Creswell, 2014; Mason, 2017). In order to apply this thematic analysis method more systematically and efficiently, NVivo, which is computer-assisted QDA software (CAQDAS), was used. The part of the code book which shows the relationships among data, codes and their initial categories can be found in Appendix N with a visual description of how data were coded and then categorised into sub-themes, and then developed to main themes.

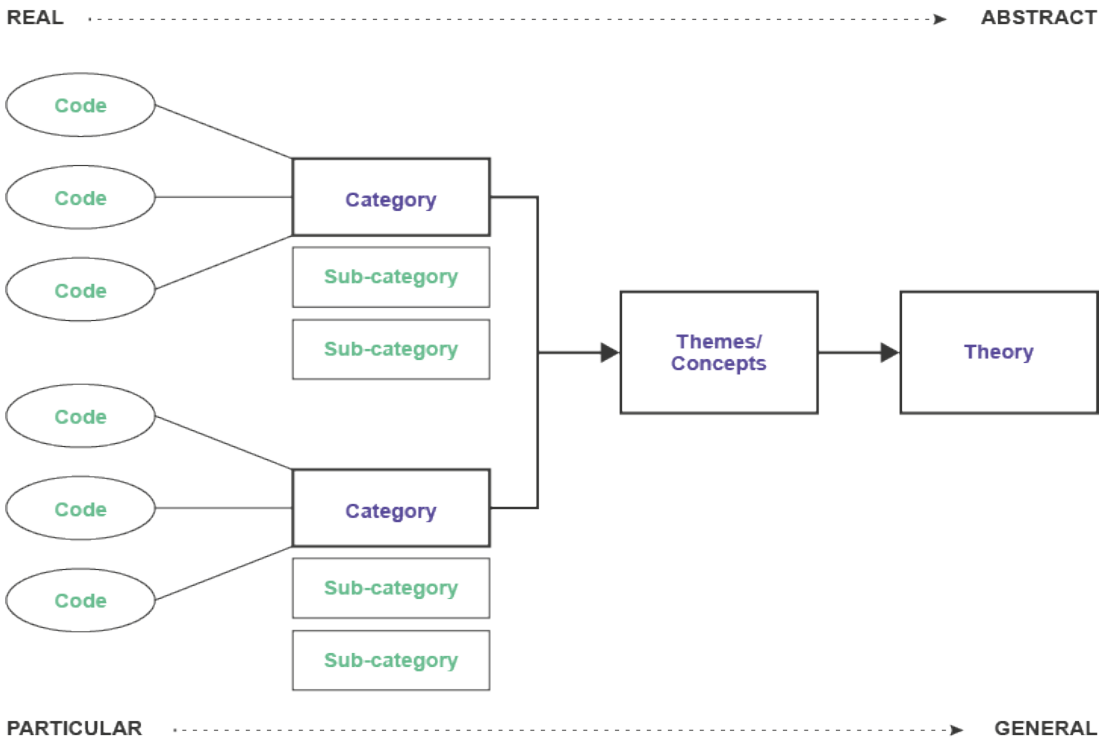


Figure 3-7 A streamlined codes-to-theory model for qualitative inquiry

Additionally, archival data obtained from internal reports, programme documents and annual reports of each council were collected and analysed in order to complement the empirical data. Moreover, the cross-case synthesis technique was undertaken to aggregate research findings based on the themes which arose from a series of individual case studies (Yin, 2017). Therefore, the findings of

this case study were the result of the convergence of all sources of evidence which were gained from the different data sources and analysed together. Yin (2017) stated that researchers can easily become stuck at the data analysis stage because they chose a case study approach and began the study with no clear strategy of how to analyse the evidence. In order to avoid the problem, this study developed a case study protocol (see Appendix E) and followed a general analytic strategy suggested by Yin (2017). The analytic strategy, which this study followed, developed a case description (ibid.) based on the conceptual framework which was developed through the literature review and the scoping study.

3.4 Research Quality

3.4.1 Ethics in the Research

Academic research should be conducted in accordance with ethical principles which include obligations and responsibilities of researchers to not only protect the confidentiality of participation information and all data collected, but also maintain the highest standards of academic integrity and reliability in conducting and disseminating research outcomes (Resnik, 2011). In order to ensure ethical principles, this research followed the 'Code of Practice on Research Ethics' defined by the University of the Arts London (UAL). First of all, this study officially gained ethical approval from the UAL after confirmation of a general risk assessment and two types of participant's consent form for interviews and workshop observations (see Appendix G and H). Both consent forms were given to every interviewee and workshop participant in advance and they were asked to sign them after they received an explanation about why the research is being performed, what their participation would involve, and what the benefits and risks to them might be. Additionally, a participant's right to be able to withdraw at any time without any detriment or consequences was explained. To ensure confidentiality, the names of all local councils and participants in this research study were disguised and kept confidential and anonymised.

3.4.2 Trustworthiness of the Research

It is important for researchers to ensure the accuracy and credibility of the research procedures and findings throughout the steps in the process of research (Creswell, 2014; Robson, 2011). Creswell (2014) organised and presented eight primary validity strategies and suggested the use of multiple approaches to improve *"the researcher's ability to assess the accuracy of findings as well as convince readers of that accuracy"* (p. 201):

- Triangulate different data sources of information
- Use member checking to determine the accuracy of the qualitative findings
- Use a rich and thick description to convey the findings
- Clarify the bias the researcher brings to the study
- Present negative or discrepant information that runs counter to the themes
- Spend prolonged time in the field
- Use peer debriefing to enhance the accuracy of the account
- Use external auditor to review the entire project

In order to enhance the trustworthiness of the research, four strategies out of the eight were employed. First, the data collected during the interviews were checked and confirmed by interviewees after it had been digitised and transcribed in an attempt to increase the accuracy of the findings. Second, data collected through observations were triangulated with interview and survey data. Third, rich and thick descriptions were used to present the findings. Fourth, the research position and perspective of the researcher for this study were clarified.

3.4.2.1 Validity

It is very difficult to be sure whether a qualitative research is valid (Robson, 2011). However, the level of validity of the research can be increased by removing recognisable threats because securing the validity of flexible research is vital; the validity of research is concerned with data accuracy and the reliability of the data collection procedure (ibid.). Maxwell (1996, as cited in Robson, 2011) organised and presented three main threats involved in qualitative research: description, interpretation, and theory. In order to enhance the credibility of the research, this study tried to eliminate possible threats to validity in relation to the three main types.

First of all, this study tried to collect as many audio and image data as possible with permission from the case organisations and interview participants as they help to complement inaccuracy and inadequacy of the description of what the researcher heard or observed. Mason (1996, as cited in Robson, 2011, p. 170) argued that validity of interpretation in most qualitative research depends on the "end product including a demonstration of how that interpretation was reached". Therefore, this study tried to provide a traceable route of interpretation through a clear demonstration as a second way of increasing validity. Thirdly, this study also tried to eliminate possible threats to validity in relation to the three main types.

3.4.2.2 Reliability

A case study protocol is one of the primary ways of enhancing the reliability of multiple-case studies as it helps the investigator to conduct the research coherently and reduce the errors and biases in a single case (Stake, 2013; Yin, 2017). Therefore, the case study protocol was established for this multiple-case study (see Appendix E). Moreover, a case study database was created in the researcher's personal portable encrypted hard drive. The raw data collected and the documents of the case study reports were saved into a database.

Conclusion

The ultimate purpose of this research is to develop a model which supports designers and public servants in enabling design-led collaborations at different stages of public service innovation processes and to help them embed design capability as part of their organisational capabilities based on an understanding of how design capability is embedded within local governments. In order to achieve the aim, a key research question and two research sub-questions were outlined. This research took an exploratory approach in an interpretivist position (see Table 3-9).

The research methodology chosen in this study for primary data collection was the mixed methods approach, including both quantitative and qualitative approaches. An online survey was conducted as a scoping study and four local councils were selected for the multiple-case studies. The data collected through observations, interviews, feedback left by workshop participants and archival data were analysed based on a hermeneutic approach and the thematic analysis method. The details of the processes and findings of each study will be presented in the rest of the thesis.

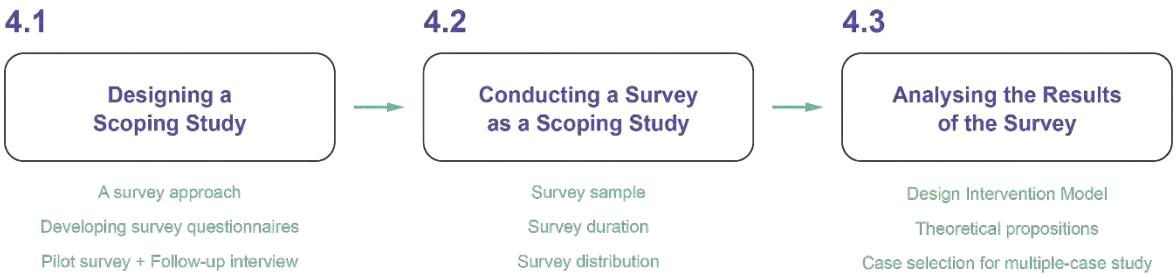
Title	Concept selected	Reasons for selection
Research Purpose	Exploratory	The aim of this research is to develop a conceptual model for supporting the development of design capability within local governments on the basis of an understanding of how design capability is embedded in reality
Research Paradigm	Interpretivism	This research is the study of emerging practices of design
Research Approach	Abductive	This research adopts a mixed methods approach which includes qualitative and quantitative data collection and analysis

Research Methodology	Mixed methods	This research applies a quantitative research method (survey) and qualitative research methods (interviews and observations)
Research Strategy	Survey & Case study (Multiple-case)	This research aims to identify conditions and factors that affect ways of embedding design capability, and articulate different roles that designers and non-designers play via survey and case study strategies
Time Horizons	Cross-sectional	The cases have happened at different time periods
Research Methods (Techniques & Procedures)	- Data collection: Interview, Observation, Feedback, Archival data - Data analysis: Hermeneutic approach, Thematic analysis using qualitative data analysis software, NVivo	Observation field notes, photos and workshop materials as well as interview transcriptions will be analysed based on hermeneutic approach and thematic methods

Table 3-9 Concepts selected in each layer based on Research Onion Diagram

CHAPTER - 4 A SCOPING STUDY

Introduction



This research study started with no predetermined or preassigned cases to be investigated because the initial inquiry for this research, which was motivated by the researcher's interest in the use of design by non-designers in public sector organisations, was not sufficiently focused to allow the selection of specific cases. Furthermore, as Yin (2017) argued, it is difficult to design and scope a case study research project that ensures the efficient collection of suitable and sufficient data to be able to adequately answer the research questions because of the difficulty of finding organisations that are willing to participate in case study research, and the limited or restricted access to data.

While developing the theoretical background on design approaches to public service innovation and design capability building in organisations, the need for a scoping study emerged. The scoping study was conducted to gain an overview of the use of design approaches to collaborative innovation in local government and to look for potential candidates for case studies that have ongoing design projects related to public service innovation. Although there is no universal definition of what a scoping study is, it is generally used as a method to rapidly review the scope and nature of the research activity and map the main sources of evidence available in the fields of study, or to identify research gaps and determine the value of undertaking a full systemic review, especially in complex or not fully examined areas (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010). Therefore, a scoping study was established to achieve three aims for this research. First, it aimed to better understand the perceptions of public servants in the local governments about design approaches and their actual use in reality, particularly in England. This included the implications, barriers and challenges of applying design approaches from the perspective of public servants and designers who have experience of participating in design projects for public service innovation or

organisational change. Second, it aimed to develop a conceptual framework, outlined through the literature review, to apply this framework in the case study process. Third, it also aimed to identify appropriate local councils with ongoing design projects to ask their participation in the case studies. A survey approach was adopted as a scoping study method in this research. The rationale for the choice of a survey approach and its design and execution are presented in the rest of this chapter.

4.1 Designing a Scoping Study

4.1.1 A Survey Approach as a Scoping Study Method

While developing contextual and theoretical background on design approaches to public service innovation through the literature review, the conceptual framework of embedding design capability in local government (see Table 2-19) was outlined. Additionally, six different types of design intervention as a way of applying design approaches to public service reform were recognised, specifically from the publication, 'Restarting Britain 2' (Design Commission, 2014) (see Table 2-6). The six types of design intervention were adopted in this research as a classification to investigate diverse ways of applying design in the local government context. However, although the model was useful as a starting point to explore different ways of applying design and embedding design capability in the public sector, there still remains a lack of understanding of which model local governments mostly use in reality and the reasons for that choice, because the model in 'Restarting Britain 2' is just an aggregation of every existing type. In order to understand why local governments want to apply design and ultimately embed design capability within their organisations and how it can be realised, it is essential to see which specific design practice they currently employ and what types of intervention they adopt to successfully apply a design approach to innovate services and embed design capability within their organisations. Considering the number of local governments existing in England and the limited time available to collect data, a survey approach was selected to briefly ascertain the current use of design practices and to rapidly map out the adoption of design interventions in local governments in England. The survey was also expected to enhance the conceptual framework developed from the literature review.

4.1.2 Developing Survey Questionnaires

A systematic literature review helped to create the first version of a survey questionnaire for public servants (see Figure 4-1, see Appendix L) because a conceptual framework, which is necessary for the case studies, was outlined as a result of the literature review.

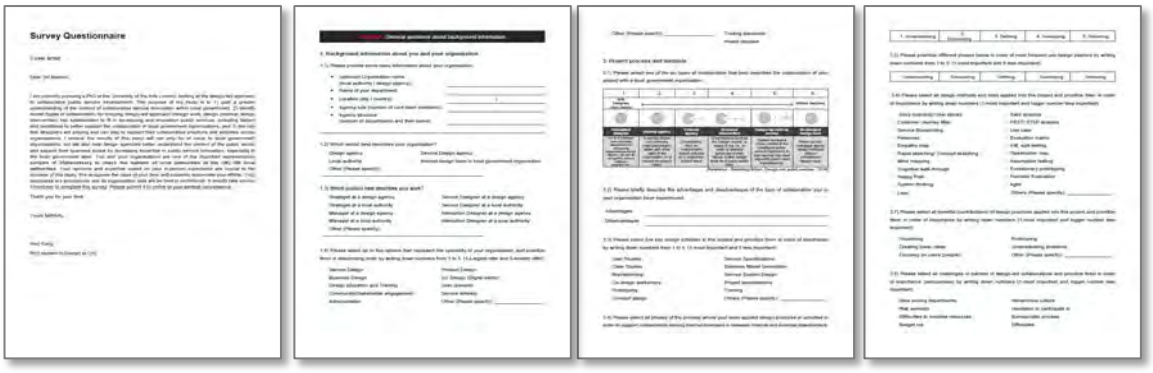


Figure 4-1 A questionnaire for a pilot survey

The first version of the questionnaire was designed mainly to better understand the actual use of design practices in local governments and their intentions, including questions about their chosen types of design interventions, experiences from representative projects that had successfully applied design approaches and challenges to the application of design. The questions were created by aligning to the three aims of the scoping study (see Table 4-1).

The aims of a scoping study	Survey questions
To develop an overview of local governments' actual use of a design approach as a collaboration tool for innovation	Q) Please briefly describe the best representative collaborative design project of your organisation. Q) Please rank the phases of the process in designing and implementing service where your team has mostly applied collaborative practices in order to support collaboration among internal members or with external stakeholders Additional questions about experiences of the application of design approaches including level of satisfaction, value of using design approaches, challenges and barriers
To review and develop the conceptual framework outlined through the literature review	Q) Please rank the reason for the collaboration in order of importance Q) From your experience, how worthwhile are the outcomes from collaborating? Q) Were there any specific approaches (including tools, methods and practices) that your organisation employed to enhance and effectively operate collaborations for the project above? Q) Please list every practice, activity and tool or method that you have used during the collaborative project Additional questions about factors that affect the facilitation of collaborative design projects
To help select the local councils in framing a multiple-case study by generating criteria for a case selection.	Q) Which local council do you work for? Q) If you want us to inform you when the results become available, please leave your email

Table 4-1 Concepts selected in each layer based on Research Onion Diagram

It was then pilot tested with two public servants who have been working for two different local authorities, one worked in the strategy department and the other in the transformation department, to innovate services and organisations with the help of design approaches. In order to discuss issues that arose from the pilot surveys, follow-up face-to-face interviews were conducted. They particularly pointed out issues about the relevance and adequacy of each question as they found some questions were difficult to answer and some questions confused them as public servants. Agreeing strongly with the need of this study for local governments, they mentioned the difficulty of gaining responses from public servants because they might not welcome this kind of a survey as they are usually busy with their daily jobs. In relation to this issue, one participant introduced the web-based digital platform for public service collaboration, 'Knowledge Hub' (www.khub.net), and suggested directly passing a link to the survey through the platform to each public servant because those who have deliberately joined communities on the private platform might have more interest in the topic of this research and be more willing to respond to the questionnaire. In effect, the survey was distributed by direct messages through the website, which played a major role in increasing the response rate and selecting targets for the case studies as two cases for the multiple-case studies were chosen based on follow-up interviews with the respondents registered on the platform.

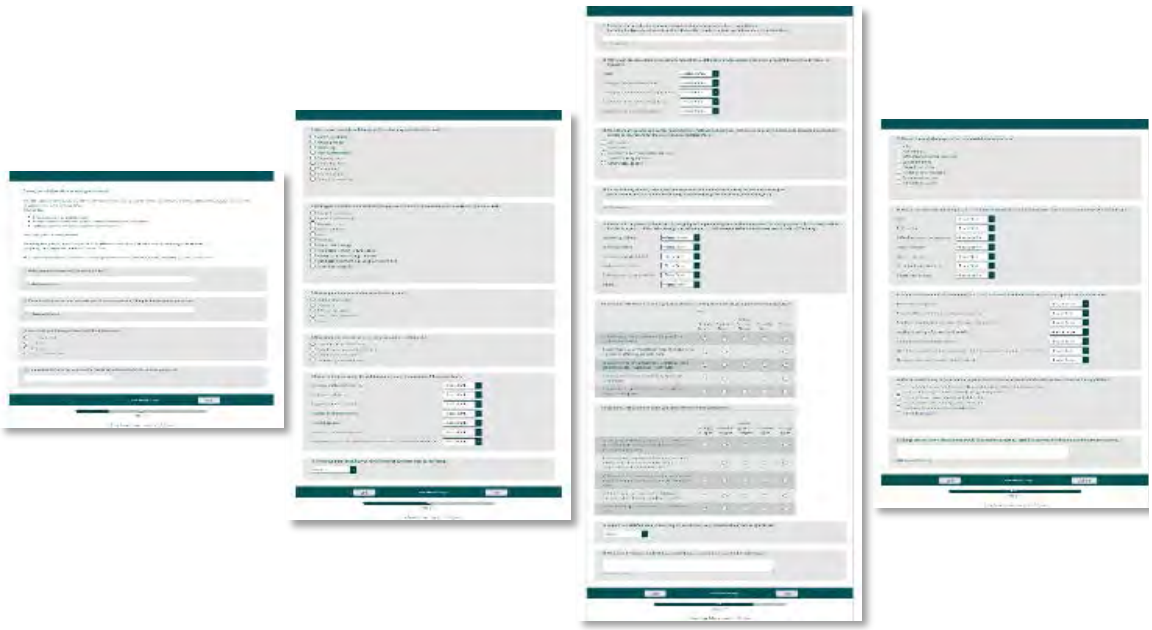


Figure 4-2 Second version of survey questionnaire

The second version of the survey questionnaire (see Figure 4-2, see Appendix J for bigger images) was refined and developed based on the feedback from the pilot test and follow-up interviews. It was newly designed through the online survey software, 'SoGoSurvey', into two different types of questionnaire: one for designers and the other for public servants. This was because perspectives on

design approach to service innovation and organisational change can vary depending on the participants' role, position and experience.

4.2 Conducting a Survey as a Scoping Study

4.2.1 Survey Population and Sample

The scope of this study was limited to local governments in the UK. There are 418 local authorities in the UK (Wilson & Game, 2011) including unitary, upper and lower tier councils but excluding parish and town councils (Chandler, 2001; Local Government Association, 2011) after the public reform of the 1970s. The population of the survey for this study was narrowed down to a total number of 353 unitary, county and district councils in England as the target of the survey for the scoping study because Scotland and Wales have different systems to operate local authorities.

Design approaches to public service innovation or organisational change have often been brought into local governments by a team or department called 'Service design/redesign team', 'Service transformation', 'Transformation and change', or 'Innovation and improvement' who are responsible for service innovations and organisational learning, change or transformation. It is difficult as a third party to identify individuals who are in charge of the application of design in the local authorities to identify the sample. However, considering the aim of the survey was to seek and overview the use of design and find cases, each individual who belongs to any one of the teams or departments in which design is being applied can be a representative sample from a population because this study does not involve stratification of the population (Creswell, 2014). Therefore, the sample for the survey of this study was randomly chosen.

4.2.2 Survey Distribution and Response

The survey started on September 30, 2016 and ended on March 31, 2017. It was distributed through the online survey software, SoGoSurvey, and a link attached in direct emails. Some of the surveys were also disseminated with the help of the UK Design Council as a request for survey dissemination was sent to the Communication Team and was accepted by them. Additionally, the link to the survey was also sent to public servants and designers who belong to the communities of the digital platform for public service collaboration called 'Knowledge Hub' (www.khub.net) by the researcher in order to increase the number of respondents. Approximately 200 surveys of the two types of survey questionnaire were circulated, excluding those delivered through the Design Council because the total number of the surveys disseminated by the Design Council was unclear. Moreover, the result of the distribution through Twitter was not added to the total number as it could not be traced.

Therefore, the number of sent emails only indicates the emails that were directly sent by the researcher through the 'SoGoSurvey' distribution service, Knowledge Hub platform and personal email. However, more people may have received the survey questionnaire because the link to the questionnaire was set up as a public link when it was distributed through the Design Council's mailing lists and some of the survey participants' retweet through the tweeter and their forwarding email as all recipients of the survey were asked to distribute the link to the survey.

The initial target number of survey respondents was ambitious. However, the response rate was too low to be accepted as valid data for analysis: 8.69% of public servants and 9.56% of designers (see Table 4-2).

Target	Public servants	Designers
Start / End date	30.09.2016 ~ 31.03.2017	
Response rate	8.69 %	9.56%
	• Sent: 120 + • Delivered: 119 • Bounced: 1 • Completed: 11	• Sent: 32 + • Delivered: 32 • Bounced: 0 • Completed: 7

Table 4-2 Survey details

Although the result of the survey was invalid for a quantitative analysis, the result was still valuable for the research study as it contributed to the development of the conceptual framework and the selection of the cases.

4.3 Analysing the Results of the Survey

Each answer of the two survey questionnaires for public servants and designers was planned to be separately analysed to show statistical results based on frequency of responses to all multiple-choice questions. Additionally, the answers were expected to be broken down separately and compared in order to identify hidden meaning based on comment analysis. This process of analysis intended to find some common patterns or issues, and gaps in the understanding between designers and public servants. However, as stated above, the total number of the local governments that responded to the survey was not enough for this. Therefore, the result of the survey was used to complement other data collection methods such as interviews and observations of the cases.

4.3.1 An Overview of the Use of Design in the Local Government Context

According to the result of the survey, there were 11 responses from 9 different local councils out of more than 120 emails delivered (see Table 4-3).

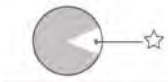
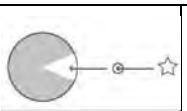
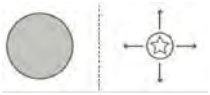
					
Embedded designer	**Internal agency**	**External agency**	**Brokered intervention**	**Design-led start-up service**	**Non-designer design work**
1	1 (Closest model, but does not fully represent the features of the intervention)	2	-	-	5

Table 4-3 Different types of design intervention used by survey respondents

One council adopted the embedded designer model. Another council used an intervention that was closely related to the internal agency model, but the model did not fully describe the features of the approach that the council took; it seemed to fall in between the internal agency and external agency models. Two councils followed the external designer model at that point in time and the other five local governments used the non-designer design work model. No councils followed the brokered intervention and design-led start-up service models.

4.3.1.1 Development of the design intervention model

Descriptions of six types of design work intervention in public sector organisations were adapted from the paper, 'Restarting Britain 2: Design and Public Services', published by the Design Commission in 2014. The report seems to adapt a model from Junginger's work (2009) that describes the level of influence of design in an organisation. However, as a result of the survey, the need for the development of a new model which better reflects the situation in local government arose and thus the DIM was developed. The six types of design intervention were adjusted based on the recurring features that emerged from the survey, examining how design was employed and how designers were situated within the local government settings. Then, the different types of design intervention were classified into four distinct models – non-designer model, internal/external designer model, external designer model and embedded designer model – depending on the type of

designer involvement in service development or organisation transformation projects (see Table 4-4).

			
Non-designer Model	**External Designer Model**	**Internal/External Designer Model**	**Embedded Designer Model**
A way of applying design by the team made up of internal public servants deploys design approach without the help of professional designers	A way of applying design by a traditional design project team made up of external designers on a project-by-project basis	A way of applying design by the temporary design unit organised with external designers and selected public servants, which is strategically established within the organisation	A way of applying design by a service design team includes full-time service designers hired by the organisation to develop design capacity and redesign services
 : Local government organisation		 : Designer(s)	

Table 4-4 Different types of design intervention model (Kang & Prendiville, 2018)

This is because one of the aims of this research is to identify the role of designers and non-designers in embedding design capability. The non-designer model describes an approach in which public servants deploy design methods without professional design input after learning how to use design methods. The internal/external designer model illustrates a temporary organised service design unit that works with a department that is strategically established, such as a strategic transformation department and strategy and change department. The external designer model characterises consultancy from an independent design practice on a project-by-project basis, which is the general and the most common way of how design agencies work with clients. Lastly, the embedded designer model represents design intervention in which full-time strategic-level designers are responsible for developing services and organisational design capacity. The four different types of DIM are positioned on the matrix having two cross axes below (see Figure 4-3): horizontal (internal and external) and vertical (designer and non-designer). It displays their different positions.

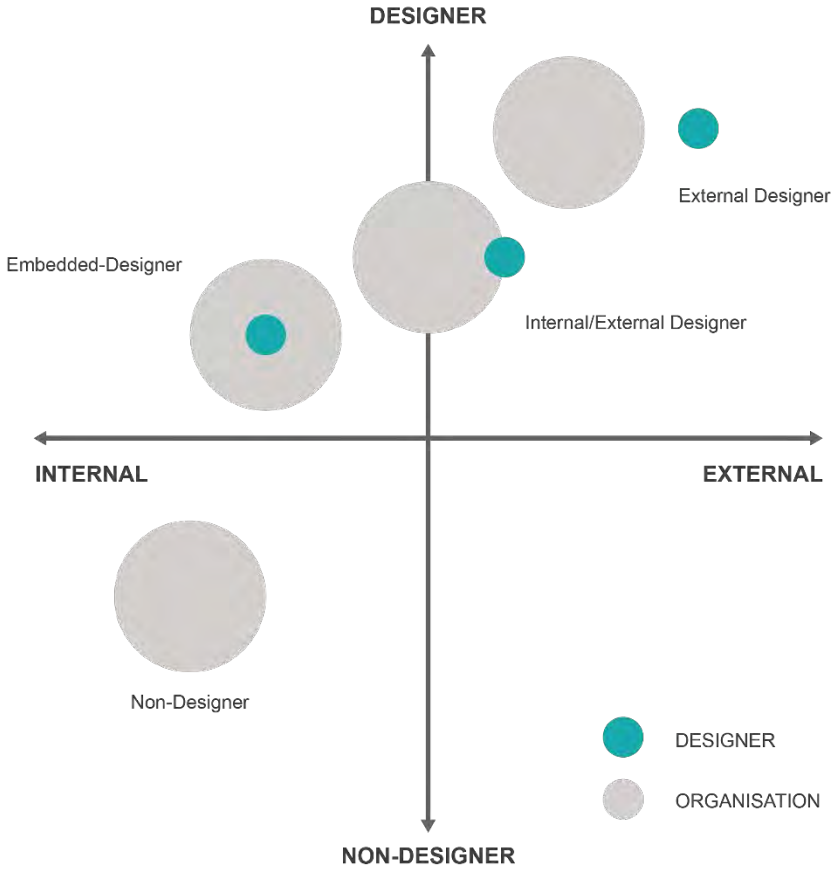


Figure 4-3 Position of different design intervention models

4.3.2 Selection of the Cases

For the case study, the researcher tried to approach local councils that had ongoing design-led collaborative projects based on the responses to the survey.

4.3.2.1 Follow-up visual survey

Follow-up contacts were made to every respondent who left their contact details on the survey questionnaire and identified councils that were trying to embed design in their organisations. In the follow-up contact through email, the respondents were asked to complete the visual survey (see Figure 4-4, see Appendix I for bigger images) which helped them to determine which types of DIM they followed and whether they were interested in joining this research as samples for the case study.

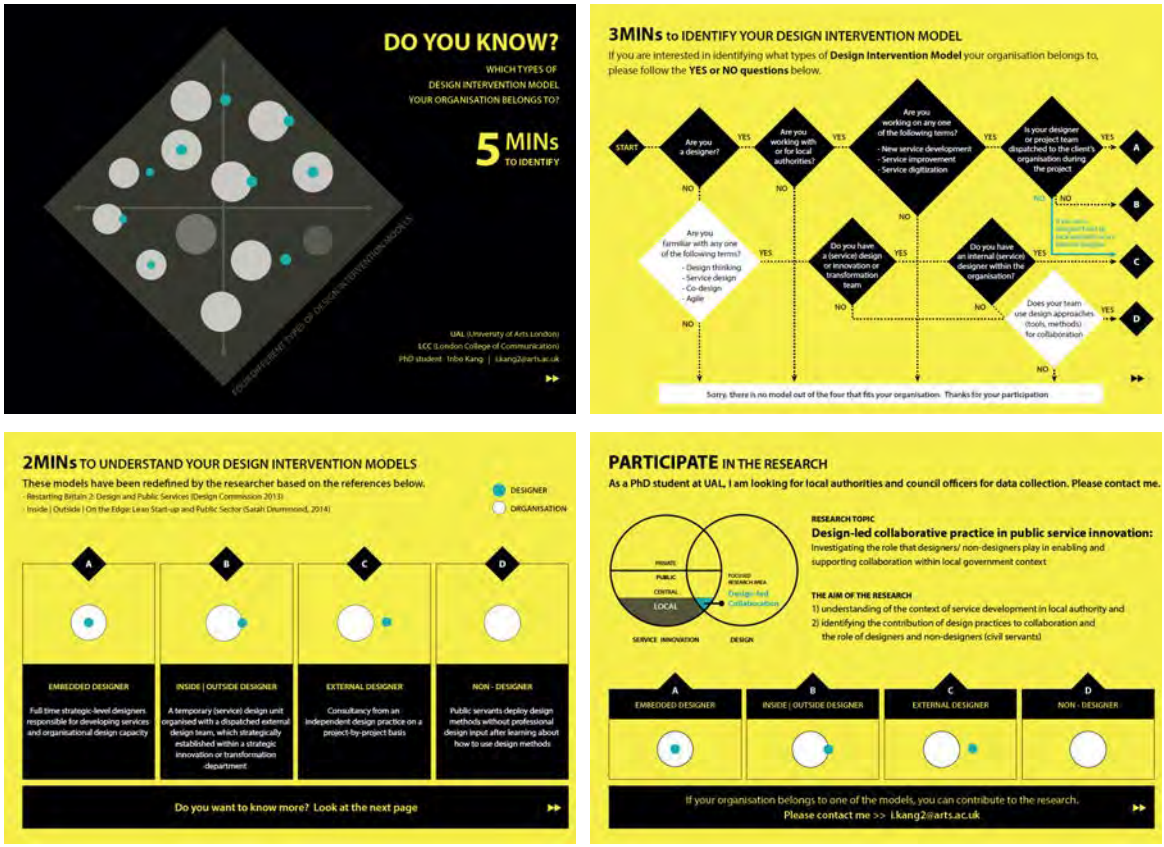


Figure 4-4 Visual questionnaire to identify types of design intervention model

4.3.2.2 Cases selected for primary data collection and analysis

The four councils in England – Councils A, B, C and D – were selected as the samples of the multiple-case study on the basis of the responses to the follow-up visual survey questionnaire (see Figure 4-4). They had all been trying to embed design within their organisations with different types of DIM, and they were willing to share their work and stories for a research purpose. Permissions were granted for observing design-led collaborative workshops from the four local councils (see Table 4-5).

Case of local Government	Council A	Council B	Council C	Council D
Design Intervention Model (DIM)				
	Internal /External Designer	Embedded Designer	Embedded Designer	Non-Designer
 : Local government organisation			 : Designer(s)	

Table 4-5 Cases selected for this study

Council A uses the internal/external designer model; it had a dedicated team for disseminating Agile and service design approach as a new way of working when the interviews with service designers and public servants in the team were conducted. Councils B and C use the embedded designer model; they had service design teams made up of service designers hired by the council. Council D was using the non-designer model and trying to spread design thinking and service design approaches across the organisation through service design training workshops for employees and co-design events, to which they invited various stakeholders including citizens. Fortunately, the author gained permission to attend the design workshops for ethnographic observations and follow-up interviews with designers and public servants who belong to the team. Detailed descriptions about each local council chosen as a case for this study can be found in the following chapters.

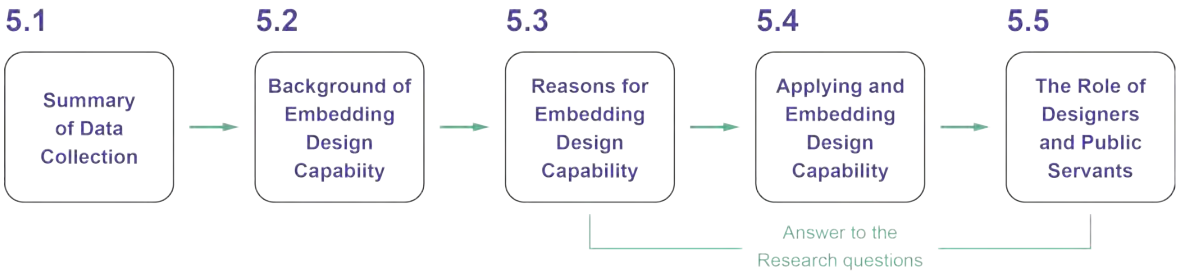
Conclusion

When designing the survey questionnaire, six different types of intervention to apply design approaches in public sector organisations emerged from the literature review: embedded designer, internal agency, external agency, brokered intervention, design-led start-up service and non-designer design work. However, the classification of the six types did not fully reflect the situation in local government. Although there might be local governments that follow a type of design intervention not identified in this study, they would probably be rare cases that do not represent the typical ways of applying design in the local government context. Therefore, four commonly identified types of design intervention were redefined as a DIM based on the six types of intervention in this study: external designer, external/internal designer, non-designer and embedded designer.

Moreover, four councils in England were selected as the sample for the multiple-case study on the basis of the responses to a preliminary survey as a scoping study; the scoping study aimed to build a better understanding of the application of design approaches to collaborative service innovation and organisational change in local government contexts and develop the conceptual framework outlined through the literature review. The four councils were trying to apply design approaches – some described it as design thinking and the others did it as service design – and embed design capability within their organisations through their own routes. Their different paths – different types of design intervention to introduce and embed design approaches and design capability – including their characteristics will be further described and discussed in the following chapters based on the case study approach.

CHAPTER - 5 CASE STUDY OF COUNCIL A: INTERNAL/EXTERNAL DESIGNER MODEL

Introduction



This chapter describes the process and result of the case study of Council A. It includes a description of Council A, and the background to the application of a design approach and the embeddedness of design capability. It also presents the data collection process of each method, such as in-depth interviews and co-design workshop observations, and exhibits a summary of the results. Moreover, more importantly, this chapter presents answers to the research questions. Therefore, to help the reader to better understand this study, a clear chain of evidence is provided that shows how the research findings and conclusions were drawn from the data collected.

5.1 Summary of Data Collection Results

Permission to observe internal co-design workshops was gained from Council A with the help of the lead service designer who responded to the survey distributed for the scoping study. His company was working on a project commissioned by Council A to modernise their services and train the members of their project team to develop their design capability.

Empirical data were collected through 10 direct workshop observations and five in-depth interviews with designers and public servants who were involved in the project. These observations and interviews were done from January 19 to June 21 in 2017 (see Table 5-1). Each workshop lasted between 90 and 380 minutes, and each face-to-face in-depth interview lasted between 50 and 85 minutes.

Local Government (Political party)	Design Intervention Model (DIM)	Data Collection Methods			Data Collection Period
		Interviews	Workshop Observations	Workshops Participants' Feedback	
Council A (Labour)	 Internal/External-Designer	5 3 officers 2 designers	10	21	(19/01/2017 ~ 21/06/2017)

Table 5-1 The case study summary of Council A

All interviews with service designers and public servants from the council were face-to-face in-depth interviews based on an open-ended questionnaire, and they lasted around one hour on average. They were voice recorded with interviewees' consent and transcribed to apply a thematic analysis method by coding text in the transcripts. The interviews were intended to aid understanding of why the council tried to apply a design approach and ultimately embed design capability within its organisation, what benefits they gained from the application of a design approach, and what challenges and barriers they encountered in the course of applying a design approach in developing their public services and embedding design capability. There were five interviews in total, three of the five interviewees were performed with their internal public servants, and the other two were conducted with external service designers who joined the temporary unit for the commissioned project (see Table 5-2).

Name (anonym)	Department or Team	Position (Role)	Work experience (years)
CAS01	Service Transformation	Service designer (Head of product)	24
CAS02	Service Transformation	Service designer (Lead of the project)	13
CAP01	Service Transformation	Digital Services Delivery Lead	38
CAP02	Service Transformation	Digital Services Delivery Lead	8
CAP03	Service Transformation	Digital Services Delivery Lead	15

Table 5-2 Council A's interviewee profile

A total of 10 workshops were observed; they were all 'Discovery' workshops which aimed at identifying user needs and co-designing possible solutions for modernising five existing services: Reporting and maintenance service, Job searching service, Childcare service, Council tax & benefits service, and Adult social care service (see Table 5-3).

No	Collaborating department	Date (Day)	Time	Total number of participants	Aim
1	Maintenance	20/02/2017 (Mon)	13:10 - 15:50	5	To come up with solutions to improve the reporting and maintenance system
2	Job/ Employment support	14/03/2017 (Tue)	13:45 - 16:20	7	How might we showcase the progression of candidates and prove workplace can support skilled candidates?
3	Childcare	16/03/2017 (Tue)	09:30 - 15:40	11	To create a community of families feeling secure, healthy, happy, engaged and supported by the council through developing a new and improved childcare service
4	Childcare	17/03/2017 (Wed)	09:15 - 15:40	3	Task: Prototyping Service for families having disabled children
5	Childcare	21/03/2017 (Tue)	14:00 - 15:20	9	Pilot testing about prototyped website
6	Council tax & benefits	18/04/2017 (Tue)	09:30 - 15:50	10	It aims to improve council tax & benefit reporting system. This workshop will be running continuously for five days. (Tue/Wed/Thu + Mon/Tue)
7	Council tax & benefits	19/04/2017 (Wed)	09:41 - 16:10	7	It is a second day of the three-day sprint. It aims to develop ideas for residents' better understanding (and impact) of benefits/rents/status and changes
8	Council tax & benefits	24/04/2017 (Mon)	10:03 - 16:45	3	To develop touchpoints for the citizen to make it easier for the process of council tax issues
9	Adult social care	12/06/2017 (Mon)	12:00 - 15:00	9	How to improve digital services for Adult social care, especially the services provided through the website
10	Adult social care	21/06/2017 (Wed)	14:00 - 16:30	4	How to improve Adult social care, especially disabled facilities grant

Table 5-3 Council A's workshop observation profile

The duration of the workshops varied depending on the plan of the workshops, running from one day to three days, lasting from a minimum of around one hour and a half to a maximum of around six

hours per day. Only one workshop invited end-users (citizens), and the other nine workshops involved public servants as service providers because of time and budget issues. Two of the ten workshops were conducted solely by public servants without help from any service designers.

No	Job Title	Years of work	Additional comments on the question below (How might this way of working affect your work?)
1	Electronic Business Application Support officer/Monitoring team leader	9	"Gave an insight on how we can transform service in the future. If all the ideas are implemented, then it will change the way we work."
2	OPS Manager	8	"We need to be digital, how might this work in progress."
3	Digital Delivery Lead	8	"I was assisting the team running the workshop as an observer. I felt like the attendees could have been more prepared / on board."
4	Not specified	7	"Only if it is implemented"
5	Business Development manager	2	"Need to see results"
6	Commissioning officer	30	"I will be leading on the content of this website, so this process has allowed me to influence its construction from the outset. I also know how a sprint works so can apply it to other service design/ reviews."
7	Training Manager	13	"The way of working on these workshops is very different from what I am used to and requires (in my view) a lot of artistic creativity or expression which is not quite my style - so I have struggled a bit. I am conscious of the time this has taken out of my day and the work I have piling up!"
8	Business Change Manager	17	"No impact"
9	Business Change	33	"Felt a little confused at the focus of the workshop in that I have a preconceived idea of the outcomes we were loving for. This meant that I was thinking very much "inside the box" against their completes creatively. I also have little experience of the practicalities of the contract with actors in Adult social care."
10	Occupational Therapy Practice Manager	1.5	"Improve service delivery and overall customer journey."

Table 5-4 Council A's participants' feedback

A set of observation field note sheets were designed in order to efficiently and systematically capture different aspects in relation to design activities and the role of designers and non-designers. The sheets enabled the researcher to consistently compare the results of different observations by more

clearly describing their collaborative activities and interactions. Additionally, the sheets helped to illustrate the environment of the workshops and represent the process of the workshops, unique activities, and the tools and methods for the activities, which were captured through a hand drawing and photographed with consent. Furthermore, the unique activities and behaviours of facilitators and participants were recorded on the field note sheets in order to capture invisible factors that might affect the process and the outcome of the workshops.

A total of 21 participants of the co-design workshops responded to the feedback form circulated before the end of the workshop session. The feedback form was designed for participants to be able to quickly evaluate the level of contributions and their satisfaction, and they could note their opinions about the impact and the quality of the co-design workshops based on their hands-on experiences. It also included an evaluation of the workshop design, preparation and operation (see Table 5-4).

5.2 Background to Embedding Design Capability

Council A was under Labour party control. They recently applied the GDS approach to introduce innovation into their services and transform their organisation through an organisation-wide digital transformation project operated by a temporary joint unit under the Service Transformation department. According to an internal report created in 2016 explaining the organisation's strategic plan for 2020, which was accessed with the help of the interviewee, CAP01, like any other local government in England Council A faced a dramatic reduction in the level of funding from central government as a result of the ongoing austerity programme. In the face of this huge budget cut by 2020, Council A set up a team, called 'Council A 2020 Transformation Team', which was made up of a blend of dedicated officers from across the organisation alongside some temporary hired external consultants with specialist skills including the Head of the team.

The team decided to initiate an organisation-wide programme in 2015 in order to prepare for potential major challenges over the following years. The programme was planned to change the organisation to make it a more agile and flexible council, by dividing the council into several independent units. The council was attempting to innovate their operating model regarding how they would work and deliver services in the future; the organisational structure required to support the transformation was initially based on 'PRINCE2': a project management method. With the successful pursuit of the programme, the council aimed not only to reduce costs by changing the way they govern the local area and deliver services to the residents, but also to raise revenue by creating new business models by 2020. It was a strategic attempt to change themselves to become a more commercially focused, entrepreneurial and innovative organisation in the future.

While the transformation programme was in progress in 2015 and they were beginning to follow the GDS approach, which built on the agile and service design approach after PRINCE2, they realised they needed help from a specialist to apply the GDS approach. They then decided to strategically establish a temporary design unit organised with an external design team from the agency U, including service designers within the Digital Transformation team, in order to better understand citizen needs, by carrying out the 'Discovery' phase that was thoroughly based on the GDS approach (see Table 2-11 and Figure 5-1).

When the first project of the joint team, called 'Service Transformation Team', started in September 2016, the goal was to digitise the council's existing services in order to ultimately improve the efficiency of service delivery, by modernising them (see Table 5-5). After sharing the interim results of the first project presented by a joint project team, the value of design approaches became widely acknowledged among senior managers, particularly in engaging stakeholders and discovering their needs during the process of reforming services. The GDS approach gained more traction with the council as an alternative approach to develop services in the face of change: by applying the various service design methods and tools to help them to better engage stakeholders in defining main problems and needs, and coming up with solutions together. The successful interim result led to the extension of the project contract which included an additional mission; the mission was to build design capability in the organisation by equipping the members of the joint team with design skills while working closely with service designers as a team on a daily basis, so that they could continue to apply the GDS approach appropriately even after the professional designers left.

Immediately after the end of the contract for the discovery phase with the external agency U, council A newly organised a joint team with an external agency R (see Table 5-5), which was commissioned via a procurement process to carry out the rest of the phases: Alpha, Beta, Live.

5.3 Reasons for Embedding Design Capability

From the outside looking in, we can consider that the reason for applying and embedding design capability in local governments is to better understand user needs and develop services that meet user needs identified. However, it is half-true. Although there was growing awareness of the need for resident-centred service development and the positive results from a series of agile projects conducted in the 'Discovery' phase based on the GDS approach (to identify problems and needs from residents' perspectives) influenced council A to decide to apply and embed design capability within the organisation, their ultimate goal through embedding design capability was to save money.

The results of a series of interviews with the public servants and service designers from the temporary joint unit called the Service Transformation Team and workshop observations show what council A really wants from embedding design capability within their organisation.

5.3.1 Optimising the Way of Modernising Existing Services to Save Money

As shown in Chapters 1 and 2, it is imperative for local councils in the UK to prepare themselves for a reduction in core financial support from the central government by 2020. Therefore, to make efficiencies in the management and operation of the organisation and identify places where they can save money are their top priorities. They found from the successful progress of central government's 'Digital by default' strategy that modernising services by digitalising them is one way to save money. Moreover, they started to find that using the GDS approach to identify and design services was beneficial as it allowed the council to see what front-line staff as well as residents found difficult during the entire service journey. It led Council A to consider this new way of working as an alternative to their traditional way of developing services.

CAS01 "I guess one of our bigger roles, what we are doing here is to achieve a certain savings like in terms of improving the processes, optimising the way people work, by putting and making things digital instead of having a paper-based process"

CAP02 "We have a 2020 team, it's called. This team was commissioned to look at activity around the council looking at where we can make savings and they were also commissioned to do a new way of working, looking at working from home, potentially giving us software and hardware to be able to work remotely since we are not having to be in the council building to save costs here. And the other strand is what we're doing. It is looking at digital services"

5.3.2 Carrying out a Discovery Phase of Agile Approach on their Own

The project which carries out the Discovery phase of public services in council A established a temporary joint unit. The two main goals of the temporary joint unit were to carry out Discovery phase of the agile approach to identify users' needs for service modernisation and to transfer the design knowledge and skills of external designers to other team members from council A while working together as a team. Council A wanted their internal people in the team to learn from external design experts how to carry out discovery phases for other services in the council without support from the external design experts; by learning and experiencing the application of the GDS approach they would be able to adjust the approach to different contexts and identify users' needs properly.

CAP03 "[…] basically, the big story, bigger picture is like the council doesn't have the money to carry on hiring someone like agency U (design agency). So, if we think they have the skills that we need, we need external partners, but that cost a lot of money"

CAP02 "We want to make savings and improve the user experience for our residents. And actually this time doing it based on the user needs. We start with users' needs rather than just buying existing services out there hoping for the best. So completely different way of doing things. So whole plan is to do knowledge transfer. So, one day we can just do it ourselves"

The team considered the knowledge transfer a cultural change that required mindset change. By learning how to carry out the 'Discovery' phase of the agile process and equipping their employees with the necessary knowledge and skills to be able to apply a design approach for the phase, especially the GDS approach, Council A expected to change the mindset of its employees towards a more agile and user-centred way; the employees would then be able to better understand residents' needs and deal with issues identified from the residents' point of view, but, ultimately, Council A wanted to reduce the budget through that effort.

5.4 Applying and Embedding Design Capability

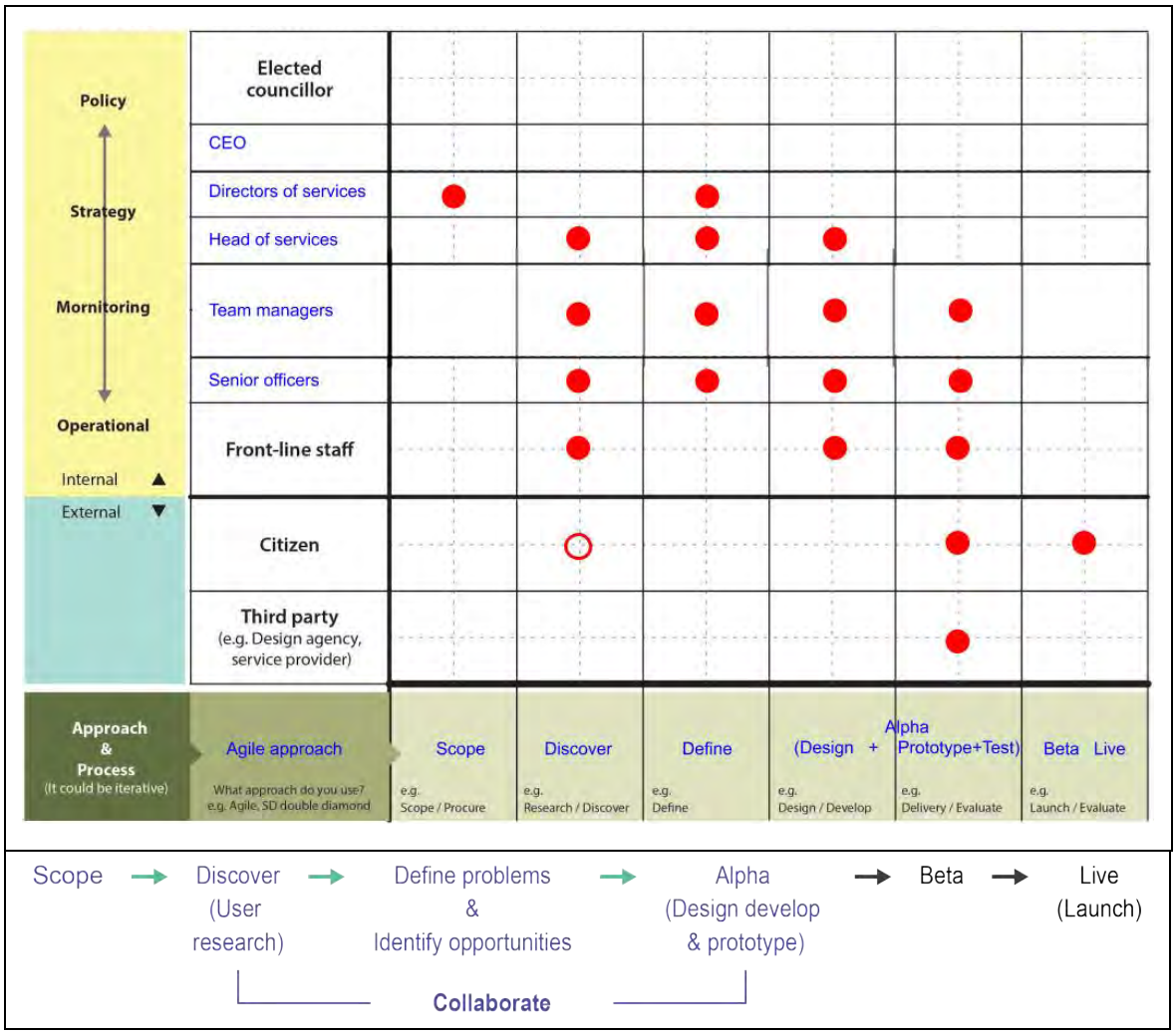
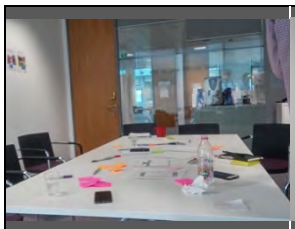


Figure 5-1 The process of a design approach and the range of stakeholder involvement of Council A

The first temporary joint team which was established in 2016 prioritised the services that the council provides based on the importance and urgency of improvement. Considering the budget of the project, the team selected four services which required urgent improvement in order to carry out the Discovery phase out of the four phases of the GDS approach; Discovery, Alpha, Beta, Live (see Figure 5-1). The Discovery phase of the GDS approach that Council A adopted differed from both the Discovery phase of the PD approach and the Discover phase of the DDM of the service design approach. Unlike the phases of the other two approaches, which basically aim to understand problems and user needs before moving on to the next Define and Development phases, the Discovery phase of the GDS approach includes identifying opportunities to improve the problems through the 'How might we' activity, as well as constraints, such as technology and legislation (Agile Delivery Community, 2013). Therefore, this study premised that the Discovery phase of GDS approach at least in Council A can be divided into three stages; Scope, Discover, Define.

The team used presentation slides created by designers in order to introduce and explain the aim and process of each activity of the workshop and the result of the user research to participants. The introductory presentation slide is generally distributed via an email before the participatory co-design workshops and posted on the walls of the workshop space. They also used various workshop materials, such as concept templates, a persona template, post-it notes and colour dot labels which were created by them or were off-the-shelf items, in order to enable participants to complete activities efficiently and for them to ultimately facilitate the workshop seamlessly (see Figure 5-2).



Space layout	Information shared	Collaborative activities	Collaboration outcomes
• A boardroom style table layout in a meeting room	• User personas • User research result: interview, shadowing	• User persona • Creating best and worst scenarios to identify problems and opportunities • Developing ideas through 'How might we' activity	• Problems and needs prioritisation • Service improvement ideas voted

Figure 5-2 Typical scenes of a participatory co-design workshop

5.4.1 Establishing a Partnership with External Experts for Knowledge Transfer

Year	2012 ------ 2015	2016	2017	2018
Changes in DIM		Agency U	Agency U	Agency R

Table 5-5 Council A's journey towards embedding design capability

The main strategic goal of Council A in applying and embedding design capability within their organisation was to transfer design knowledge and keep developing design capability in partnership with external design experts. On their journey towards embedding design capability, they tried to

find a suitable small or medium-size external design agency who could undertake design-led service innovation projects in conjunction with internal people in Council A within their limited budget and thus transfer knowledge while working closely together as a team (see Table 5-5).

CAP03 "Agency U has been teaching us along the way. And also, we look to procuring again. But one of the criteria we've been asked for. So, we've said like can you do knowledge transfer between the people in the team already. So, I think Agency U is like I will call a small to medium company doing design work with a big organisation. But these bigger organisations out there like Deloitte, KPMG, and PWC. They probably wouldn't do knowledge transfer. They tend to come in and do what they need to do and then go. So, I think you need to find a right team, the right fit as well."

5.4.2 Setting Up a Dedicated Offline Space and Online Platform



Figure 5-3 Dedicated space for a temporary unit

Council A set up a dedicated offline space for the temporary joint unit including an office zone for individual working and a group working zone in an open space for group discussions and co-design workshops. They also utilised office walls not only to visually record and share the progress of the projects within the team, but also to promote what they were doing to other people in the council (see Figure 5-3). Moreover, they used Slack and Google Drive, the cloud-based communication and co-working platform, as well as an online blog. They communicated remotely and promptly through

these facilities. The online blog was used to post the process, progress and the outcomes of the activities with reflections on the experience of the project blog as it progressed in an attempt to store and share knowledge with other people in the council and, ultimately, to promote and distribute this new way of working across the council.

CAS01 "I mentored them and guided them and be there on a day-to-day basis. We supported them in the Slack channel. We communicated with them to help them to make decisions and guide them"

CAP02 "We do want to do more down the root of our communication channels like intranet or even just putting things up on the wall like down in the Hive. We've got a room which is dedicated to this project. So, it's more visual and people can see what we are doing, but again, it's the time to keep it updated because we're so busy. So, there is potential, but we probably could do with more people within the team to spread that word"

5.4.3 Transferring and Learning Knowledge by Doing Together

The collaborative activities in the Discovery phase were designed to identify and define problems. This the phase where people involved in issues can build a shared understanding of the issues and define and prioritise problems by working closely together. The outcomes of the activities become a basis and common ground for the team to innovate or develop better services for their front-line staff as well as users.

The joint unit was established because people both in council A and agency U believed that transferring design knowledge and embedding design capability in the council inevitably required cultural change.

CAS01 "But actually, the knowledge transfer piece is often not explicit in what people come to us to buy. […] there is an element of cultural change required in order to make the shift or to be a more user-centred, Agile approach. You can't just do it. You can't just do some courses and then apply it. The constraints of the culture in an organisation are massively powerful. And the culture in the mentoring and in the facilitating role is really important. But it's not people what people buy"

Therefore, the council set up dedicated spaces for conducting co-design workshops and managing entire projects separately. The joint team used the spaces as the ones in a design studio by the external designers. How the designers use the spaces including the walls and the table layout demonstrated the designerly way of working to public servants not only in the joint team but also in Council A (see Figure 5-3). Moreover, the joint unit collaborated when it came to understanding problems and user needs of services, defining main problems and opportunities, and coming up with ideas to solve the

problems with stakeholders, while working on their own individual tasks separately, for example, visual designs by designers and administrative works by public servants in the joint unit. These collaborative works, which usually include user research and co-design workshops that require design knowledge and skills to apply relevant design methods and tools, were deliberately assigned to public servants in the joint team so that they could acquire and develop the necessary design knowledge and skills by actually practising them.

> **CAS01** "To do that, you have to be there with them, you have to be there with them on a day-to-day basis, reminding them. Yes, there's obstacles there but there's a way around obstacles or there's an obstacle there you have to make sure it's removed. You have to identify the obstacles and say this needs to be removed for me to do my job properly".

Sometimes, the public servants in the team conducted user research independently, played the role of main facilitator during workshops while the designers worked as mentors, or they participated in the workshops in order to encourage other participants.

5.5 The Role of Designers and Public Servants in Applying and Embedding Design Capability

Council A established a unique relationship with an external design agency by setting up a temporary united in-house initiative made up of external designers and public servants from different departments but mainly from Council A's digital transformation team. This unique relationship and the assigned goal of the temporary joint team also resulted in different roles for both the designers and public servants when compared to other DIMs.

5.5.1 Role of Designers

The unique relationship between Council A and the external design agency U also involved particular conditions, such as the united team working in the same office daily with two main goals of carrying out a series of discovery phases with other internal service departments and transferring knowledge within the team. This special situation required the designers in the team to play various roles during the project in accordance with their imaginary positions (see Table 5-6).

The different roles that designers played in the team of the internal/external designer model were identified and organised by referring to the existing research which previously identified the role of designers, such as Tan (2012), Michlewski (2016), Yee, Jefferies, and Michlewski (2017) and Bason

(2017). The research analysis showed that the different roles of designers were defined by their imaginary positions which changed according to the need from the public servants in the team or were guided by the team leader depending on the progress of Discovery projects or the level of ability that public servants had in applying a design approach. The imaginary position in this study was used to indicate an invisible mindset and functions of the designers in the team which were required to change depending on the needs. It can be divided into overall two positions, a designer and a coach; the designer position includes the characteristics of both in-house and external designers.

Categories (Imaginary Position)		Specific role	Description
Designer	In-house Designer	Researcher	Coordinates user research including planning the research, developing research tools and conducting the research with public servants
		Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions in collaboration with public servants in the team and other stakeholders
		Facilitator	Prepares for a co-design workshop, engages and encourages participants, visualises the outcomes and progress while facilitating the workshop
	External Designer	Reifier	visualises verbal conversations, concept descriptions and ideas, and concretises them through sketches and prototypes with varying levels of fidelity.
		Change Catalyst	Questions the status quo, identifies and deals with internal issues objectively from a third party's point of view, stimulates out-of-the-box thinking, motivates changes
Coach		Trainer	Teaches necessary design knowledge and skills to public servants in the joint team
		Mentor	Oversees the progress of capability building within the team, provides help and advice to public servants along their journey of developing design capability

Table 5-6 The role of designers in the internal/external designer model

A designer as an in-house designer plays three different roles: researcher, co-creator, facilitator. As a researcher, a designer coordinates user research including planning the research, developing research tools and conducting the research with public servants in the joint team in order to better understand context by discovering problems and needs. The co-creator's role signifies defining problems, identifying needs and opportunities, and co-creating vision and ideas for solutions together

with public servants in the team and other stakeholders. As a facilitator, a designer prepares for a co-design workshop, engages and encourages participants, and visualises the outcomes and progress while facilitating the workshop. Although in many cases the roles of workshop facilitation and visualisation are performed by different people, a designer played both roles in the case of Council A. Moreover, a designer, as an external designer, plays a role of reifier and a change catalyst.

As a reifier, a designer visualises verbal conversations, concept descriptions and ideas, and concretises them through sketches and prototypes with varying levels of fidelity. Although this role overlaps with the facilitator's role to some extent, it requires a higher level of design skills and experience because the outcomes produced by reifiers are usually used to explain the concepts of potential solutions to stakeholders and test them with potential users. This is the role which distinguishes design-trained designers from design-untrained designers. As a change catalyst, a designer identifies internal issues objectively from an outsider's point of view by questioning the status quo, and motivates changes by stimulating out-of-the-box thinking. One of the main reasons that organisations, both in private and public sector, have for bringing in external design experts is that they expect them to look at the internal problems from an outside perspective. This allows them to identify different aspects of the problems and thus create better design solutions. Therefore, it is very important for designers in Council A's joint team with Internal/External Designer mode to be able to keep this position in order to drive change or innovation in the council as a change catalyst.

Another imaginary position of a designer in this unique relationship is as a coach, which includes trainer's and mentor's role. Both of these roles are important in transferring knowledge and skills and to successfully embed design capability in the council. When taking a trainer role, a designer teaches necessary design knowledge and how to apply a design approach, including different methods and tools according to different phases of the process, to public servants and applies them to real Discovery projects together with the public servants so that public servants can learn by practising them. As a mentor of the project team, a designer oversees the progress of capability building within the team and provides help and advice to public servants over the journey of embedding design capability by being with them.

CAS01 "there is an element of cultural change required in order to make the shift or to be a more user-centred, Agile approach. You can't just do it. You can't just do some courses and then apply it. The constraints of the culture in an organisation are massively powerful. And the culture in the mentoring and in the facilitating role is really important […]
I mentored them and guided them and be there on a day-to-day basis. […] So that is an investment in people and people's feelings. They feel responsible, they feel pressure to make this thing work. But they kind of take ownership of it. So, it's about creating the environment and support for those people to flourish."

Designers in the team themselves consider this mentoring role critical as they believe to embed design capability inevitably requires cultural change, which causes fear of change and for public servants a feeling of pressure to make a change. Therefore, this role is usually taken by a senior level designer who has enough project experience as well as great knowledge in design process because it requires a holistic view and leadership to critically review the progress and guide people in the right direction to achieve the goal.

5.5.2 Role of Public Servants

The special situation which was formed by the unique relationship between Council A and external design agency U and two different project goals also influenced the role the public servants needed to play in the team in order to successfully achieve the goals of the project.

Public servants in the joint team were also required to play diverse roles in order to fulfil their assigned tasks. Their roles can be clustered into three categories: before the co-design workshop, during the co-design workshop, throughout the project (see Table 5-7). The co-design workshop was used as the main route not only to transfer design knowledge and skills from designers to public servants, but also for public servants to practise the knowledge and skills and to develop them based on the learning by doing principle. Before the co-design workshop, public servants prepared for and conducted user research independently or collaboratively with designers depending on their level of understanding and experience of user research to collect data for co-design workshops. They also coordinated co-design workshops including finding gatekeepers who helped the joint team to recruit participants and workshop arrangements, such as location, date and time, and preparation of workshop-supporting materials. During the co-design workshop, they could potentially take three different roles – facilitator, mediator, co-creator – depending on what the designers wanted them to do according to their learning plan.

Public servants usually play a mediator's role by supporting communication between designers and public servants who participate in a co-design workshop; they sometimes manage conflict either between participants or between designers and participants with empathy based on their experience and understanding of the organisational culture. This approach is often considered significant for the successful operation of co-design workshops. They also participate in co-design workshops as co-creators to encourage other participants to better engage in the process by defining problems, identifying needs and opportunities, and coming up with solutions together. It helps designers to make a positive and creative environment and thus leads to better outcomes through active engagement of the participants. Public servants sometimes take on the main facilitator's role with support from the designers to experience and practise the entire process of the co-design workshop when the designers think they are ready to practise.

Categories (Imaginary position)	Specific role	Description
Before the co-design workshop	Researcher	Prepares for and conducts user research independently or collaboratively with other public servants or designers
	Coordinator	Coordinates co-design workshops including finding a gatekeeper who helps the team to recruit participants, and arrangement of workshops
During the co-design workshop	Mediator	Supports communication between designers and public servants who participated in the workshop, and manages conflict either between participants or between designers and participants
	Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions together with inside or outside public servants in the team and other stakeholders
	Facilitator	Prepares for a co-design workshop with designers, engages and encourages participants
Throughout the project	Project manager	• Manages a project including monitoring progress and managing schedules • Keeps senior managers in the council briefed • Gains permissions or agreements from decision makers • Accesses an internal database and collects the necessary information for the project • Builds relationships and communication between designers and internal employees
	His/her own previous role	Is still partially in charge of his/her previous work as a separate role alongside the new role

Table 5-7 The role of public servants in the joint team of the internal/external designer model

This is an important opportunity for public servants in developing their individual design competence because it allows them to have hands-on experience and realise what they find it difficult to undertake in the workshop, and what they can actually achieve from the process.

CAP01 "one thing we've learned from the previous workshop, which was the first workshop with Disabled Citizen Grant, is we didn't do something in the right way. It's probably not enough. We didn't get quite what we needed because we didn't do this part. So, I think that is the hardest bit. When you work with the professional, so to speak, it's very natural for them to do that. They would know instinctively if there is not enough information or they would know instinctively if they've got a variety of information. But when you are novice, you are in learning circle, it's hard to know"

CAP03 "I think when designers talk about a certain language that makes it's hard to understand, but what happens is they talk about it and then they apply it. So, when they are applying something and then going through the process then you think 'Oh so that's what that means. That's what a persona means, yeah'"

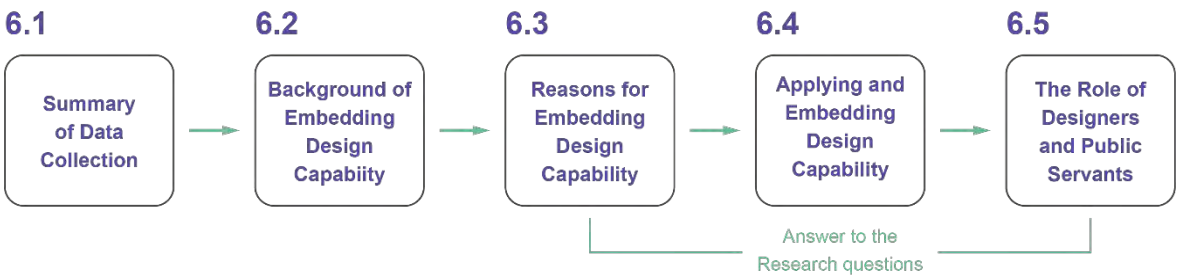
Moreover, public servants need to take on a project manager role from the council side to make sure the progress of the project is going as well as planned and share the progress with senior managers in the council. Additionally, they support designers in gaining permissions or agreements from decision makers for the projects by communicating with the head of the transformation team. They also access an internal database for necessary information for the project. Building relationships and communication between designers and internal employees is their subsidiary role. Interestingly, they still need to continue their own previous work, although it is not full-time work. Sometimes, it disrupts what they are doing in the joint team.

CAP01 "I'm having to report to this hierarchy, and I get dragged out sometimes to 'Oh CAP02 can you set up a meeting for this, I'm actually over here. It's also in a way, we're the ones that keep some to come out to be accountable for what we are doing. So, you are removed from the process to be reporting back to write reports for them, so they know what you are doing"

CAP03 "So, I would do a bit of work and give it to someone else and then they do whatever they do with it [Laugh]. I'm hoping over the next round that I can be fully involved cause my procurement is coming to the end now. I have been involved from the beginning … in these two other ones once come out which I can't just focus on that because I needed to do normal procurement"

CHAPTER - 6 CASE STUDY OF COUNCIL B: EMBEDDED-DESIGNER MODEL

Introduction



This chapter has the same structure as Chapter 5. It details the process and result of the case study including a description of Council B, the background to the introduction of the design approach and the embeddedness of design capability. The detailed description of the data collection process of each method as well as the summary of the results, including answers to the research questions, will be useful for readers to understand how the research findings and conclusions were drawn from the data collected.

6.1 Summary of Data Collection Results

The leader of the Innovation and Improvement team in Council B completed the survey which was sent to him directly through the messenger service of 'Knowledge Hub'. Workshop observation was agreed by him and his colleague, who was working as a service redesign lead officer, during a follow-up interview, which was held in the workplace of Council B.

The observation was made during a training workshop in which public servants from different departments engaged voluntarily to develop their design capability. The service redesign training workshop had been designed and operated by the public servants in an attempt to spread a design mindset and a skill set across the organisation as part of their work to innovate their services and change their organisation. One observation on a co-design training workshop and two interviews

were carried out, and feedback from six participants of the workshop were collected between June 14 and June 29 in 2017 (see Table 6-1).

Local Government (Political party)	Design Intervention Model (DIM)	Data Collection Methods			Data Collection Period
		Interviews	Workshop Observations	Workshops Participants' Feedback	
Council B (Conservative)	 Embedded-Designer	2 1 officer 1 designer	1	6	(14/06/2017 ~ 29/06/2017)

Table 6-1 The case study summary of Council B

A face-to-face in-depth interview based on an open-ended questionnaire was carried out with two public servants at the same time in their workplace. It lasted 70 minutes and was voice recorded with interviewees' consent and transcribed for coding (see Table 6-2). The interviewee, CBP02, took a one-off short course in design thinking provided by the UK Design Council in the past. Although they both did not have any work experience either as designers or in the design field, they played the designer's role with confidence. They designed and facilitated co-design workshops for the development of services and to train other colleagues in a service design approach.

Name (anonym)	Department or Team	Position (role)	Work experience (years)
CBP01	Innovation and Improvement Team	Team leader	12
CBP02	Innovation and Improvement Team	Service redesign lead officer	5

Table 6-2 Council B's interviewee profile

A one-day service design training workshop which targeted all internal employees was observed (see Table 6-3). The participants were got together in the dedicated meeting room, which had a big square table in the middle of the room. There were six participants from different departments and two facilitators from the Innovation and Improvement team. The whole of one wall, which faced a big digital screen, was a whiteboard. Cookies and tea were prepared for participants, but there were no workshop aids, such as sticky notes and printed materials, to support the workshop. The workshop began at 9:45 and ended at 15:30, and there was a lunchtime break for one hour. After introducing what design thinking and service design are about, including terminology, and presenting different phases in the process, activities with tools and methods, and some successful service redesign cases

through presentation slides, the participants were asked to organise themselves into three pairs. They were then asked to choose a problem for the workshop with regards to the public services that the council provides to its citizens.

No	Collaborating department	Design intervention model	Date (Day)	Time	The number of participants	Aim
1	Multiple	Embedded-Designer	29/06/2017 (Thu)	09:45 - 15:30	6	A service redesign training workshop for teaching how to apply service design approach into individual projects

Table 6-3 Council B's workshop observation profile

The participants were taken through the four phases of the DDM from the Discover phase through to Define, Develop, and Deliver phases. They were asked to apply primary design tools and methods, such as a user journey map and persona, in order for them to learn the ways in which the design approach can identify needs and problems and how it can be used to help communicate identified needs and problems and come up with solutions collaboratively with other stakeholders. They were then asked to prototype a service reflecting what they wanted to improve and present it as an outcome of the workshop. During the workshop, a set of observation field note sheets were used to systematically capture unique features of design activities and interactions between designers and facilitators. Several pictures were also taken with consent to complement the field notes.

Workshop feedback forms were distributed to participants when the workshop was completed, and all six participants left comments on the workshop (see Table 6-4).

No	Job Title	Years of work	Additional comments on the question below (How might this way of working affect your work?)
1	Customer Insight officer	32	"I need to re-think how I put forward insight in recommendations for change"
2	Housing Strategy & Communications officer	5	"Will help me to work on workstream reviews and influence changes to services"
3	Team Leader - Supported Housing	15	"Will help me to test ideas that I have effectively and to have more confidence in redesigning my service."
4	Environmental Health officer	9	"Understanding of how to use toolkit to implement ideas."

Table 6-4 Council B's participants' feedback

6.2 Background to Embedding Design Capability

Council B was under Conservative party control and followed the embedded-designer model. Although the council did not adopt design thinking as an alternative approach to solve problems and improve their services across the council, they were aware of the advantages of a design approach to reform their services from citizens' perspectives. In 2015, the council established the Innovation and Improvement team in order to digitalise their services based on the GDS approach. As the role of the team was expanded to include the non-digital side of innovations, Council B hired a service designer as Service redesign lead officer in the middle of 2016 (see Table 6-5).

Year	2012 ------ 2015	2016	2017	2018
Changes in DIM				

Table 6-5 Council B's journey towards embedding design capability

The leader of the Innovation and Improvement team was convinced of the benefit of design thinking and then became a design champion. The two design champions from the Innovation and Improvement team, Team Leader and a Service redesign lead officer, customised the co-design workshop tools to fit their context and make them easier to use for people in the council. They respectively played vital roles in applying and distributing a design thinking mindset and tools across the council. CBP02, the Service redesign lead officer, is a graduate from a local government graduate scheme. He took the design thinking training programme run by the UK Design Council and had experience of applying a design approach during a voluntary project which applied a design thinking approach. Although CBP01 and CBP02 did not take any design degrees, they were aware of and acknowledged the value of design thinking approaches based on human-centred design principles. They self-developed their knowledge of what design thinking is and how to apply it in their day-to-day work.

6.3 Reasons for Embedding Design Capability

Council B's first introduction to and experience of a design approach to service redesign was through the GDS approach while working on digitisation of their services. Moreover, the first application of

a design thinking approach in Council B was to redesign and digitise their council tax registration process.

6.3.1 Understandable and Methodical Approach to Service Development

It was the user-centred design principles and the methodical process that initially grabbed the attention of public servants in the team in charge of supporting the development of services; they acknowledged the process of the approach as an understandable way to conduct service development. People in the council also found it useful in understanding the interaction and experience of the users throughout their entire journey of service and in identifying problems and needs from their point of view through the systematic but relatively easy approach.

CBP01 "Double diamond and it makes sense. It really makes sense and a lot of problems I've come across where people are trying to change things without doing exploration of what is actually the problem rather than what we think is a problem. They generally do end up, not necessarily in failure, but not as successful. The second element was when I was hired, when I was started, it was very much as a digital only role. And Government Digital Service (GDS) in central government are heavily influenced by design thinking. And their structure for the development services is based around design thinking and Alpha and Beta and the other work. As a result, that seemed like the best model to follow. And when the role got expanded to include the non-digital side of innovation as well, it made even more sense to kind of fill those elements in and use that as a structure because it's something that we both understand. It's easy to explain to people because it makes sense"

6.3.2 To Quickly Identify and Clarify Needs and Develop Ideas

The interviews with two in-house designers in charge of distributing design mindset and a user-centred design approach and supporting service design development across the council as an external consultancy clearly showed their reasons for the adoption of a design approach and intention to embed design capability within their organisation.

CBP02 "We've made it more relevant to us and much easier to use for a team may be limited on time who wants to see the result quite quickly. I think another thing to say about the way we approach it at the moment is that we're aware that we kind of do a fast-track version of design thinking and, then, we probably don't spend that much time identifying user needs, what the actual problem is, as we would like to. But there are so many things that we deal with a quite obviously break when you look at them just thinking from the users'

> point of view. We're largely focusing on quick wins first and then the more fundamental looking right through how everything works"

As CBP02 stated above, the main reason for Council B to use a design approach is its systematic, easy to understand, process of identifying problems and user needs, although it is often identified by public servant themselves wearing users' hat. However, that does not mean they misunderstand what the real value of a design approach is and how to use it. They just found what the real value of a design approach is for them and optimised it to be more relevant to their situations as it takes a relatively long time, effort and money to follow the authentic design process.

6.4 Applying and Embedding Design Capability

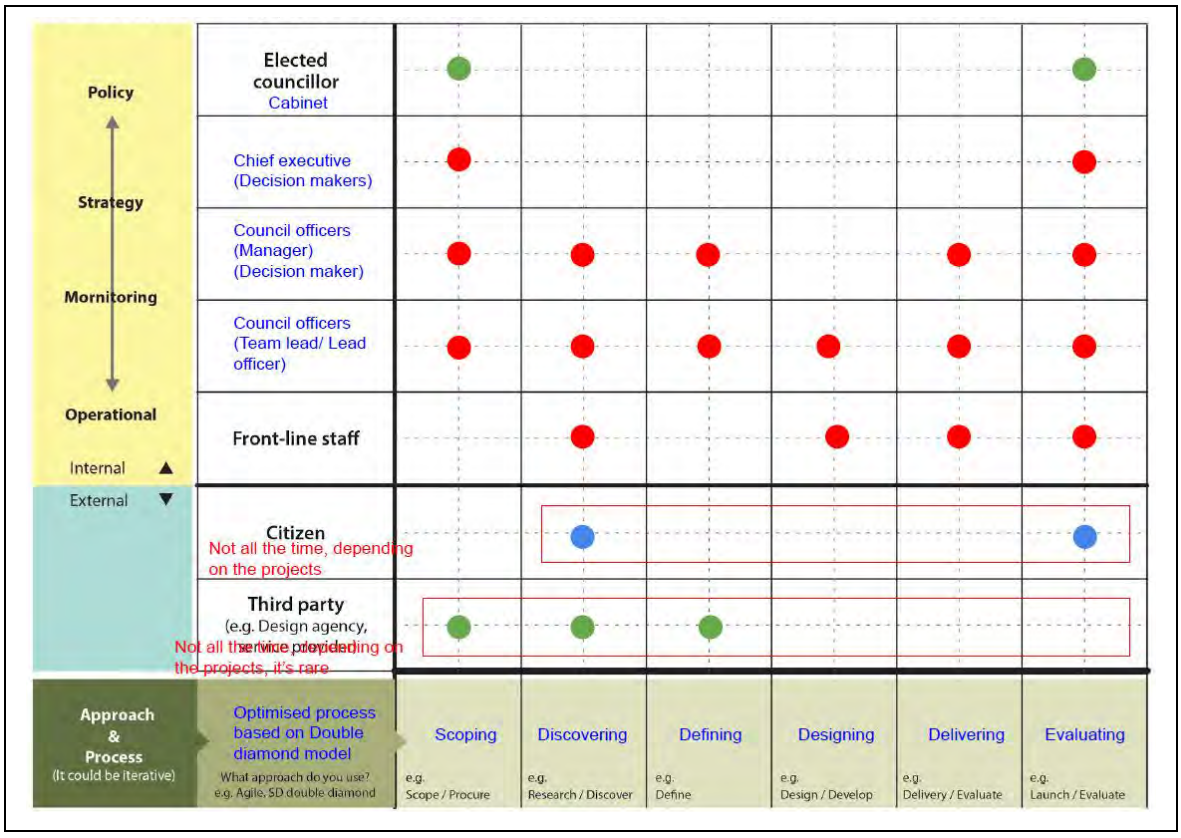


Figure 6-1 The process of a design approach and the range of stakeholder involvement of Council B

A design approach in Council B was being applied and distributed not by the organisation, but mostly by the Innovation and Improvement team, particularly by the two members of the team, a team leader and a service redesign lead officer. They advocated the value of design thinking in gaining behavioural insights and developing services. They mainly used a persona and a user journey map in order to identify problems that their residents often face and the residents' needs: the persona and

customer journey mapping showed the entire journey of the residents in the course of service use. However, the result of 'the process of a design approach and the range of stakeholder involvement' of Council B and the interviews with in-house designers revealed that the general intention of the use of the design approach in Council B was to quickly identify residents' needs and create ideas, normally in a narrative form, through an internal co-design workshop by putting the public servants in each service team into residents' shoes (see Figure 6-1). They occasionally invited residents during the service development process; however, Council B still found benefits from their use of a design approach.

A positive experience in developing the tax registration process through a design approach led them to develop bespoke design tools to support the application of the design approach within their organisation. They tried to apply and distribute the design mindset and approach across the council in order to increase staff engagement in defining problems and designing better services from a user's point of view. In an attempt to distribute the approach and establish a design mindset, they held organisation-wide training workshops on a regular basis, which were open to all staff in the organisation. As displayed in Figure 6-2, the process of a co-design workshop in Council B is mostly text-based and the outcomes of each activity were produced in narrative forms.

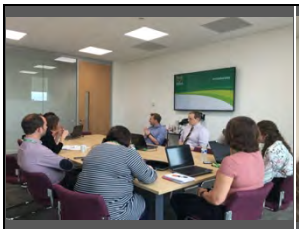
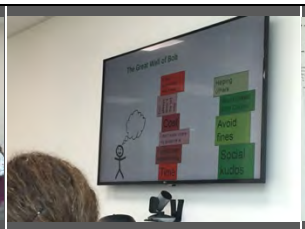
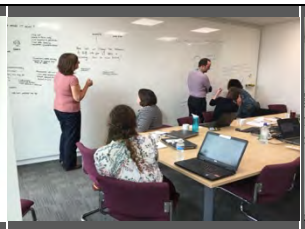
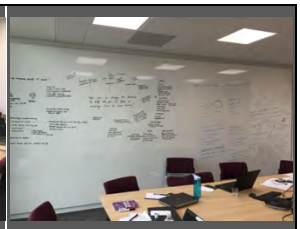
			
Space layout	Information shared	Collaborative activities	Collaboration outcomes
• A boardroom style table layout in a meeting room	• Example topics for exercise • The whole process of service design approach • Various methods and tools	• Creating a user persona • Creating a user journey map • Iterative idea development • Prototyping	• User persona • User journey map • Problems and needs identification • Service improvement ideas development

Figure 6-2 Typical scenes of a participatory co-design workshop

They also helped other teams to run a co-design workshop for defining problems and creating ideas to solve problems on request.

There was no official blog to share their activities and the outcomes of the application of a design approach or to promote the approach. Instead, the two public servants actively participated in online and offline-based external communities and events in which people shared their experiences in applying design approaches to public service development and innovation.

6.4.1 Establishing a Design Team as an Independent Unit from Services

Council B established a design team under the name of Innovation and Improvement team as an independent unit separated from other services. They worked as if they were an external design agency, which allowed them to look at the issues that service teams wanted addressed objectively as a third party with fresh eyes. It seems they thought that what they were doing was right and believed it to be an important factor for the successful application of a design thinking approach.

> **CBP01** "[…] we are a unit within the local authority, but we are outside any particular services. We could get brought in. The phrase we usually use is an internal consultant because we are within the council and, what we do, we look at it with fresh eyes. In theory, more of an understanding of design than perhaps people have themselves"

This independent position added value in several ways. It enabled the team to explore the problem areas more freely as they could look at the issues from a different point of view and manage time themselves. Moreover, it allowed the team to break down silos between departments by working together with all departments as a temporary team on a case-by-case basis, which enabled them to play an intermediary role.

> **CBP01** "we've massively improved a silo environment because we've worked with every department since we came here. So, housing don't necessarily speak to planning or regulatory services who deal with health inspections that kind of thing, they're necessary to go to Business rates. So, what we can add, which has been very useful, is..."You want to know this data. They're collecting this data". So, Business rates know business closes down, the food business closes down, and you know when a food business opens. So, if you exchange data, it means that we have a better idea of what's happening in the borough overall. And we can save time because you're no longer trying to inspect places which closed. Business rates save time because they know this business is open"

6.4.2 Setting Up their own Process and Tools by Adjusting Existing Ones

An interview with two people from the design unit and the workshop observation identified two things they wanted to achieve in their operation of the unit, which includes running a service redesign training programme, which they hold on a regular basis and on a demand basis, and directly supporting service teams. First, they wanted public servants in Council B to be aware of the value of a design approach, particularly in identifying user needs and coming up with ideas from users' point of view. Second, they wanted public servants in Council B to be able to actually apply the service redesign approach to their everyday work. In order for the better introduction and adoption of the approach, they designed and set up their own design process and tools by adjusting existing design

thinking tools to better fit their situation so that people in the council could understand and use them easily and effectively (see Figure 6-3).

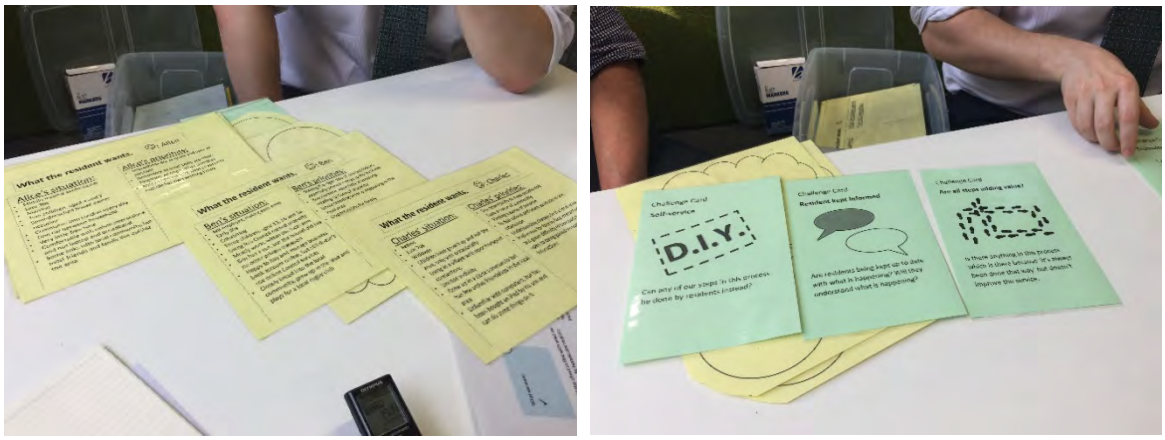


Figure 6-3 Customised DIY design toolkits of council B

CBP02 "We have four processes of design, that's the whole toolkit, which is how we'll redesign the process. We've made it more relevant to us and much easier to use for a team maybe limited on time who wants to see the result quite quickly. I think another thing to say about the way we approach it at the moment is that we're aware that we kind of do a fast-track version of design thinking and then, we probably don't spend that much time identifying user needs, what the actual problem is, as we would like to. But there are so many things that we deal with a quite obviously break when you look at them just thinking from the users' point of view. We're largely focusing on quick wins first and then the more fundamental looking right through how everything works"

As CBP02 stated, they focus mainly on 'quick wins' by allowing people from different services to apply a 'fast track version of design thinking' which they devised. It is designed for people in the council to be aware of the value of design and be familiar with the approach within a relatively short time by quickly trying the approach and experience its benefits in person. However, although this way might be effective to promote a design approach across the organisation, it might lead to a misunderstanding of what a design approach is for. Furthermore, it could lead to wrong decisions about what user needs are and what the real problems are because it skips a few significant phases; these phases invite users and stakeholders to better understand users and stakeholders and identify their needs and hidden problems through various tools and methods from their perspectives. It can be a pitfall of this kind of fast or ad hoc approach.

6.4.3 Providing Organisation-wide and Service-specific Support

Overall, the design unit provided three different services to service teams in order to promote and distribute a user-centred design approach across the council, and support service teams in improving their services. In order to achieve the goals, the team ran a quarterly service redesign training programme which was open to everyone in the council. It was a workshop-based general introductory training programme held in a dedicated workshop space at the council. Advance booking was required because there was a limit to the number of attendees due to the size of the workshop space.

> **CBP02** "We run a quarterly course of service redesign which introduces people to concept. And we basically started training on how to use this (service design) such as persona side, understanding getting to the roots of the problems rather than just what we think is the problem."

They also supported service teams or individuals in the council with guerrilla-style service-specific support on an on-demand basis. People in the council could get in touch with the team and request them to come in and support their team in a range of ways at various points in time, from identifying needs and problems together at the beginning of a service development project to implementing ideas in a real situation. However, the design unit focused more on the training and distribution of the design approach or guiding in the right direction by asking the team questions instead of directly working on the issues and coming up with ideas for the teams to improve their services.

> **CBP02** "And that's most of what we are doing to push onto other people. Next week I'm running an ad hoc day with finance to go with the team talk through how design theory works because they've got quite a few small processes that they want to do internally"

The other way what the independent design unit does to promote user centred design approach and support the teams to improve service is a top-down way to intervene the service development process. The design unit allocates 20 days equally to the six assistant directors who are in charge of managing different services in the council. The assistant directors can bring the unit in their services and request them to support in identifying user needs and problems, in creating ideas for solutions, and designing potential solutions together within 20 days per year.

> **CBP01** "So, we've got different levels of management go to assistant directorates. So, we've got housing is under an assistant director. Planning is under an assistant director. There's six in total and each one we've given them twenty days of our time for the year. And we work with individual teams on top of that. But we have twenty structured days where they can use us for whatever they need help with. So, coming up, we're working with

> our Finance and resource assistant director, we're working with our parking service, caravan storage size, cemeteries and procurement"

Likewise, the design unit set up a structure which offers three different accesses to their services to effectively provide support services to people and teams in the council.

6.5 The Role of Designers and Public Servants in Applying and Embedding Design Capability

In the Council B context, the position of the designers under the embedded-designer model can be defined as a designer-manager rather than either a pure designer or pure public servants when considering what their backgrounds are, what they are doing and how they are doing a design approach in the council. This mixed identity of the two design champions is recognised in the answer of the two people taking on the designer's role to a question about the definition of their positions.

CBP02 "I think a lot of local governments have gone through this journey. Maybe having an external designer and doing this kind of internal/external they've learnt how it works and then saying actually you know we can do it now. So, a lot of them have kind of gone through this journey. Whereas we probably much more started here (embedded-designer model) because I came in having, well it's always the idea we started here, I think. That's what our assistant director wanted. "

CBP01 "I will argue that we probably started from non-designer model. Personally, I still see myself as a non-designer because it is more the formalised in design side and I'd picked up, and I've learned. But actually you (CBP02) are probably right we are now the embedded-designer model."

6.5.1 Role of Designers

Their unique position, which required them to play mixed roles, defines what kinds of role they need to play, not only as a designer but also as a public servant of the Innovation and Improvement team in the council, in order to fulfil their responsibilities: researcher, co-creator, facilitator, educator, supporter (see Table 6-6).

CBP02 stated during an interview (see below) that the designers working inside Council B are part-time designers; in other councils, depending on their conditions of work, designers are often required to play both a designer's role and project manager's role.

Categories (Imaginary Position)	Specific role	Description
Designer-Manager	Researcher	Coordinates user research including planning the research, developing research tools and conducting the research with other public servants from different service department or just guiding them on how to do it
	Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions in collaboration with other public servants from different service departments
	Facilitator	• Develops their own co-design workshop tool by adapting existing ones in order to fit their purpose • Prepares for a co-design workshop, engages and encourages participants, produces outcomes
	Educator	Develops a design thinking training programme to teach necessary design knowledge and skills for internal employees so that they can apply a design thinking approach to their individual work
Project Manager	Supporter	• Managing small to large-scale innovation projects • Supporting service teams to successfully facilitate the implementation of service ideas

Table 6-6 Role of designers in the embedded-designer model

CBP02 "I would actually say that we are probably, in terms of this type (design intervention model), probably embedded-designer model, but the reason that we may be worried about just saying that we are completely embedded designer, is because we do other work as well. We are essentially part-time embedded designers. […] We are not just specialist designers which you might get from the external people and we play a role of project management as well"

However, even when they are taking on a designer's role, they do not fully work in the way in-house designers generally do. So, their designer position was defined as designer-manager in this study. Under a designer-manager position, they play four distinct roles. As a researcher, they coordinate user research including planning the research, developing research tools and conducting the research with other public servants from different service departments or just guiding them on how to do it. Although they focus more on the overseeing and guiding role, they sometimes participate in the workshops as a co-creator to define problems, identify needs and opportunities, and come up with solutions together with other public servants from different services. A facilitator is one of their main roles as a designer-manager. They develop their own co-design workshop tools by adapting existing ones in order to fit their purpose and they prepare co-design workshops, and engage and encourage

participants to produce outcomes. Another main role as a designer-manager is an educator. They develop a design thinking and service redesign training programme to teach necessary design knowledge and skills to internal employees so that they can apply a design thinking approach to their individual work.

Under a project manager position, they play a supporter's role. They support service teams to manage small to large-scale design and innovation projects. They also help service teams to be able to successfully implement service ideas. As CBP01 and CBP02 stated below, they consider supporting implementation as their important role as an in-house design team.

CBP01 "But we say twenty days initially and that is very much of discovery elements and initial mappings. And after that we will help the implementation phase as long as we need to"

CBP02 " […] we will also do some of the actual implementation work. So, we actually put together say the final forms that get used or rewrite letters. Things like that which maybe are the more nitty-gritty. If you are external agency to come in, they wouldn't necessarily do it"

6.5.2 Role of Public Servants

The position of the rest of the public servants in the council can be defined as 'officer as a design user' and this position can be divided into two types of role – a general user and advocate – depending on their level of interest and actual use of a design approach in reality (see Table 6-7).

Furthermore, this position is often affected by the perception of the leaders of the teams of design approaches and their level of understanding of them because the introduction and actual application of a design approach to develop services need their decisions.

Categories	Specific role	Description
Officer as a design user	General user	Participates in the design thinking training sessions to learn about a design approach and think of the possibility of the application of a design approach into their services
	Advocate	Values the advantages of a design approach and tries to apply a design approach, and promotes its benefits across the council

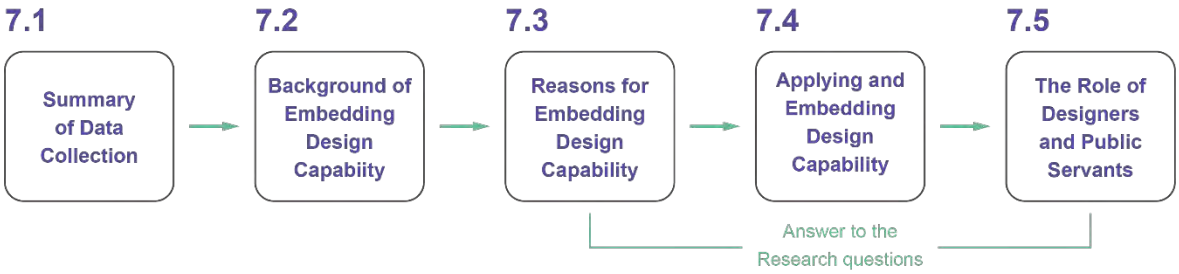
Table 6-7 Role of a public servant in the embedded-designer model

CBP01 "But it can be run by four people to twenty people. It depends on what they are doing. If you get the buy in from the team leader, then it's very smooth process and everyone buys in. But the difficulty quite often is whether a team leader is resistant. And getting them over that is actually probably a lot of the battle"

As a general user of a design approach, public servants voluntarily participate in the design training sessions to learn about a design approach and consider the possible application of it into their services. Some public servants in the position of the 'officers as design users' also play a role of design advocate; they value the advantages of a design approach and thus try to apply a design approach to their work, and promote the benefits of the application of a design approach across the council.

CHAPTER - 7 CASE STUDY OF COUNCIL C: EMBEDDED-DESIGNER MODEL

Introduction



Following the two previous case studies, A and B, this chapter presents a summary of data collection, including the process and the results, of the Council C case study. It also introduces the background to embedding design capability and answers to the research questions in relation to Council C which applied an embedded-designer model.

7.1 Summary of Data Collection Results

Council C was the first case selected for this study. However, no observations were made. A workshop observation was initially agreed by the first interviewee, but it did not happen because he officially took a year off from work. Although the second interviewee also agreed to allow the researcher to come in and observe the co-design workshops during the interview, which was held almost 6 months after the first one, it did not happen for several reasons.

A total of two interviews with both service designers were carried out in their workplaces separated by an interval of six months (see Table 7-1). Because of the relatively fewer opportunities to collect empirical data than in other cases, the analysis of the features of the embedded-designer model in the context of Council C was limited, such as the role of service designers and public servants and feedback from the participants during co-design workshops. Although archival data was a complementary data source, which was shared by interviewees and available on the council's online database, the lack of observational data was not fully filled.

Local Government (Political party)	Design Intervention Model (DIM)	Data Collection Methods			Data Collection Period
		Interviews	Workshop Observations	Workshops Participants' Feedback	
Council C (Labour)	 Embedded-Designer	2 2 designers	-	-	(15/12/2016 ~ 01/06/2017)

Table 7-1 The case study summary of Council C

The two in-house service designers hired by Council C were interviewed (see Table 7-2). However, they said they both did not study service design or any other design disciplines, and did not have work experience as service designers before they joined the team. CCS01 said that she got the service designer position as her work experience in marketing and expertise in customer experience management were recognised by the council. CCS02 learned how to apply a service design approach from a service design training programme before getting the position from Council C.

Name (anonym)	Department or Team	Position (role)	Work experience (years)
CCS01	Service design team, Corporate Development	Service design lead	33
CCS02	Service design team, Corporate Development	Service designer	5

Table 7-2 Council C's interviewee profile

7.2 Background to Embedding Design Capability

Council C is under Labour party control. Their internal documents showed that the Cabinet of Council C consented to a major organisational change programme in October 2013. The programme aimed to redefine the council so that they could continue to meet their residents' needs by achieving a balanced budget, reinforcing local democratic leadership, and establishing a new business model while managing additional budget cuts from central government by 2020. As part of the programme, the establishment of a group was proposed to put the residents at the heart of the process in designing and delivering services. The group was planned to consist of three sub-hubs: a procurement hub supporting procurement and commissioning decisions; a data and information hub providing

intelligence and data that support procurement and commissioning decisions; and a clienting hub supporting client management. In October 2015, after the group was strategically set up, an in-house service design team was established with three service designers and two business analysts (see Table 7-3)

Year	2012 ------ 2015	2016	2017	2018
Changes in DIM				

Table 7-3 Council C's journey towards embedding design capability

Unlike the other two councils (Councils A and B) discussed earlier, Council C had decided to set up their own dedicated service design team by directly recruiting service designers from outside the council. The team aimed to bring together insight, procurement and commissioning expertise and design innovative services to fulfil the residents' needs. The team often led the service redesign process from a portfolio of commissioning projects that aimed to ensure the delivery of high quality and cost-effective services that delivered positive outcomes for the residents as well as the council.

7.3 Reasons for Embedding Design Capability

7.3.1 To Create Ideas to Meet Residents' Needs while Saving Money

As described in an earlier section, the establishment of the in-house service design team was realised under the plan of an organisation-wide change programme agreed in 2013 in order to deal with several issues, such as balancing budgets, managing budget cuts from central government and reinforcing democratic leadership while continuously meeting residents' needs. Providing services that met residents' needs was one of the top priorities of the council and service design was perceived as an approach to create service design ideas based on user needs. Three service designers were initially hired to set up the service design team in Council C, which was mainly for identifying residents' needs and creating ideas based on the result of a deep dive into the situation of residents.

CCS02 "They brought in a service design manager who has experience in this world, and he recruited us as three service designers. Now it was pretty much shaped by his interest in service design particularly in ethnographic research as it's his background"

[…]

> "Service design team would be effectively the engine room of ideas. We'd come and use participatory design techniques to understand people's needs and assets, how they want service to be. We would work internally with current services or commissioned services to understand their situations. We would develop a range of options and ideas around what could be done."

7.3.2 To Support Procurement and Commissioning Decisions

The position of the service design team within the council and their main roles show why the team was set up and why Council C wanted to embed design capability within its organisation.

Council C set up a group which supports procurement and commissioning decisions as part of the council redefining programme to overcome budget cuts from central government. Design was then set up within the commissioning process and the service design team was established in the transformation team.

CCS02 "We were set up design as a team to be within a commissioning process. So, the thinking behind it being there would be some work on insights to understand issues and characters what service is."

Each service designer worked with a project manager from the transformation team from a portfolio assigned to them.

CCS01 "Broadly speaking, we work in three ways. We lead, plan and manage the design process, but it still requires key input and decisions from the people who asked us for help. Moreover, we design together, or we help people to design themselves by providing them with tools and mentoring support to lead, plan and manage the design process. Embedding design thinking in our organisation is at the heart of our mission"

The service design team supported people from the services in different ways. They sometimes led the design project for the services including planning and managing the project by closely collaborating with them, or they were just involved in the develop phase to co-create ideas and design together. Sometimes, they just provided the team with the necessary tools and guidance so that the teams themselves could carry out a service design development process. All this support was to help the service teams and a procurement team for better commissions.

7.4 Applying and Embedding Design Capability

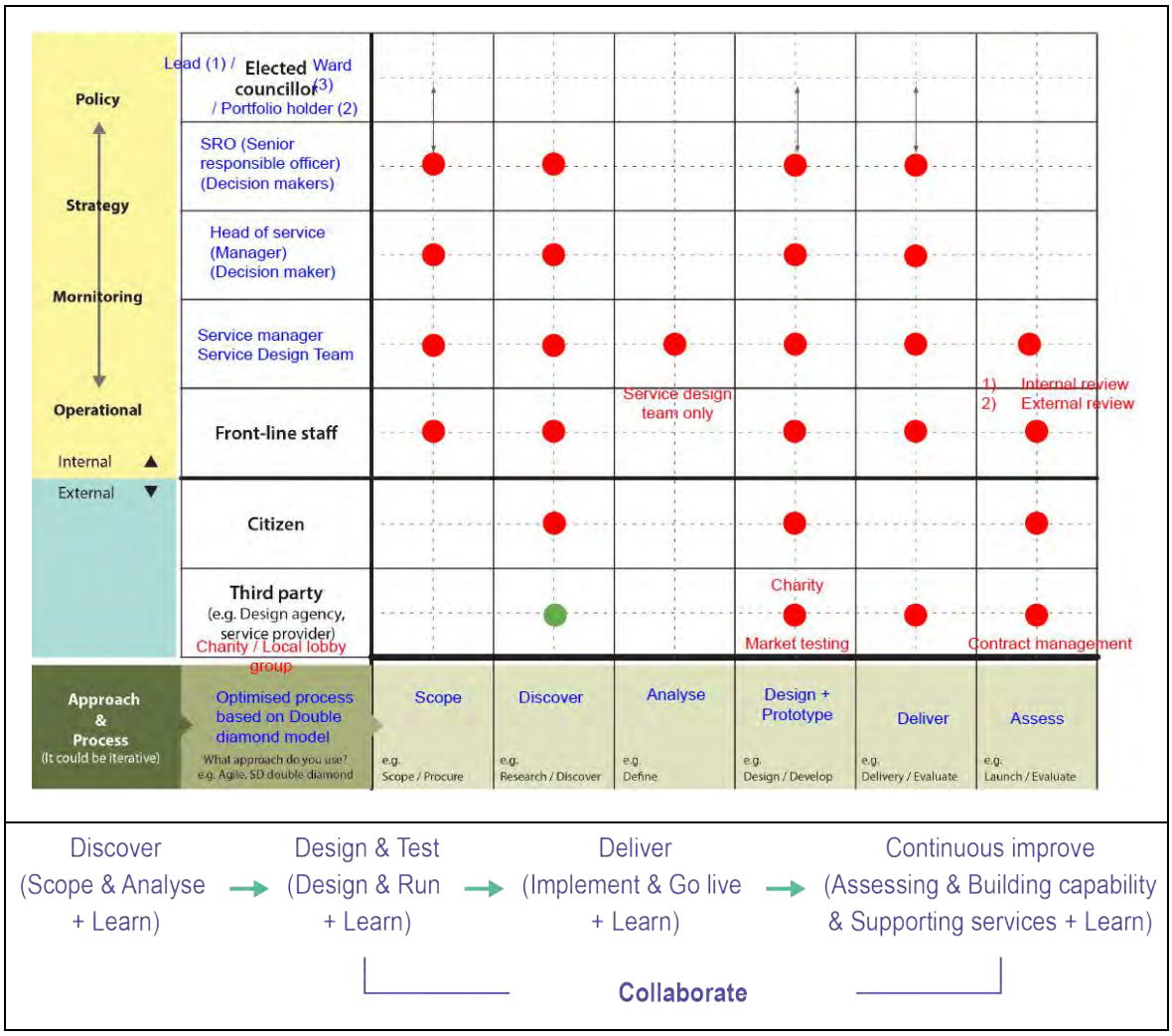


Figure 7-1 The process of a design approach and the range of stakeholder involvement of Council C

Unlike Council A, but similar to Council B, the service design team as an internal agency provided service design-related services to other service teams. They adopted the UK Design Council's DDM and adapted it to devise their own service design model which they called the Transformation Framework, which consisted of 'Discover', 'Design & Test', 'Deliver' and 'Continuously improve' phases. Each phase had three main activities: Scope, Analysis and Learn in the Discover phase; Design, Run and Learn in the Design & Test phase; Implement, Go live and Learn in the Deliver phase; and Assessing and Building capability, Supporting the Service and Learn in the Continuously improve phase (see Figure 7-1).

7.4.1 Trying to Follow User-centred Design Principles and a Process Thoroughly

Council C applied various design methods and tools based on their own transformation framework, building on the service design approach, such as a real-life persona, basic user journey map, empathy map and round table discussion during the co-design workshop. The service design team in Council C seemed to try to follow user-centred design principles thoroughly by actively involving as many citizens and senior managers as possible in the process of service design development from the Discover phase to the Assess phase. However, this adherence to the principles sometimes seemed to affect their workload and cause difficulty for the service design team in managing their time to deal with the large demand for help from services.

> **CCS01** "It is time and budget allocations. People like what we do and how we do. So, there is a lot of demand for working with us, but we have only three people. And these days, I'm working by myself as one out of the three service designers including me left and one took a year of sabbatical leave"

At the time of the second interview with CCS01, there was only one service designer. One of the service designers who was interviewed by the author for this research was on a leave of absence for a year and the other service designer left. This scarcity of designers seemed to put more workload on CCS01.

7.4.2 Individual Battling against Limitations of Resources

In reality, it is hard to get people together in one place and ask them to do what they are unfamiliar with for a minimum of two or a maximum of half of their daily working hours in the local council. Therefore, it was not an easy task for the designers to gather necessary information from stakeholders, even from internal employees, let alone apply a design approach thoroughly, following its original process which includes many activities with different tools and methods. As a result, the service designers in Council C tried to maximise their chances to collect information for better outcomes of discover and develop phases.

> **CCS02** "Again, people have a lot of stuff in their diaries. So, finding a time when you can get four or five people to come together for twenty minutes is quite hard. So different meetings frequently, that's the way. We as a service design team, we are grateful to meet and very informally we sit together and talk about project, but in terms of the meetings with stakeholders are difficult"

The working conditions in Council C, such as large demand for help from the different services, difficulty of gathering necessary people for a co-design workshop aiming to identify problems and needs, and generate ideas, and a lack of service designers, required service designers to work individually not as a team.

7.5 The Role of Designers and Public Servants in Applying and Embedding Design Capability

The case study for Council C that used the embedded-designer model included in-depth interviews with two service designers. Less data were collected compared to the other cases in this study. Any unique roles of the public servants as the main actors in applying and embedding design capability were not able to be directly identified because there was no opportunity to interview them, observe their design practices or receive feedback about their experience of design use. However, what some of the public servants in the council thought about the application of the design approaches was able to be indirectly identified from the results of the interviews with the two service designers.

7.5.1 Role of Designers

According to the interviews with two out of the three service designers in Council C, each service designer worked most of the time as an individual unit, by undertaking and managing separate projects from the 'Discover' phase to the 'Deliver' phase, although sometimes they collaborated to create ideas or run co-design workshops together.

CCS02 "No, we work quite separately. So, each of the three of us service designers has a portfolio of projects which we work on separately. We collaborate but we sort of collaborate to prove ideas things. So, I would see how my colleagues see working on these projects, thinking about this, what do you reckon. So, we usually work as a team on individual projects which is interesting and the transformation team in general is more based around project management. So, the way things are set out is that we often will collaborate with project manager or piece of work. So, one service designer and one project manager do a piece of work. […] So, projects don't usually get addressed by a team. They get addressed by an individual from the team"

Categories (Imaginary Position)	Specific role	Description
Independent design agency on its own + **In-house service designer as an assistant of the service design hub**	Researcher	Plans research, develops research tools, and conducts the research individually or with people from different service departments
	Co-creator	Defines problems, identifies needs and opportunities, and comes up with ideas for solutions to problems in collaboration with service teams
	Facilitator	• Develops their own co-design workshop tools by adapting existing ones in order to fit their purpose • Prepares for a co-design workshop, engages and encourages participants, produces outcomes
	Assistant	• Assists people in the service teams to be able to apply design approach in developing their service on their own, by providing them with necessary tools and guidance for use • Assists a procurement team to commission a service working as a function within the commissioning process

Table 7-4 Role of designers in the embedded-designer model

In doing so, their positions can be clustered as an independent design agency on its own and in-house service designer as an assistant of the service design hub, playing overall four different roles as a service designer: researcher, co-creator, facilitator, assistant (see Table 7-4). As an individual researcher, each service designer plans and conducts research to collect necessary data to define problems and create ideas; as a co-creator with people, the service designer asks them to help in identifying needs and problems and developing ideas to improve services. If the project needed a co-design workshop, they usually take responsibility as a facilitator, which includes designing workshops, preparing workshop materials and analysing the workshop. In this case, they often worked as a team. As an assistant of the service design hub, a service designer normally assists people from the service teams to be able to apply a design approach in developing their service on their own, by providing them with the necessary tools and guidance for the application of a design approach with tools. Additionally, they assist a procurement team to commission a service working as a function within the commissioning process.

CCS01 "We would develop a range of options and ideas around what could be done. In theory we would prototype it at least to a sort of paper-type prototyping level and then we would commission it with procurement team. So, we effectively function within the commissioning process"

The range of work of a service designer in Council C is limited from the Discover to the Develop phases of the DDM. Moreover, the Develop phase is also limited to idea generation in a narrative form, very rarely including minimum viable prototyping.

7.5.2 Role of Public Servants

The role of the public servants in Council C was inferred from the results of the two interviews with service designers, who worked together closely with them to support their use of a design approach, without analysis of empirical data directly collected from the public servants. The analysis of the role of public servants in Council B, which also used an embedded-designer model, was used in order to infer the role of the public servants in Council C (see Table 7-5).

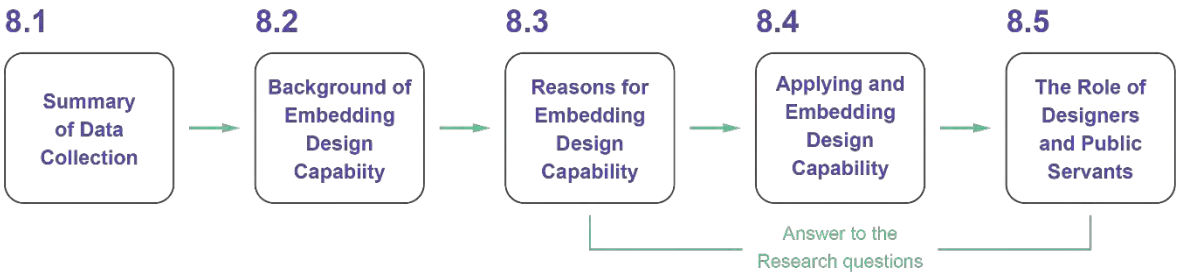
Categories	Specific role	Description
Officer as a design user	General user	Participates in the design thinking training sessions to learn about a design approach and think of the possibility of the application of a design approach to their services
	Advocate	Values the advantages of a design approach and tries to apply a design approach, and promotes its benefits across the council

Table 7-5 Role of a public servant in the embedded-designer model

The position of the public servants might be defined as ‘an officer as a design user’ and their roles can be divided into two types based on their level of interest and advocacy in using a design approach in developing services. As general users, they can try a design approach by participating in a design training workshop in an attempt to understand and learn different tools and methods of a design approach without any certainty of its benefits. There may be some public servants who value the advantages of a design approach based on their previous experience and try to apply a design approach to their work, and share their positive experience with colleagues in the council.

CHAPTER - 8 CASE STUDY OF COUNCIL D: NON-DESIGNER MODEL

Introduction



This chapter presents a summary of data collection, including the process and the results, of the Council D case study including the route to gain permission for a case study from the council. The chapter also shares the background to embedding design capability in Council D which adopted a non-designer model. More importantly, the answers to the research questions about reasons for applying and embedding design capability, the way it was achieved, and the role of designers and public servants are presented.

8.1 Summary of Data Collection Results

Council D was selected as a case after a follow-up interview to the survey for the scoping study with the Head of the Transformation and Change team. She was first contacted through the 'Knowledge Hub' website, and the survey link was sent by email. However, the data gathering from the council began after finishing data collection from the other three councils because of their internal schedule.

A total of three workshop observations and three interviews were conducted (see Table 8-1). These observations and interviews were carried out between August 23 and October 16 in 2017. A total of eight workshop participants responded to the distributed feedback form.

Local Government (Political party)	Design Intervention Model (DIM)	Data Collection Methods			Data Collection Period
		Interviews	Workshop Observations	Workshops Participants' Feedback	
Council D (Conservative)	Non-Designer	3 3 officers	3	8	(23/08/2017 ~ 16/10/2017)

Table 8-1 The case study summary of Council D

After completing a face-to-face in-depth interview with the Head of the Transformation and Change team, the other two face-to-face interviews were carried out thanks to an introduction by the Head in their workplace; one was with a project manager and the other was with a service design and engagement officer in the team (see Table 8-2). The interviews lasted between 65 and 85 minutes, and they were voice recorded with interviewees' consent. The voice records were all transcribed for coding.

Name (anonym)	Department or Team	Position (role)	Work experience (years)
CDP01	Transformation and Change department	Head of the department	22
CDP02	Transformation and Change department	Service Design and Engagement officer	5
CDP03	Transformation and Change department	Project manager	25

Table 8-2 Council D's interviewee profile

Observational data were collected through direct observations from a design thinking training workshop targeting internal employees across the council and from a co-designing workshop to create a new service for children (see Table 8-3). The training workshop lasted 155 minutes and the co-design workshop was held for around 120 minutes. Additionally, the Design and Innovation Board meeting which deals with all issues in relation to innovation and design in the council, for example, decision making on which ideas they would choose to continue to support, was observed in an attempt to secure additional data that could complement other data sources for better data analysis.

No	Collaborating department	Design intervention model	Date (Day)	Time	The number of participants	Aim
1	The members of the Board	Non-designer	27/09/2017 (Wednesday)	14:30 - 16:30	11	Agenda for the Design and Innovation Board meeting - An update on the impact and evaluation of the refreshed council website - Review of challenges and decision making for implementation of Hunch buzz. - Review of the projects that are underway regarding the possibility of further support
2	Multiple	Non-designer	12/10/2017 (Thursday)	14:00 - 16:35	9	This 4th event, a kind of training session, aimed to share the knowledge about design thinking and service design, and to train participants to be able to better understand the new ways of working and how to apply them to participants' day-to-day work
3	Potential internal and external stakeholders	Non-designer	16/10/2017 (Monday)	14:00 - 16:00	5	The purpose of the workshop is to develop three concepts for how Junior Citizen could operate in the future to present back to the Design and Innovation Board

Table 8-3 Council D's workshop observation profile

A total of eight workshop participants responded to the workshop feedback form distributed at the end of the workshop (see Table 8-4).

No	Job Title	Years of work	Answer to the question below or any comments (How might this way of working affect your work?)
1	Level 3 Apprentice	Less than a year	"Perhaps create an opportunity to express an idea to line manager & getting feedback"
2	Project manager at Transformation and Change	28	"- Building networks & connections across different service areas. - Igniting & encouraging ideas – infectious!! - Opportunities for user experience research"
3	Strategy	10	"Loved it!"
4	NMT	2 weeks	"Good thinking time"
5	Read safety team leader	34	"Helped to generate ideas to tackle on the identified issue and has given a start point to take forward."

Table 8-4 Council D's participants' feedback

8.2 Background to Embedding Design Capability

Council D, which is under Conservative party control, faced a big wave of change in the period of austerity. In 2015, the newly joined directors and a Chief Executive of the council tried to change the culture and direction of the organisation towards a more practical and outcomes-based direction (InnovationLab, 2018). At that point, the human-centred design approach started to gain attention from the team in charge of organisational transformation in the council as they found it useful as a new approach which provides a set of practical tools to deal with complex problems (ibid.). They were first exposed to design thinking (the DDM) and the Agile approach through a series of service development projects commissioned to external design agencies, recently to Agency R. They then realised the need for building their own design approach and embedding it into their existing approach after experiencing the failure of the implementation of the interventions proposed by the design agencies (see Table 8-5).

Year	2012 ------ 2015	2016	2017	2018
Changes in DIM	Agency F		Agency R	

Table 8-5 Council D's journey towards embedding design capability

The Transformation and Change team was established to pursue organisational transformation. The members of the Transformation and Change team are design-led innovation champions. Unpublished internal documents shared by CDP02 and interviews revealed that Council D decided to set up a board, named 'Design and Innovation Board', to deal with tasks in relation to design and innovation issues as part of the new governance arrangements to enable the organisation to manage financial challenges and prepare for the future. A team that was interdisciplinary was deliberately selected; it consisted of various people from different departments as of December 2016. The goal of the board was to support innovative thinking and help employees to be able to develop their entrepreneurial and explorative ideas that may enable the council to develop into a self-sufficient organisation. A cross-organisational team, called Transformation and Change team, was additionally established in January 2017 to initially undertake two individual projects redesigning services which aimed to provide financially sustainable and user-friendly services with an external design agency. They set up an offline Innovation Lab in a dedicated space and established an online space to archive, share and promote their works with the help of external design experts, Agency R. They had kept applying and promoting a design approach since the contract with Agency R was completed for the project, which aimed to build design capacity within the organisation in order to develop their design

capability by themselves towards embedding design capability as part of the organisation's capabilities.

8.3 Reasons for Embedding Design Capability

The CEO of Council D advocated the use of a design approach as a new way to bring innovation into local government services and deal with organisational change. The involvement and support from a very high level of the management played an important role in the process of applying and embedding design capability in Council D. Interviews with the head of the Transformation and Change team, which is in charge of the distribution of a design mindset and design approach across the council, and its members revealed what Council D ultimately wants to accomplish from design capability embeddedness.

8.3.1 To Encourage all Levels of Employees to be More Engaged with Council Innovation

Like other local governments in the UK, modernising existing services through digitisation and preparing for a reduction in council revenue due to budget cuts from central government are urgent problems confronting Council D, which inevitably require organisational innovation and transformation. Design thinking was adopted as an approach to address these emerging problems because the people in the council who were in charge of transformation thought design thinking has a structure to follow to be able to identify and clarify problems under uncertain conditions so that the council could act to innovate its organisation.

> **CDP01** "I think it gives us a different conversation to have about what we're trying to achieve, but within a structure that gives us some... you know, in the state of uncertainty, I think, the double diamond kind of just gives you some sense of structure. And clarifying what problem you're trying to solve. You know, what is the purpose? For me, in the midst of all the uncertainty and ambiguity, it also gives me something to say. Okay, we'll let you know if we hold, If we can hold a bit to this process, or arrangement of way of thinking, then we might throw up some alternatives or some difference."

The senior management in Council D found a design approach useful as an approach to drive innovation and understood the importance of engaging more people in the council in the innovation process as innovation inevitably require changes and changes need the active participation of employees.

CDP03 "It helps to normalise change. So, 24 years ago, if you mentioned the word, change programme, people would say "it's gonna be so much. I can't do it. Change is so hard". This's actually making change part of our daily lives. […] So, the whole approach around the design and innovation, certainly here, actually helps, everybody can have an idea and no idea is a bad idea. And with the Design and Innovation Board, all ideas are listened to. So, it's been an initial gathering of ideas and encouraging people to think of new ideas"

Setting up the Design and Innovation Board and holding regular meetings show that the council counts on innovative ideas from all employees as they are considered experts in their own service areas.

8.3.2 To Integrate Design Thinking into Council's Commissioning Cycle

Council D also tried to set up design thinking within their commissioning cycle before the procurement phase as an approach to identify and clarify residents' needs and co-design better ideas to solve problems.

CDP01 "These are non-designers and then we've probably got some emerging activities in our commissioning functions where they're applying design thinking as they look at re-commissioning. So, they are kind of absorbing design thinking into those professional activities. So, this, I guess, is like, are you truly a designer, or are you somebody who manages a service, who is also thinking about the future of your service with a design lens, or are you a commissioner who is also part of the commissioning process thinking about design. So, our commissioning cycle looks something like this. You've got analysis of need, and then you've got a co-design space of the solution, then a kind of procurement, spec, and performance management of the contract. So, this is where we are kind of trying to build our capacity here. We focus more on ourselves developing that capacity. But, also developing a toolkit for commissioners and managers"

By officially putting the design process within the professional commissioning process, Council D is trying to embed design capability so that more people in the council take a design lens to their own service innovation process and build a design culture in the council.

8.4 Applying and Embedding Design Capability

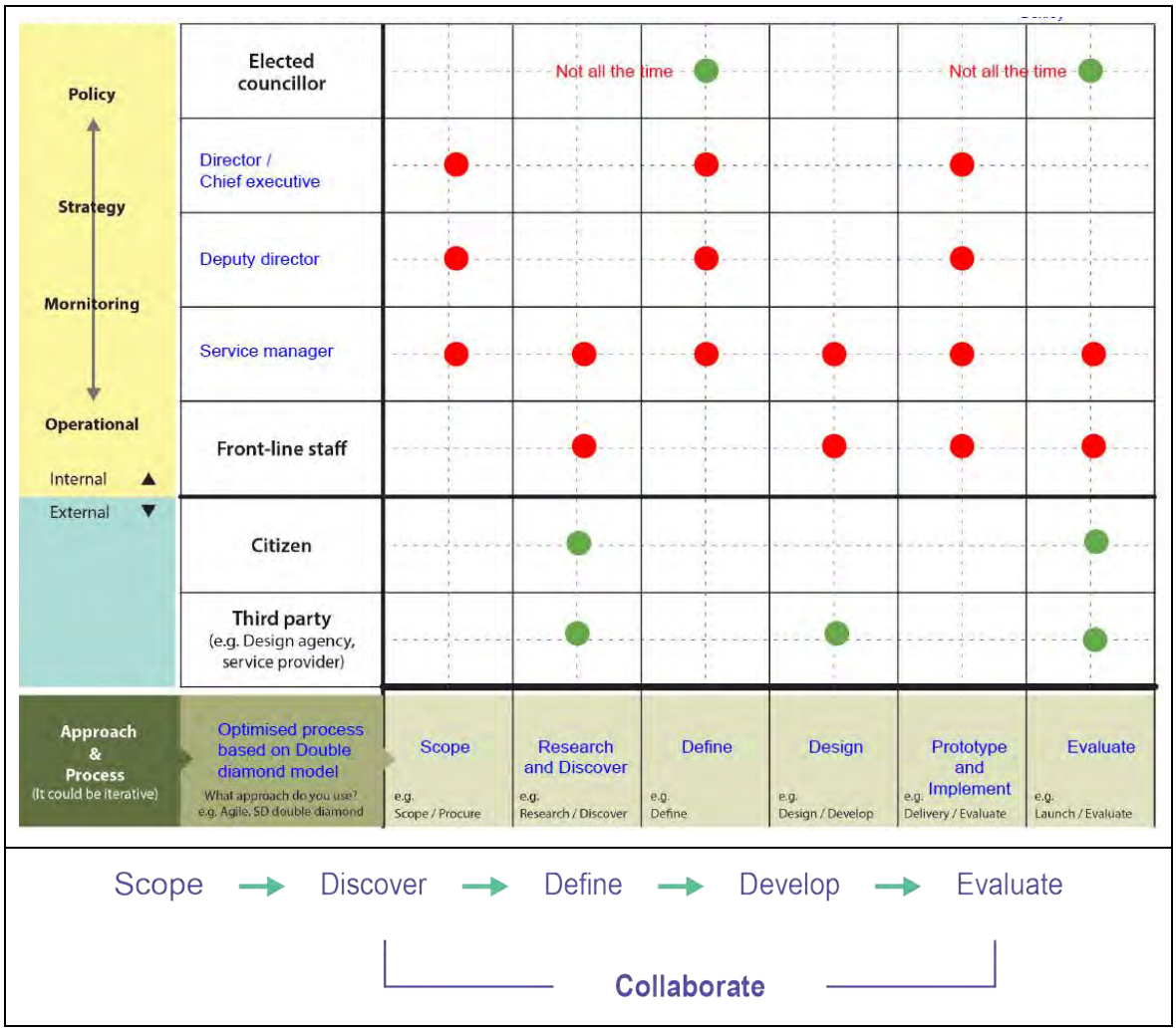


Figure 8-1 The process of a design approach and the range of stakeholder involvement of council D

Council D had been actively trying to distribute a design approach and establish a human-centred design mindset and design capability across the council with strong support from a Chief Executive Officer (CEO). They set up a dedicated team to promote a design mindset and approach. They also newly established a board meeting which includes all levels of workers in the council from the front-line staff to CEO in order to discuss only innovation and design-related issues. They operated training programmes on a regular basis and occasional events to accelerate the distribution of the design mindset and approach.

8.4.1 Setting up a Dedicated Team Made up of Design Champions

The Transformation and Change team at Council D played a pivotal role in promoting a user-centred design mindset and applied a design approach, which consisted of five phases (Scope, Discover, Define, Develop and Evaluate), to internal projects and embedding design capability within the

organisation (see Figure 8-1). Although the team itself was very small, it consisted of only three people, all of them became advocates of a designerly way of working, as an alternative to the traditional way of developing services for their council and residents, as a positive result of the lived experience of applying a design approach to several projects.

CDP01 "So now we have got people, I would like to say they are embedded designers, but they aren't trained specifically but they got real appetites and real ability in that area. So, they developed appetite and ability, and now they're moving into that space (non-designer). That is kind of like our evolution. But we are a small team. So, we still rely on some of that (external-designer model), some of that (internal/external designer model), and some of that (non-designer model). So, that is kind of like almost where we're reflecting our approach"

CDP02 "I 'discovered' design a few years ago, before it was really a thing that we were doing at Council D, and I would say that CDP01 and I were big drivers of it being a part of how we wanted to work and then because senior managers were supportive of that, it's been something the organisation is starting to adopt. I am attracted to design and would like to be a designer because the principles of the way of working really appeal to me. The approach feels different to the more traditional ways we used to approach change and I find it much more appealing and enjoyable as a way to work"

The team developed their own toolkit that was easier to use and thus was more attractive to people in the council. The team kept developing their knowledge and skills, which were previously developed through service design projects in collaboration with an external design agency, and consolidating their own design approach through applying it to various internal projects and running design training programmes.

8.4.2 Providing Multiple Ways of Experiencing a Design Approach

The Transformation and Change team promoted a design mindset and approach through three main activities. First, the team tried to introduce and promote a human-centred design mindset and a design approach to other colleagues across the organisation; they did this by conducting user research together or supporting co-designing activities so that people in the council could see the benefits of a design approach as a new approach. In general, a person or a team responsible for the development of a service organised a meeting involving necessary stakeholders and asked the Transformation and Change team to join and facilitate a co-designing session to develop ideas. Figure 8-2 shows what a general co-designing activity looks like.

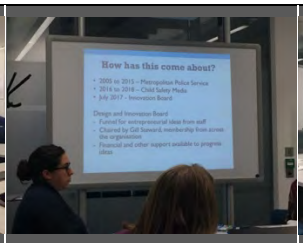
			
Space layout	Information shared	Collaborative activities	Collaboration outcomes
• A cabinet style table layout in a meeting room	• The project progress • Collected data and necessary information • Issues and agendas	• Creating a user persona • Creating a user journey map • Identifying obstacles • Developing ideas	• User persona • User journey map • Problems and needs identification • Service improvement ideas development

Figure 8-2 Typical scenes of a participatory co-design workshop

Second, they sometimes organised and held organisation-wide training and co-designing workshops under the name of 'Council D's D School' named after Stanford University's D-school. They ran monthly lunchtime learning sessions for those to whom design thinking and human-centred design are new (see Figure 8-3).




Figure 8-3 Monthly lunchtime design thinking training programme

Additionally, they occasionally held and facilitated a local community-wide event, called 'Innovation Event', as an attempt not only to distribute a design approach to employees and local residents, but also to better understand users in order to inform a corporate plan. They used the event to train people at all levels across the organisation in the use of a design approach in order to convince them of the need for innovative approaches and to build a culture of design. Moreover, the event was also used as a channel to their residents to promote how they work to improve public services. Last, they actively posted and shared their experience of the journey towards applying a design approach and

integrating design capability into their organisational capability through online media, such as a blog and Twitter.

8.4.3 Engaging and Empowering all Levels of Employees to Foster Involvement in Council Innovation

Council D tried to engage and empower their employees, from front-line staff to senior management, to become involved in the council's transformation journey to deal with financial challenges and prepare for the future by encouraging and supporting the innovative thinking of all levels of employees, and by fostering an innovative and supportive environment. The Design and Innovation Board, as an interdisciplinary meeting including the CEO of the council, plays a role in this. The Board's meetings are held on a regular basis and provide a chance for employees to present their entrepreneurial and explorative ideas; this helps the Board to be able to develop selected ideas that may enable the council to develop into a self-sufficient organisation (see Figure 8-4).

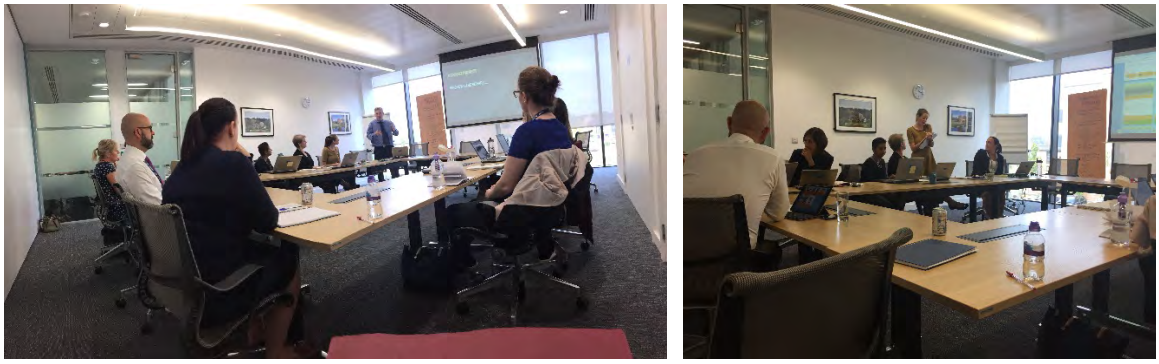


Figure 8-4 Typical scenes of a Design and Innovation Board meeting

Moreover, the meeting also offers financial and human resource support for the development of the ideas selected through presentations, and enables members and participants to keep track of new and ongoing innovation and design projects through regular meetings.

8.5 The Role of Designers and Public Servants in Applying and Embedding Design Capability

Council D promoted the benefits of applying a design approach in developing services for residents and bringing innovation into the organisation. Therefore, they tried to distribute a design mindset and design approach across the organisation through various activities by setting up a dedicated team and holding regular board meetings.

Interviews with people from the Transformation and Change team and observations of a Design and Innovation board meeting and a design thinking learning session and supporting co-design workshop revealed different roles of designers and public servants under the non-designer model, especially in Council D context.

8.5.1 Role of Designers

In the non-designer model, public servants themselves usually take on a designer's role although they have a different level of knowledge and skills. Although Council D had already gone through another DIM using the external-designer model through to internal/external designer model to the non-designer model aiming, ultimately, to use an embedded-designer model, their roles as designers were generally limited within the first diamond (Discover and Define) phase of the DDM (see Chapter 2, Table 2-10) as they still needed help from the professional designers to design and develop final outcomes for implementation. In order to fill the gap, Council D still worked with external design agencies under a different mode of DIM depending on the type of project. The role of designers, therefore, varied in Council D depending on the project. However, most of the time they worked as external design experts in the current non-designer model context as the council wanted to manage the project and had budget limitations to be able to commission the whole development process.

Categories (Imaginary Position)	Specific role	Description
External design expert	Researcher	Undertakes user research for or with public servants in Council D.
	Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions for the council or with the council
	Facilitator	Prepares for a co-design workshop, engages and encourages participants, visualises the outcomes and progress while facilitating the workshop, and produces insights
	Developer	Creates design ideas and develops ideas to solve problems in an agreed way (e.g., leaflet, website and mobile application)
	Mentor	Gives tips about specific issues related to the application of design approach on an on-demand basis

Table 8-6 Role of a designer as a design champion in the non-designer model

Designers as external design experts played five different roles: researcher; co-creator, facilitator, developer and mentor (see Table 8-6). As researcher, they undertook user research during the Discover phase for or with public servants in Council D. As co-creators, they defined problems, identified needs and opportunities, and came up with ideas for solutions for or with service teams. During a co-design workshop as part of the service development process, they took on facilitators' role. They prepared a co-design workshop, engaged and encouraged participants, visualised the outcomes and progress, while facilitating the workshop, and produced insights. Moreover, they created design ideas and developed ideas in agreed ways, such as leaflet, website or mobile application, to solve problems as developers. Additionally, they provided tips about specific issues related to the application of a design approach by public servants from the service teams or the Transformation and Change team on an on-demand basis while conducting other projects commissioned by one of the service teams in Council D.

8.5.2 Role of Public Servants

The role of public servants in Council D under the non-designer model can be divided into two parts. One part is a group of people from the Transformation and Change team who are in the position of 'Designer-officer as a design champion' in a transformation team. The other part is the rest of the public servants in Council D who are learning and trying to apply a design approach to their day-to-day work (see Table 8-7).

In the position of 'Designer-officer as a design champion', they carry out five different roles: coordinator, researcher, co-creator, facilitator, knowledge transferor. As a coordinator, the designer-officer coordinates and organises user research and various events, such as training workshops, Design and Innovation Board meetings, and innovation events. As a researcher, they undertake user research including planning and conducting the research as well as developing research tools with public servants. During the co-design workshops, they take on the role of co-creator and facilitator. They prepare a co-design workshop, engage and encourage participants to identify problems and needs, and create ideas for solutions with other public servants in the service teams, and document the outcomes and progress in a narrative form while facilitating the workshop. In one of the important roles as a member of a transformation team, they, as knowledge transferors, not only help colleagues (public servants) to learn necessary design knowledge and skills including their own customised co-design tools, but also transfer their knowledge and lived experience in relation to their work in the council to designers.

The rest of the public servants in the position of 'Officer as a design trainee' play two different roles: learner and booster. The main role of the rest of the public servants in the council is to actively

participate in the design learning journey to develop their own individual design competence and try to apply the design approach to their everyday work as learners.

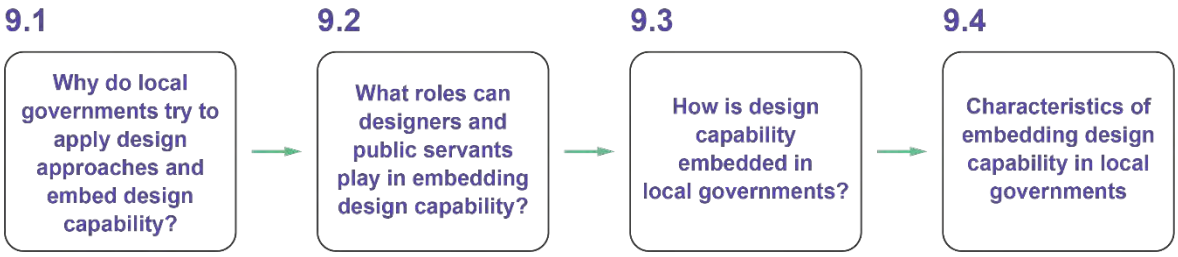
Categories	Specific role	Description
Designer-officer as a design champion	Coordinator	Coordinates and organises user research, workshops, board meetings and innovation events
	Researcher	Undertakes user research including planning the research, developing research tools and conducting the research with public servants
	Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions in collaboration with public servants in the team
	Facilitator	Prepares for a co-design workshop, engages and encourages participants, documents the outcomes and progress in a narrative form while facilitating the workshop
	Knowledge transferor	• Transfers absorbed and practised design knowledge and skills to other colleagues (public servants) • Transfers knowledge and lived experience in relation to their work in the council to designers
Officer as a design trainee	Learner	Participates in the design learning journey to develop their individual design competence to apply a design approach to develop their services
	Booster	Actively applies a design approach, shares the progress and experience to promote the design approach

Table 8-7 Role of a public servant in the non-designer model

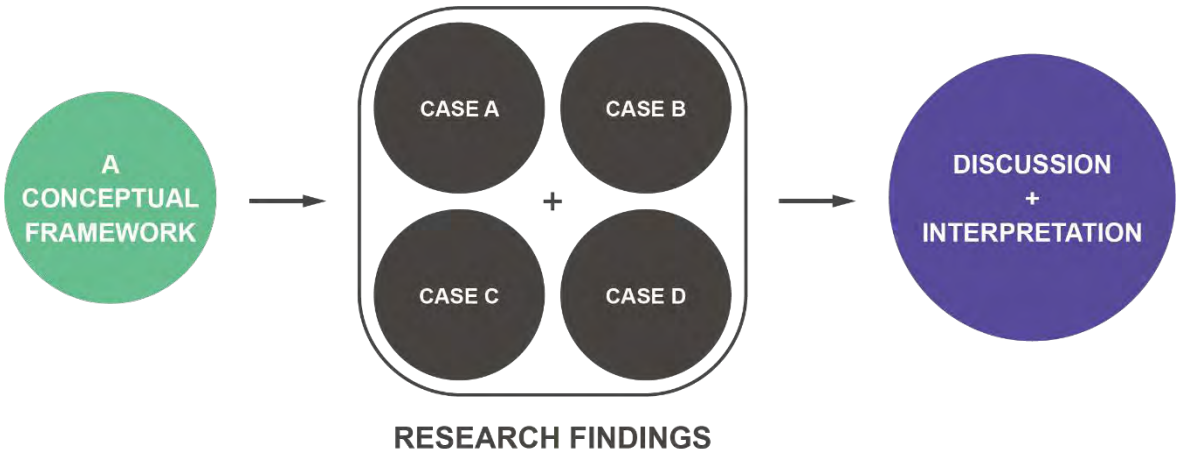
Additionally, they, as boosters, share their experience and outcomes of the application of the design approach to promote a design mindset and approach. In embedding design capability, it is important for the council to find and involve design champions who advocate the value of a design approach and proactively promote it as well as the active participation of the rest of the employees.

CHAPTER - 9 DISCUSSION AND INTERPRETATION

Introduction



This chapter synthesises and discusses the findings of the four case studies in light of the research questions and the conceptual framework, based on the literature, in order to discuss and interpret the research findings with regard to embedding design capability in local governments.



- **Key research question:**

  How is design capability embedded in local governments as part of organisational capabilities?

- **Research sub-questions:**

  1) Why do local governments try to apply design approaches and embed design capability?

  2) What roles can designers and public servants play in embedding design capability?

9.1 Why do Local Governments Try to Apply Design Approaches and Embed Design Capability?

In the previous chapters, the case study results show various reasons for applying and embedding design capability in the four local councils in England respectively, with their different modes of the DIM.

Collectively, there are three different but interconnected motivations for embedding design capability and four shared values of the design approaches, which have led local governments in England to embed design capability as part of their organisational capabilities.

9.1.1 The Motivation to Embed Design Capability in Local Governments

The design approach has been considered a problem-solving process based on a user-centred design principle. The role of design range and its area of practice have been expanded from the traditional work for visual and tangible objects, called the first order, through to the more strategic role of developing ideas, values and culture of an organisation, called fourth-order design (Buchanan, 1998, 2001). The recent use of design approaches in public sector organisation is all about service reform, organisational change or transformation, which require the application to work within the fourth-order design.

In the UK, the introduction of design approaches to public service innovation and the adoption of them in local governments is not new. However, there are different backgrounds and intentions due to political and economic conditions. As mentioned in Chapter 1 of this thesis, the design-led user-centred public service reform was carried out under the experimental project, Design of The Time (DOTT). This was part of the government's long-term programme of renewal and reform, called 'Modernising Government' during the Labour government between 1999 and 2010 (Cook, 2011; Tan, 2012). The programme was established to promote social sustainability and achieve a democratic innovation through public participation (Treasury by Command of Her Majesty, 2002). Therefore, the co-design approach was valued in public service reform during the project because its user-centredness and collaborative process supported the identification of user needs and value co-creation with various stakeholders, particularly users (Kimbell, 2011; Meroni & Sangiorgi, 2011; Thackara, 2007).

However, the political and economic environment has changed. Whichever party was elected in the General election of 2010, it was going to have to deal with the government budget deficit caused by the global financial crisis of 2007–2008 which would inevitably cause a huge reduction in public funding (Lowndes & Pratchett, 2012).

The integration and discussion of the results of the case studies show the changed aspects that motivate the application of design approaches and identifies specific contextual factors that determined the decision of local governments to adopt design approaches since 2010. Unlike the case of developing services through design approaches when the Labour party was in office, the background of the re-rise of design application in the development of local governments' services is closely linked to the government strategy of digital transformation and economic reform which was formed and carried out by the Coalition government between 2010 and 2015 and more recently by the Conservative party in time of financial crisis. However, all cases considered the user-centred design principle as a core rationale for the choice of the design approach.

9.1.1.1 To digitise services under the Government digital strategy

The first introduction of the design approaches and their level of application varies between and within local governments, in terms of the time, routes, and reasons. However, the current use of design approaches as an organisation-wide strategic approach was triggered by the successful implementation and active promotion of the Government digital strategy, 'Digital by Default' carried out by the Government Digital Service (GDS). Although it is a responsibility of local governments, which have their own governance, to shape approaches to digital transformation and action plans (Cabinet Office, 2017), GDS has encouraged local governments to take part in service digitisation along with the development of a single integrative digital service platform for the central government, GOV.UK. Their activities included providing the end-to-end support from sharing platforms to offer design sources; data and a blended and agile process of service design. Its guidance, service design standards and training programmes for local governments have led to the participation of a growing number of local councils in digital transformation to ensure seamless service for their citizens.

Therefore, it can be considered that the increased adoption of design approaches as an organisation-wide strategy by local councils, in the most cases since 2010, is a by-product of an attempt to participate in digital transformation based on the GDS approach rather than a deliberate intention to adopt design approaches by councils.

CAP03 "It was more about [...] it's just getting things online. It's a channel shifting. So, instead of people coming face-to-face or calling them, we just wanted things to go online. So, we used teams, internal teams, to do design like a current website, CRM"

CBP01 "When I started, it was very much as a digital-only role and Government Digital Service (GDS) in central government is heavily influenced by Design thinking. And their structure for the development services is based around Design thinking and Alpha and Beta and the other work. As a result, that seemed like the best model to follow. And when the role got expanded to include the non-digital side of innovation as well, it made

even more sense to kind of fill those elements in and use that as a structure because it's something that we both understand. It's easy to explain to people because it makes sense."

9.1.1.2 To save money and increase revenue

Since the huge reduction in public expenditure under the austerity program set up in 2010 by the Conservative and Liberal Democrat coalition government, reducing cost and increasing efficiency in the delivery of public services have been main goals of local governments in the UK.

One of the main reasons for the digitisation of services based on the GDS approach for local councils was to save money, not only by helping to improve the quality of services, but also modernising existing services and thus reducing the cost of operating different channels (Local Government Association, 2014).

All four of the case study councils in this research have tried to devise and develop their own service design process based on their working environment not only to increase the efficiency of designing services but also to reduce consultation costs.

Generating a new business model requires various expertise and resources. Therefore, it is very hard to design a business model which is technologically feasible and economically viable by a design approach alone. Nonetheless, the successful application of the design approaches, such as design thinking, service design and the GDS approach, and accumulated experience encouraged some local councils to expand their use of design approaches in developing new business models. This went beyond service digitisation and efficiency improvement in an attempt to secure a new revenue stream and become a self-help organisation in the face of budget cuts from the Central government by 2020. They found the design approach very useful when developing new business models because of its structured, systematic and collaborative ways of understanding users' needs and identifying opportunities to solve them.

CAS02 "I guess one of our bigger roles, what we are doing here is to achieve certain savings like in terms of improving the processes, optimising the way people work, by putting and making things digital instead of having a paper-based process."

CAP03 "So, basically, the big story, the bigger picture is like the council doesn't have the money to carry on hiring someone like agency U. So, if we think they have the skills that we need, we need external partners, but that cost a lot of money. So whole plan is to do knowledge transfer. So, one day we can just do ourselves."

CDP02 "… where we had external people around that we've been working with. We have always approached them and asked them about different things. I think sometimes with these kinds of projects because we're not working directly with an external agency. And

sometimes it's sort of like if I ask you this question, you're gonna be asking me, can we come in and you pay 500 pounds a day. So sometimes that's a bit of a barrier there."

9.1.1.3 To develop a commissioning process

Experience and accumulated evidence of successful adoption of design approaches have made people in local councils value the process of design approaches as a way to develop a commissioning plan. They found the design approach helpful in understanding problems and identifying citizens' needs, co-creating ideas and testing the ideas by prototyping them quickly. Moreover, they point out the benefits of the visible process and outcomes that enable various stakeholders to see the progress and thus build a common ground for better decision making. Therefore, some local councils have tried to integrate a design process into their commissioning cycle as part of an organisational transformation and service innovation strategy. This will help identify various issues that might affect procurement proposals in the analysis phase of the commissioning process and come up with better ideas in the plan phase.

CCS02 "We were set up design as a team to be within a commissioning process. So, the thinking behind it being there would be some work on insights to understand issues and characters what service is. Service design team would be effectively the engine room of ideas. We'd come and use participatory design techniques to understand people's needs and assets, how they want service to be. We would work internally with current services or commissioned services to understand their situations. We would develop a range of options and ideas around what could be done. In theory we would prototype it at least sort of paper type prototyping level and then we would commission it with procurement team…So, we effectively function within the commissioning process."

CDP01 "I guess, is like, are you truly a designer, or are you somebody who manages a service, who is also thinking about the future of your service with design lens, or are you a commissioner who is also as part of the commissioning process thinking about design. So, our commissioning cycle looks something like this. You've got analysis of need, and then you've got a co-design space of the solution, then a kind of procurement, spec, and performance management of the contract."

9.1.2 The Shared Values of Design Approaches for Local Governments

The successful adoption and application of design approaches have enabled local councils to recognise the values of design approaches in dealing with the various challenges they face during the process of organisational changes as well as service innovations. The synthesis and analysis of case study results identify the shared values of design approaches for local governments which have encouraged the adoption of design approaches and the expansion of the range of design uses in local

governments in general (see Appendix Q). Although they require the proven value of design approaches to be broadly applied to other situations, there are also context-specific values that local governments need to be aware of and actively utilise in order to develop their services and manage change. The case study analysis identifies four main values of design approaches within the local government context in the time of uncertainty.

9.1.2.1 A holistic and user-centred way of building a common ground

The fundamental principle of design approaches involves the users' perspectives in all steps of the problem-solving process. These generally go through a couple of divergent and convergent stages during the iterative process of discovering, defining, developing and testing phases and even after the outcomes have been launched, in order to keep developing products or services. In doing so, each phase requires gathering the proper amount of information such as the lived experience of users and front-line staff as evidence for making better decisions. Therefore, the process of the design approach allows change or service development agents to have a more holistic view and a user-centred perspective on the issues.

CAP01 "And this is very much back turning them around and saying this is kind of coming from customer perspective we need to build something that is fit for purpose and not just easy for us to use we think that's what people want. And I think if the services were involved in the way we did involve them, we wouldn't get information, we wouldn't get the kind of people thinking about difficulties for people, or we wouldn't get the ideas."

CAP02 "For me is being put the user first. That is something that is never happened for the council. It's always by the big systems. So, for me is actually starting in a right place. User-centred design is key and iteration as well."

CCS02 "The strength is, in my opinion, it does take a more holistic look, I think. And at least more measured decisions, measured ways of approaching, re-design, re-development, potentially reduction in service. That is the reality of it. It gives you the opportunity to strategically re-engineer something as a whole rather than just cutting a bit of it which has worked up until now, I think in local government because there has been enough, but you can cut off the piece of work still function. We're getting to a point now that so much has been sliced off. That slicing more off means it's unviable. That actually have to re-work the whole thing, re-work how it functions. That's to me is where the strength of Service design comes in to get that whole system look at things and to get that broad view of all the different factors come into it and people who're evolved it.

CDP03 "We looked at user experience. We went out, we did one to one with parents and young people to find out what life was like for them what their anxieties were. So, we could break down some assumptions and some of the assumptions were that the people don't

want to do stuff in the community. They want to go to day centre. They want to go to residential school whereas what we found is actually they don't want to do that. They want to stay close to mum and dad. They want to keep going to church or they want to keep doing the local football club and keep the connections that they've made."

9.1.2.2 A systematic way of approaching problems and solutions

As described in Chapter 2, different design approaches have their own structured processes which have been refined and developed continuously in order to approach problems systematically and come up with possible solutions effectively. Moreover, each step of the process has required activities, including methods and tools geared to specific objectives to gather evidence for better decision making with the various participants and move to the next step in an analytical and measured manner. The visible outcomes created as a result of the structured and systematic process of the different activities, using various methods and tools, allowed people in local governments to appreciate what the design approaches are. They thus found them acceptable and usable as approaches in understanding problems, identifying needs and opportunities, imagining future scenarios to develop possible solutions and making better decisions under uncertainty.

CBP01 "Double diamond and it makes sense. It really makes sense and a lot of problems I've come across where people are trying to change things without doing an exploration of what is actually the problem rather than what we think is a problem. They generally do end up, not necessarily in failure, but not as successful."

CDP01 "… in the state of uncertainty, I think, the double diamond kind of just gives us some sense of structure. … what is the purpose? For me, in the midst of all the uncertainty and ambiguity, it also gives me something to say. Okay, we'll let you know if we hold, if we can hold a bit to this process, or arrangement of way of thinking, then we might throw up some alternatives or some difference. Or we might just say, actually, we can get more from the money that we're investing. And if we get more from the money we're investing, that's gotta be good thing…what's done for us, I think, is given us a route to see the impact of austerity as something where there might be possible alternatives rather than just being alone…"

CDP02 "We do series of different kind of deep dive projects that pulled each year in different areas. We particularly chose design thinking to kind of shape that partly because the nature of the project. […] I think lots of people actually being allowed to step back and explore the thing first is really valuable. And I think for people who have been out and spoken to users and haven't done that at all before, or have done that for a very long time, that's really, really valuable for people, partly just because it reinvigorates people and people really enjoy the experience of it, but also because they get new intelligence, and it reminds them what their service is for in the first place."

9.1.2.3 An agile way of making things visible and tangible

Each phase of the structured design approaches process engages various stakeholders in different activities which require them to produce several visible and tangible outcomes in an agile way. Public servants and designers in the case studies found these visual and tangible outcomes very useful in discussing issues because they function as a visual language that participants from different backgrounds can understand. Moreover, they acknowledge that the tangible prototypes, generated for tests, allow stakeholders and senior managers to make better decisions about the potential solutions.

CAS01 "I think generally people within the council are quite used to the fact that in order to produce anything tangible, it takes really really long time to get there. We're here within the month and we had some interesting things to show that people can click on. So, I think that's what really, they find quite useful and interesting. Especially, because they thought it is based on, what we talked about, users"

CAS02 "They (front-line staff) know those things intuitively because of their experience. But they've never gone through the process of visualising it of putting it down the paper of making some kind of sketching out of that. Making an actual prototype that they've never gone through. That's they found it interesting. What interesting for them is turning those insights into something more even very quick time."

CCS02 "Service design team would be effectively the engine room of ideas. We'd come and use participatory design techniques to understand people's needs and assets, how they want service to be. We would work internally with current services or commissioned services to understand their situations. We would develop a range of options and ideas around what could be done. In theory, we would prototype it at least sort of paper type prototyping level…"

9.1.2.4 A collaborative way of removing duplications and creating value

One of the fundamental principles of the design approach, to get the most of its benefits, is the participation of people who are concerned with the products or services, for example, managers from different levels who can affect decision-making with regards to designing and delivering services, front-line staff and service users. People in local governments who have experience of participation in co-design workshops, either as facilitators or participants, acknowledge the benefits of the engagement of various levels of stakeholders in the process because they found it helpful to break down barriers between departments. The activities in the co-design workshops use diverse methods and tools to motivate active discussions between various levels of participants who have different experience and expertise. The participants produce visible and tangible outcomes, such as user journey maps, personas and future scenarios from each collaborative activity. The outcomes enable

participants not only to understand what the main problem is but also to identify the duplications of effort when designing and delivering the services. This helps them find a common ground regarding the main problems they face and what must be done to deal with the main problems. Moreover, the successful co-creation activities in the well-prepared and facilitated co-design workshops often make the participants feel ownership about the outcomes and thus changes are more acceptable to them.

CAS01 "That something that I would say I really appreciate that skill (visualisation). They are able to somehow synthesise what's going on and present back in such a way that people feel ownership of it. But it also helps them get to the next place."

CAP02 "It is a more collaborative approach clearly because you've got this aim and you need a lot of people involved to make it possible. It helps to break down silos. When you're working with services who'd like to work in their own areas. Service design approach can help to say, okay this is actually the vision, and this is what we've worked towards."

CCS02 "…the biggest issue that we faced in that project is that people simply did not know what others are doing. Now they do the opportunity for creating ideas and understanding where things are overlap and where things are duplicate. It always solves itself. So, in practical term, simply by putting on kind of design workshop can say what is a current situation, what do you want to achieve, and give a very early idea on how we might want to go about it for our priorities. Simply by doing that putting people from different departments in the same room, they said oh we do have? Oh, we do this way? Simply put people in the same room and let them talk to each other. See how happens. That leads to paradise."

CDP03 "… the project was quite wide, so it was bringing schools together with children social care, adult social care, help the community and how do we respond to the need enabling young people to stay at home. Keep their network, their contacts that care had all this time. How do we do that? So, you had children social care with all their priorities, their budget, adult social care their priorities their budgets, school etc. And there was a lot of tension where people were understandably worried about who can pay. But at the end of the day, it doesn't matter who's gonna the pay. Let's get the right thing for this young person."

9.2 What Role Can Designers and Public Servants Play in Embedding Design Capability?

As discussed earlier in Chapters 1 and 2, there are several research studies which present the role of designers and the role of design in different contexts. Tan (2012) identified seven dominant roles of the designers in design for social good: Co-creator; Researcher; Facilitator; Capability Builder;

Social Entrepreneur; Provocateur; Strategist. Yee et al. (2017) also introduced seven roles that a design approach can play in driving organisational transformation: Cultural Catalyst; Framework Maker; Humaniser; Power Broker; Friendly Challenger; Technology Enabler; Community Builder. What public managers can do through a design approach to transform public governance within a public sector organisation was also identified by Bason (2017): questioning assumptions; leveraging empathy; stewarding divergence; navigating discomfort; making the future tangible; insisting on public value. They are the roles of the designers as main actors in applying the design approach to innovation and transformation. Moreover, Yu and Sangiorgi (2018) introduced three different designer–client relationships in the service development process in order to articulate the transformative impacts of the service design approach in accordance with the service development process: delivering; partnering; facilitating.

Case of Local Government	Design Intervention Model	Roles	
		Designers	Public Servants
Council A	 Internal /External Designer	Researcher, Co-creator, Facilitator, Reifier, Change Catalyst, Trainer, Mentor	Researcher, Coordinator, Mediator, Co-creator, Facilitator, Project Manager, His/her own previous role
Council B	 Embedded Designer	Researcher, Co-creator, Facilitator, Educator, Supporter	General user, Advocate
Council C	 Embedded Designer	Researcher, Co-creator, Facilitator, Assistant	General user, Advocate
Council D	 Non-designer	Researcher, Co-creator, Facilitator, Developer, Mentor	Coordinator, Researcher, Co-creator, Facilitator, Knowledge Transferor, Learner, Booster

Table 9-1 Different role of designers and public servants in embedding design capability in local government

With those findings from literature in mind, this study sought to identify roles that designers and public servants are playing and need to play as main actors for facilitating the application and embeddedness of design capability in the context of local government. It is based on the research findings of the case studies about the four different councils adopting different DIMs.

Table 9-1 displays the generally identified roles of the designers and public servants in the four English councils from the four case studies respectively. There are common roles of designers and public servants between the councils as they deliberately apply design approaches with similar motivations and purposes (see 9.1.1) and follow similar design approaches (see 2.2.3, Table 2-12). However, the scope and level of their involvement is slightly different depending on the projects in which they are involved.

Local Government	Council A		Council B		Council C		Council D	
DIM / Role of D: Designer P: Public Servant	 Internal/External Designer		 Embedded Designer		 Embedded Designer		 Non-designer	
	D	P	D	P	D	P	D	P
Researcher	X	X	X		X		X	X
Co-creator	X	X	X		X		X	X
Facilitator	X	X	X		X		X	X
Reifier	X							
Change Catalyst	X							
Developer							X	
Assistant					X			
Supporter			X					
Mentor (Internal/External)	X(I)						X(E)	
Trainer	X							
Educator			X					
Knowledge Transferor								X
Learner								X
Project Manager		X						
Coordinator		X						X
Mediator		X						
Advocate				X		X		
Booster								X
General user				X		X		
His/her own previous role		X	X					X

Table 9-2 Common and distinct role of designers and public servants in embedding design capability in local government

Every role of designers and public servants, identified through the case studies, were combined and listed in order to compare the types of roles between the councils, depending on the mode of DIM used by each council (see Table 9-2).

The roles listed on Table 9-2 come into play both separately and simultaneously in real-life settings to fulfil their tasks depending on the type of project, the direction from the leader of the design team, or the request from the public servants involved in the service development process. Each role also has a different range of intervention during the process. In order to show these differences, the roles of the designers and public servants were positioned on the conceptual framework which includes service development process (see Figure 9-1).

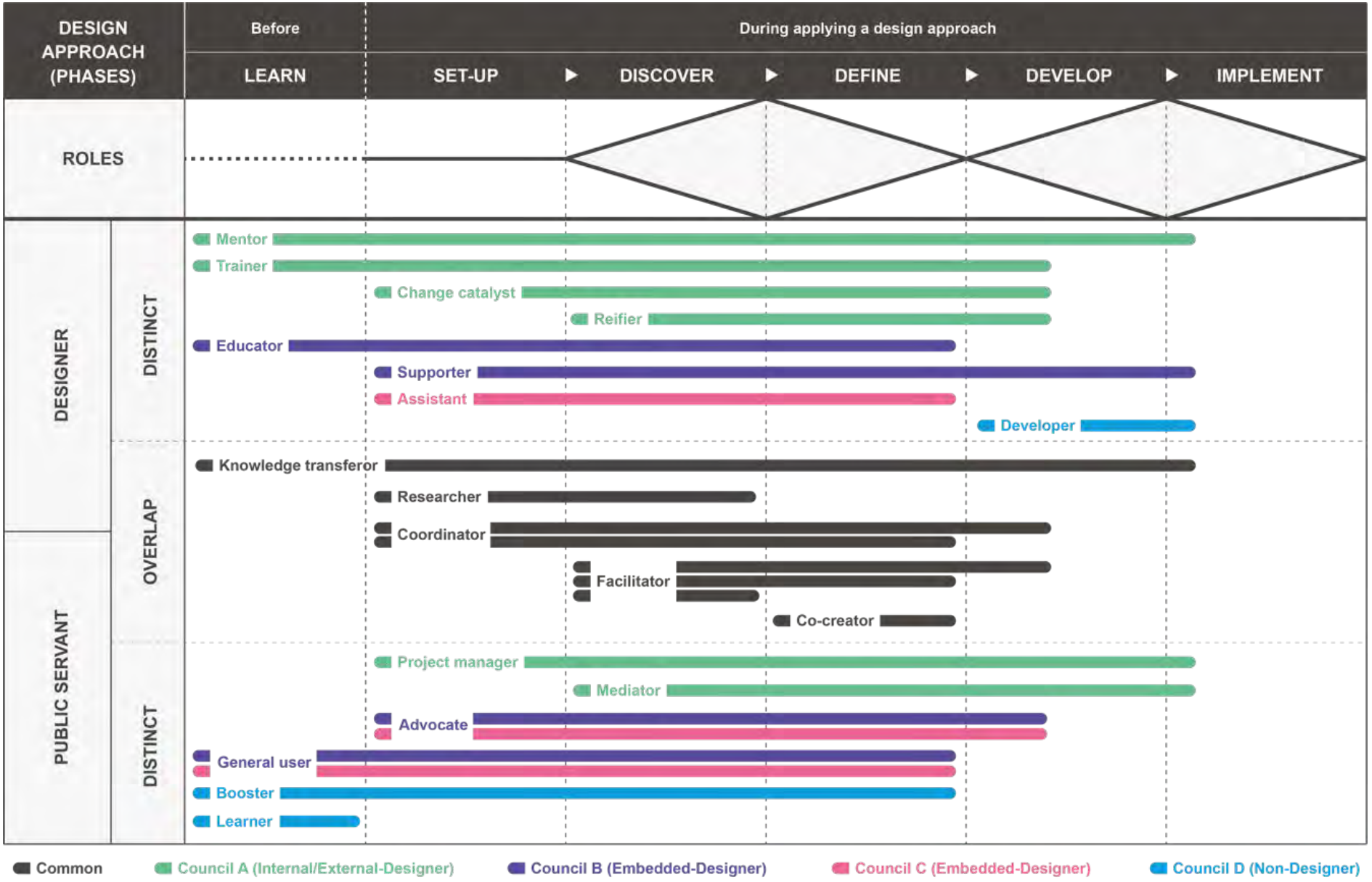


Figure 9-1 Role of designers and public servants in embedding design capability in local governments

9.2.1 Common Roles of Designers

The three shared roles of designers identified from the case studies are: Researcher; Co-creator; Facilitator (see Figure 9-1). These recurring roles from the four case studies present the common areas of applying design approaches as well as their intention.

As Tan (2012) identified, designers often play the role of researchers in the Discover phase by coordinating the research exploration. This includes different tasks from planning the research and developing research tools, through to carrying out field research in order to better understand the context and identify needs and problems (see Table 9-3).

Researcher	Coordinates user research including planning the research with ease with ill-defined problems and incomplete information, developing research tools, and conducting the research with other public servants from different service departments or just guiding them on how to do it.
Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions in collaboration with public servants in the team or from different service departments, or with other stakeholders, or with other councils.
Facilitator	Develops their own co-design workshop tool by adapting existing ones in order to fit their purpose, prepares for a co-design workshop, engages and encourages participants, visualises outcomes and progress while facilitating the workshop, and produces insights.

Table 9-3 Common roles of designers

Although public servants in Council A and D also play a Researcher's role by preparing and undertaking user research, there are a few noticeable differences in what experienced designers do as researchers. First, the experienced designers as researchers were more comfortable with the ambiguity of tasks they were going to tackle, and had a clearer goal of research with more confidence than public servants as researchers. Secondly, they had more specific criteria in selecting research targets and defining research scope based on the topic of the issues. Thirdly, they were more proficient in asking questions and improvising interview questions depending on the answers of interviewees as if they already knew what they needed in order to transform problems into solutions. These features noticed from designers can be corresponded to the features of design experts such as an ease with ill-defined problems and 'situatedness' of design problems by Lawson and Dorst (2005) and Michlewski (2008).

As co-creators, designers are involved in the Define and Development phase with other stakeholders to collaboratively define the main problems and come up with ideas to solve them through service

design or redesigning projects (see Table 9-3). During the Define phase, an experienced designer played a clearly distinct role as a co-creator compared to the role of a public servant as a co-creator, particularly in defining main problems with limited and unorganised information available. In Council A, an experienced designer extracted keywords from the interview and observation data collected and quickly defined main problems of the issues by clustering the keywords written on the post-it notes in accordance with their relationship to each other. This feature is related to the attitude of a designer being good at consolidating and reconciling multiple meanings which Michlewski (2008) identified. Cross, Christiaans, and Dorst (1994) presented that framing problems with incomplete information, by choosing relevant elements in a certain situation, is one of the key aspects of design expertise. In the role of the co-creator, there was a clearer distinction between the way experienced designers framed problems compared to public servants.

During the co-design process in the Define or Development phase, designers often participate in the process as facilitators. They lead the process which includes co-defining and co-designing activities by encouraging the active engagement of participants, stimulating their creativity and visually synthesising the progress and outcomes of the different activities (see Table 9-3). In this role, designers also apply their ability of framing problems and creating solution concepts by filtering important clues and reconciling multiple meanings. Moreover, there is a noticeable gap in engaging participants and creating quality outcomes between designers and public servants in general as the visualisation skill of design expertise is required for the effective operation of a workshop. This means that all participants can see the progress and can communicate with visible and tangible outcomes. The role also helps participants from different backgrounds to build a common ground regarding the problems they face and how to address them. It is noted, however, that the background of the designers varies between the councils and this often affected the range of work, level of involvement, and type of outcome produced during the process, even when the roles had the same title. For example, service designers in Council A have design backgrounds. They have either a degree in design and/or lengthy experience in the design field. On the other hand, the service redesign lead officer and the team leader of Innovation and Improvement in Council B, and the three service designers in Council C, all took on designers' roles in applying design approaches and embedding design capability in the two councils respectively but do not have design backgrounds. Instead, they have learnt design approaches through design-related projects, short training programmes or self-study. These different backgrounds seem to affect how they facilitated co-design workshops, particularly in how to synthesise and present the progress and outcomes of the workshops. The designers with design backgrounds seemed to use visualisation skills more frequently during the co-design workshops, although this did depend on the topic and duration of the workshops.

The synthesis of each designer's role in applying and embedding design capability in local government, identified from the four case studies, presents distinct roles depending on the mode of DIM that each local council adopted (see Table 9-2).

In the next section, the designers' distinct roles will be discussed. However, the aim of this discussion, including the comparison between the councils, is not to show where designers need to play more or less of a role in the council, or which mode of DIM is best for the designers in applying and embedding design capability in local government. Instead, this discussion aims to identify what role designers, as a whole, need to play to realise design capability embeddedness in the context of local government.

9.2.2 Distinct Roles of Designers

The distinct roles of the designers in the four councils are described and discussed in this section.

9.2.2.1 Distinct roles of designers in Council A (Internal/External Designer)

<table>
<tr><th colspan="2">Categories
(Imaginary Position)</th><th colspan="2">Specific Roles</th></tr>
<tr><td rowspan="5">Designer</td><td rowspan="3">In-house Designer</td><td rowspan="3">Common</td><td>Researcher</td></tr>
<tr><td>Co-creator</td></tr>
<tr><td>Facilitator</td></tr>
<tr><td rowspan="3">External Designer</td><td rowspan="4">Distinct</td><td>Reifier</td></tr>
<tr><td>Change Catalyst</td></tr>
<tr><td colspan="2" rowspan="2">Coach</td><td>Trainer</td></tr>
<tr><td>Mentor</td></tr>
</table>

Table 9-4 Common and distinct roles of designers in Council A (internal/external designer)

Designers in Council A are design-trained, meaning they have a design background such as a degree or work experience in a design field for a certain amount of time. As discussed earlier in Chapter 5, the unique mode of relationship between designers and public servants in the Internal/External Designer model divided the imaginary position of the designers into three types: Inhouse Designer; External Designer; Coach (see Table 9-4). Although the imaginary positions were not officially defined or fixed by contract, they are defined by the needs of the public servants in the team or the direction for a design leader. The positions and roles are all imaginary concepts in this study and they usually come into play simultaneously in reality to accomplish a certain task.

The most important roles of the designers in Council A as External Designers were reifier and change catalyst. As a reifier, a designer visualises verbal conversations, concept descriptions and ideas in a narrative form and concretises them through prototyping (see Table 9-5).

Reifier	Visualises verbal conversations, concept descriptions and ideas, and concretises them through sketches and prototypes with varying levels of fidelity. This is the role which distinguishes design-trained designers from design-untrained designers as it requires a higher level of design skills and experience.
Change Catalyst	Questions the status quo, identifies and deals with internal issues objectively from a third party's point of view, stimulates out-of-the-box thinking, motivates changes.
Mentor (an internal mentor)	Oversees the progress of capability building within the team, provides help and advice to public servants along their journey of developing design capability.
Trainer	Teaches necessary design knowledge and skills to public servants in the joint team.

Table 9-5 Distinct roles of designers in Council A

This role overlaps with the facilitator's role to some extent. However, it requires a higher level of design skills and experience compared to the facilitator's role, thus this is the role which shows the clear difference between design-trained and design-untrained designers. A certain level of designer with design expertise, goes through a problem-solving process, by taking a trial-and-error method after identifying the most important issues immediately (Lawson & Dorst, 2005). This design expertise, like other cognate expertise such as music and chess, can only be developed as the result of dedicated application in various challenges, which means the level of design expertise is generally proportional to the accumulated amount of time people have spent practising (Cross, 2004). What a reifier needs as a designer is closely related to the aspect of design expertise, to realise ideas by connecting creativity and innovation with the application of imagination and constructive thought (Cross et al., 1994; Nelson & Stolterman, 2012).

One of the main reasons that organisations, both in the private and public sector, have for bringing in external design experts is that they expect them to look at the internal problems from an outside perspective. This allows them to identify different aspects of the problems and thus create better design solutions. Therefore, it is very important for designers in Council A's joint team with Internal/External Designer mode to be able to keep this position in order to drive change or innovation in the council as a change catalyst (see Table 9-5). As a change catalyst, a designer identifies internal issues and tackles them, by questioning the status quo objectively from a third party's point of view in order to motivate changes of local governments.

Another position the designers in this mode have is a coach, which includes the role of trainer and mentor. These are important roles to transfer the necessary design knowledge and skills. As a mentor to the joint team, a designer not only oversees the progress of the development of design capability of the public servants within the team, but also provides emotional support and advice on demand during the process of embedding design capability (see Table 9-5).

9.2.2.2 Distinct roles of designers in Council B (Embedded Designer)

<table>
<tr><th>Categories
(Imaginary Position)</th><th colspan="2">Specific Roles</th></tr>
<tr><td rowspan="4">Designer–Manager</td><td rowspan="3">Common</td><td>Researcher</td></tr>
<tr><td>Co-creator</td></tr>
<tr><td>Facilitator</td></tr>
<tr><td rowspan="2">Distinct</td><td>Educator</td></tr>
<tr><td>Project Manager</td><td>Supporter</td></tr>
</table>

Table 9-6 Common and distinct roles of designers in Council B (embedded designer)

Designers in Council B are design-untrained designers, which means they do not have design backgrounds; instead they developed their design knowledge and skills through self-study, participation in a couple of short design training programmes, or have experience of several designer-involved projects before or after they joined Council B. Therefore, in this situation – working as a designer in the Embedded-Designer mode – they do not work in the same way as full-time in-house designers because of their lack of design skill and experience. This is combined with the fact that they also have other roles in the council. So, their positions were defined as designer–manager and project manager depending on their tasks in this study (see Table 9-6). One of the primary roles of a designer in Council B is to teach what design thinking is and how to use a design approach to develop services, mainly through a service redesign training programme (see Table 9-7).

Educator	Develops a design thinking training programme to teach necessary design knowledge and skills for internal employees so that they can apply a design thinking approach to their individual work.
Supporter	Manages small to large-scale innovation projects, supports service teams to successfully facilitate the implementation of service ideas.

Table 9-7 Distinct roles of designers in Council B

Under a project manager position, the designer plays a supporting role helping service teams to manage different scales of design and innovation projects. More importantly, they help service teams to successfully implement service ideas. As two designers in Council B said, this is the benefit of having in-house design resources, in other words the strength of the Embedded Designer model.

9.2.2.3 Distinct roles of designers in Council C (Embedded Designer)

Categories (Imaginary Position)	Specific Roles	
Independent design agency on its own + In-house Service Designer as an assistant of the Service Design Hub	Common	Researcher
		Co-creator
		Facilitator
	Distinct	Assistant

Table 9-8 Common and distinct roles of designers in Council C (embedded designer)

Interestingly, all three of the service designers in Council C's service design team do not have design backgrounds. Like the designers in Council B, designers developed their design knowledge and skills through self-study, participation in a couple of short design training programmes or had experience of several designer-involved projects before or after they joined Council C. Therefore, designers in Council C also indicate design-untrained designers. What service designers in Council C do is, therefore, not identical to that of service designers in external design agencies. In most of the projects in the council, their roles are limited to the first diamond of the DDM which includes the Discover and Define phases.

The position of designers in Council C can be divided into two, based on how they work within the council (see Table 9-8). According to the interview with one of Council C's service designers, they work in a service design sub-team of the transformation team. They sometimes work as an independent design agency, providing service design to different service teams on an on-demand basis, including some minimum viable prototyping to better explain ideas or sometimes to test them. However, their work as service designers is limited to the Discover and Define phases, including idea generation in a narrative form to assist the procurement team to commission services. Therefore, they mainly play an assistant's role in the Service Design Hub by supporting people from service teams to apply a design approach in developing their services and by providing them with the necessary tools and guidance for the application of the design approach (see Table 9-9).

Assistant	Assists people in the service teams to be able to apply a design approach in developing their service on their own, by providing them with necessary tools and guidance for use. Assists a procurement team to commission a service working as a function within the commissioning process.

Table 9-9 Distinct role of designers in Council C

In this sense, the ability of framing and reframing problems in relation to contextual perceptions (Cross et al., 1994) is the essential element of individual design competence of the assistant as a distinct role of the design-untrained designer in council C.

9.2.2.4 Distinct roles of designers in Council D (Non-Designer)

Categories (Imaginary Position)	Specific Roles	
External design expert	Common	Researcher
		Co-creator
		Facilitator
	Distinct	Developer
		Mentor

Table 9-10 Common and distinct roles of a designer in Council D (non-designer)

Public servants in Council D, who are in charge of the distribution of a design mindset and design approach, are in a similar situation to the designers in Council B. However, despite their design knowledge and skills which were developed from previous project experience in both the External Designer and Internal/External Designer modes, they do not consider themselves as designers.

Developer	Creates design ideas and develops ideas to solve problems in an agreed way (e.g., leaflet, website and mobile application).
Mentor (an external mentor)	Gives tips about specific issues related to the application of a design approach on an on-demand basis.

Table 9-11 Distinct roles of designers in Council D

Therefore, unlike Council B and Council C, Council D is in the Non-Designer model as this is how they define themselves. In the Non-Designer model, therefore, designers are external designers who have design background and work for external design agencies (Table 9-10). The distinct role of designers in Council D, therefore, describes the role external designers play when they are brought into the council for service design and development projects.

As a developer, an external designer develops ideas and turns the ideas into final outcomes for implementation to deal with problems identified, in agreed forms, such as leaflets, websites or mobile applications (see 9-11). Additionally, as mentors, they provide tips about specific issues which are related to the application of a design approach and implementation of design outcomes when public servants from service or transformation and change teams request it (see Table 9-11). This is usually while they are conducting other projects commissioned by one of the service teams in Council D. In this sense, the designers as developers in Council D are required to play roles just like external designers, having a certain level of design knowledge and skill to design and produce a specific outcome asked for by internal people.

9.2.3 Common Roles of Public Servants

The case studies also show that public servants in Councils A and D, who adopt the Internal/External Designer model and Non-Designer model respectively, also play the three roles – Researcher, Co-creator and Facilitator – that the designers in the four councils are commonly in charge of (see Table 9-12 and 9-13).

In Council A, designers in the joint team deliberately assign these roles to the public servants so that they can experience these roles themselves and learn how to do them with support from the designers. Therefore, the range of tasks and level of involvement are inevitably different depending on who carries out these roles. The public servants in Council D carry out the roles based on their project experience and self-taught knowledge without direct support from designers. However, these roles were not identified from the case studies of Council B and Council C which fall under the Embedded Designer model, but that does not mean the public servants in either council do not play these roles. There might be public servants who play these three roles, applying design approaches to develop their own services. However, this research cannot prove this due to a lack of data collected through the case study approach.

The public servants as facilitators in Council A and Council D often found it more difficult to facilitate the workshops as a facilitator for the second diamond of the DDM (see Table 2-10) – which includes the Develop and Deliver phases, in which they are asked to visualise ideas – than carry out the other two roles of researcher and co-creator.

Researcher	Prepares for user research activities including planning the research and developing research tools, and conducts user research independently or collaboratively with other public servants or designers.
Co-creator	Defines problems, identifies needs and opportunities, and comes up with solutions together with inside or outside public servants in the team and other stakeholders, sometimes with the help of designers.
Facilitator	Prepares for a co-design workshop, engages and encourages participants, documents the outcomes and progress in a narrative form while facilitating the workshop.
Coordinator	Plans and organises user research activities, including planning and conducting research in the field. Coordinates co-design workshops, including appointing a gatekeeper who can help the team recruit participants and arrange workshops.
Advocate	Values the advantages of a design approach and tries to apply it in the development of their services. Actively participates in internal and external design-related events, such as design training workshops. Develops their own services in support of a designer-led way of working to positively effect knowledge transfer and distribution of design approaches across the council.
Booster	
General User	Participates from time to time in design-thinking training sessions open to all council employees, in order to learn about the design approach, and considers the possibility of how a design approach could be applied to their services. Normally attends internal design-related events voluntarily but does not have as strong confidence in the real value of the design approach method as the advocates or boosters.

Table 9-12 Common roles of public servants

This was because the facilitator role in the Develop and Deliver phases requires more knowledge, skills and practice, especially in the understanding of design language and visualising skills which require a certain amount of time of deliberate practice and training as Cross (2004) argued. When considering the process of the design approach, this also means that public servants as facilitators are more familiar with facilitating the first diamond of the DDM which includes the Discover and Define phases. The objectives of these two phases are to identify the problems and needs to be addressed and define the main problems and opportunities by reframing them. It is necessary for them to be exposed to challenges so that they can practise framing problems based on contextual factors and coming up with suitable solutions for them in order to develop their design capability as facilitators.

Role of Public Servants	Council A	Council B	Council C	Council D
Researcher	X			X
Co-creator	X			X
Facilitator	X			X
Knowledge Transferor				X
Learner				X
Project Manager	X			
Coordinator	X			X
Mediator	X			
Advocate/Booster		X	X	X
General user		X	X	
His/her own previous role	X			X

Table 9-13 Common and distinct roles of a public servant

There might be a few more roles shared by the public servants between the councils that probably exist in other local councils, although they did not appear in the four councils through the case studies. Additionally, some of the roles identified from one of the councils have a unique name which can be clustered with similar roles.

In this light, the role of coordinator, advocate and booster, and general user can also be grouped into the common role of public servant, as the main actors for applying and embedding design capability in local governments (see Table 9-12 and 9-13). Although the scope varies depending on the projects, public servants, as coordinators, plan and organise user research activities, including planning and conducting research in the field. They also coordinate co-design workshops, including appointing a gatekeeper who can help the team recruit participants and arrange workshops. The role of advocate and booster describes silent designers in the council (Gorb & Dumas, 1987), in other words design champions who value the advantages of a design approach and try to apply it in the development of their services. They are active participants in internal and external design-related events, such as design training workshops, organisation-wide and local community events. They also develop their own services in support of a designer-led way of working to positively effect knowledge transfer and distribution of design approaches across the council. They are very important in embedding design capability and the sustainable use and development of design capability. This is particularly relevant for design-inexperienced local governments, as the design champions play a key role in disseminating the tools for a design approach while promoting its value and benefits through word of mouth. The role of general user describes public servants who from time to time participate in design-thinking training sessions open to all council employees, in order to learn about the design approach, and who consider the possibility of how a design approach could be applied to their

services. These workers normally attend internal design-related events voluntarily but do not have as strong confidence in the real value of the design approach method as the advocates or boosters.

Another common feature in the role of public servants during the process of applying a design approach and embedding design capability in local governments is that they normally have another responsibility in the council. These public servants belong to a dedicated design team or are in charge of application and distribution of a design approach under either the Internal/External Designer model, the Embedded Designer model or the Non-Designer model (see 9-12 and 9-13).

9.2.4 Distinct Roles of Public Servants

The distinct roles of the public servants in the four councils, which appeared during the case studies, are described and discussed in this section to identify the necessary elements of design capability as a whole. 'Distinct roles' mean the essential roles when applying a design approach and embedding design capability rather than the unique roles exclusively appearing in a specific mode of the DIM, although they emerged from specific modes of the DIM during the case study in this research.

9.2.4.1 Distinct roles of public servants in Council A (Internal/External Designer)

Categories (Imaginary position)	Specific Roles	
Before the co-design workshop	Common	Coordinator
		Researcher
During the co-design workshop		Co-creator
		Facilitator
Throughout the project	Distinct	Mediator
		Project manager
		His/her own previous role

Table 9-14 Common and distinct roles of public servants in Council A (internal/external designer)

There are two distinct roles for public servants in Council A in the Internal/External Designer mode: Mediator and Project Manager (see Table 9-14). As a mediator, public servants in the joint team support communication between designers and the public servants who participated in the co-design workshop (see Table 9-14 and 9-15).

Mediator	Supports communication between designers and public servants who participated in the workshop, and manages conflict either between participants or between designers and participants.
Project Manager	Manages a project including monitoring progress and managing schedules, keeps senior managers in the council briefed, gains permissions or agreements from decision makers, accesses an internal database and collects the necessary information for the project, builds relationships and communication between designers and internal employees.

Table 9-15 Distinct roles of public servants in Council A

Moreover, public servants sometimes manage conflicts, either between participants or between designers and participants, based on their lived experience of the organisational culture. It is often considered a significant role, not only for the successful operation of co-design workshops, but also for the successful embeddedness of design capability in the context of local government. This is because there can be knowledge gaps and cultural conflict between public servants and designers, as well as resistance and fear of change from public servants.

Another distinct role of the designer is managing projects. As a project manager from the council side, public servants need to check the project's progress, and regularly brief the council's senior managers on the progress (see Table 9-15). They can support designers in gaining permissions or buy-in from decision makers and other stakeholders, to carry out projects. They can also access internal databases for collecting necessary information for projects. Building relationships and communication between designers and internal employees is their subsidiary role. Interestingly, they still need to continue their own work. Sometimes, it disrupts what they are doing in the joint team.

9.2.4.2 Distinct roles of public servants in Council B and Council C (Embedded Designer)

Categories	Specific Roles	
Officer as a design user	Common	General user
		Advocate

Table 9-16 Common roles of public servants in Council B and Council C (embedded designer)

The case studies of Council B and Council C in this research found two roles common to the public servant as design user: General user and Advocate (see Table 9-16). The distinct roles in both councils were not recognised because of the shortage of data directly collected from the research about them. There may also be other roles which were not identified in this research from the case

studies of Council B and Council C. Instead, the designers in Council C, in the Embedded Designer mode, played a distinct role, particularly in supporting the implementation of design outcomes, which is often considered a weakness of external designers, as discussed in Section 9.2.2.3. Public servants in the Embedded Designer mode can help service teams put design outcomes into practice by following up the work for adjustments to the council situation, as in-house designers.

9.2.4.3 Distinct roles of public servants in Council D (Non-Designer)

Categories	Specific roles	Description
Designer–officer as a design champion	Common	Coordinator
		Researcher
		Co-creator
		Facilitator
	Distinct	Knowledge Transferor
Officer as a design trainee	Common	Learner
		Booster

Table 9-17 Common and distinct roles of public servants in Council D (non-designer)

The role of the public servants in Council D, adopting the Non-Designer model, were defined by their positions with regard to knowledge transfer within the council (see Table 9-17). The positions can be divided into the 'Designer–officer as a design champion' and the 'Officer as a design trainee'. In the position of 'Designer–officer', the public servants play several common roles which were also identified from the case studies of the other three councils, such as the coordinator, researcher, co-creator and facilitator. Here, the public servants play a central role in transferring design knowledge across the council as a knowledge transferor (see Table 9-18).

Knowledge Transferor	Transfers absorbed and practised design knowledge and skills to other colleagues (public servants), transfers knowledge and past experience in relation to their work in the council to designers.
Learner	Participates in the design learning journey to develop their individual design competence to apply a design approach to develop their services.

Table 9-18 Distinct roles of public servants in Council D

The skills they share with the other public servants in the council, in most cases to those in positions of the 'officer as a design trainee', were generally developed through practice and self-study after the absorption and accumulation of knowledge from designer-involved service development projects. Therefore, although there are some limitations in their design knowledge and skills because of the designer–officer's lack of experience in a design field, they can bring context-specific knowledge which is easier for the people in Council C to understand as it has been customised and adjusted to the council's conditions.

The other roles in the position of the 'officer as a design trainee' are as learner and booster. They indicate the main role for the rest of the public servants in the course of embedding design capability in the council. As a learner, they actively participate in the design learning journey to develop their own individual design competence and try to apply the design approach in their everyday work (see Table 9-18). In some ways they have similar characteristics to the general users in Councils B and C, but unlike the general users they actively participate in the individual design capability development process. The literature review on design practices in the public sector, including different types of design approaches, showed the significance of co-design practice as a route for transferring design knowledge and skills and thus developing design capability as part of the organisation's capabilities within the public sector (See Chapter 2.2). Therefore, it is crucial to involve as many general users and learners as possible and encourage and nurture design advocates and boosters in order to accelerate the journey of embedding design capability in local government.

9.3 How is Design Capability Embedded in Local Government?

It is clear that embedding design capability into a local government is not simply about hiring external designers or bringing in design methods and tools, and then applying them. It is about organisational change which includes the development of two dimensions of the organisation's design capability. These are individual design competence, which allows the local government to carry out service development based on a design approach, and the development of organisational design competence, which enables local governments to support the development and mobilisation of the individual design competence, on demand.

The review of existing literature on organisational capabilities, design capability and design practices in the public sector clearly showed that the successful adoption and application of a design approach and embedding design capability in the organisation requires a few elements. Not only do employees have to acquire individual abilities in applying design approaches, but also, they must value the design and organisational benefits of building a learning environment. They also must secure and

mobilise their employees' abilities in order to enable individuals to fully utilise their abilities of applying the value of a design approach in the development of services (Acklin, 2013b; Malmberg & Holmlid, 2014).

The remainder of this chapter will discuss the research question: 'How is design capability embedded in local government?'. It will present the challenges, and necessary and desirable conditions to overcome these challenges, towards embedding design capability in local governments. It will also link the roles of designers and public servants as main actors for embedding design capability with the elements of individual and organisational design competences required to deal with these challenges and accomplish the objectives of each phase of the service development process.

9.3.1 Challenges in Embedding Design Capability

The analysis of the case studies revealed a number of challenges faced by both designers and public servants in the four councils under the different DIM modes. The shared challenges within the councils which emerged during the process of applying and embedding design capability were organised and described in order to discuss the necessary and desirable conditions, and the elements of local government's design capability (see Appendix Q).

9.3.1.1 Understanding and changing a complex system for a long-term effect

Improving services will not be accomplished through a fragmented solution such as the improvement of a single touchpoint or the change of service staff. Instead, it inevitably requires the change and development of the service system based on an understanding of the local council as a complex system.

CBP01 "The biggest challenge is that the council is a kind of complex system. Changing one thing over here, this change over here, and change something here, and residents become confused and they start to phone the call centre, the cost of the call goes up. So, they start taking away telephone numbers, then people get more frustrated and then they start knocking on the door. You know this is quite a complex system now"

CAS02 "[…] we've got the project based on short term goals. Possibly because people need to deliver something. So, we are trying to change it a little bit. We are trying to shift the conversation a bit to think more about the bigger system that has a long-term effect on it. If we are going to improve the service in a certain way, I mean more human-centred way maybe, it is going to make savings in a few years. But they (local councils) may be interested in 'what are you going to do for me in the those few months?' They are thinking like that. Maybe they are going to cut down something"

Therefore, embedding design capability to redesign services often requires the supports from senior levels and the participation of internal managers who have good knowledge about the structure, systems and culture of the council over the process of service development and capability building.

9.3.1.2 Propagating a design mindset and mobilising resources for co-creation

People in local government generally fear of change or are risk averse because of their relatively stable position. It often makes it difficult to disseminate a design mindset across the council. Moreover, public servants are normally under pressure in their day-to-day work. These aspects often make it hard to bring them together in the same place to transfer the necessary design knowledge and equip them with design skills. The issue of the challenge of mobilising resources for co-creation also includes residents' participation in the co-creation process. Despite its importance, it is rare in the real world, to invite residents in as service users, to participate in the process of developing or co-creating services.

CAP03 "But also, people are always saying that they haven't got any time. So, it's a mindset and type of thing. But the thing is they have their ideas. So, they know what the capacity for this service is, or what they can do change for you a bit. But I don't think they are given the time to... so they don't get given like spaces to be"

CBP02 "Especially where in this sort of non-designer redesign method space, I think it's about mindset and how you approach problems, different questions what we've asked before as a local government. I think that is really hard thing to teach someone to do or someone to do differently, particularly in local government. There are people who have been working here for long time with same job for 20, 30, 40 years. So how you get their mindset shift I think it is really difficult"

Therefore, it is important to gain buy-in and support from the senior level to secure resources to engage more people in the collaboration process.

9.3.1.3 Maintaining momentum for behavioural and cultural change

The feedback from the workshop participants shows that most public servants who were in the co-design workshops found the value of a design approach to public service innovation. However, their enthusiasm and passion for learning and developing design capability often faded away over time because of a lack of continuous programmes to help employees to keep developing their individual design capability. Additionally, the lack of support from the senior level and a failure to track new or past design-led service development projects, also cause a loss of momentum for behavioural and cultural change.

CAP02 "But the way of working (designerly way) is quite different from the council culture. The council culture is frustrating race, you know, people come in and work for the council for thirty years and never retire. So, it's challenging everything they know and of course change is scary"

CCS02 "The culture is a really tough one. Changing cultural organisation is enormous. I think it is a, we find, steady step by step process. When we have done projects with certain service areas, they see the value of our work. They tend to often come and say that oh we got a new project coming up. We want to use the same methodology, we think this is important. This kind of shows they are changing the way they think about approaching redesigning of services"

9.3.1.4 Transferring and storing knowledge

The reduction of core financial support from the central government requires the local government in the UK to be more efficient and innovative. Cost saving in councils is often achieved by a reduction in the number of employees. This is challenging for embedding design capability within local government as it does not motivate people to keep developing and transferring knowledge across the council.

CAS01 "Yeah, so they changed the job within the organisation, which is OK because learning goes with them, it's when they leave. So, this is an important point you make and it's something I'm quite wary of. As I said, it's very rewarding coming to an organisation and see people who are struggling in their jobs and then they're satisfied with their jobs after you show them a new way of working. But if the organisation can't meet quickly enough to support that person or develop that person, allowing them to explore a new way of working which moves very quickly"

CAP02 Also, you don't get the training. So, people come to the local authority to do a bit, but then they will move on to learn skills. I hate service budget that for not investing in their staff. And that is a major factor that is gonna affect this new way of working because you just don't get it continued. For me, it is learning. I think that remains the key thing. People are overworked, perhaps, and increasing overworked because of the job cuts. So, they're looking for other opportunities. There are job cuts generally that's why people go. And people are on short-term contracts now.

An online or offline platform to share project progress, stories or experience with reflection, will help the councils not only store and transfer knowledge but also promote the value of a design approach to service development across the council.

9.3.1.5 Developing skills and giving confidence to public servants through practise

Public servants in charge of supporting the application of design approaches and building design capability are normally good at and confident in conducting the first diamond of the DDM which includes the Discover and Define phases of the service design project. However, they are much less confident in carrying out the Develop and Deliver phases of the service design process because these require special design knowledge and skills.

CAS01 "The hard bit is then giving them the confidence that they can solve the problems. Because they can see the problems. It is obvious that they experience things themselves, but they also know all the obstacles of the council"

CAS02 "I personally much more feel confident with this diamond (Discover and Define phase of the Double Diamond model) than with this one (Develop and Deliver phase of the Double Diamond model). We've done a lot of that (the first Diamond phase) and I feel happy about doing those things. I think in this second diamond space particularly with big problems and big difficult things"

As the case study showed, design approaches in local government in England are mostly limited to the first two phases of DDM: Discover; Define. These aim to identify needs and problems and create ideas to support a procurement and commissioning process. Nonetheless, it is necessary for local councils to help their employees learn the necessary design knowledge and skills in order to develop their individual design competence and confidence in conducting the entire process of the design approach.

9.3.2 Necessary and Desirable Conditions for Embedding Design Capability

The case study results present a number of necessary and desirable conditions for successful application of design approaches and embeddedness of design capability within local governments. Although some of the conditions only arose from one council under a specific mode of the DIM, they seem to be compatible with, and desirable to have, for the other councils regardless of the DIM.

9.3.2.1 An awareness of the value of the design approach from senior levels and their supports

The introduction of a design approach and the establishment of a dedicated design team in the local government are often championed by someone who is aware of the value of design approaches and can influence the council with their strong belief and push. It is not necessary that they have a design background, but they often have lived experience about the benefits of design approaches. Having a sponsor in a senior management level is very helpful in continuously moving the progress of

embedding design capability forward as there are many jobs to be done which require agreement and support from the senior managers.

CCS01 "They brought in a service design manager who has an experience in this world, and he recruited us as three service designers. Now it was pretty much shaped by his interest in service design particularly in ethnographic research as it's his background. […]
He was the service design manager and now we have shifted it and that position doesn't exist anymore"

CAP02 "[…] having a sponsor helped. So, I've got an assistant head of the council. He used to be my old boss … he is very supportive of me and what I have done because I've probably always been the digital person. He comes to me for advice. Having someone who appreciates what you are doing. That person has to have influence over other people as well. Recognition and advocate or everything you're up to. That's really helped"

CBP01 "I think we're quite lucky in a way is that we've got. So, our assistant director reports started to the council chief executive and our counsellor who's a portfolio holder is really they brought in. The three of them were brought in massively to the idea of our team and the idea of providing services"

Additionally, the emotional support from an advocate and recognition from the senior managers will be of help as they can encourage and motivate people in the team.

9.3.2.2 A dedicated design initiative in an independent position

Embedding design capability requires not only transferring knowledge and skills but also continuously developing this knowledge and skills. Therefore, changing the team of individual employees within the council will affect the development of knowledge and skills for the council as well as for individual employees. Moreover, applying a design approach to develop services itself requires a lot of work from coordinating user research and co-design workshops, which includes planning and preparing materials, through to analysing all the data collected and creating ideas for solutions. The teams from the three councils, who are responsible for the distribution of a design mindset and approach, are also in charge of other roles except for Council C (Embedded-Designer). It is necessary to establish a dedicated initiative to be able to focus on the embeddedness of the design capability, as embedding design capability usually requires an organisational change which needs long-term engagement and continuous supports from all levels of employees, especially senior management. Moreover, the teams need an independent position that enables them to participate in the project as a third party and look at the problems with fresh eyes.

CAS02 "The only problem is, basically he is temporarily assigned to this team. So, it's not given that they will stay within the team. They may return to their own team. So, if we had

someone who was in the team for a few months, but after change, they are still in the council, but they move to another place in the council. So, there is a bit of uncertainty about knowledge transfer and how much with they can use them"

CBP01 "[…] we are a unit within the local authority, but we are outside any particular services. We could get brought in. The phrase we usually use is an internal consultant because we are within the council and what we do, we look at it with fresh eyes. In theory, more of an understanding of design than perhaps people have themselves"

This separated position from other service teams with authority can also give the team more freedom to explore the problems

9.3.2.3 A dedicated online platform and offline space to share and carry out design projects

As (Dam & Siang, 2018) argue spaces that people occupy influence them on many levels such as their feelings and behaviours, and thus interactions between people in the space and how they work. Therefore, it is beneficial to have the right place for a team as the work of applying a design approach requires a lot of co-design workshops. This involves many people in the same place and asks them to create tangible outcomes which can be posted on the wall. The space itself, therefore, is an archive to store and share the knowledge produced and is also a channel to promote a designerly way of working. The value of having a dedicated offline space along with its mood and environment were often identified during the observation and interview data collection process.

CAP02 "We do want to do more down the root of our communication channels like intranet or even just putting things up on the wall like down in the Hive. We've got a room which is dedicated to this project. So, it's more visual and people can see what we are doing…"

The case study results also show the importance of setting up an online space to post project stories including progress, experience and outcomes, with some reflections on them. Posting on the dedicated online space is not only a way to store knowledge and the project histories in one place, but also a way to transfer knowledge by sharing. The posts about the progress and outcomes of previous projects and the reflections on them, which were shared by colleagues, become good examples for those who are about to start a new project or are in the middle of a project.

9.3.2.4 Finding internal design champions and nurturing them

Embedding design capability is not just about having your own customised design tools or bringing in external designers for the application of a design approach. It is about developing the design competence of individuals and organisations, including mindset changes, as it requires behavioural

change in the way of thinking and working. The constant use of a design approach and thinking in a designerly way to embed design capability within a non-design organisation, needs more than training. It needs someone who can make sense of what the design approach is and how it works, and more importantly can enjoy working through a design approach. Especially in the local government context under the financial crisis which hinders more investment in design, it is important to find someone with an open mind to learn this new way of working and to carry out it voluntarily. Moreover, it is essential to give them opportunities to learn and keep developing their design capability so that they can distribute a design mindset as well as user-centred design principles and approaches to other colleagues for use.

CDP02 "I am attracted to design and would like to be a designer because the principles of the way of working really appeal to me. The approach feels different to the more traditional ways we used to approach change and I find it much more appealing and enjoyable as a way to work, so I'd definitely say that I'm intentionally setting out to work in a designerly way. CDP01 and I have really built that into our ways of working as a team deliberately because we want that to be how we work because we think it's right / enjoy it, as much (if not more) than the fact that that's what the role was, or the organisation wanted – we've been building it over the last few years, I think. I think this personal commitment probably is important for embedding design because design is as much about principles and mindset and how you approach a situation as it is about the tools that you're using"

CBP01 "[…] It (Double Diamond Model) really makes sense and a lot of problems I've come across where people are trying to change things without doing exploration of what is actually the problem rather than what we think is a problem. They generally do end up, not necessarily in failure, but not as successful. The second element was when I was hired, when I was started, it was very much as a digital only role. And Government Digital Service (GDS) in central government are heavily influenced by Design thinking. And their structure for the development services is based around Design thinking and Alpha and Beta and the other work. As a result, that seemed like the best model to follow"

9.3.2.5 A combination of routes to experience design practice and to get necessary supports

Case study results show that one of the main reasons for embedding design capability in local governments is to change the way of working from how they would traditionally deal with demand for change and innovation under the rapidly changing environment. This change in the way of working needs to provide employees not only with learning and practising opportunities, but also accessible routes to gain the necessary support for the knowledge and skills and be able to practise

them. This will help change their mindset and allow them to become familiar with the new way of working. In theory, setting up a systematic training programme consisting of different sessions considering individual employee's levels of knowledge and skills on design would be the best option for developing design capability within organisations. However, it is not easy under the pressure of cost saving amid the governmental austerity programme. Therefore, it is important to provide public servants with various opportunities which can encourage and motivate them to get exposure to and use a design approach to their work. This will ultimately increase their confidence in how they work through a design approach with a design mindset.

CAP02 "I don't think people are loyal in the public sector anymore. Also, you don't get the training. So, people come to the local authority to do a bit, but then they will move on to learn skills. I hate service budget for not investing in their staff. And that is a major factor that is gonna affect this new way of working because you just don't get it continued. For me, it is learning. I think that remains the key thing. People are overworked, perhaps, and increasingly overworked because of the job cuts. So, they're looking for other opportunities"

CAP03 "But I don't think like I could do it on the same level like a professional. I feel like we as a team learned a lot. So, because we know that if we're asked different questions that comes up, especially about the process, someone sit on and ask, 'what am I doing personas? what does that mean?' Sometimes we don't fully confident answer that questions. But then like agency U would say, no this is what's for. There is a vision behind it. You know that kind of thing."

9.3.3 Linking the Roles of Designers and Public Servants with the Elements of Local Government Design Capability

The conceptual framework (see Table 2-19 in Section 2.3) was used throughout the case study research as a scaffold in order to identify and organise necessary elements of both the individual and organisational design competences.

The necessary aspects of each element of the individual and organisational design competence for local government design capability were organised respectively based on the conceptual framework.

In this discussion, the individual design competence is considered as the combination of the abilities of individual designers and the public servants. This is because the reason for embedding design capability in local governments is to allow them to carry out design practices and the design capability development process themselves. So, it is unnecessary to distinguish who plays which role once embedding design capability is successfully achieved. In this sense, the aspects of each element of the individual design competence are organised by assuming that the aspects are for a person or a

group of people who will work for a local government to apply a design approach to service development and distribute a design mindset and approach to change the way of working.

Aspects of an individual design competence of a local government design capability			
Researcher Co-creator Facilitator Reifier Change Catalyst Developer Assistant Supporter Mentor Trainer Educator Knowledge transferor Project manager Coordinator Mediator Advocate/ Booster	Individual design competence for the roles identified	C	• Knowledge of design language, principles and value • Knowledge of design practice to carry out design practices and training programmes: design processes (i.e. set-up, discover, define, develop, deliver), design tools and methods • Contextual knowledge: stakeholders, local governments • Cognitive ability of creative, intuitive, holistic and integrative thinking
		F	• Interviewing and observing skills • Data analysing and interpreting skills • Visualising and prototyping skills for visual progress, outcomes and test • A project management skill • Writing and story making skills to post project stories and present outcomes
		S	• Engaging stakeholders in design process • Social and communication skills to facilitate design activities and collaborations, train people and play a role of the mentor
		M	• Design leadership and initiative to embrace complexity and uncertainty and catalyse a change • Carrying out iterative design practices pursuing better quality • Design mindset including empathy, confidence, flexibility, and persistence
C: cognitive	F: function	S: social	M: meta

Table 9-19 A The aspects of Individual design competences in relation to the role of designers and public servants identified

The reorganised aspects of the four elements (see Table 9-19) of the individual design competence are as follows:

9.3.3.1 Cognitive competence

In the context of local government design capability development, the cognitive competence describes the possession of proper work-related design knowledge and skills, and the ability to put the knowledge and skills into design practice to achieve a certain goal. Design knowledge here needs to include knowledge of design language, principles and values, as well as the knowledge of design practice, such as an understanding of design processes, design tools and methods. It also includes contextual knowledge about the features of local government, the life of public servants and stakeholders in order to train internal people and distribute a design mindset and approach across the organisation. Moreover, it also includes the cognitive abilities of creative, intuitive, holistic and integrative thinking as a designer to carry out design practices.

9.3.3.2 Functional competence

Functional competence represents the practical abilities of an individual or a group of people to perform a range of work-based tasks through a design approach. This is related to the skills necessary to conduct design practices for the development of local government services or organisational change. They include interviewing and observing skills to identify problems and needs from users' perspectives, and the abilities of analysing and interpreting the data collected. Moreover, it includes the abilities of visualising and prototyping invisible outcomes such as verbal conversation, the result of the data analysis and interpretation, design ideas, and stories to explain and share ideas. Additionally, it entails project management skill such as time and resource management.

9.3.3.3 Social competence

Social competence indicates the relational and communication skills. As discussed in Chapter 2, they are a generic but essential competence required by managers in almost every industry. In the context of local government, social competence includes the ability for teaching colleagues design knowledge and skills, engaging stakeholders in design processes and facilitating design activities and collaborations, including with various participants who have different knowledge and come from different cultural backgrounds. Moreover, this competence needs the relational and communication skills for a mentoring role to encourage internal people to deal with change and learn and practise a new way of working through a design approach.

9.3.3.4 Meta competence

In theory, meta competence describes the personal and professional values and attitudes in relation to facilitating the acquisition of the other substantive competences. In the context of local government design capability building, it includes design leadership and the initiative to embrace ambiguity, complexity and uncertainty, and carry out iterative design practices to develop a better

quality of the outcomes. It is a design mindset including empathy to see issues from residents' perspectives, confidence in training and applying a design approach to develop services and build design capability within the organisation. It also includes the flexibility and persistence to carry out a design approach and the ability to undertake design practices under complex and uncertain conditions.

From a perspective of professionalism based on the individual's design competence, developing design capability can also mean nurturing in-house designers to develop design ability, building on the understanding of the internal context. Although this does not mean all public servants should become design experts, it is essential to take both "training and learning experiences" (Nelson & Stolterman, 2012, p. 212) to develop the expertise required to make the desired change through design, in today's complex and uncertain environment (ibid). Schon (1984) also argued that design is a reflective practice, which is often taught through experiential learning where design learners are trained in methods and tools, developing a design mindset through an active learning setup (Wetter-Edman & Malmberg, 2016). As Nelson and Stolterman (2012) assert, becoming a designer also means learning whether a design approach is appropriate or not in a given situation. This reflects the nature of design capability which requires continuous development in accordance with changing conditions, as the level of design expertise in relation to design knowledge and experience, which enable framing problems and combining situations in novel ways, are closely related to the accumulated amount of time spent on deliberate practice (Lawson & Dorst, 2005). Therefore, embedding design capability in local government as part of the organisation's design capabilities requires the establishment and development of the structures of design management, thus enabling design practice and continuously increasing the awareness of design value across the organisation.

Considering the meaning of design capability, embedding design capability into local government is not about simply bringing in design methods and tools. It is also about encouraging organisations to use human-centred design as one of the key approaches to problem solving considering not only the needs of end users, but also those of all stakeholders. In other words, it is about adopting a new way of thinking and working which requires the acceptance of design methods and practices, roles, structures and processes, and environments (Meyer, 2011). As discussed earlier, Kootstra (2009) identified five key aspects to evaluate the level of design maturity in the organisation: awareness, planning, resources, expertise and process. These aspects represent the need for a structure and organisation-wide support to develop design capability as part of organisational capabilities.

The aspects of the three elements of the organisational design competence (see Table 9-20) are reorganised as follows:

<table>
<tr><th colspan="4">Aspects of an organisational design competence of a local government design capability</th></tr>
<tr><td rowspan="3">Researcher
Co-creator
Facilitator
Knowledge transferor
Learner
Project manager
Coordinator
Mediator
Advocate/ Booster
General user
His/her own previous role</td><td rowspan="3">Organisational design competence to support the individual roles identified</td><td>Ma</td><td>• Distributing design mindset across organisation
• Adjusting design process and tools to changing internal and external environment
• Training internal employees to develop and maintain design knowledge and practice
• Sharing ongoing projects and success stories to promote and build trust
• Securing and mobilising internal and external designers
• Securing and allocating budget to support design activities
• Securing and managing facilities and equipment for supporting design activities
• Developing design management process to effectively apply design practices
• Hiring external experts on a project by project basis
• Aligning the design management process with organisation’s innovation or change management process</td></tr>
<tr><td>Mi</td><td>• Tolerance for uncertainty and an open mind on ambiguity
• Belief that all people are creative and experts from their own experience
• Trust in the value of design approaches</td></tr>
<tr><td>L</td><td>• Creating vision and sharing it
• Setting up a design initiative
• Supporting and sponsoring design initiatives and all employees</td></tr>
<tr><td colspan="2">Ma: management</td><td>Mi: mindset</td><td>L: leadership</td></tr>
</table>

Table 9-20 A The aspects of organisational design competences to support the individual and organisational roles

9.3.3.5 Design management

As Meyer (2011) argues, embedding design capability is about adopting new ways of thinking and working which requires management support. This includes the formation of a structure to provide employees with the necessary training and keep to distributing the design mindset across the organisation. This will raise the awareness of the value of a design approach in understanding residents, identifying their needs and creating ideas to solve problems from their perspectives. It also entails adjusting design processes and tools to their own context and changing the internal and external environments. Therefore, it is an important part of design management to share ongoing

projects and success stories with internal and external people to promote and build trust in design. More importantly, it requires securing and mobilising internal and external design resources and securing and allocating budget to support various design activities and secure and manage necessary facilities and equipment for supporting design activities. Furthermore, it is important to align the design management process with organisation's innovation or change management process to make synergy and embed design capability effectively.

Terrey (2009) argues that developing a strategy to build design capability is one element of the organisation design since it inevitably entails the establishment and connection of various multidisciplinary design units or teams which encourage the awareness of design and the use of design within the organisations. This, in turn, provides organisations with ability to share, teach, and learn new knowledge (Terrey, 2009). Therefore, it is critical to establish an organisation's framework of building design capability describing the roles and types of work necessary to carry them out and the processes for doing them.

As discussed earlier, developing design capability requires the development of organisational design competence, such as the establishment of design units to stimulate its use, because design emerges when people start to apply design approaches to their day-to-day jobs and projects. The application of design into everyday work provides a steady stream of opportunity for design interventions (Nelson & Stolterman, 2012) and thus plays a key role in developing organisational design capability. However, as discussed earlier, organisational design capability is the social collectives reflecting the attitude of a group of individual designers, which means that developing the individual's design competence is necessary to foster an organisational design culture. Therefore, developing both individual and organisational competence together and balancing them by adjusting to local government context is crucial in embedding design capability in local governments.

9.3.3.6 Design mindset

Lawson and Dorst (2013) argued that designing practical solutions requires tolerance for uncertainty, working with incomplete information, and the ability to use imagination and visualisation skills as a means of problem solving. Likewise, accommodating design approaches as an alternative to traditional waterfall ways of working in local government requires an open mind on ambiguity, a belief that all people are creative and experts in their own area, and trust in the value of design approaches. However, as shown in the case study results, there are cultural obstacles to accepting design as a new approach, resulting from the fear of change and risk aversion among public servants which has been influenced by organisational culture. Therefore, it is important to raise the awareness of design and the opportunities of being exposed to design practice across the organisation to nurture the design mindset and thus drive cultural and behavioural change in order to successfully apply a design approach and develop design capability in local governments.

However, this cultural change in organisations and mindset change of individuals within them are largely dependent on the leadership due to the limitations of external interventions (Wrigley & Bucolo, 2012).

9.3.3.7 Design leadership

As Wrigley and Bucolo (2012) maintained, the change of organisational culture and mindset of the individual essentially requires leadership as it plays an important role in guiding the entire organisation by creating a vision and sharing it. Design leadership is also important since it makes the ideas to be implemented into reality by allocating budget and the necessary resources Muenjohn et al. (2013).

9.4 Characteristics of Embedding Design Capability in Local Governments

Local governments are public sector organisations in England which have specific purposes within the establishment. They are responsible for offering statutory services, enhancing local economic growth, as well as designing and delivering public services to the residents in their local areas either in partnership with third parties or by themselves (National Audit Office, 2017). These services are distinct from those offered by central government. Local councils have a different organisational structure compared to private sector organisations, in order to fulfil these unique responsibilities. Although, they are independent authorities having their own governance, they still function under the control of the central government through its policies and funding. They consist of two different groups; hired council officers working to ensure the delivery of government policies and services, and elected councillors representing their local communities who play a bridging role between councils and local communities. These specific structural and contextual situations have created a unique context which affects how local governments apply design approaches and embed design capability.

The results of the case studies in this research reveal a few unique characteristics which emerged over the journey of embedding design capability in the local government context. These features include the interdependent relationship between the designers and public servants (as main actors of embedding design capability), the level of design-readiness of the local government on the public sector design ladder, and the locus of the application of the design approach.

9.4.1 The Interdependence of the Relationship between Designers and Public Servants

The case study results showed what roles designers and public servants have played in applying design approaches and embedding design capability in each council under the different modes of DIM.

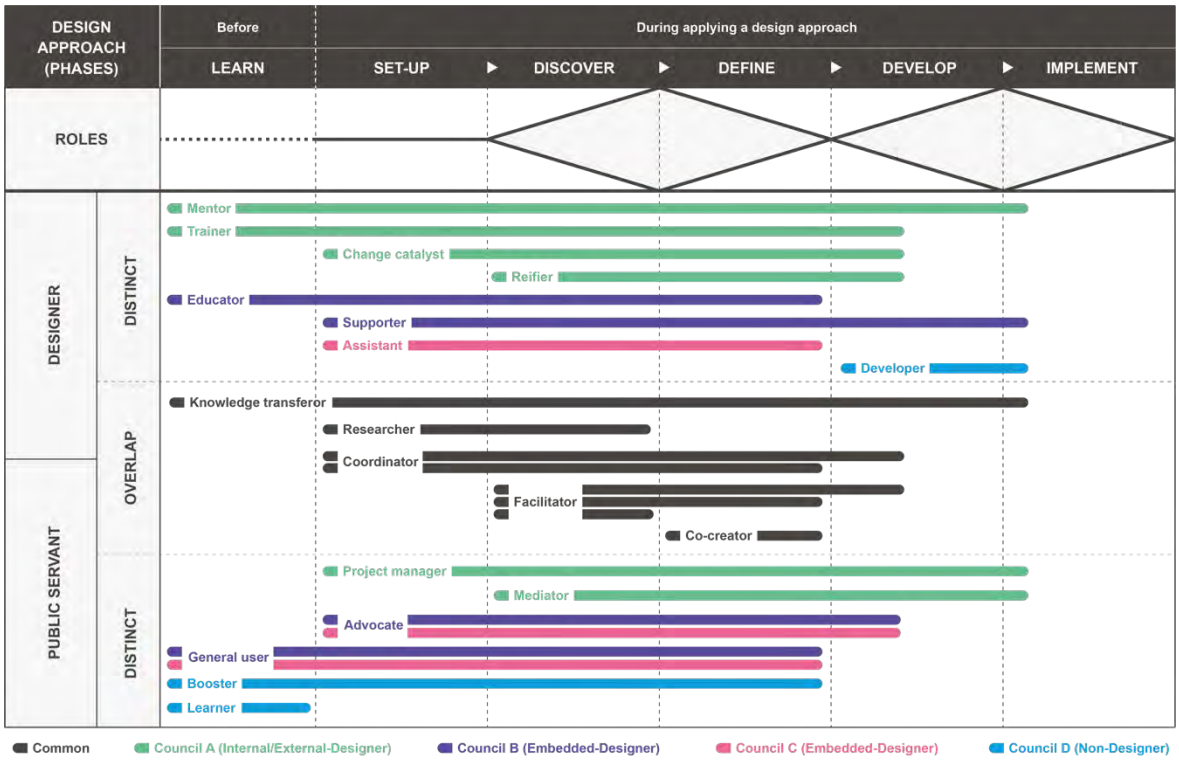


Figure 9-2 Role of designers and public servants in embedding design capability in local governments

Figure 9-2 charts every role of both the designers and public servants identified from the case studies on the common phases of design approaches (see Figure 2-12). The 'learn' phase was added after the literature review and put before the common design development process on the chart. The development process consists of five phases: Set-up; Discover; Define; Develop; and Implement. The different coloured bars on the chart correspond to Councils A, B, C and D, and the length of the bars indicates the span of each role during the process of applying a design approach and embedding design capability. The position and the span of each role were identified through the case studies of the four local councils

The chart above synthesises the case study results and shows the characteristics of the application and embeddedness of design capability in local governments in relation to the role of designers and public servants as main actors for applying and embedding design capability in four councils in England. There are both distinct roles of the designers and public servants respectively and overlap between them. Although gaps still exist the between the level and range of work that different designers or public servants, under the different DIM, can cover in the same roles with the same title,

depending on their knowledge and experience of the design practice. However, this chart clearly displays the interdependent and complementary relationships between designers and public servants in applying and embedding design capability in local governments. For example, the public servants in Council A play the role of project manager and mediator while the designers are working as change catalysts in order to ensure the progress of the project and deal with any conflicts or resistance as they emerge throughout the project. While the public servants in Council B try to learn and apply a design approach to develop their services, designers provide necessary service redesign training sessions. This aspect presents the importance of the collaboration between designers and public servants in the successful application and thus embeddedness of design capability in local governments.

9.4.2 Design Approach as a Capability to Deal with Change and Develop Services

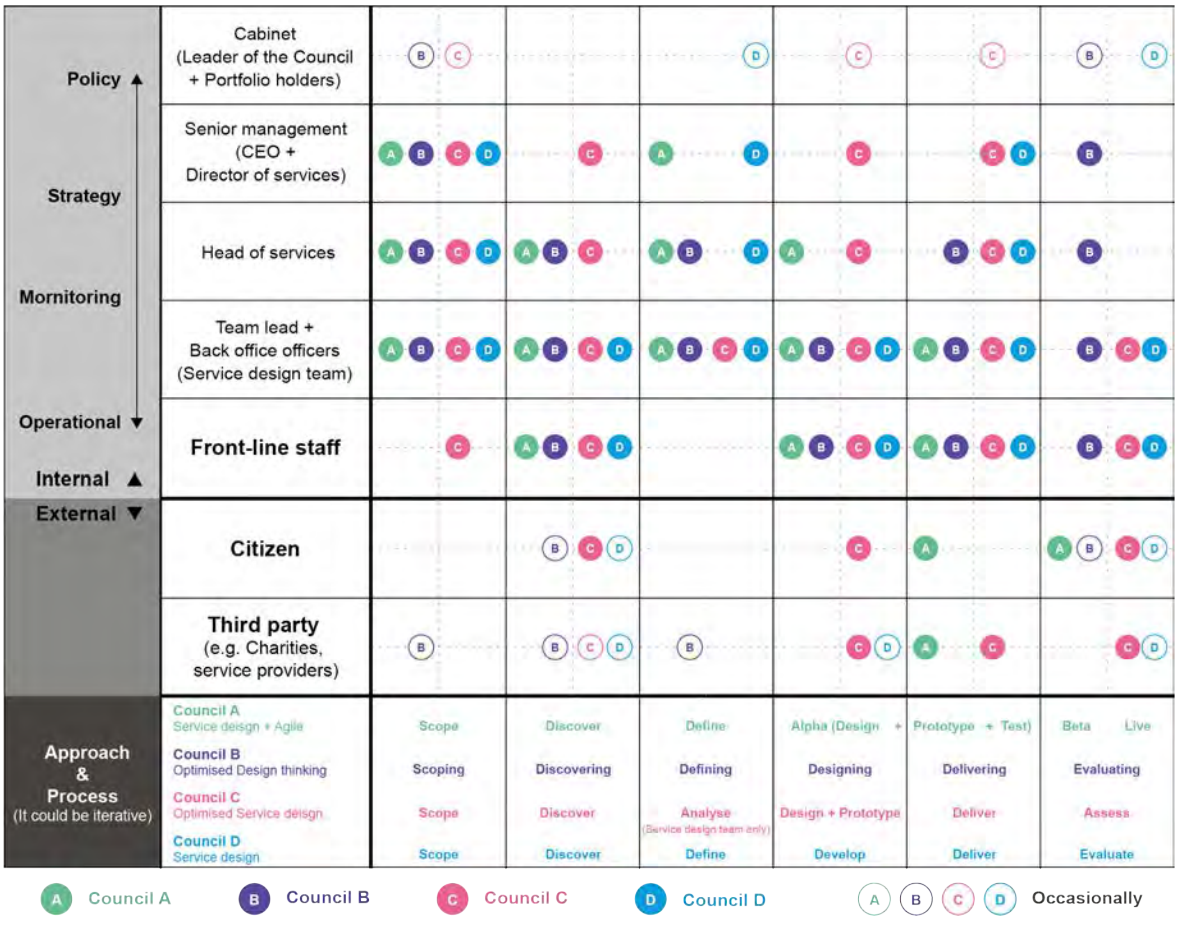


Figure 9-3 The level of involvement in the service development process of Councils A, B, C, and D

The level of involvement of the internal officers and external stakeholders in Councils A, B, C, and D, over their typical process of service design development were all marked on the template which

displays the hierarchy of the local council in the UK (Figure 9-3). This is one of the outcomes from the face-to-face interviews with public servants from the four councils. Some of the interviewees were asked to complete a form (see Figure 3-4 and refer to Section 3.3.1.2) during the interview as a way to describe what kinds of design approach they apply, what processes they follow, and who is involved in which phase of the process.

When looking at the 'level of involvement in the service development process' in the four local councils, the participation of the cabinet is still very limited and rare. Similarly, there was little involvement in the 'discover' phase which is a crucial part in the process as it helps to understand what residents find problematic and identify what they need. This infrequent involvement of elected councillors during the design development process can indicate that the four local councils in England are now at the second step of the 'Public Sector Design Ladder' (Figure 9-4). This means the four councils consider design as capability.

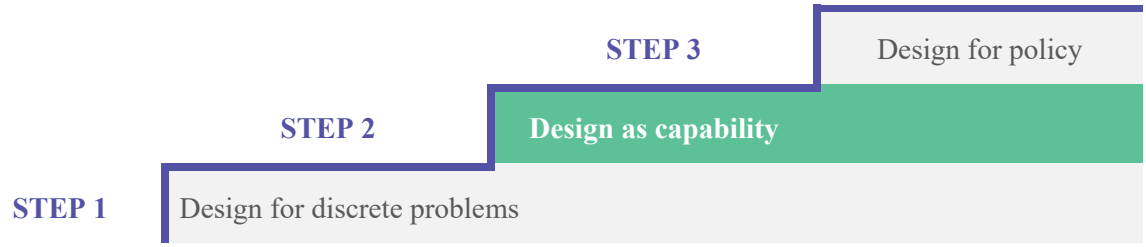


Figure 9-4 Public Sector Design Ladder (McNabola et al., 2013)

The results of the case study show that the councils apply design approaches to develop services based on the better understanding of users' perspectives, by using design tools and methods. They also found it useful to apply design approaches in their organisations as not only does the approach help them to identify needs and create ideas, but it also allows the organisations to deal with changes collectively by trying to engage more employees in the process through co-design workshops. These workshops give the participants a chance to hear residents' voices, see duplications between the services, and talk about problems and possible solutions together.

9.4.3 Internal Collaborations as the Locus of the Application of a Design Approach

The synthesis of the level of involvement in the service development process of the four local councils also presents the limitations of the councils in applying design approaches. Although they often publicly say they have adopted and applied a design approach to better understand residents' needs and create better services to meet these needs, the actual involvement of citizens during the service development process is rare (see Figure 9-5). The participation of citizens is limited although they are usually invited for the test. Although some of the councils conduct field research to listen to

their citizens' voices in person, it is unusual to see actual participation by citizens in the co-design process in the context of local government.

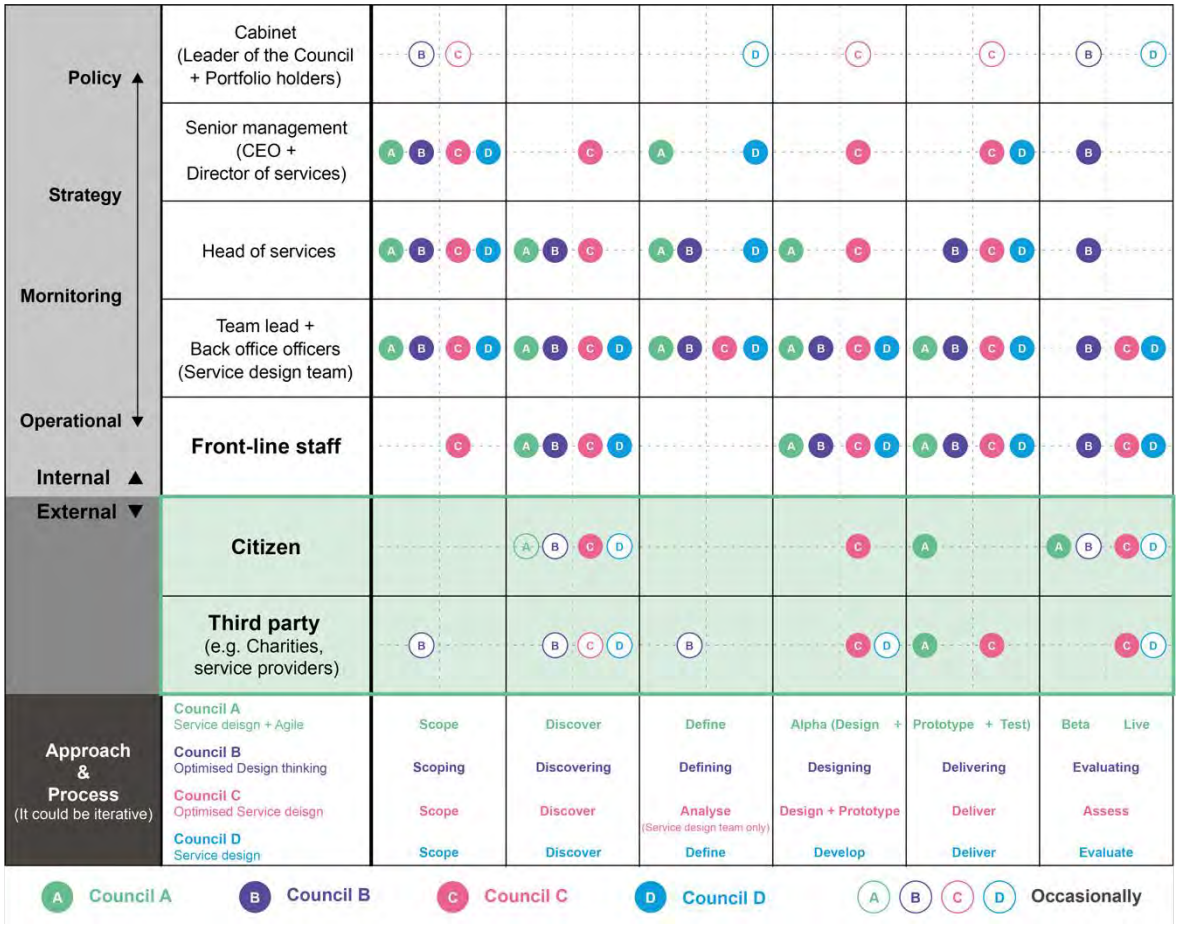
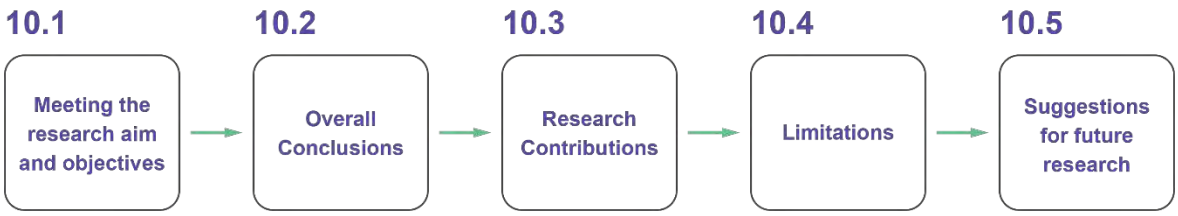


Figure 9-5 Limited participation of citizens in the service development process of Councils A, B, C, and D

The limited participation of citizens in the process of service design development implies that the central purpose of the design approach within local councils is for effective internal collaborations which aim to gain an agreement for change and create ideas for a solution that internal people can agree with, rather than sincerely come up with citizen-centred solutions that perfectly deal with problems that citizens face. Nonetheless, the application of a design approach with limited participation from citizens and senior level officers is still valuable at least in understanding problems and residents' needs and building common ground between people in charge. As the report – Whole Pace Community Budgets: A Review of the Potential for Aggregation – published by Ernst & Young LLP (2013) presented about the benefit of a collaborative approach to service delivery in achieving financial savings, the collaborative aspect of design approach can also contribute to the reduction of costs and time needed in design and delivery services, by aligning different divisions' or agencies' objectives, activities and resources in the context of local government.

CHAPTER - 10 CONCLUSION

Introduction



In this chapter, the key research findings will be restated with evidence that supports them. This will be done by linking them to research objectives in order to summarise the study and remind the reader of the contributions to knowledge and the values of this study. Research limitations will be also presented with the future research suggestions.

10.1 Meeting the Research Aims and Objectives

The purpose of this study is to develop better understanding of the growing application of design approaches and embeddedness of design capability in local governments as an alternative way of developing service and dealing with organisational change and innovation.

This thesis, therefore, investigated how design approaches are applied, and how design capability is embedded as part of organisational capabilities, and what roles designers and public servants are playing and can play in embedding design capability. This was achieved by exploring the different journeys of four local councils in England which adopted different types of design intervention model towards embedding design capability under the nation-wide austerity programme. Through this, the study aimed to identify the value of design approaches in the local government context, building on the understanding of why and how local governments try to apply and embed design capability. It also aimed to articulate the role of designers and public servants as the main actors for applying design approaches and embedding design capability. Throughout the quest, this thesis dealt with the following key research question and sub questions with five objectives established.

- **Key research question:**

How is design capability embedded in local governments as part of organisational capabilities?

- **Research sub-questions:**

1) Why do local governments try to use and embed design capability?
2) What roles can designers and public servants play in embedding design capability?

- **Research objectives**

1) To understand what local governments in the UK do and how they work.
2) To critically review literature on design for public service innovation and design capability in order to develop a conceptual framework for applying and embedding design capability.
3) To investigate why local governments in England try to apply and embed design capability, and how they do it.
4) To identify determining factors which influence the application and embeddedness of design capability in local government.
5) To identify the role of designers and public servants as main actors in facilitating the application and embeddedness of design capability in the local government context.

In the following paragraphs, the summary of how the research objectives were achieved throughout the thesis will be described as part of the conclusion to this study.

- **Objective 1: To understand what local governments in the UK do and how they work**

This objective was established to develop a background knowledge about local government in England, such as their structure, governance, services, financial and political aspects, before exploring the research problems, as the topic of this research was very context specific. Various sources were collected and reviewed, including academic journal papers, central and local government reports and the local governments' websites. As a result, a general structure of local government was created (see Table 2-2) which displays the positions and roles of the different levels of hired officer. Moreover, a template to identify the typical design approach process and the range of stakeholder involvement of councils was created, building on the general structure of the local government.

Please refer to Chapter 2.

- **Objective 2: To critically review literature on design for public service innovation and design capability in order to develop a conceptual framework for applying and embedding design capability**

Although the focus of this study was in the design field, the context of this study required an interdisciplinary literature review in order to address the problems of this research. There needed to be an understanding of how people in public sector organisations, particularly local government in England, understand and perceive design approaches and the designerly way of working. And how they perceive the benefits of the application of these approaches in developing existing services or creating new ones. An extensive literature review was conducted including a wide-range of material relating to local government, public service innovation, design-led approaches to service innovation, design capability building and organisational learning. As a result of the critical literature review, the concept of design capability was discussed and defined as an organisation's perception of design and their practical ability to be able to access and mobilise relevant design resources to address challenges and create value. The value of design approaches to service innovation in the public sector and the general role of the designer were identified. Moreover, the conceptual framework was created to identify the elements of design capability in local governments and organise them through a multiple-case study. Please see Table 2-19 in Chapter 2 and Section 9.3.3 in Chapter 9.

- **Objective 3: To investigate why local governments in England try to apply and embed design capability, and how they do it**

To accomplish this research objective, a mix-method approach was chosen which included a preliminary survey and multiple-case study. Initially, a pilot survey and follow-up semi-structured interviews with public servants were carried out to get an overview of the application of design approaches and the embeddedness of design capability in real-life situations, particularly in the context of local councils in England. Two types of online survey questionnaires for designers and local government public servants were developed using the online survey software, 'SoGoSurvey', and distributed as a scoping study. These were intended to briefly identify reasons for applying and embedding design capability and identify the factors affecting how they can drive service innovations and organisational transformation. Additionally, as the study did not have predetermined direction and cases, the scoping study was used to identify cases for further study. Consequently, four local councils were selected for case studies. The development procedures, final version of the survey questionnaire and the scoping study can be found in Chapter 3 and 4.

A multiple-case study approach was applied, including four local councils in England that adopted different types of the Design Intervention Model (DIM) to apply a design approach and embed design

capability. Each case study included a series of ethnographic workshop observations and interviews based on the conceptual framework. As a result of the case study, three distinct motivations for applying and embedding design capability and four values of the design approaches, which have drove local councils, were identified. Please refer to Chapter 5, 6, 7 and 8 for the specific findings of each case study and see Chapter 9 for discussion and interpretation of the issues.

- **Objective 4: To identify determining factors which influence the application and embeddedness of design capability in local government**

The results of the multiple-case study explored different ways of applying the design approach and embedding design capability by each local council respectively and identified their own specific reasons for, and ways of, applying and embedding design capability. Please see Chapters 5–8 for further details. The shared challenges, necessary and desirable conditions for successful application and embeddedness of design capability are discussed in Chapter 9. Additionally, the characteristics of embedding design capability in local governments in England are also presented and discussed in Chapter 9.

- **Objective 5: To identify the role of designers and public servants as main actors in facilitating the application and embeddedness of design capability in the local government context.**

The role of designers and non-designers was discussed, based on the primary data collection through case studies, including face-to-face in-depth interviews with service designers and public servants who were involving in the journey towards embedding design capability in local governments. Co-design workshop observations were also undertaken. The case studies, of each of the four councils using different modes of the Design Intervention Model, discussed and presented 19 roles, including common and distinct roles of the designers and public servants. Please see Chapters 5–9. These roles were brought together and discussed based on the conceptual framework to organise the elements of the individual and organisational design competences which constitute the organisational design capability. Please see Chapter 9.

10.2 Overall Conclusions

This study aimed to develop a better understanding of the application of a design approach as an alternative to how local governments traditionally develop and deliver their services to residents and to explore the embeddedness of design capability as part of local government's organisational

capabilities, particularly in an English context. The understanding included why local governments want to apply and embed design capability, what they want to do by embedding it, how they embed it, and importantly, what roles designers and public servants, as main actors for applying and embedding design capability, play and can play over the process.

In order to achieve the research aims, the concept of design capability was discussed based on the literature. The meaning of design capability in this study was defined as an organisation's perception on design and their practical ability to access and mobilise relevant individual and organisational design resources to address challenges and create value. The two dimensions of organisational design capability were created building on the Holistic Competence Model (HCM). The individual design competence includes four elements: Cognitive, Functional, Social and Meta. The organisational design competence contains three elements: Design management, Mind and Leadership. These two individual and organisational design competences constitute organisational design capability. Additionally, the essential components of the design approaches were organised based on the analysis of different types of design approach such as service design, design thinking, participatory design, co-design and an approach adapted from UK's Government Digital Service (GDS) team.

The conceptual framework was developed by converging the elements of organisational design capability and the process of the integrated version of the design approaches that represent the essential phases of design approaches. The conceptual framework was designed for the process of data collection and analysis while conducting case study research. The research applied interviews and observations as data collection methods in order to identify the aspects of the four elements of the individual's design competence and the three elements of the organisational design competence. Moreover, the reframed Design Intervention Model (DIM) was proposed as a result of a scoping study, which represents four recurring distinct ways of applying a design approach and embedding design capability depending on the position of design (a designer or a group of designers) in the organisation: Non-Designer; External Designer; Internal/External Designer; Embedded Designer.

This study carried out multiple case studies including four local councils in England chosen through the preliminary survey as a scoping study. Council A adopted the Internal/External Designer Model, Councils B and C used the Embedded Designer Model, while Council D chose the Non-Designer Model.

Multiple case studies identified the reasons for embedding design capability in the four councils respectively. Council A wanted to optimise how they modernised their existing services to save money and carry out the Discovery phase of Agile approach on their own by successfully embedding design capability as part of their organisational capabilities. Council B considered a design approach as an understandable and methodical approach to service development. They found it made sense and easy to use as a human-centred approach, which allows the people in the council to quickly identify and clarify residents' needs and develop Ideas to meet them. Council C wanted to come up

with ideas to meet residents' needs while saving money by accomplishing the embeddedness of design capability in the council. Council D expected to be able to encourage all levels of employees to be more engaged with the council innovation process and wanted to integrate design thinking into the council's commissioning cycle in order to better reflect resident's needs. All four of the councils commonly found a design approach useful as an easy to use, collaborative, relatively quick, and user-centred approach to service development. Moreover, three common motivations for the introduction and embeddedness of design capability were identified. Under pressure from residents demanding better services with lower costs and the governmental strategy of 'Digital by Default', all councils needed to digitise services, save money and increase revenue. They also had to develop their commissioning process, based on the design approach, to identify needs and problems more effectively and reflect them in the process of procurement development in the commissioning cycle. This was particularly pressing due to the financial crisis causing budget cuts from central government amid a nation-wide austerity programme,

In order to apply a design approach and embed design capability effectively, each council followed their own way by taking different modes of DIM.

Council A established a partnership with an external design agency by setting up a temporary joint team in a dedicated place to realise designerly way of working, the Internal/External Designer model. This took place inside the council so that both sides could learn by working together and thus exchange knowledge. The council found a small-medium size design agency who could transfer knowledge while carrying out the Discover process, with a relatively low cost, but with an aim to develop their own knowledge and experience in the public sector through the project. It was a win-win strategy.

Council B established an independent unit responsible for the distribution of the design mindset and approach. It would also provide support for the application of the design approach to other service teams in the council. They devised their own co-design workshop tools by adjusting existing design tools to fit the context of the council. They also provided support services on an on-demand basis. They met with teams and taught how to use the tools and apply the process to identify needs from residents' perspectives and create ideas rather than doing these jobs for them.

Council C established an inhouse service design team by hiring three service designers. As a service design team, they tried to follow the design approach and principles thoroughly, but it was always a challenge due to limited resources compared to the demand from service teams.

Council D set up a dedicated team made up of design champions to advocate the value of a design approach and were eager to apply it into their work and promote a design approach across the council. The Transformation and Change team in charge of the dissemination of a design mindset and approach provided people in the council with various opportunities to be exposed to a designerly way of working through regular basis lunchtime design training session and community-wide co-

design workshop where citizens and other external stakeholders were invited to participate. They also provided direct support to teams' internal co-designing process, mainly taking a facilitator's role.

Nineteen roles, including common and distinct roles, were identified from the multiple case studies. These showed the variety of ways that designers and public servants support the application of a design approach and embeddedness of design capability in local governments. The three shared roles of designers – Researcher; Co-creator; and Facilitator – recurred in the four case studies and present common areas in applying design approaches, as well as its intention. Moreover, these three roles were played by public servants in Councils A and D, which also indicates the main areas of applying design approaches in the local government context.

Considering Council A in the Internal/External Designer model, the relationships between designers and public servants, determined by the DIM, mainly defines the position of the designers as: Inhouse Designer; External Designer; and Coach. This condition holds true in other DIMs. This means that the relationship between the designers and public servants determined the role they took, since the relationship was formed following specific requests from either side (design agency or council) depending on the range or purpose of the projects and the phase of the process. The two distinct roles of designers in the Internal/External Designer model were Reifier and Change Catalyst. This means that the ability of designers to turn invisible things into tangible and visible ones and give them meaning are important and distinct strengths of designers, because the reifier's role is difficult to find among public servants. To be able to look at a problem with fresh eyes and drive change and catalyse innovation were also distinct roles for the external designers. Another common, necessary role which emerged in the process of embedding design capability from the four council was, apart for the three common roles explained earlier, the training and mentoring role. This means that the mentoring role which involves not only knowledge transfer, but also emotional support, is also required.

When defining the roles of designers and public servants another interesting aspect arose from the case study, which was one role distinct to the public servants, that of mediator. Public servants, not only in the joint team, but in any mode of the DIM need this role as they streamline communication between designers and the participants in co-design workshops. Furthermore, public servants sometimes manage conflicts, either between participants or between designers and participants based on their lived experience and their understanding of organisational culture. It is often considered a significant role both for the successful operation of co-design workshops and for the successful embeddedness of design capability in the local government context. This is because there are always knowledge gaps and cultural conflicts between public servants and designers that require an intermediary role.

These aspects show embedding design capability within and for local governments is a strategic choice for local governments aiming for a democratic decision-making during times of uncertainty.

Design approaches have a structured process enabling people in local government to holistically and systematically approach problems and solutions in a visible and relatively quick way based on residents' perspectives. It is worth noting, however, that in reality there is still a limit to residents' participation in the process.

The shared challenges, as well as the necessary and desirable conditions in applying a design approach and embedding design capability were identified and the characteristics of embedding design capability in local governments, particularly in England, were also articulated. They will help both designers and public servants to apply and embed design capability as sources to refer to before and during the journey towards embedding design capability in local governments.

10.3 Research Contributions

As the title of this thesis – *Embedding design in local government* – shows, this study had ambition. The application of design approaches let alone embedding design capability, in public sector organisations is not an easy task because of the inherent complex issues to be tackled to realise the integration of design capability in the process of innovation or management. Embedding design capability within and for local governments requires not only the consistent effort of a dedicated team, but also long-term support from a senior level and awareness of the value of design across the organisation. Moreover, it is important to overcome the fear of change and the attitude of risk aversion prevalent within local governments which hinders people adopting and applying design approaches to their everyday tasks. In short, embedding design capability in local governments is demanding work necessary to develop organisational design competences, as well as individual design competence. Therefore, it is crucial for local governments to understand and find a suitable way not only to allow their employees to effectively learn how to use a design approach as an alternative approach to the traditional way of service development and delivery, but also set up a structure and a support system that enable effective application of design approaches and mobilisation of organisational resources for a successful application and embeddedness of design capability.

This research shares the overviews and insights into how design approaches can help local councils change their organisations and innovate their services in a more agile, democratic and collaborative way. However, it does not mean that this research covers everything in the successful journey towards employing design capability in local governments. Through the research findings and outcomes, this study made several contributions to knowledge and practice in relation to design for public sector innovation, especially in developing and embedding design capability within and for local governments.

First of all, this study proposes a conceptual framework as a structure and guide to identify and organise design capability in local government, by considering local government design capability as a combination of individual and organisational design competences. The individual design competence was divided into four elements including cognitive and functional, and social and meta competences, respectively, building on the Human Competence Model (HCM); the organisational design competence was divided into three elements: Management; Mindset; Leadership. The framework not only includes the different elements of a local government design capability, but also presents the process of service design development based on literature review of various types of design approaches, organisational capability and design capability. It was developed to complement the limitation of the previous perspectives on what design capability means in the context of local government, and helps to investigate how each local council tries to apply design approaches and embed design capability as part of organisational capabilities.

Secondly, it presents the reasons why local governments are trying to embed design capability and how they are actually applying design approaches for service innovation or organisational change through a multiple case study. The Design Intervention Model (DIM) was adopted and adapted as a way of framing case studies, and four local councils were selected depending on the DIM. Over the journey to investigate how design approaches are applied and how design capability is embedded in local government, the different intentions and ways of applying and embedding design capability were identified respectively. This was carried out through a multiple case study approach based on the analysis of empirical data collected through interviews and ethnographic observations in real-life situations of four local councils.

Thirdly, it also identified challenges, necessary and desirable conditions, as enablers and barriers to the application and embeddedness of design capability as part an organisation's capabilities. The different routes to applying design approaches and embedding design capability in local governments, and unique features which emerged over the journeys depending on the DIM, were also identified. Although this PhD research study did not set out to determine which is the best DIM or which is the most efficient journey from the multiple case studies, it gives a better understanding of the different nature and conditions of design approaches to service innovation and organisational change in the context of local government. This includes enablers and barriers to embedding design capability to design practitioners regardless of whether they are designers or public servants or their level of speciality in design. It is expected to help elected councillors and the different levels of public servants in local government to understand different types of DIM and the necessary and desirable conditions for embedding design capability so that they can consider which type will be most suitable for their conditions and situation. It will also help them to prepare to embark on that long-term journey towards embedding design capability within their organisations with the understanding of and preparation for latent challenges.

Lastly, but not least, the roles of designers and public servants as main actors in applying design approaches and embedding design capability were expounded. The border between traditional design disciplines is becoming blurry and the role of design and the way designers work is getting increased attention as a driver to innovation in the public sector. Therefore, it is crucial for people who want to work as designers to have a better understanding of newly emerged areas in the design field and to learn how to create specific design solutions for them. This research clearly shows this changing and expanding role of designers and what they need to know and learn to tackle newly emerging complex problems. Therefore, not only the outcomes of the research, but also the process of this study, enable design practitioners and public servants, who are planning to apply design-led approaches within and for local governments, to better understand the contextual factors and actually see how design approaches that support collaborative identification of problems and user needs, as well as the development of ideas, can help local councils innovate their services and change their organisations.

10.4 Research Limitations

Despite the value of this study and original contributions to knowledge and practice, there were a few research limitations that existed when planning the research and throughout it.

One of the main limitations of this study which was inherent in the research was in the collection of data. The response rate of the preliminary survey for a scoping study, which was used to classify different types of Design Intervention Model (DIM), was around 9.5%. This means there may be more types of DIM which were not identified from the scoping study.

Another main limitation was also related to recruitment and data collection. It was to find the right cases and gain permission from them to carry out the research. Although four local councils were finally selected, it took a relatively long time to recruit them when considering the total PhD research time scale. Moreover, carrying out four case studies including empirical data collection and analysis at the same time was not an easy task. Managing time and gaining agreement to participate in the co-design workshop were particularly difficult. Because of these issues, there was imbalance of the amount of data collected from the four local councils. This quantitative difference in primary data collected from interviews and observations may have affected the research findings. In order to overcome this issue, this study collected archival data as a complementary data source. However, it was still a limitation to this study.

For the future research, it is recommended that the use of online and offline networks to find people working for local governments or for design agencies who are developing projects for design capability in public sector organisations. These people could help act as a gatekeeper by allowing access to their meetings or work and help build relationships within local government. There was

also a language barrier, as an international PhD researcher using English as a second language, there were definite constraints in the interpretation of data. The findings of this research have not been discussed with the interviewees and designers from the case studies or other experts to validate the quality of them.

10.5 Suggestions for Future Research

The research findings and outcomes of this study will, in turn, support not only local governments but also other organisations in the public sector to develop their internal design capabilities and thus, help them to facilitate service innovation and organisational transformation. Therefore, expanded research, including other public sector organisations could be carried out to further develop the theoretical and practical framework or model of applying and embedding design capability for public sector innovation. This could include service innovation and organisational change and transformation which can reflect different conditions and contextual factors in public sector organisations in developing their internal design capability. Moreover, it is necessary to conduct further research that aims to develop evaluation tools to allow design practitioners or public servants to check the conditions and the levels of readiness of applying and embedding design capability, as well as the progress of the embeddedness of design capability. Evaluation research which applies the findings of this study can be conducted not only to evaluate and justify the outcomes of this study but also to develop them and consolidate the outcomes so that people in the design community, academia and public sector organisation can benefit from them.

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APPENDICES

Appendix A. Selected literature through advanced search to understand design capability

Journal	Selected literature
Design Issues	Nusem, E., Wrigley, C., & Matthews, J. (2017). Developing design capability in non-profit organizations. Design Issues, 33(1), 61-75. Dong, A. (2008). The policy of design: A capabilities approach. Design Issues, 24(4), 76-87. Manzini, E. (2016). Design culture and dialogic design. Design Issues, 32(1), 52-59. Body, J. (2008). Design in the Australian taxation office. Design Issues, 24(1), 55-67. Steen, M. (2013). Co-design as a process of joint inquiry and imagination. Design Issues, 29(2), 16-28. Buchanan, R. (2008). Introduction: design and organizational change. Wilson, S., & Zamberlan, L. (2015). Design for an Unknown Future: Amplified Roles for Collaboration, New Design Knowledge, and Creativity. Design Issues, 31(2), 3-15. Narvaez, L. M. J. (2000). Design's own knowledge. Design issues, 16(1), 36-51. Buchanan, R. (2001). Design research and the new learning. Design issues, 17(4), 3-23.
Design Studies	Mutanen, U. M. (2008). Developing organisational design capability in a Finland-based engineering corporation: the case of Metso. Design Studies, 29(5), 500-520. Dong, A., Sarkar, S., Nichols, C., & Kvan, T. (2013). The capability approach as a framework for the assessment of policies toward civic engagement in design. Design Studies, 34(3), 326-344.
CoDesign	Hillgren, P. A., Seravalli, A., & Emilson, A. (2011). Prototyping and infrastructuring in design for social innovation. CoDesign, 7(3-4), 169-183. Huybrechts, L., Benesch, H., & Geib, J. (2017). Institutioning: Participatory design, co-design and the public realm. CoDesign, 13(3), 148-159. Feast, L. (2012). Professional perspectives on collaborative design work. CoDesign, 8(4), 215-230. Drain, A., Shekar, A., & Grigg, N. (2018). Insights, Solutions and Empowerment: a framework for evaluating participatory design. CoDesign, 1-21. Kleinsmann, M., Valkenburg, R., & Buijs, J. (2007). Why do (n't) actors in collaborative design understand each other? An empirical study towards a better understanding of collaborative design. CoDesign, 3(1), 59-73. Smeenk, W., Sturm, J., Terken, J., & Eggen, B. (2018). A systematic validation of the Empathic Handover approach guided by five factors that foster empathy in design. CoDesign, 1-21. Dykes, T. H., Rodgers, P. A., & Smyth, M. (2009). Towards a new disciplinary framework for contemporary creative design practice. CoDesign, 5(2), 99-116. Manzini, E., & Rizzo, F. (2011). Small projects/large changes: Participatory design as an open participated process. CoDesign, 7(3-4), 199-215. Poulsen, S. B., & Thøgersen, U. (2011). Embodied design thinking: a phenomenological perspective. CoDesign, 7(1), 29-44. Bowen, S., McSeveny, K., Lockley, E., Wolstenholme, D., Cobb, M., & Dearden, A. (2013). How was it for you? Experiences of participatory design in the UK health service. CoDesign, 9(4), 230-246. Kimbell, L., & Bailey, J. (2017). Prototyping and the new spirit of policy-making. CoDesign, 13(3), 214-226.

Appendix B. Service expenditure net of sales, fees and charges and of other income, 2014-15 to provisional 2018-19, real term (MHCLG, 2019, p4)

Table 1b. Service expenditure net of sales, fees and charges and of other income [a], 2014-15 to Provisional 2018-19 (real terms)

£ million - adjusted for inflation, in 2018-19 prices [b]	2014-15	2015-16	2016-17	2017-18	*2018-19*
Education [c]	36,927	36,271	34,680	32,856	32,229
Highways and transport	4,860	4,602	4,169	4,071	3,854
Social care [d]	24,192	24,121	24,300	24,607	25,461
of which: Children's Social Care	8,666	8,822	8,806	8,996	9,348
Public Health [e]	2,931	3,349	3,615	3,427	3,284
Housing (excluding Housing Revenue Account)	1,983	1,709	1,567	1,564	1,675
Cultural, environmental and planning	9,548	9,242	8,773	8,445	8,399
Police	11,662	11,616	11,479	11,370	11,426
Fire & rescue	2,190	2,108	2,037	2,009	2,005
Central services	3,285	3,211	3,282	3,122	3,006
Other Services	98	74	58	-20	58
Total Service Expenditure	**97,677**	**96,302**	**93,960**	**91,450**	**91,396**
% Difference Year-on-year	-1.9%	-1.4%	-2.4%	-2.7%	-0.1%
Total Service Expenditure excluding Education [f]	**60,751**	**60,032**	**59,280**	**58,594**	**59,168**
	0.1%	-1.2%	-1.3%	-1.2%	1.0%
Total Service Expenditure excluding Education & Public Health [f]	**57,820**	**56,682**	**55,664**	**55,166**	**55,884**
	-0.2%	-2.0%	-1.8%	-0.9%	1.3%
Revenue Expenditure	**102,758**	**100,441**	**97,205**	**94,812**	**94,203**
% Difference Year-on-year	-1.8%	-2.3%	-3.2%	-2.5%	-0.6%

Source: Revenue Outturn returns from England local authorities

(a) Other income includes, for example, significant funding for Adult Social Care from the NHS such as via Better Care Fund pooled budgets.

(b) All figures have been adjusted for inflation using the GDP deflator. www.gov.uk/government/collections/gdp-deflators-at-market-prices-and-money-gdp

(c) Education services spend by local authorities, this is not comparable over time due to schools converting to academies and thus becoming directly funded

(d) Adult Social Care is not shown separately since figures are available without the exclusions noted in NHS Digital's Adult Social Care - Activity and Finance Report (https://digital.nhs.uk/data-and-information/publications/statistical/adult-social-care-activity-and-finance-report/2017-18 published 23 October 2018)

(e) The Health and Social Care Act 2012 transferred substantial duties to local authorities from 2013-14 to protect and improve the public's health. Responsibility and funding for Children's public health transferred to local authorities on 1 October 2015

(f) Education and public health spend are excluded to provide a fairer year-on-year comparison. In the case of education services spend by local authorities, this is not comparable over time due to schools converting to academies and thus becoming directly funded. As noted, there were changes in responsibility for Public Health over the period

Appendix C. Summary of local authority income 2014-15 to 2018-19 Summary of local authority income 2014-15 to 2018-19 (MHCLG, 2020, p12)

Table 2.1a: Summary of local authority income: 2014-15 to 2018-19

£ million

	2014-15	2015-16	2016-17	2017-18	2018-19
Grant income:					
Revenue Support Grant [a]	12,675	9,520	7,188	3,978	1,379
Police Grant [a]	7,784	7,423	7,387	7,114	7,125
Specific and special grants inside Aggregate External Finance (AEF)	40,805	40,119	39,218	39,330	39,549
Local Services Support Grant (LSSG)	48	29	19	35	22
Grants outside AEF [b]	18,655	18,296	21,608	20,478	19,127
Housing subsidy [c]	-692	-734	-767	-776	-733
Grants towards capital expenditure	9,760	10,863	10,184	8,109	9,115
Total grant income	**89,035**	**85,516**	**84,838**	**78,268**	**75,585**
Locally-funded income:					
Council tax [d]	23,964	24,734	26,083	27,641	29,563
Retained Income from Rate Retention Scheme [a]	11,331	11,855	11,735	15,162	17,973
External interest receipts	865	1,047	1,088	1,169	1,507
Capital receipts[e]	1,879	2,196	2,327	2,769	3,160
Sales, fees and charges [f]	11,741	11,666	12,103	12,732	13,181
Council rents	7,439	7,468	7,110	7,010	7,154
Total locally-funded income	**57,218**	**58,966**	**60,445**	**66,483**	**72,539**
Other income and adjustments [g]	18,469	19,390	18,305	19,511	19,553
Total income	**164,722**	**163,871**	**163,588**	**164,262**	**167,676**
Grants as a percentage of total income	54%	52%	52%	48%	45%

Sources: Revenue Outturn (RO) returns and Capital Outturn Returns (COR), 2014-15 to 2018-19

(a) Since 2013-14 there were changes to the Department's Local Government Finance Settlement policy. This affects the figures for Revenue Support Grant, Police Grant and Non-domestic rates.

(b) Excludes council tax benefit subsidy and rent rebates granted to HRA tenants.

(c) Housing Subsidy includes 'Government grants and assistance (including downward adjustments)' less Transfers to the General Fund Revenue Account (GFRA) and Major Repairs Reserve (MRR). These are all recorded in the Housing Revenue Account (HRA) in RO4

(d) Includes council taxes financed from Council Tax Benefit Grant but excludes council taxes financed from local authority contributions to council tax benefit.

(e) Capital receipts used to finance capital expenditure. Circa £100m 'Capital receipts used to finance revenue expenditure under receipts flexibility' in 2016-17 not included

(f) Since 2014-15 Sales, Fees and Charges from the Trading account are no longer recorded. For 2014-15 onwards this figure excludes the any sales, fees and charges from the trading accounts.

(g) Other income and adjustments includes 'Other Income' from the Services areas, 'Other Items' (surpluses/deficits from the collection fund), 'Inter-authority reorganisation recoupment', HRA leaseholder charges and 'other contributions toward expenditure' in the Housing Revenue Account. Prior to 2014-15 this also in included other income in the Trading Accounts, this was not recorded for 2014-15 onwards.
To avoid double counting, 'levies and recharges from other accounts' recorded in the RO6 are removed from this. Before 2014-15 receipts from other authorities were also excluded but this figure is no longer regularly collected as part of the SAR return.

Appendix D. Different ways of defining an organisation's ability to apply design

Term	Literature
Design (Thinking) capability,	Malmberg, L. (2017). *Building Design Capability in the Public Sector: Expanding the Horizons of Development* (Vol. 1831). Linköping University Electronic Press. De Paula, D., Dobrigkeit, F., & Cormican, K. (2018). DESIGN THINKING CAPABILITY MODEL (DTCM): A FRAMEWORK TO MAP OUT DESIGN THINKING CAPACITY IN BUSINESS ORGANISATIONS. In *DS92: Proceedings of the DESIGN 2018 15th International Design Conference* (pp. 557-566). Body, J. (2008). Design in the Australian taxation office. *Design Issues*, *24*(1), 55-67. LIN, Jhen-Yi. (2014). Design Capabilities in the Public Sector. In *The 19th DMI International Design Management Research Conference* (pp.2364-2381). DMI. Saviranta, L., & Elorante, E. M. (2015). Transforming organizations–Linking Design Practices to Managing Organizational Capabilities| Transformando organizações–Vinculando práticas de design para gerenciar as capacidades organizacionais. *Revista D.: Design, Educação, Sociedade e Sustentabilidade.*, *7*(2), 1-5. Boland, R. (2004). *Managing as designing* (pp. 164-168). F. Collopy (Ed.). Redwood City, CA: Stanford University Press. Mutanen, U. M. (2008). Developing organisational design capability in a Finland-based engineering corporation: the case of Metso. *Design Studies*, *29*(5), 500-520. Howard, Z., Senova, M., & Melles, G. (2015). Exploring the role of mindset in design thinking: Implications for capability development and practice. *Journal of Design, Business & Society*, *1*(2), 183-202.
Design capacity	Storvang, P., Jensen, S., & Christensen, P. R. (2014). Innovation through Design: A Framework for Design Capacity in a Danish Context. *Design Management Journal*, *9*(1), 9-22. Hesselmann, S., & Walters, A. T. (2013). A critical assessment of the design management staircase model factor. In *Cambridge Academic Design Management Conference* (Vol. 2, pp. 47-60).
Design competencies	Vazirani, N. (2010). Review paper: competencies and competency model–a brief overview of its development and application. *SIES Journal of management*, *7*(1), 121-131. Fass, J., Chui, M. L., & Rutgers, J. (2018). Using Design Competencies to Define Curricula and Support Learners.
Design readiness	Bailey, S. G. (2012, February). Embedding service design: the long and the short of it. In *ServDes. 2012 Conference Proceedings Co-Creating Services; The 3rd Service Design and Service Innovation Conference; 8-10 February; Espoo; Finland* (pp. 31-41). Linköping University Electronic Press, Linköpings universitet.
Design maturity	Westcott, M., Sato, S., Mrazek, D., Wallace, R., Vanka, S., Bilson, C., & Hardin, D. (2013). The DMI design value scorecard: A new design measurement and management model. *Design Management Review*, *24*(4), 10-16. Fraser, P, Moultrie, J and Hodway, R (June 2001) Exploratory studies of a proposed design maturity model, in Paper presented at the Presented at: 8th international Product Development Management Conference, Twente, Holland pp 11e12
Design-minded	Lockwood, T. (2009). Transition: How to become a more design-minded organization. *Design Management Review*, *20*(3), 28-37.
Culture of design (Design attitude)	Michlewski, K. (2008). Uncovering design attitude: Inside the culture of designers. Organization studies, 29(3), 373-392. McLean, K., Scully, J., & Tergas, L. (2008). Inland revenue New Zealand: Service design in a regulatory context. *Design Management Review*, *19*(1), 28-37.

Appendix E. Case study protocol

<table>
<tr><th colspan="2">Case study protocol</th></tr>
<tr><td>Section A

Overview of the case study</td><td>By means of a case study approach, this thesis aims to ultimately find and document answers to the questions: what does embedding design capability mean to the local government?; how is design capability embedded?; what roles can designers and publics servants play in supporting it?

Four local councils who have been trying to apply design approaches and embed design capability within their organisations were chosen for the multiple-case study. Multiple data collection methods such as direct observations, in-depth interviews, and feedback are applied to collect data to investigate the research questions.</td></tr>
<tr><td rowspan="2">Section B

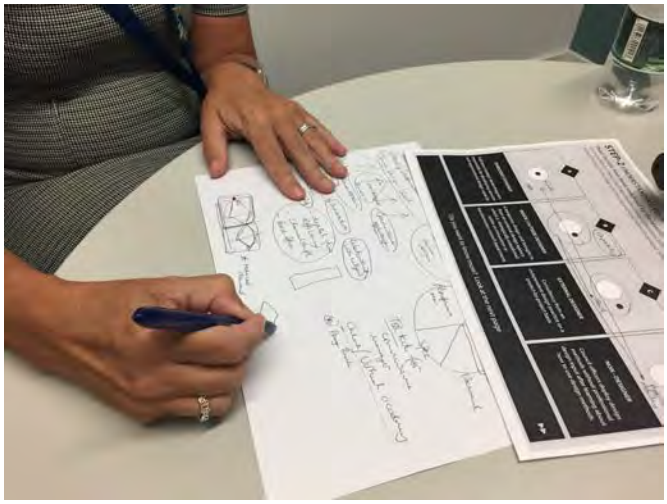
Data collection procedures</td><td>In order to systematically and coherently collect data from different workshop observations, observation templates were created (see Appendix N). The observations were made, by filling the blanks of the template with information collected based on the procedures and rules below. Moreover, an interview questionnaire (see Appendix K) was also created to conduct semi-structured in-depth interviews.</td></tr>
<tr><td>• Procedures and rules

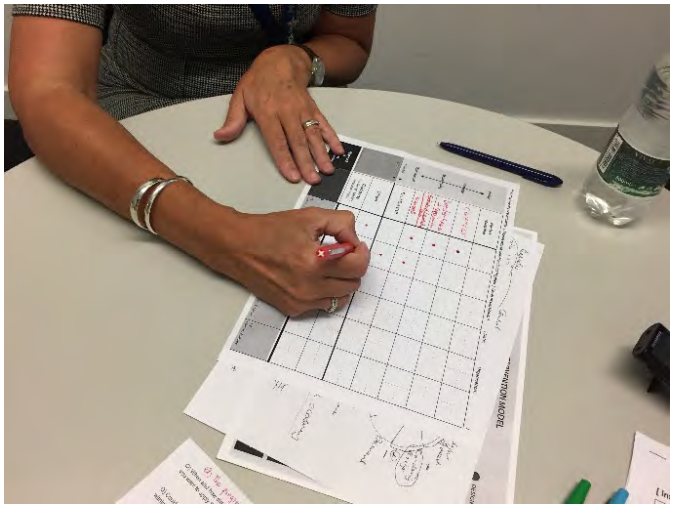
[Before]
1. To email to ask for confirmation
2. To send a workshop or interview consent form to managers who is in charge of projects or interviewees and ask them for permissions to collect data in advance (photographs and voice recording if possible).
3. To pack a bag and check whether you have all materials and instruments for observations or interview
4. To make sure whether you have enough templates, your camera battery is fully charged

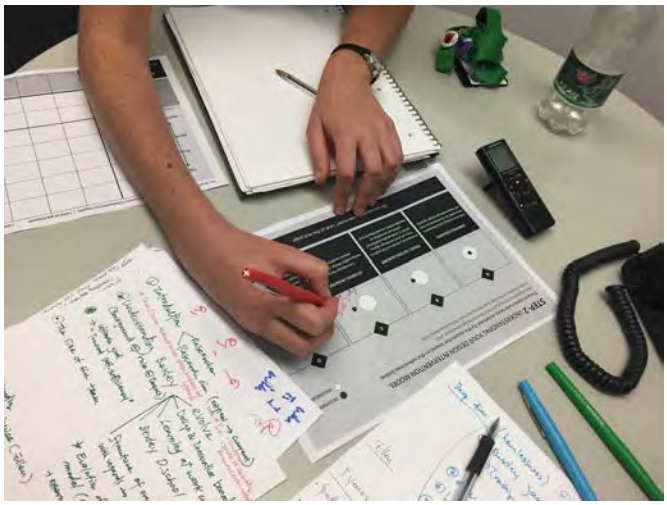
[During]
5. To arrive earlier at the venue
6. To explain again the purpose of the research and what kind of data will be collected
7. To ask for signature(s) on the consent form
8. To follow the observation templates or refer to an interview questionnaire
9. To write down comments or photograph scenes if necessary
10. To check whether the amount of data collected is enough</td></tr>
</table>

	11. To distribute and request participants to complete a feedback form [After] 12. To send a thank you email 13. To share transcribed or photographed data if it is necessary to get an agreement to use them
Section C Protocol questions	1. To complete this section after finishing the development of a conceptual framework 2. Did you explain again about your research aim and participant's rights of confidentiality, anonymity and withdrawal? 3. Did you get signatures on the consent form? 4. Did you check the topic and goal of the workshop/ meeting? 5. Did you check the programme/ schedule/ Timeline of the workshop? 6. Did you check the number of participants and facilitators? 7. Did you check the aspects of the conceptual framework that you need to capture during the observations? (Please keep every aspect of the framework below in your mind) 8. Did you find any unique or different features from the workshops? 9. Did you record (text, image, drawing) the factors (activities, actions, reactions, events, behaviours, speech etc.) you captured or identified? 10. Did you record challenges and barriers that either facilitators or participants face during the workshop observations?
Section D Tentative outline for the case study report	Audience for the report: Designers, Public servants, Researchers in the relevant fields

Appendix F. Sample images of interview scenes













Appendix G. Research Ethics Approval Form

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Student Post-Registration Research Ethics Approval Form

Name:	**Inbo Kang**
College:	**London College of Communication**

Please ensure that you have read the 'Guidance for Research Ethics Approval' and 'Code of Practice on Research Ethics' before completing this form. All supporting documentation on research ethics can be found in the Research Degrees section on Moodle.

If your research involves participants, please complete Questions 1 to 9. If not, go to Question 10.

1. Please provide a 100-word summary of your proposed research. Explain in terms appropriate to a layperson.

Public sector organisations have been facing increasingly complex challenges such as an ageing population and healthcare in the changing contexts of society. Moreover, increasing expectations and demands for better services by citizens, as at once service users and taxpayers are continually pressing public sector organisations to provide better services with less costs. In order to cope with these daunting challenges and meet citizen needs, innovative approaches are essential for public sector organisations because of its structural and cultural limits. This study will investigate how design-led approaches can facilitate a collaborative innovation in the public sector and what roles designers can play to support the active engagement and collaboration of public servants in developing public services.

2. Who will the participants be? Please tick as appropriate.

	Students at the University
	Staff at the University
V	Other. Please specify:

3. How will participants be recruited and how many will be involved?

The participants for this research are design practitioners and key stakeholders of public service innovation projects such as public servants, belonging to design agencies or local authorities. There are three main routes to reach and recruit participants: 1) To contact local authorities recently conducting innovation projects using design-led approaches with designers or without designers, 2) To contact design agencies that they are conducting public service innovation projects or currently commissioned to develop public services by local authorities, 3) To contact the UK Design council in order to indirectly make relationships with local authorities or design agencies having ongoing projects. These three groups of organisations will act as gatekeepers, enabling access to the ongoing projects and potential participants. Additionally, the researcher is going to attend a 'Service Design in Government' conference including three days hands-on workshops to meet and make a professional network with practitioners from a service design field and public managers from local authorities of government. Two case studies will be selected through those four main ways, including at least three participants of each case.

4. What will participants be asked to do? Explain in terms appropriate to a layperson.

Participants, design practitioners and public servants, will be asked to explain their professional knowledge on service design, and service design and delivery processes in general. Moreover, they will be asked to share their true views and opinions on design-driven public service development processes based on their hands-on experiences, which will include the benefits and challenges of design-led approaches within and for collaborative public service innovations.

5. What potential risks to the interests of participants do you foresee and what steps will you take to minimise those risks? A participant's interests include their physical and psychological well-being, their commercial interests; and their rights of privacy and reputation.

It is not suspected that participants will be subject to a risk of exposure of physical or psychological harm, by taking part in the study because the research methods as well as research aim are not related to the sensitive ethical issues. However, confidentiality and utilisation of personal and project information can be possible issues that might be like to cause their concerns and stress. In order to minimise these risks, a consent form and information sheet explaining the detailed research purpose and process of the project will be provided. Additionally, interviews will be carried out in places where the participants feel comfortable and safe. Moreover, all data will be kept confidentially and will be anonymised unless the respondent requests otherwise.

6. What potential risks do you foresee to yourself as the researcher and what steps will you take to minimise those risks? E.g. does your research raise issues of personal safety for you or others involved in the project, especially if taking place outside working hours or off University premises.

The majority of the potential risks faced by researchers occur when traveling from one place to another; however, these potential risks are minimal. In order to further minimize the risks, the researcher will use safe public transportation while following a realistic time schedule, and the research schedule, including meeting times and locations, will be shared with a supervisor.

7. Please attach a copy of proposed written consent form and information sheet to be given to participants. If you are not obtaining written consent or supplying an information sheet, please explain the reasons for this.

Please find the attached files

V	Please tick here if the written consent form and information sheet are attached.

8. Does your project involve children or vulnerable adults? E.g. a person with a learning disability.

V	No. Go to Question 9.
	Yes.

If you answer 'Yes', you must refer to Section 4 in the 'Guidance for Research Ethics Approval' and obtain a Disclosure and Barring Service (DBS) check (formerly known as a CRB check).

	I confirm that I have obtained a DBS check.

It is a presumption of academic research that, wherever possible and feasible, the information on which the research is based should be preserved, so that it can be made available to future researchers. However, the privacy of participants must be respected. Please refer to the guidance note on data protection before answering Question 8.

9. Will you be obtaining personal information from any of the participants? E.g. name, personal opinions, address, recorded images or audio, date of birth, notes and observations.

	No. Go to Question 10.
V	Yes.

If you answer 'Yes', please give details. In your response, please consider: How will you store and use this information during the course of your research? What parts of this information will need to be confidential and how? Will you exhibit or publish the information? Will you retain information after the research is concluded? If information is to be destroyed, explain why this is appropriate.

Participants' personal information such as name, title and position, email address will be obtained. They will be kept anonymous and encrypted, by storing researcher's password protected private laptop computer. Any one of the data collection items including participants' personal information and identifying an individual participant, such as a written or oral consent forms and contact information, will be confidential and carefully stored in the researcher's locked desk drawer and will be destroyed five years after conclusion of the project.

10. Will payments to participants be made?	
V	No. Go to Question 11.
	Yes.
If you answer 'Yes', please state amount and whether payment is for out-of-pocket expenses or a fee.	

11. If the project is to receive financial support from outside the University, please give details. Include any restrictions that have been imposed upon the conduct of the research. Please discuss this with your Director of Studies. Both financial propriety and the protection of commercial rights are important for you, the University and other third parties (e.g. sponsors, participants etc.)

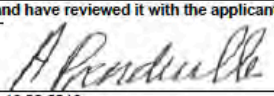
12. Will any restrictions be placed on the publication of results?	
V	No. Go to Question 13.
	Yes.
If you answer 'Yes', please state the nature of the restrictions, e.g. details of any confidentiality agreement.	

13. Have you attached a detailed outline of the research project to this form?	
V	Yes, the detailed outline is attached.

14. I confirm my responsibility to deliver the project in accordance with the Code of Practice on Research Ethics of the University of the Arts London (the University). In signing this form I am also confirming that:

a) The form is accurate to the best of my knowledge and belief.
b) There is no potential material interest that may, or may appear to, impair the independence and objectivity of researchers conducting this project.
c) I undertake to conduct the project as set out in the application unless deviation is agreed by the University and to comply with any conditions set out in the letter sent by the relevant College Research body and/or the University's Research Ethics Sub-Committee.
d) I understand and accept that the ethical propriety of this project may be monitored by the relevant College Research body and/or the University's Research Ethics Sub-Committee.

Signature of Student:	
Date:	15.02.2016

15. I support this project and have reviewed it with the applicant.	
Signature of Director of Studies:	
Date:	18.02.2016

Appendix H. Participant Information sheet & Interview anworkshop observation consent forms

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[Interview] Participant Information sheet

Research title:	**Design-led collaborative public service innovation:** Investigating the role design/designers play in supporting effective collaboration in local government organisations.
Institution:	London college of Communication, University of the Arts London (UAL)
Researcher:	Inbo Kang

I would like to invite you to participate in my research on **Design for collaborative public service innovation.** Your participation information and all data collected will be kept confidentially and anonymised. Before you decide whether to take part in this, it is important that you understand why the research is being performed, what your participation would involve, and what the benefits and risks to you might be. This participation information will help you understand those questions.

Please take the time to read the following information carefully before you decide whether to take part in or not. Whether or not you take part is your choice. If you agree to take part in this study, you will be asked to sign the **Consent Form** that will be given to you with this sheet. Additionally, you will be able at any time to withdraw without any detriment or consequences. If there is anything that is not clear, or if you need more information, please get in touch with Dr. Jamie Gilham (you can find his contact details at the end of this sheet).

This document is 3pages long, including the Consent Form. Please make sure you have read and understood all the pages.

What is the purpose of the research?

This study will investigate how design-led approaches can formulate a collaborative environment in the public sector organisations and what is the role of designers in maximising the active engagement of public servants and supporting their collaboration.

Why I have been invited?

For the case studies, the public service innovation projects applying design-led approaches have been purposefully selected. You are being asked whether you would like to participate in this study because you have been participating in the project as a designer or a key stakeholder who has hands-on experiences and own views about the selected projects.

What do you need from me?

If you will agree to take part in this project, I would interview you about the public service innovations that you have taken part in or are taking part in for about one hour. The interview will be voice-recorded. I will ask you to share your experiences, thoughts or opinions on the project related to this project. More specifically,

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- Your basic personal information (e.g. name, position, email, role in the project)
- Background and brief information about the project
- Key actors (e.g. stakeholders, decision makers) of the project and the relationship between them
- The roles of the each actor and their contributions to the project
- Overall process of the project and your thoughts on the process
- Challenges and barriers to the project

What are the possible benefits and risks of this study?

With regard to the possible benefits, you may benefit in the future from the research findings, as this study will contribute to the development of the understanding of design-led approaches to collaborative public service innovation. It will help you to build a better understanding about how to effectively use design-led approaches so that you can formulate a successful collaborative environment, maximising active engagement of key actors. When it comes to the risks, there are no foreseen disadvantages or risks to taking part because the research methods as well as research aim are not related to the sensitive ethical issues. However, confidentiality of personal and project information can be possible issues that might be like to cause your concerns and stress. However, in order to avoid these risks, all information which is collected about you during the course of research will be anonymised and kept confidential. If you wish to make a complaint or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact with Dr. Jamie Gilham (you can find his contact details at the end of this sheet).

What will be done with the gathered data and my personal information?

The interviews will be voice-recorded. The voice-recorded data will be transferred to the researcher's password protected laptop computer. Then, any identifiable data will be encrypted. Moreover, any confidential information related to the project will be stored and accessed only by the researcher and his supervisory team. Additionally, your personal information gathered and consent form will be separately stored in researcher's locked office desk drawer and destroyed five years after conclusion of the project. Your anonymised data will be used in researcher's PhD thesis, and could be used in future reports such as academic papers and presentations accessible to academics and practitioners worldwide.

What are my rights?

You are free to decline to participate, or to withdraw from the research at any time, without experiencing any disadvantage. Moreover, you have the right to access information about you collected as part of the study.

Who do I contact for more information or if I have concerns?

Please feel free to ask **Dr. Jamie Gilham**, if you have any further questions, concerns, and complaints to make related to this research.

Institution: University of the Arts London	**e-mail:** j.gilham@arts.ac.uk

[Consent form]

Please tick to indicate you consent to the following	Please tick
I have read, or have had read to me, and I understand the Participant Information Sheet.	
I have been given sufficient time to consider whether or not to participate in this study.	
I am satisfied with the information I have been given regarding the study.	
I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without any disadvantages.	
I understand that any information given by me will be only used in the researcher's PhD thesis, and may be used in future reports, academic papers and presentations by the researcher.	
I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.	
I know who to contact if I have any questions about the study in general.	
I understand my rights as a study participant.	
I agree to take part in the above study.	

Declaration by participant:

I hereby consent to take part in this study.

Participant's name:	
Signature:	Date:

Declaration by researcher:

I have given an explanation of the research project to the participant, and have answered the participant's questions about it. I believe that the participant understands the study and has given informed consent to participate.

Researcher's name:	
Signature:	Date:

[Workshop observation] Participant Information sheet

Research title:	**Design-led collaborative public service innovation:** Investigating the role design/designers play in supporting effective collaboration in local government organisations.
Institution:	London college of Communication, University of the Arts London (UAL)
Researcher:	Inbo Kang

I would like to ask you to give permission for me to use any photographs that contain you (unidentifiable) for my PhD research on Design for collaborative public service innovation. All photographs taken will be kept confidentially and anonymised. Before you decide whether to take part in this, it is important that you understand why the research is being performed, what your participation would involve, and what the benefits and risks to you might be. This participation information will help you understand those questions.

Please take the time to read the following information carefully before you decide whether to take part in or not. Whether or not you take part is your choice. If you agree to take part in this study, you will be asked to sign the Consent Form that will be given to you with this sheet. Additionally, you will be able at any time to withdraw without any detriment or consequences. If there is anything that is not clear, or if you need more information, please get in touch with the researcher (you can find contact details at the end of this sheet).

This document is 3pages long, including the Consent Form. Please make sure you have read and understood all the pages.

What is the purpose of the research?

This study will investigate how design-led approaches can formulate a collaborative environment in the public sector organisations and what is the role of designers in maximising the active engagement of public servants and supporting their collaboration.

Why I have been invited?

For the case studies, the public service innovation projects applying design-led approaches have been purposefully selected. You are being asked whether you would like to participate in this study because you are one of the participants of the project selected as a designer or a key stakeholder.

What do you need from me?

If you will agree to take part in this project, some photographs will be taken during the workshop in order to describe specific scenes or processes of the workshop.

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What are the possible benefits and risks of this study?
With regard to the possible benefits, you may benefit in the future from the research findings, as this study will contribute to the development of the understanding of design-led approaches to collaborative public service innovation. There are no foreseen disadvantages or risks to taking part because every unidentifiable photographs will be anonymised and kept confidential. If you wish to make a complaint or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact the researcher at the end of this sheet.
What will be done with the photographs taken?
The photographs will be transferred to the researcher's password protected laptop computer and be encrypted. Your unidentifiable photos will be used in researcher's PhD thesis, and could be used in future reports such as academic papers and presentations accessible to academics and practitioners worldwide.
What are my rights?
You are free to decline to participate, or to withdraw from the research at any time, without experiencing any disadvantage. Moreover, you have the right to access information about you collected as part of the study.
Who do I contact for more information or if I have concerns?
Please feel free to ask **Dr. Jamie Gilham**, if you have any further questions, concerns, and complaints to make related to this research.

Institution: University of the Arts London	**e-mail:** j.gilham@arts.ac.uk

ual: university of the arts london

[Consent form] for the use of photographs

Please tick to indicate you consent to the following	Please tick
I consent to be photographed by the researcher, Inbo Kang, while participating in the workshop.	
I further authorise that only unidentifiable photographs will be published only for his research purpose.	

Declaration by participant:

I hereby consent to take part in this study.

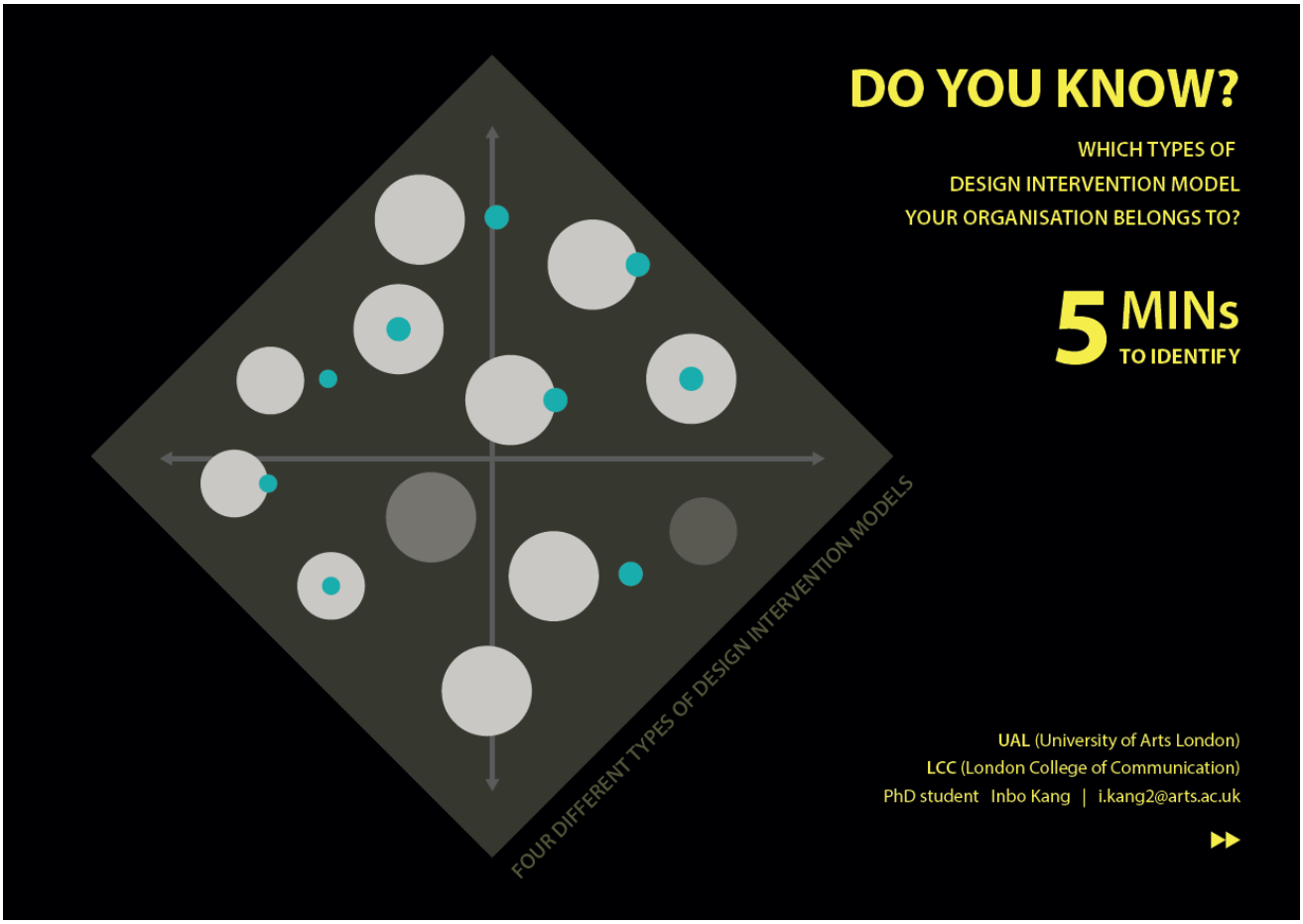
Participant's name:	
Signature:	Date:

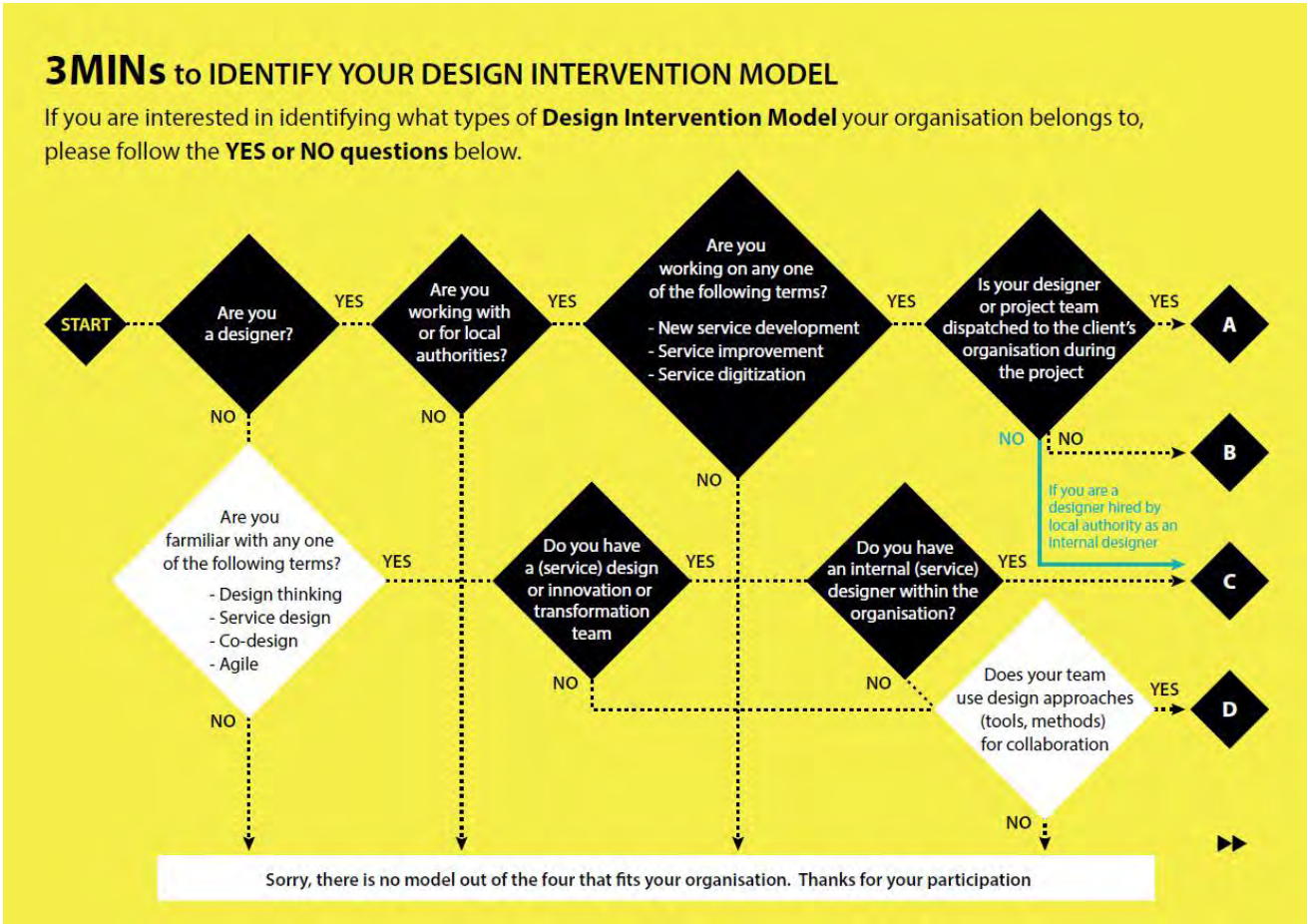
Declaration by researcher:

I have given an explanation of the research project to the participant, and have answered the participant's questions about it. I believe that the participant understands the study and has given informed consent to participate.

Researcher's name:	
Signature:	Date:

Appendix I. Visual questionnaire for a scoping study to identify types of Design Intervention Model



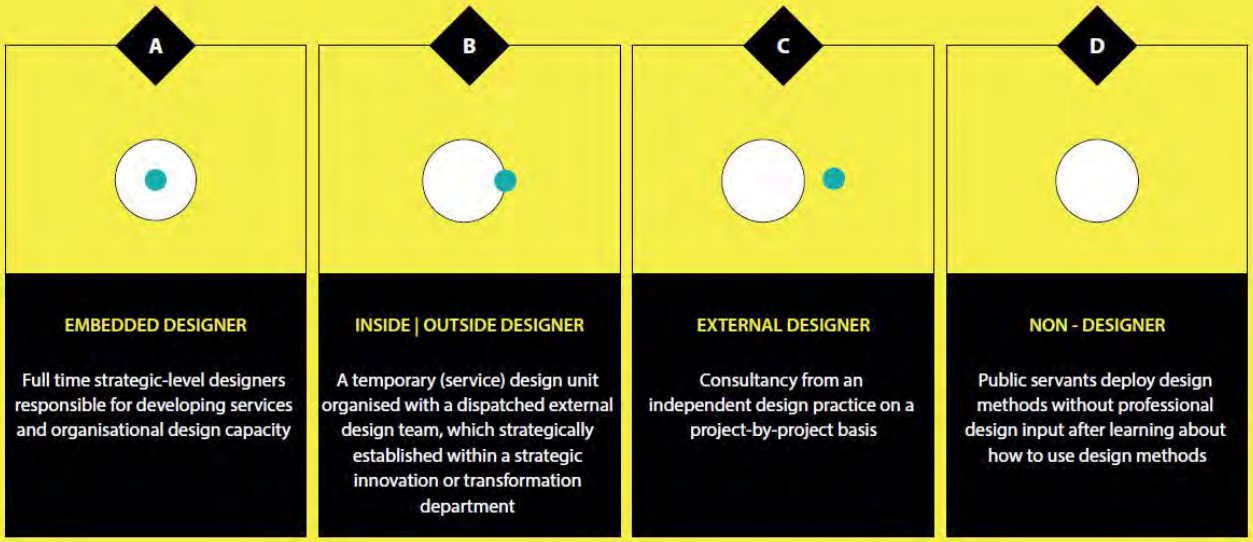


2MINs TO UNDERSTAND YOUR DESIGN INTERVENTION MODELS

These models have been redefined by the researcher based on the references below.

- Restarting Britain 2: Design and Public Services (Design Commission 2013)
- Inside | Outside | On the Edge: Lean Start-up and Public Sector (Sarah Drummond, 2014)

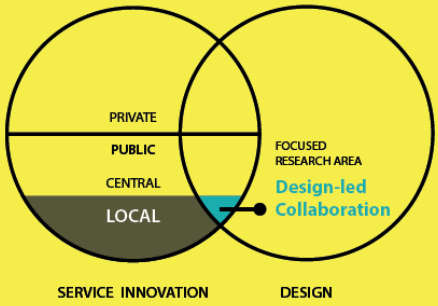
DESIGNER
ORGANISATION



Do you want to know more? Look at the next page ▶▶

PARTICIPATE IN THE RESEARCH

As a PhD student at UAL, I am looking for local authorities and council officers for data collection. Please contact me.



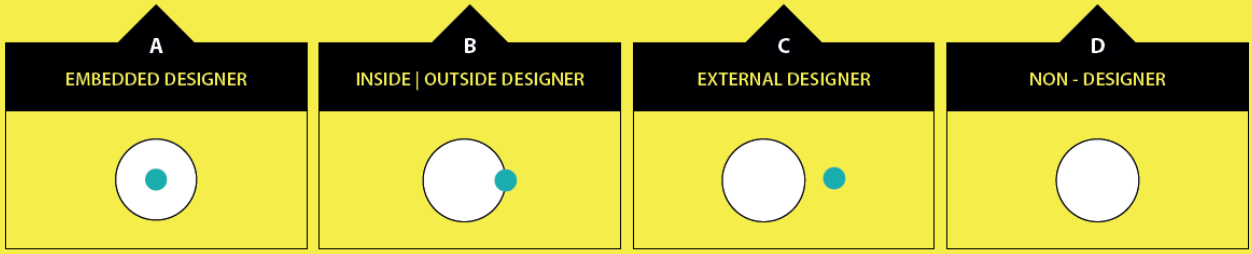
RESEARCH TOPIC

Design-led collaborative practice in public service innovation:

Investigating the role that designers/ non-designers play in enabling and supporting collaboration within local government context

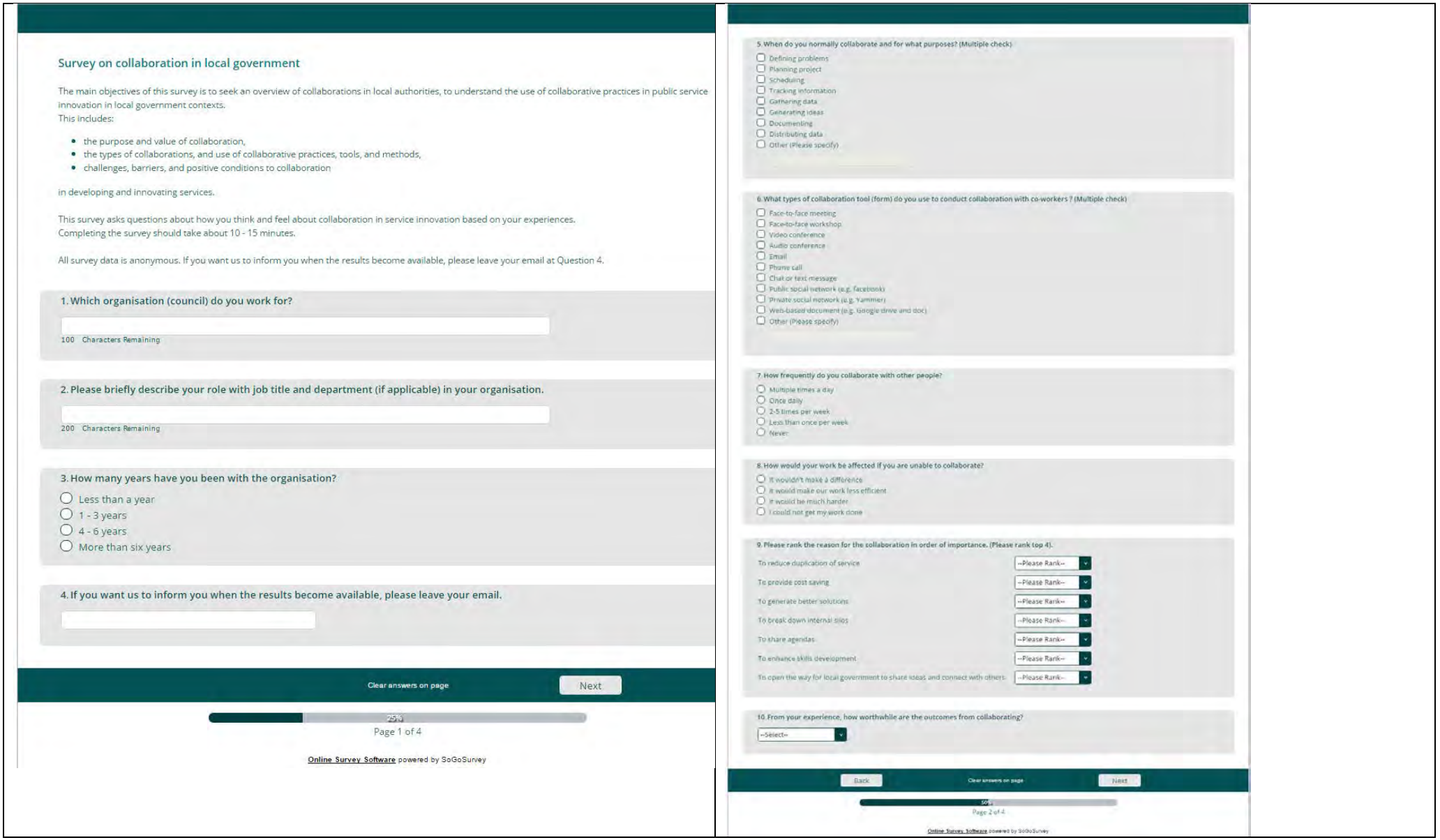
THE AIM OF THE RESEARCH

1) understanding of the context of service development in local authority and
2) identifying the contribution of design practices to collaboration and the role of designers and non-designers (civil servants)



If your organisation belongs to one of the models, you can contribute to the research.
Please contact me >> i.kang2@arts.ac.uk ▶▶

Appendix J. Preliminary survey questionnaire for a scoping study



Survey on collaboration in local government

The main objectives of this survey is to seek an overview of collaborations in local authorities, to understand the use of collaborative practices in public service innovation in local government contexts.
This includes:

- the purpose and value of collaboration,
- the types of collaborations, and use of collaborative practices, tools, and methods,
- challenges, barriers, and positive conditions to collaboration

in developing and innovating services.

This survey asks questions about how you think and feel about collaboration in service innovation based on your experiences.
Completing the survey should take about 10 - 15 minutes.

All survey data is anonymous. If you want us to inform you when the results become available, please leave your email at Question 4.

1. Which organisation (council) do you work for?

100 Characters Remaining

2. Please briefly describe your role with job title and department (if applicable) in your organisation.

200 Characters Remaining

3. How many years have you been with the organisation?

- Less than a year
- 1 - 3 years
- 4 - 6 years
- More than six years

4. If you want us to inform you when the results become available, please leave your email.

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5. When do you normally collaborate and for what purposes? (Multiple check)

- Defining problems
- Planning project
- Scheduling
- Tracking information
- Gathering data
- Generating ideas
- Documenting
- Distributing data
- Other (Please specify)

6. What types of collaboration tool (form) do you use to conduct collaboration with co-workers ? (Multiple check)

- Face-to-face meeting
- Face-to-face workshop
- Video conference
- Audio conference
- Email
- Phone call
- Chat or text message
- Public social network (e.g. facebook)
- Private social network (e.g. Yammer)
- Web-based document (e.g. Google drive and doc)
- Other (Please specify)

7. How frequently do you collaborate with other people?

- Multiple times a day
- Once daily
- 2-5 times per week
- Less than once per week
- Never

8. How would your work be affected if you are unable to collaborate?

- It wouldn't make a difference
- It would make our work less efficient
- It would be much harder
- I could not get my work done

9. Please rank the reason for the collaboration in order of importance. (Please rank top 4).

To reduce duplication of service	--Please Rank--
To provide cost saving	--Please Rank--
To generate better solutions	--Please Rank--
To break down internal silos	--Please Rank--
To share agendas	--Please Rank--
To enhance skills development	--Please Rank--
To open the way for local government to share ideas and connect with others	--Please Rank--

10. From your experience, how worthwhile are the outcomes from collaborating?

--Select--

Back Clear answers on page Next

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11. Please briefly describe the best representative collaborative project of your organisation (including the type of project and specific collaborative practices or tools applied to enhance collaboration).

100 Characters Remaining

12. With whom did you collaborate most with through the collaborative practices used in the above project? (Please rank all in order of frequency)

Citizen	--Please Rank--
Colleagues in the same department	--Please Rank--
Colleagues from other internal departments	--Please Rank--
Stakeholders from external organisations	--Please Rank--
Experts from external organisations	--Please Rank--

13. Were there any specific approaches (including tools, methods and practices) that your organisation employed to enhance and effectively operate collaborations for the project above? (Multiple check)

- [ ] Agile approach
- [ ] Lean approach
- [ ] Co-design (e.g. service design) approach
- [ ] System thinking approach
- [ ] Other (Please specify)

14. Please list every practice, activity and tool or method that you have used during the collaborative project. (Brainstorming with sticky note, Prototyping, Story telling, Lego serious playing, Role playing etc.)

100 Characters Remaining

15. Please rank the phases of the process in designing and implementing service where your team has mostly applied collaborative practices in order to support collaboration among internal members or with external stakeholders (Please rank in order of frequency).

Discovering problems	--Please Rank--
Defining problems	--Please Rank--
Developing ideas (solutions)	--Please Rank--
Implementing solutions	--Please Rank--
Evaluating and revising solutions	--Please Rank--
Others	--Please Rank--

Please indicate the extent to which you agree with the following statements regarding the representative project.

	16. Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
(a) Participants clearly understood the goal of the collaborative practice.	○	○	○	○	○
(b) Participants knew the different types of collaborative practices, to effectively get tasks done.	○	○	○	○	○
(c) Opportunities for participants to express opinions and generate ideas were equally distributed.	○	○	○	○	○
(d) Participants communicated clearly with other stakeholders	○	○	○	○	○
(e) Participants could easily access and check the progress of the project	○	○	○	○	○

Please indicate the extent to which you agree with the following statements.

	17. Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
(a) The project involved a proper team, or skilled people, who could effectively lead the collaborative practices and support participants.	○	○	○	○	○
(b) Our organisation provided the training needed to utilise collaborative practices for supporting collaborations with other stakeholders.	○	○	○	○	○
(c) The project team provided or used proper tools and methods to support collaborative practices during the project.	○	○	○	○	○
(d) The tools and methods used enabled us to effectively achieve the goal established together	○	○	○	○	○
(e) Collaborative practices helped us to achieve better results	○	○	○	○	○

18. Overall, how satisfied were you working in the collaborative practices in the project as a participant?

--Select--

19. What were the most valuable things about collaborating with other stakeholders in the project?

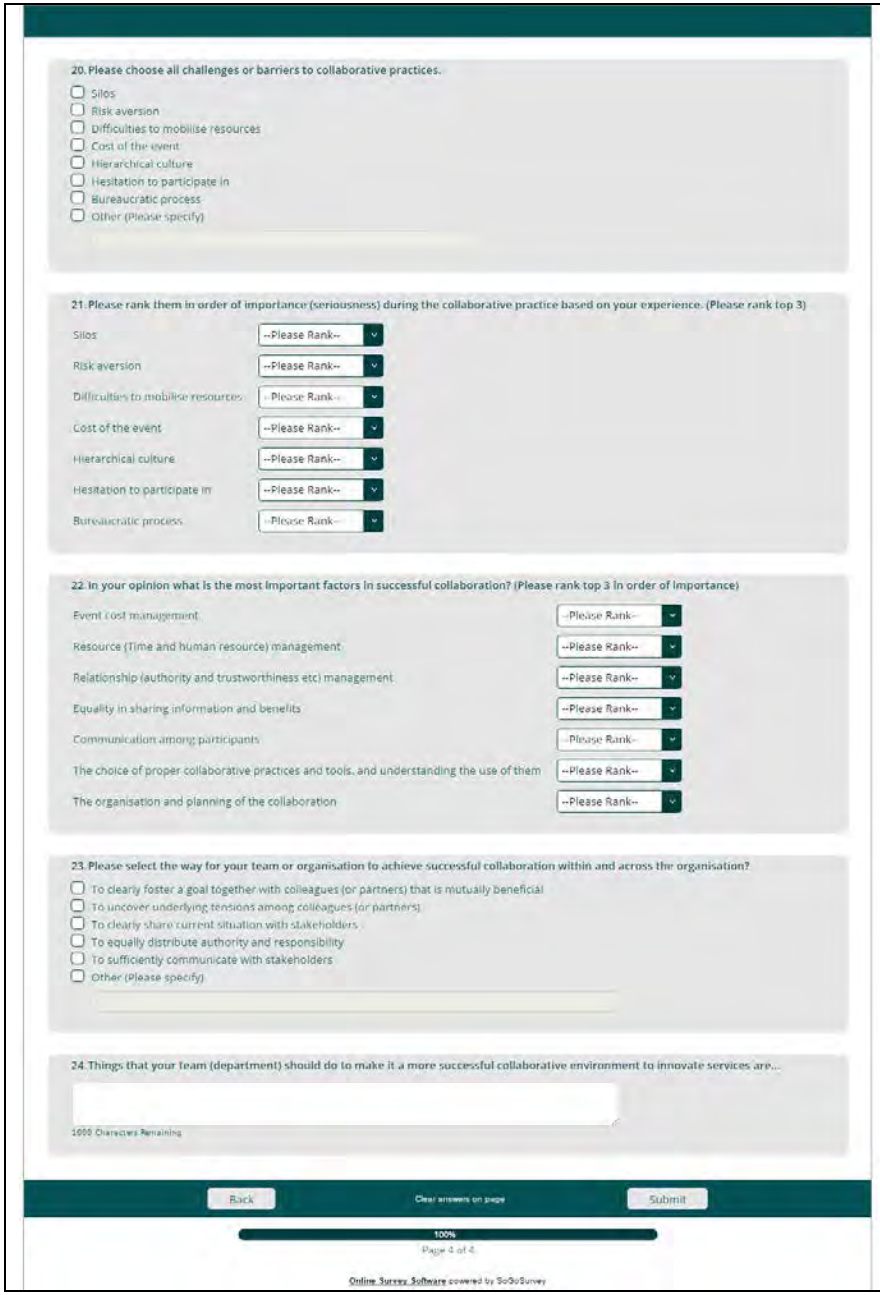
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20. Please choose all challenges or barriers to collaborative practices.

- [ ] Silos
- [ ] Risk aversion
- [ ] Difficulties to mobilise resources
- [ ] Cost of the event
- [ ] Hierarchical culture
- [ ] Hesitation to participate in
- [ ] Bureaucratic process
- [ ] Other (Please specify)

21. Please rank them in order of importance (seriousness) during the collaborative practice based on your experience. (Please rank top 3)

Silos	--Please Rank--
Risk aversion	--Please Rank--
Difficulties to mobilise resources	--Please Rank--
Cost of the event	--Please Rank--
Hierarchical culture	--Please Rank--
Hesitation to participate in	--Please Rank--
Bureaucratic process	--Please Rank--

22. In your opinion what is the most important factors in successful collaboration? (Please rank top 3 in order of importance)

Event cost management	--Please Rank--
Resource (Time and human resource) management	--Please Rank--
Relationship (authority and trustworthiness etc) management	--Please Rank--
Equality in sharing information and benefits	--Please Rank--
Communication among participants	--Please Rank--
The choice of proper collaborative practices and tools, and understanding the use of them	--Please Rank--
The organisation and planning of the collaboration	--Please Rank--

23. Please select the way for your team or organisation to achieve successful collaboration within and across the organisation?

- [ ] To clearly foster a goal together with colleagues (or partners) that is mutually beneficial
- [ ] To uncover underlying tensions among colleagues (or partners)
- [ ] To clearly share current situation with stakeholders
- [ ] To equally distribute authority and responsibility
- [ ] To sufficiently communicate with stakeholders
- [ ] Other (Please specify)

24. Things that your team (department) should do to make it a more successful collaborative environment to innovate services are...

1000 Characters Remaining

Back | Clear answers on page | Submit

100%

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Appendix K. The result of the preliminary survey (Designer and Public servant)

Survey Title: Survey on collaboration in local government			
Census (entire target population): Designers who have worked with local authorities in the UK			
Sample: Designers who have worked and are working with local authorities in England			
Start Date: 30-Sep-2016			
The point of the time: based on the data collected until the 7th of Dec.			
End Date: 31-March-2017			
Directly sent: 32 +	**Delivered:** 32	**Bounced:**	**Completed:** 7
Response (completion) Rate: 9.56% * The number of sent emails only indicates the emails that directly sent by the researcher. However, there may be more people who received the survey link as the public link of the survey was distributed through design council's mailing lists and some of participants' tweeter and email.			

Q1. Which organization (council) do you work for?
This information will keep confidential as respondents want their information to be kept anonymous.

All respondents are working at different organisation in England as a service designer, experience designer, or UX designer. The result of this survey has a limitation to be considered as representative answers of designers working with local councils because the number of respondents is not enough and their perception about local council may vary depends on the types of the project and their experience on the project.

Q2. Please briefly describe your role with job title and department (if applicable) in your organisation.
Leader, manager, officer etc. / innovation team, policy and partnership, Transformation team, Adult social care etc.

Respondents are working as a service designer, experience designer, or UX designer. Two of them are working as a leader, other two are senior designers, and others are working as a manager.

Q3. How many years have you been with the organisation?

Responses	Responses	%	Percentage of total respondents
Less than a year	3	42.86%	
1 - 3 years	3	42.86%	
4 - 6 years	1	14.29%	
More than six years	0	0%	
(Did not answer)	0	0%	
Total Responses	**7**		20% 40% 60% 80% 100%

Only one respondent has been working at the same company more than 4years and more than forty percent of them have been working at the current company less than a year. When considering their career, it is evident that designers change job also frequent, but unlike the phenomenon of public servants in local council, this issue does not seem to affect the

results of the work commissioned by local councils because designers' work skills and capabilities normally grow based on their experiences.

Q4. If you want us to inform you when the results become available, please leave your email.
This information will keep confidential as respondents want their information to be kept anonymous.

Q5. Please select every reason for the collaboration in developing public service projects (Multiple check)

Responses	Responses	%	Percentage of total respondents
Planning a project	5	71.43%	
Defining problems	7	100.00%	
Generating ideas	7	100.00%	
Making the leap from ideas to solutions	7	100.00%	
Implementing solutions	6	85.71%	
Evaluating and revising solutions	6	85.71%	
Other (Please specify)	2	28.57%	
(Did not answer)	0	0%	
Total Responses	**40**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Other (Please specify)
- Stakeholder engagement, user research, set standards and guidelines

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(a): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Sharing agendas

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	1	1	14.29%	
2	0	2	0%	
3 - Middle	2	3	28.57%	
4	1	4	14.29%	
5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 3.71				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(b): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Planning a project

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	2	3	28.57%	
4	2	4	28.57%	
5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	

(Did not answer)	0	NULL	0%	
Weighted Score: 4.14				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(c): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Combining opinions and ideas

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	1	4	14.29%	
5 - Highest	5	5	71.43%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.57				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(d): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Gathering data

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	3	3	42.86%	
4	2	4	28.57%	
5 - Highest	2	5	28.57%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 3.86				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(e): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Developing solutions

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	1	4	14.29%	
5 - Highest	5	5	71.43%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.57				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below				
6(f): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Documenting				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Lowest	2	1	28.57%	
2	1	2	14.29%	
3 - Middle	3	3	42.86%	
4	0	4	0%	
5 - Highest	1	5	14.29%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 2.57				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below				
6(g): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Implementing solutions				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Lowest	1	1	14.29%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	2	4	28.57%	
5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 3.86				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below				
6(h): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Reducing time consumption				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Lowest	0	1	0%	
2	2	2	28.57%	
3 - Middle	3	3	42.86%	
4	0	4	0%	
5 - Highest	2	5	28.57%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 3.29				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below				
6(i): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Evaluating and revising solutions				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**

1 - Lowest	0	1	0%	
2	1	2	14.29%	
3 - Middle	1	3	14.29%	
4	2	4	28.57%	
5 - Highest	2	5	28.57%	
N/A	1	NULL	14.29%	
(Did not answer)	0	NULL	0%	
Weighted Score: 3.83				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(j): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Saving cost

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	2	2	28.57%	
3 - Middle	1	3	14.29%	
4	2	4	28.57%	
5 - Highest	1	5	14.29%	
N/A	0	NULL	0%	
(Did not answer)	1	NULL	14.29%	
Weighted Score: 3.33				
Total Responses	**7**			20% 40% 60% 80% 100%

Q6. Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below

6(k): Based on your experience, please indicate how important the use of collaborative practice is for developing services based on the purposes outlined below: Breaking down internal silos

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	0	3	0%	
4	1	4	14.29%	
5 - Highest	6	5	85.71%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.86				
Total Responses	**7**			20% 40% 60% 80% 100%

Q7. Please briefly describe what types of collaborative practices you normally use during service design & innovation projects.

- Regular meetings. Co Hosting workshops. Keeping the client engaged throughout every part of the project.
- workshops, swot analysis, creative collaboration tools, experience mapping, Johari window, ideas cards, wild cards, lifelines, Principles mapping, brainstorming, prioritisation grid, evaluation grid, effort mapping, t-shirt sizing, story pointing, desktop prototyping, real world prototyping, service safaris, business model canvas, service flows mapping
- Workshops, creative brainstorming, defining project scope, drawing together

- Bringing people together to develop collaborative strategies and understanding what our shared values are to develop a shared culture
- Design sprint with stakeholders, experts and multi-disciplinary design/development team to understand problems, agree on problems and generate ideas.
- Practices used include: Field observation, Storyboarding, Process mapping, Role play, Rapid prototyping/testing
- Working together with council employees in embedded innovation teams Co-design workshops with end customers and clients Researching customers / residents (observation, interviews, concept testing) Researching frontline / back office staff (observation, interviews, concept testing) Show and tell presentations to share and discuss with a broader audience / stakeholders (weekly) Daily stand-up with innovation / design team Kanban board to share tasks (e.g. used during standups) Sprint planning and retrospectives with innovation / design team

Q8. From your experience, how worthwhile are the outcomes from collaborative practices?

Responses	Responses	%	Percentage of total respondents
Extremely Dissatisfied	0	0%	
Very Dissatisfied	1	14.29%	
Somewhat Dissatisfied	0	0%	
Neutral	0	0%	
Somewhat Satisfied	2	28.57%	
Very Satisfied	3	42.86%	
Extremely Satisfied	1	14.29%	
(Did not answer)	0	0%	
Total Responses	**7**		20% 40% 60% 80% 100%

Q10. Who were the most important participants during the collaborative practices used in the above project? (Please rank all in order of frequency)

Answer	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Weighted Rank (Score)
Public servants in the local government	2	2	0	2	0	1 (22)
Citizen	1	2	2	0	1	2 (20)
Stakeholders from outside the local government	1	1	1	2	1	3 (17)
Councillors in the local government	1	0	3	0	2	4 (16)
Experts from outside the local government	1	1	0	2	2	5 (15)
Did Not Answer						1
Total Responses						**7**

Q11. Were there any specific approaches that your team employed to enhance and effectively operate collaborations for the project above? (Multiple check)

Responses	Responses	%	Percentage of total respondents
Agile approach	5	71.43%	
Lean approach	2	28.57%	
Co-design (e.g., service design) approach	7	100.00%	
System thinking approach	3	42.86%	
Other (Please specify)	1	14.29%	
(Did not answer)	0	0%	
Total Responses	**18**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q12. Please list every practice, activity and tool or method used during the collaborative project. (e.g., Brainstorming with sticky notes, Prototyping, Storytelling, Lego serious playing, Role playing etc.)

- All of the above and workshops and spreadsheets for capturing ideas.
- workshops, swot analysis, creative collaboration tools, experience mapping , Johari window, ideas cards, wild cards, lifelines, Principles mapping, brainstormings, prioritisation grid, evaluation grid, effort mapping, t-shirt sizing, story pointing, desktop prototyping, real world prototyping, service safaris, business model canvas, service flows mapping
- Observation, Interviewing, Workshops, Prototyping, Business Development, Playing, Role Playing, Idea Generation, Causes Diagram, Question Ladder, Storyworld, People & Connections Mapping, Service Blueprinting
- Google Sprint- define, diverge, test, develop Paper prototype Digital prototype Existing data to tell story Research- ethnography, video and user lab, role play
- mostly brainstorming and prototyping (i.e., creating a code-based prototype)
- Brainstorming with sticky notes, Prototyping, Storytelling, Journey mapping, Personas, Card sorting, Concept sketching templates, Problem definition templates, Kanban boards, Sprint planning / retrospective / standups, Google Docs for collaborative documentation.

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(a): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Having a proper team to effectively lead the collaborative practices.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	0	3	0%	
4	3	4	42.86%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.57				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(b): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Mobilising proper resource (time, cost, human) and managing them.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	2	4	28.57%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.43				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(c): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Providing proper programmes or sessions to train participants.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	1	2	14.29%	
3 - Middle	1	3	14.29%	
4	2	4	28.57%	
5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.00				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(d): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Employing proper tools and methods to support collaborative practices.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	3	3	42.86%	
4	0	4	0%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.14				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(e): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Setting the clear goal of the collaborative practice.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	0	3	0%	
4	2	4	28.57%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	1	NULL	14.29%	
Weighted Score: 4.67				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(f): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Securing equality for members to express opinions and share information.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	2	3	28.57%	
4	1	4	14.29%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.29				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(g): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Building trust within project team and keeping good relationship.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	0	3	0%	
4	1	4	14.29%	
5 - Highest	6	5	85.71%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.86				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(h): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Supporting smooth and clear communication within project team.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	1	2	14.29%	
3 - Middle	0	3	0%	
4	1	4	14.29%	
5 - Highest	5	5	71.43%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.43				
Total Responses	**7**			20% 40% 60% 80% 100%

Q13.Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.

13(i): Based on your experiences from the project above, please rate the importance of each of the factors outlined below for successful collaborating.: Sharing information and the progress of the project transparently.

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	3	4	42.86%	

5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	
(Did not answer)	0	NULL	0%	
Weighted Score: 4.29				
Total Responses	**7**			20% 40% 60% 80% 100%

Q14. What were the most valuable things about applying collaborative practices in the project?

- You get the best out of everyone when each person is allowed their own voice.
- clarity, cohesion and flexibility, knowledge sharing
- Everyone had collective ownership over the outcomes of the project
- Shared vision
- It highlighted the importance of getting users involved at every step of design and development, rather than solely for the user acceptance stage.
- Generating buy-in from the Council – even the services that weren't directly involved Cultural transformation – some of the practices have already started spreading and are being implemented in the daily work of some council officers Multi-faceted perspective on the project – complex problems benefit from having different views, generating deeper insight and better solutions Personally for me – creating an enjoyable working environment

Q15. Please select all challenges or barriers to collaborative practice.

Responses	Responses	%	Percentage of total respondents
Silos	6	85.71%	
Risk aversion	6	85.71%	
Difficulties to mobilise resources	5	71.43%	
Cost of the event	3	42.86%	
Hierarchical culture	5	71.43%	
Hesitation to participate in	1	14.29%	
Bureaucratic process	5	71.43%	
Other (Please specify)	2	28.57%	
(Did not answer)	0	0%	
Total Responses	**33**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.

16(a): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Silos

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	0	3	0%	
4	2	4	28.57%	
5 - Highest	4	5	57.14%	
N/A	0	NULL	0%	
(Did not answer)	1	NULL	14.29%	
Weighted Score: 4.67				

Total Responses	7	20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.				
16(b): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Risk aversion				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	3	3	42.86%	
4	1	4	14.29%	
5 - Highest	1	5	14.29%	
N/A	1	NULL	14.29%	
(Did not answer)	1	NULL	14.29%	
Weighted Score: 3.60				
Total Responses	**7**			20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.				
16(c): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Difficulties to mobilise resources				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Lowest	1	1	14.29%	
2	1	2	14.29%	
3 - Middle	2	3	28.57%	
4	0	4	0%	
5 - Highest	1	5	14.29%	
N/A	1	NULL	14.29%	
(Did not answer)	1	NULL	14.29%	
Weighted Score: 2.80				
Total Responses	**7**			20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.				
16(d): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Cost of the event				
Answer	Responses	Value	%	**Percentage of total respondents**
1 - Lowest	0	1	0%	
2	2	2	28.57%	
3 - Middle	1	3	14.29%	
4	1	4	14.29%	
5 - Highest	1	5	14.29%	
N/A	1	NULL	14.29%	
(Did not answer)	1	NULL	14.29%	
Weighted Score : 3.20				
Total Responses	7			20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.

16(e): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Hierarchical culture

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	3	4	42.86%	
5 - Highest	1	5	14.29%	
N/A	0	NULL	0%	
(Did not answer)	2	NULL	28.57%	
Weighted Score: 4.00				
Total Responses	**7**			20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.

16(f): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Hesitation to participate in

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	0	2	0%	
3 - Middle	1	3	14.29%	
4	1	4	14.29%	
5 - Highest	3	5	42.86%	
N/A	0	NULL	0%	
(Did not answer)	2	NULL	28.57%	
Weighted Score: 4.40				
Total Responses	**7**			20% 40% 60% 80% 100%

Q16.Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.

16(g): Please rate how much the collaborative practice can help overcome the challenges below during public service innovation projects.: Bureaucratic process

Answer	Responses	Value	%	Percentage of total respondents
1 - Lowest	0	1	0%	
2	2	2	28.57%	
3 - Middle	0	3	0%	
4	1	4	14.29%	
5 - Highest	2	5	28.57%	
N/A	0	NULL	0%	
(Did not answer)	2	NULL	28.57%	
Weighted Score: 3.60				
Total Responses	**7**			20% 40% 60% 80% 100%

Q17. Please choose the way for your team or organisation to achieve successful collaboration within and across the organisation?

Responses	Responses	%	Percentage of total respondents
To clearly foster a goal together with colleagues (or partners) that is mutually beneficial	7	100.00%	
To uncover underlying tensions among colleagues (or partners)	4	57.14%	
To clearly share current situation with stakeholders	5	71.43%	
To equally distribute authority and responsibility	6	85.71%	
To sufficiently communicate with stakeholders	5	71.43%	
Other (Please specify)	0	0%	
(Did not answer)	0	0%	
Total Responses	**27**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q18. Things that your team (department) should do to make it a more successful collaborative environment to innovate services are...

- Practice, practice, practice.
- have more resources and have a more easy to set up research process
- Develop a shared culture
- Involve users from earlier on and take the time and effort to truly understand what is required (in terms of resources and management) for delivering a product with the user centred service design process.
- The team itself works well, but the problem is propagating the new ways of working across the whole organisation. Structures, processes and silos are deeply embedded in local authorities and it takes time to penetrate them. Some more top-down support within the council could go a long way to support that.

- **The result of the preliminary survey (Public servant)**

Survey Title: Survey on collaboration in local government			
Census (entire target population): Public servants working at 352 different local authorities in England			
Sample: Public servants in England who are working in Strategic change, or Transformation, or innovation team.			
Start Date: 30-Sep-2016			
The point of the time: based on the data collected until the 7th of Dec.			
End Date: 31-March-2017			
Directly sent: 120	**Delivered:** 119	**Bounced:** 1	**Completed:**11
Response (completion) Rate: 8.69 %			
* The number of sent emails only indicates the emails that directly sent by the researcher. However, there may be more people who received the survey link as the public link of the survey was distributed through design council's mailing lists and some of participants' tweeters.			
Q1. Which organization (council) do you work for?			
This information will keep confidential as respondents want their information to be kept anonymous.			

Nine of the Eleven respondents are working at different local councils in England and other two are working at the same council. The result of this survey has a limitation to be considered as representative answers to clearly describe the situation of the local authorities because the number of respondents is not enough to represent the current situation of local authority.

Q2. Please briefly describe your role with job title and department (if applicable) in your organisation.
Leader, manager, officer etc. / innovation team, policy and partnership, Transformation team, Adult social care etc.

Ten respondents are working as a leader, or manager, or officer and mostly working in the department or team regarding strategic partnership, or transformation, or innovation team.

Q3. How many years have you been with the organisation?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Less than a year	2	18.18%	
1 - 3 years	5	45.45%	
4 - 6 years	2	18.18%	
More than six years	2	18.18%	
(Did not answer)	0	0%	
Total Responses	**11**		20% 40% 60% 80% 100%

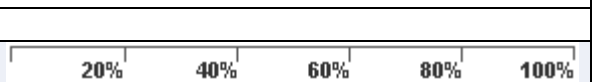
Q4. If you want us to inform you when the results become available, please leave your email.
This information will keep confidential as respondents want their information to be kept anonymous.

Q5. When do you normally collaborate and for what purposes? (Multiple check)			
Responses	**Responses**	**%**	**Percentage of total respondents**
Defining problems	11	100.00%	
Planning project	11	100.00%	
Scheduling	4	36.36%	

Tracking information	4	36.36%	
Gathering data	8	72.73%	
Generating ideas	10	90.91%	
Documenting	1	9.09%	
Distributing data	3	27.27%	
Other (Please specify)	1	9.09%	
(Did not answer)	0	0%	
Total Responses	**53**		

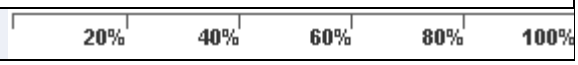
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q6. What types of collaboration tool (form) do you use to conduct collaboration with co-workers ? (Multiple check)

Responses	Responses	%	Percentage of total respondents
Face-to-face meeting	11	100.00%	
Face-to-face workshop	10	90.91%	
Video conference	3	27.27%	
Audio conference	3	27.27%	
Email	8	72.73%	
Phone call	6	54.55%	
Chat or text message	4	36.36%	
Public social network (e.g., Facebook)	0	0%	
Private social network (e.g., Yammer)	3	27.27%	
Web-based document (e.g., Google drive and doc)	4	36.36%	
Other (Please specify)	0	0%	
(Did not answer)	0	0%	
Total Responses	**52**		

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q7. How frequently do you collaborate with other people?

Responses	Responses	%	Percentage of total respondents
Multiple times a day	7	63.64%	
Once daily	0	0%	
2-5 times per week	4	36.36%	
Less than once per week	0	0%	
Never	0	0%	
(Did not answer)	0	0%	
Total Responses	**11**		

Q8. How would your work be affected if you are unable to collaborate?

Responses	Responses	%	Percentage of total respondents
It wouldn't make a difference	1	9.09%	
It would make our work less efficient	2	18.18%	
It would be much harder	2	18.18%	
I could not get my work done	6	54.55%	
(Did not answer)	0	0%	

Total Responses	11		20% 40% 60% 80% 100%

Q9. Please rank the reason for the collaboration in order of importance. (Please rank top 4).					
Answer	**Rank 1**	**Rank 2**	**Rank 3**	**Rank 4**	**Weighted Rank (Score)**
To generate better solutions	5	4	2	0	1 (36)
To reduce duplication of service	3	2	3	1	2 (25)
To provide cost saving	3	1	1	0	3 (17)
To break down internal silos	0	2	0	4	4 (10)
To enhance skills development	0	1	2	2	5 (9)
To open the way for local government to share ideas and connect with others	0	1	2	2	5 (9)
To share agendas	0	0	1	2	6 (4)
Did Not Answer					0
Total Responses					**11**

Q10. From your experience, how worthwhile are the outcomes from collaborating?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Extremely Dissatisfied	0	0%	
Very Dissatisfied	0	0%	
Somewhat Dissatisfied	1	9.09%	
Neutral	0	0%	
Somewhat Satisfied	3	27.27%	
Very Satisfied	5	45.45%	
Extremely Satisfied	1	9.09%	
(Did not answer)	1	9.09%	
Total Responses	**11**		20% 40% 60% 80% 100%

Q11. Please briefly describe the best representative collaborative project of your organisation (including the type of project and specific collaborative practices or tools applied to enhance collaboration).

- A redesign of the customer journey through **adult social care**
- Car sharing with the **elder and disabled people**
- Strategic Assessments use of multiple datasets and anecdotal evidence gathering from various department
- **Children's social care**. Designing **a new approach to one aspect of our interaction with them**.
- **Working across boundaries** health, housing, digital to **reduce homelessness**
- Local Working Group - **Cross silo group** concentrating on **human centred design on a geographical area**
- **Service design for all of our interventions**.
- Process redesign for our Housing department **combining our skills and resources, and their experience**
- Do not have a sufficient overview of all services to be able to answer this. Defining new values?
- In my personal experience, we have a project currently running with Deloitte Digital and the Council
- **Developing a multi-agency model of support** for people starting to claim Universal Credit

Q12. With whom did you collaborate most with through the collaborative practices used in the above project? (Please rank all in order of frequency)						
Answer	**Rank 1**	**Rank 2**	**Rank 3**	**Rank 4**	**Rank 5**	**Weighted Rank (Score)**

Colleagues from other internal departments	2	7	1	0	1	1 (42)
Colleagues in the same department	5	2	0	3	1	2 (40)
Citizen	2	1	4	1	3	3 (31)
Stakeholders from external organisations	2	0	4	4	1	3 (31)
Experts from external organisations	0	1	2	3	5	4 (21)
Did Not Answer						0
Total Responses						**11**

Q13. Were there any specific approaches (including tools, methods and practices) that your organisation employed to enhance and effectively operate collaborations for the project above? (Multiple check)

Responses	Responses	%	Percentage of total respondents
Agile approach	3	27.27 %	
Lean approach	3	27.27 %	
Co-design (e.g., service design) approach	9	81.82 %	
System thinking approach	2	18.18 %	
Other (Please specify)	3	27.27 %	
(Did not answer)	0	0%	
Total Responses	**20**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Other (please specify)
- Multiple discussions and review of drafts

Q15. Please rank the phases of the process in designing and implementing service where your team has mostly applied collaborative practices in order to support collaboration among internal members or with external stakeholders (Please rank in order of frequency).

Answer	Rank 1	Rank 2	Rank 3	Weighted Rank (Score)
Defining problems	3	6	0	1 (21)
Discovering problems	5	1	2	2 (19)
Developing ideas (solutions)	3	2	5	3 (18)
Implementing solutions	0	1	2	4 (4)
Evaluating and revising solutions	0	1	1	5 (3)
Others	0	0	1	6 (1)
Did Not Answer				0
Total Responses				**11**

Q16.

16(a): Participants clearly understood the goal of the collaborative practice.

Answer	Responses	Value	%	Percentage of total respondents
Strongly Disagree	0	2	0%	
Somewhat Disagree	1	3	9.09%	
Neither Agree Nor Disagree	0	4	0%	
Somewhat Agree	10	5	90.91%	
Strongly Agree	0	6	0%	
(Did not answer)	0	NULL	0%	
Weighted Score : 4.82				
Total Responses	**11**			20% 40% 60% 80% 100%

Q16.				
16(c): Opportunities for participants to express opinions and generate ideas were equally distributed.				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	0	2	0%	
Somewhat Disagree	2	3	18.18%	
Neither Agree Nor Disagree	0	4	0%	
Somewhat Agree	3	5	27.27%	
Strongly Agree	6	6	54.55%	
(Did not answer)	0	NULL	0%	
Weighted Score : 5.18				
Total Responses	**11**			20% 40% 60% 80% 100%

Q16.				
16(d): Participants communicated clearly with other stakeholders				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	0	2	0%	
Somewhat Disagree	2	3	18.18%	
Neither Agree Nor Disagree	2	4	18.18%	
Somewhat Agree	6	5	54.55%	
Strongly Agree	1	6	9.09%	
(Did not answer)	0	NULL	0%	
Weighted Score : 4.55				
Total Responses	**11**			20% 40% 60% 80% 100%

Q16.				
16(e): Participants could easily access and check the progress of the project				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	1	2	9.09%	
Somewhat Disagree	2	3	18.18%	
Neither Agree Nor Disagree	1	4	9.09%	
Somewhat Agree	6	5	54.55%	
Strongly Agree	1	6	9.09%	
(Did not answer)	0	NULL	0%	
Weighted Score : 4.36				
Total Responses	**11**			20% 40% 60% 80% 100%

Q17.				
17(a): The project involved a proper team, or skilled people, who could effectively lead the collaborative practices and support participants.				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	0	2	0%	
Somewhat Disagree	1	3	9.09%	
Neither Agree Nor Disagree	1	4	9.09%	
Somewhat Agree	7	5	63.64%	
Strongly Agree	2	6	18.18%	

(Did not answer)	0	NULL	0%	
Weighted Score : 4.91				
Total Responses	**11**			20% 40% 60% 80% 100%

Q17.				
17(b): Our organisation provided the training needed to utilise collaborative practices for supporting collaborations with other stakeholders.				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	2	2	18.18%	
Somewhat Disagree	1	3	9.09%	
Neither Agree Nor Disagree	1	4	9.09%	
Somewhat Agree	4	5	36.36%	
Strongly Agree	3	6	27.27%	
(Did not answer)	0	NULL	0%	
Weighted Score : 4.45				
Total Responses	**11**			20% 40% 60% 80% 100%

Q17.				
17(d): The tools and methods used enabled us to effectively achieve the goal established together				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	1	2	9.09%	
Somewhat Disagree	0	3	0%	
Neither Agree Nor Disagree	2	4	18.18%	
Somewhat Agree	5	5	45.45%	
Strongly Agree	3	6	27.27%	
(Did not answer)	0	NULL	0%	
Weighted Score : 4.82				
Total Responses	**11**			20% 40% 60% 80% 100%

Q17.				
17(e): Collaborative practices helped us to achieve better results				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
Strongly Disagree	0	2	0%	
Somewhat Disagree	0	3	0%	
Neither Agree Nor Disagree	1	4	9.09%	
Somewhat Agree	5	5	45.45%	
Strongly Agree	5	6	45.45%	
(Did not answer)	0	NULL	0%	
Weighted Score : 5.36				
Total Responses	**11**			20% 40% 60% 80% 100%

Q18. Overall, how satisfied were you working in the collaborative practices in the project as a participant?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Extremely Dissatisfied	0	0%	

Very Dissatisfied	0	0%	
Somewhat Dissatisfied	0	0%	
Neutral	0	0%	
Somewhat Satisfied	5	45.45%	
Very Satisfied	5	45.45%	
Extremely Satisfied	1	9.09%	
(Did not answer)	0	0%	
Total Responses	**11**		20% 40% 60% 80% 100%

Q19. What were the most valuable things about collaborating with other stakeholders in the project?

- Avoiding making assumptions
- Combining different opinions and coming up with rational solutions
- To have appropriate structures and good listening skills and to act on what is being said proposed or complained about, the need for revision and to be reactive is not something easily achieved in government.
- The understand the real world
- customer focus willingness to collaborate contribution collaborative and supportive environment
- Shared expertise, understanding of how others tackle problems, identification and reduction of dual effort
- Approach the problem from a different perspective and lead to a deeper understanding of the problem and solutions
- Combining the skills of all participants. This involved the design knowledge of our internal consultancy team, and the experience and service knowledge of the Housing teams. This led to better designed services, and the Housing team gave feedback on the process design kit which has led to improvements that will benefit the rest of the organisation.
- Range of ideas generation, better solutions, multiple 'hands at work' on the project, buy-in by others to ideas and solutions.
- Visibility and involving others for their input
- No single agency has a view of the whole system collaborating helped us to achieve this. We then used evidence gathered to develop a consistent and coordinated system of support across multiple different agencies. We provide a more efficient and effective service to residents by collaborating with partners. This is widely recognised by senior managers across the public and voluntary, community and faith sectors in this area.

Q20. Please choose all challenges or barriers to collaborative practices.

Responses	Responses	%	Percentage of total respondents
Silos	8	72.73%	
Risk aversion	8	72.73%	
Difficulties to mobilise resources	7	63.64%	
Cost of the event	3	27.27%	
Hierarchical culture	4	36.36%	
Hesitation to participate in	4	36.36%	
Bureaucratic process	5	45.45%	
Other (Please specify)	1	9.09%	
(Did not answer)	0	0%	
Total Responses	**40**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Other (Please specify)
- Time constraints of those involved

Q21. Please rank them in order of importance (seriousness) during the collaborative practice based on your experience. (Please rank top 3)

Answer	Rank 1	Rank 2	Rank 3	Weighted Rank (Score)
Silos	5	2	1	1 (20)
Difficulties to mobilise resources	3	2	0	2 (13)
Hierarchical culture	2	2	0	3 (10)
Risk aversion	1	2	2	4 (9)
Hesitation to participate in	0	2	2	5 (6)
Bureaucratic process	0	1	4	5 (6)
Cost of the event	0	0	2	6 (2)
Did Not Answer				0
Total Responses				**11**

Q22. In your opinion what is the most important factors in successful collaboration? (Please rank top 3 in order of importance)

Answer	Rank 1	Rank 2	Rank 3	Weighted Rank (Score)
Resource (Time and human resource) management	2	3	4	1 (16)
Relationship (authority and trustworthiness etc) management	5	0	1	1 (16)
Communication among participants	2	1	2	2 (10)
The choice of proper collaborative practices and tools, and understanding the use of them	0	4	2	2 (10)
The organisation and planning of the collaboration	1	3	1	2 (10)
Equality in sharing information and benefits	1	0	0	3 (3)
Event cost management	0	0	1	4 (1)
Did Not Answer				0
Total Responses				**11**

Q23. Please select the way for your team or organisation to achieve successful collaboration within and across the organisation?

Responses	Responses	%	Percentage of total respondents
To clearly foster a goal together with colleagues (or partners) that is mutually beneficial	8	72.73%	
To uncover underlying tensions among colleagues (or partners)	3	27.27%	
To clearly share current situation with stakeholders	5	45.45%	
To equally distribute authority and responsibility	2	18.18%	
To sufficiently communicate with stakeholders	7	63.64%	
Other (Please specify)	2	18.18%	
(Did not answer)	0	0%	
Total Responses	**27**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Other (Please specify)
- For everyone to understand and appreciate the value of collaboration over noncollaboration

Q24. Things that your team (department) should do to make it a more successful collaborative environment to innovate services are…

- Open-mindedness
- Have parity across the team in structure, enable the managers should embrace transparency and make themselves accountable to the wider team
- focus on design thinking and customers. bring empathy into the design. train people to work in this way

- More open communication, higher rate of care post rollout of solutions, more low-level input early on (rather than at Manager level)
- Better understand the concerns, situations, barriers and motivations of partners in the collaboration
- Bring the right staff together, encourage an attitude of accepting that we can prototype ideas, and they can fail, so long as we learn lessons from them.
- Improve organisational climate for innovation: - management culture encouraging/allowing new ideas and trialling them - management culture supporting time for coming up with ideas/identifying specific projects for collaborative work - Ekvall - organisational climate principles - work through these with senior team/other teams to systematically to improve
- 1) People don't usually have a lot of dedicated time available to collaborate - time would be helpful to prepare to be mentally present on the day and session and to read the notes from the day and continue to collaborate/take actions forward 2) Training for the appropriate tools and techniques to apply to get more collaborative working
- Continue to engage with partners and maintain strong relationships. Shared governance arrangements or joint budgets can help. See Greater Manchester. Service design for all of our interventions.
- Process redesign for our Housing department combining our skills and resources, and their experience
- Do not have a sufficient overview of all services to be able to answer this. Defining new values? In my personal experience, we have a project currently running with Deloitte Digital and the Council
- Developing a multi-agency model of support for people starting to claim Universal Credit

Appendix L. Sample interview questionnaire _ open-ended questions

Q) Please select one of the six types of collaboration that best describes the collaboration of your project with a local government organisation.

□ 1.	□ 2.	□ 3.	□ 4.	□ 5.	□ 6.
With Designers (Very closely)	←	←	←	←	Without designers
					
Embedded designer	**Internal agency**	**External agency**	**Brokered intervention**	**Design-led start-up service**	**No-designer design work**
Full time strategic-level employee responsible for developing organisational design capacity, as well as for specific service redesign programmes.	A service design unit (normally multi-disciplinary) works with other parts of the organisation on a project-by-project basis.	Consultancy from an independent design practice on a project-by-project basis	Organisations such as the Design council, or Nesta in the UK. In order to address perceived market failure, broker design work for a public sector body.	Design-led teams move outside of the traditional public service institutions to start service that meet a specific public need independently.	Public service managers deploy design methods without professional design input.

[Reference : Restarting Britain: Design and public services , 2014]

Q) Could you briefly explain the type and distinct features of your council's design team by comparing the different types of collaboration above?

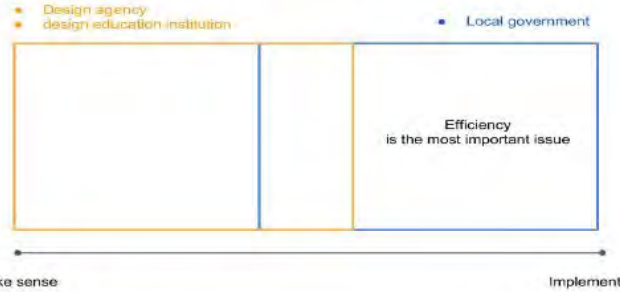
Q) Is your team an internally dedicated service design team(unit) working within the council or an external design agency commissioned by the local council?

Q) How do you collaborate with internal public servants 1) who are dedicated in the project, 2) who are from other departments?

Q) If you value the designerly way of working, Why do you think so and what do you think is important?

Q) According to the results of my survey and interview so far, there are some common features in local council.

- It seems difficult to maintain motivation of transformation and embed design culture into organisation as people who are in charge of the role frequently change the job.
  (Jobs are not stable as people frequently change their job. It seems to have a negative influence on maintaining motivation of innovation and transformation.)
  → It is not easy to propagate the new ways of working across the whole organisation.
- Public servants are normally very busy with the load of work that were given to them
  → Therefore, they do not like the work such as 'transformation', 'change', and innovation what requires their risk taking. They are normally risk averse.
- Hierarchical culture and silos are deeply embedded.
- In the face of increasing demand from citizens and decreasing budget from the central government efficiency has become the greatest concern in most of the councils.



Q) How do you think about this analysis

Q) Do you have a specific approach, tools or methods created to deal with the issues by considering those barriers; a lack of time, budget and human resources/ efficiency)

Q) Do you think design approach (design-led practice) is still useful in supporting collaboration in the local government? If you think so, why, when does it work best, and for what purpose?

Q) I am wondering if there is a possibility for me to meet and interview 1) other service designers, 2) public servants who have been participated in the project, 3) any one of the decision-maker who had decided to establish the internal design team (to commission this project)?

Q) Is there any possibility for me to have a chance to observe any one of design-led collaborative workshops during the project?

Q) As a last question, are there any lessons learned regarding the strength or weakness of design approach during collaborations based on your hands on experience?

Appendix M. Sample interview transcript _ designer

[Interview] Transcript

Case (DIM)	Council A (Internal/External Designer)
Interviewee	CAS01
Job title (position)	Service designer (Director)
Years of work	24
Interview data @Location (Interview duration)	Feb 15, 2017 @Council A (50 minutes)

INTERVIEWER: I think this interview with you will be really helpful for my research.

Interviewer gave a brief explanation about the research including DIM.

CAS01:

06:39 I could probably give you examples of all six I might have explored (six design intervention models).

INERVIEWER: Can I call you designer?

CAS01:

07:47 Me personally? you can do.

INERVIEWER: Could you briefly explain about your project and your role within the project?

CAS01:

09:09 Sure, my role is somewhere between I was described this area as design approach, Design thinking, as technology, and then as the business. You asked if I'm to call me a design and I'm definitely between the three things. So, I was a developer, coder. And then I've run my own two small businesses and spent lots of time working between businesses, creative agencies, design agencies and technologies, suppliers. So the role at the moment is kind of overseeing role. It is a strategic role to try to understand just balance the values, the principles, to find the overlap between the needs of the business, technology, and design as in customer focused, user focused design solutions to important problems. So, I guess my role is a design role to apply Design thinking process, but my role is also very much a coaching, and mentoring as well. You mentioned the two aims of why we are here. One is to actually improve delivery of services with a specific focus I suppose on how digital services can improve that delivery.

11:11 You quite rightly identified the public are talking to other people about business knowledge transfer piece. But actually the knowledge transfer piece is often not explicit in what people come to us to buy. So they come to us for us to create better digital services. But in all these four or things you were talking about, there is an element of cultural change required in order to make the shift or to be more user-centred, Agile approach. You can't just do it. You can't just do some courses and then apply it. The constraints of the culture in an organisation are massively powerful. And the culture in the mentoring and in the facilitating role is really important.But it's not people what people buy. It's what I enjoyed delivering but it's not necessarily what people buy.

INERVIEWER: According to your answer, it seems that leadership and mentoring roles are significant in equipping people with new ways of working.

CAS01:

13:09 Absolutely, absolutely. It's about joining them on with decision making. All the way through just supporting them in decision and referring back to the principles that we are trying to apply. You mentioned, non-designer, it's a quite interesting position because we, agency U, talked a lot about design as a team sport and the designer role as a facilitation role. So, one of the things we've found as an organisation that is our reputational building things using Agile techniques to build software applications. As we move to more design focus, people aren't just coming to us and saying 'Help us build this thing'. They are coming to us and saying 'Help us solve this problem' or even 'Help us identify the problems' to solve its shift. We've found that it's a different approach for designers and need designers who are confident and comfortable in their own abilities. But don't need to solve everybody's problems for them. They don't need to go away. You know the hero designer.

14:33 This external agency is not how was that, that wouldn't work for us because that evolves the agencies going away and comeback and we will show you the solutions. That's not how they at all. Much more powerful to say, OK, we don't understand your organisation, we don't understand your problems but we do have an approach which will help you make progress. And it will help you move your organisation to a space where you can start to solve the problems just yourself.

15:04 Yeah, it's a big ask for us when we're looking for design, just to say, how do you facilitate that process and not own design process. But you use your experience, to guide and support other people to apply a Design thinking.

INTERVIEWER: Do you mean that from your perspective based on your experiences, the most important role of designers for organisational transformation is to share their knowledge and skills by facilitating kind of collaborative practices or workshops?

CAS01:

15:32 Absolutely, I mean it's also really good sometimes. If you are designer, you can just short-cut sometimes. That can also be very powerful, if you are working on so you are still in a problem, a designer can just use experience to short-cut. As long as I do it in such a way which is you know I think, this is where I think we are going to end up because why I think we might get there. But, it's much more generous activities.

16:29 Me personally because I don't have a background in visual design, and I don't have a background in design. That something that I would say I really appreciate that skill. They are able to somehow synthesise what's going on have presented back in such a way that people feel ownership of it. But it also helps them get to the next place.

17:16 One of the very difficult things in organisation like this one. We're brought in as part of the transformation team. So very few levels of management between us and the top of works is like. This is rather power sits and transformation has seen as something to be wary of in public organisations because they are very weary of change they are constantly under pressure. There is a kind of austerity obviously. There is a scarcity. There is a scarcity of time and money. There is a lot of negative feedback all the time from the things you are trying to do. So for an organisation to come in and say 'OK we can help, we can transform your organisation. There is an awful lot of work to be done in saying we are not here do this to you people delivering the services. We here to support facilitating help people deliver better services. And we spent a lot of time trying to get that mind.

18:24 Because, I mean one of the easiest things that I have found is to get people to make shift from we're not an organisation delivering these services is in an extreme pressure and we're delivering those people over there. Them and us type things. People oversee the services are often seen has their trouble causers, their dependent owners. They don't read information then...It is very easy to make people to shift away from working for council to being consumer council services. This is one of the first things we do. Forget you work at the council. You are a consumer of council services. What is your experience. And people comment they just switch back quite quickly to empathising with the people that they have to serve. That's easy bit.

19:14 The hard bit is then giving them the confidence that they can solve the problems. Because they can see the problems. There are obvious they experience things themselves, but they also know all the obstacles of the council. They know all the blockages. They know the systems don't work properly and they are unsupported. They know there's lots of inconveniences. They know there are some people out there are very expensive to look after them. So I think to give people a confidence that they can take a customer-centric view, but actually start to solve some of the problems. It doesn't matter where to start, start somewhere, and start to solve those problems is the most important thing. To do that, you have to be there with them, you have to be there with them day to day basis, reminding them. Yes, there's obstacles there because way around obstacles or there's an obstacle there you have to make sure it for me. You have to identify the obstacles and say this needs to be removed for me to do my job properly.

INERVIEWER: What about the support from Council A in running the project? Are they willing to support the team?

CAS01:

20:46 To a certain extent. I think they, as the recognition that the existent methods are not working, they has drastically accelerated the pace of the change. They need to save more money more quickly. So the biggest challenge is that the council is a kind of complex system. changing one thing over here, this change over here, and change something here, and resident become confused and they start to phone call centre, the cost of call goes up. So they start taking away telephone numbers, then people get more frustrated and then they start knocking on a door. You know this is quite complex systems now.

21:33 What people, what the kind of stakeholders want, they want answers. They want to know how am I going to say this amount of money. You need to lead your activity to this cost saving. And that cost saving is often the reduction in a number of people work and the department. And that's massively challenging because that doesn't motivate the people that are delivering the service. They are not motivated by saving council money, they are motivated by making their lives easier and making and delivering a better service. So you have to somehow map on delivering a better experience for everyone.

22:10 The users are persistent thing, internal users and external ones, and who is, you have to somehow show it. Get people to [pauses] it is almost like an act of faith. You say *if* you do this, if you can deliver a better customer experience and better user experience internally, you *will* save money. [laughs] And it's like an act of faith, of course that's not good enough. So the other way, just say where am I going to save money and you work backwards from there, and you end up with some very short-term quick fix. This may improve efficiencies here but have knock-on effect which makes the service worse.

INERVIEWER: Yes, it's true.

CAS01:

So, it's how do we get re-organisation. It's not individual. It's how you get re-organisation to make that leap and recognising that delivering better services is not the opposite of saving money. They can work together.

INTERVIEWER: Is there a specific way for your company to persuade the people in the council who are thinking of whether going for a way of working?

CAS01:

25:15 I think GDS has done us all a great favour in showing that in central government. You can take an agile approach and validate this whether we can follow more Agile process and we will deliver results. So, what they allowed for is they've given a name to some called Discovery which we know what Discovery is. As we've carried out Discoveries for years. But last five years, we've come over things that council can purchase, and it's just about understanding user needs. And so we can sell you a Discovery, and now are you the council, you can sell a Discovery it would be a number of people of specialists and cross consultant team we will be looking at user need. You identified the problems, looked at the user needs around that and validate the service is or isn't delivering that user need. But even at that stage, council still wants you to say to put a number on. So at the beginning of Discovery or quite soon in Discovery, they want you to say what your solution is going to save them. Because they have to just find spend in terms of what it is going to save. And the whole knows that in the Discovery, you don't know that information. You're finding out. You're discovering where the opportunities are. You're discovering from bits of data, hidden away data sets that that can start can to reveal where the opportunities lie. But that's not quick enough for the council. They want to know.

26:46 Then there is a next phase which is the Alpha where you start to explore solutions. You'd got a pretty good idea that your solution is going to meet their needs. And yes a bit more of sense, that it will deliver the cost savings you are looking for, but you don't know for sure that's the point. You're *derisking*, in Alpha, your prototyping, your hacking, your user testing. You're just derisking. You are not giving concrete answers, It's only really when you've said OK, because we all know waterfall doesn't work. If you say put together business case, we are going to save three million pounds. We are going to spend six months designing the solutions. We are going to spend a year implementing it. And we spend another six months testing, and it never works. So I think our process just says that there's not [pauses] you know, it doesn't work like that. We don't know at the start of the project what we know at the end. Therefore why pretend we do. This is the whole Agile process.

27:40 So how do we balance that, it is incredibly challenging I've got to be honest. It's very very difficult. And there is two pronged approach. So you have to have someone in the middle who believes in the value of this design, this approach and this spreading, this culture change which allows people to solve important problems. And you have to have someone that is also able to translate that into cost saving to tell a compelling story about where the cost saving is going to come from, if you follow this approach. Without that person, it's very very difficult. I would say.

INTERVIEWER: It seems that silos and risk aversions are the most prevalent and serious problem in the local councils. Therefore, the way of propagating the new way of working seems to be really difficult because of the culture and high rate of employee turnover rate.

CAS01:

30:38 Yeah, so they changed the job within the organisation, which is OK because learning goes with them, it's when they leave. So this is an important point you make and it's something I'm quite wary of. As I said, it's very rewarding to coming to an organisation and see people who are struggling in their jobs and then their satisfied with their jobs and show them a new way of working. But if the organisation can't meet quickly enough to support that person or develop that person, allowed them to explore a new way of working which moves very quickly. You can learn very quickly then that person is going to start looking for a new job somewhere else and it is a massive turn on. You absolutely right. Especially with a lot of contractors. So, I think that something that we need to do better. We need to get to a point where this is knowledge transfer is add-on. It's not what people are buying. I think we need to make it explicit from the start. A bit more explicit. This is an important thing.

31:50 We can come in and on a small scale we can start to create a team of people that are able to think about things in a way. They are able to adapt their way of working. It's a new way of working. But you must support that team. You must listen to that team.

32:12 It's not we're here to catch up, report, you know there is management in this organisation, are saying report me briefly, tell me what you are doing. I want control, checks and balances. It's not attending daily stand ups and hearing the problems that struggles this team to come up against. When you can start to think actually this person is starting to get frustrated, then obstacles it can't move, then not get any support from the management to move things. You need to nurture that team, you need to make that team feel important and valued. Otherwise, as you said, they will move.

32:48 I'm doing a project in Guy's and Thomas's Hospital at the moment which is very similar environment. There is lots of siloed thinking. People in different services, different specialisms support different services. What they did that was recognising right from the start what they want is. They want their people think differently.

33:16 So they got some money and invested it in freeing up time of those people. So a senior commission has been effectively replaced with they called locum a temporary doctor who will take this strain of seeing patients off that doctor. So he can spend time. He's been on one of the Service design courses. He can spend time running workshops with other services, start to spread word. He's empowered and he's valued and he still got his job. You know he can go back to any time. He is still a commission. And the other thing they've done is that they got me and some other people to go and support them. I mentored them and guided them and be there on a day to day basis. We supported them in the Slack channel. We communicated with them to help them to make decisions and guide them.

34:10 So that is investment in people and people's feelings. They feel responsible, they feel pressure to make this thing work. But they kind of take ownership of it. So, it's about creating the environment and support for those people to flourish.

INTERVIEWER: When you are trying to recruit people from the service where you are working on, are people willing to share their time and involve in the project?

CAS01:

34:57 The first response was that most people are too busy. We're very busy and don't have time for this. So it's very gradual process of. First of all, inviting them or asking them to invite you, giving them the opportunity to invite you and help them. Constantly stressing as we are here to facilitate, help we know some things. We don't know as much as you. So we're here to help. And then picking up the things that they come up with, the things they generate, things they take ownership of. Doing some research about ? and going back and playing it back to them. If possible bring in them along. So come and do some user research with. Come and hear yourself?. And we run another workshop with them we tie up things we did before. We tie up to the inside we've got from research. We give them opportunities to build on that.

35:51 One of the things, we've done two phases of development and that's one of the things we've learnt is that their time is poor but you need to use that time very wisely. In an ideal world, I will take two members from every service and put them in here with us and we have a conversation. They just can't do that. That's not going to happen. So we can say commitment from you is two half day workshops, you and your team. But making that really count. It's not full true discovery. It's very limited but it is showing them the value. It gives them ownership. It gives them a sense that actually if we take this approach, we would get something better.

INTERVIEWER: How to invite or recruit people for this project?

CAS01:

36:42 We've come through quite long-winded process here. Initially, we were asked to talk to all services. Having an initial meeting with them, let them suggest opportunities to us. And for the first phase of the Discovery, we just worked with the people who were keen. So there were two different services. We ran about three Discoveries with two in Housing and one in Children services. And then we spent last two weeks of Discovery really going out and talking to people about it. So we presented that we played back what we've done. We presented the work to the councillors, to the senior management, to the service team. We did a kind of a road show within the council going a show.

37:25 And we gave people a form which was a very simple kind of what problems you are dealing with. What data do you have. What's your vision to solve this problem. And we left at the end of the workshop, we would ask people whether they want to film it. We've got that seven or eight. People who are coming to us and say 'Yeah we would like to take this approach. And then from that we've said OK. So for the next phase in Discovery, There's those people and there are also people in it politically. There's a political drive to go and work in that service. And also cross over. We know that no more cost saving, we are going to be made in that area. So let's go and help them to. So we've got a bit force of it. And that's a challenge we're trying to deal with. Then we all say OK. In this Discovery we've come up with a quite rigid format in a sense of saying. There would be initial meeting in which we will tell you what we want to do. We will identify data which you can get us. You will do some research and desk research and we will together, we will get some people in a workshop. So who do we need to be there, who do we need to be. Then we will have the workshop.

38:39 And it would be about developing personas, it would be about mapping journeys, it would be about finding opportunities. And then we will go away. We will do interview, it's not many, it's going to be about five or ten people. And then we'll come back and we will replay inside look for where opportunities are. Match two things together then we will generate some ideas about how might we stuff. So we are really short cut process. And then together we will decide what will happen next. So that's a process for getting people, involved in a very specific way and then I think that's for Discovery and then an Alpha, it would be much more about, OK now it's your project. We will help doing an Alpha but you need to commit some resources to. You need service manager. You need someone who? You will talk to your customers. It's kind of escalation involvement ?.

INTERVIEWER: I heard that this project will be continued depending on the outcome of the Discoveries and your performance.

CAS01:

40:10 Yes, we were hired to run an initial ten-week discovery phases. And then it was extended to another ten weeks. The next stage is, yes, hopefully our discoveries will be some potential Alphas to run. They're procuring, because I have gone through to come across that, procuring a large jump of work for an external company to come in and help them to deliver Alphas and Beta depending on what comes out in Discovery. So it is uncertain who is going to do that because they have to go through a procurement process for it. But that's the external needs to say? what point takes it to Alpha,

INTERVIEWER: Do you know who are going to evaluate the outcomes of your Discovery project and make a decision whether to keep working with your company?

CAS01:

41:02 That's a very good question (laugh). I would like to think it will be us and it would be the service teams that we are working with. They'll evaluate the outputs and decide whether. And then they'll have to... I suspect. So, what we've proposed here is, there is no digital team here. There is an ICT team which is actually outsourced to another company to deliver ICT. There is no digital team. As a transformation team which some digital people of kind ? actually. Some of them comes, some of them as a BA?, various people were employed into Transformation team. We've worked with them in Discovery. So they are the formation of this Digital team. So new Digital team is being formed. Just starting now is the first head of digital to the council's heads. This is the breakthrough. So previously it has been a kind of Transformation team, looking at cost saving, pushing ? down. There is now head of digital who will take ownership. I think automatically they'll be making decision based the resources they have. The pressure coming down save money. The pressure coming up from the service team saying this is really important need to do this.

42:23 What we recommended long term is a grow that digital team to facilitate and going and help services. And then that digital team involves in to support that work. I call like a guild of people who facilitate, share approaches. And people within the services they have digital capacity can service. But they have designers in the services. They have developed as service researchers. They have people in the services they can deliver digital services. And they will meet in the digital? works. So it doesn't become digital team delivering for this massive organisation. It has to spread. So eventually, there'll be a digital team, head of digital who will be assessing the Discovery we shared learning and decide what to do next. That's I'm concerned.

INERVIEWER: Is there a possibility for me to attend and observe your collaborative workshop?

CAS01:

46:28 From my perspective, there's no problem at all sharing. It might be interesting few to come to show and tell as well, which is where we share every two weeks. We share with people. That's really important part of getting buy in. It's open communicating what it is you are doing and what you are learning. So we do that. Previously we done every week. We've produced it every two weeks. So last Wednesday, we had twenty of people came and we do it at the same time every Wednesday. Come and just talk through. That's quite interesting. It might be quite interesting to observe that. Just to see their live interactions. See people's reactions, See who thinking is there actively participating because they have to be.

48:57 I don't see any problems with you come and see some workshops. You say then show how's the observing and learning. You can pick up a few more people to talk to as well.

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Appendix N. Sample interview transcript _ public servant

[Interview] Transcript

Case (DIM)	Council D (Non-Designer)
Interviewee	CDP01
Job title (position)	Transformation and Change department (Head)
Years of work	22
Interview data @Location (Interview duration)	Transformation and Change department @Council D (60 minutes)

INTERVIEWER: (Briefly introduced the background and aim of the research including DIM) and Can you tell me about the strategy of how your council has been trying to embed design capability?

CDP01

It's quite easy to say we probably fit in all of those four spaces (four different types of the DIM) in terms of where we are at the moment.

We probably had started from here (External designer). The External designer being commissioned. Part of the commission we did was to give us some learning. So I guess if we look at it we like started from here (External designer), and moved into here (Internal/External designer) and here (Non-designer).

04:40 And then what we are thinking of is, based on experience here (Non-designer), what we want to end up with is here (Embedded designer). That (External designer) was a start. This (Embedded designer) is where we want to finish or where we want to evolve to.

04:55 Depending on the different projects we've got, we were probably in the different places. We had to start here (External designer) because it was completely new to us. But then we commissioned some works in this space (Internal/External designer). But with capability transfer as part of that commission. So now we have got people, I would like to say they are embedded designers but they aren't trained specifically but they got real appetites and real ability in that area.

05:33 So, they developed appetite and ability, and now they're moving into that space (Non-designer). That is kind of like our evolution. But we are a small team. So, we still rely on some of that (External-designer Model), some of that (Internal/External Designer Model), and some of that (Non-designer Model). So, that is kind of like almost where we're reflexing our approach.

06:28 That's (the evolution from External designer model to Embedded designer model) definitely our experience. And what I like is actually that gives us some flexibility. So we can resource up and resource down depending on where we are at. But I'll be looking to build some more of this (Embedded Designer Model), but probably taking people through that same route. That is a kind of cultural fit.

INTERVIEWER: Can you tell me more about your team and the members of the team?

CDP01:07:26 (Check the drawing built by CDP01) In terms of the capacity, we have got myself (Head of transformation and change) and my service design lead, but what we have got coming up through kind of exposure is that we have got a project manager who is demonstrating a kind of move towards that way of thinking. So, it is kind of something. It's appealed in some way through that route. We've got some people in services who've been exposed to it. Who are kind of, that is almost like... So, we take ourselves as a central resource in that person. And we have got some people in the services who have been exposed to and now probably not embedded but they are non-designers who've been exposed. 08:45 So these people will be becoming designers. These are Non-designers and then we've probably got some emerging activities in our commissioning functions where they're applying design thinking as they look at re-commissioning. So they are kind of absorbing design thinking into that professional activities.

09:15 So, this, I guess, is like, are you truly a designer, or are you somebody who manages a service, who is also thinking about the future of your service with design lens, or are you a commissioner who is also as part of the commissioning process thinking about design. So our commissioning cycle (see a diagram in the image) looks something like this. You've got analysis of need, and then you've got a co-design space of the solution, then a kind of procurement, spec, and performance management of the contract.

10:05 So, this where we are kind of trying to build our capacity here. We focus more on ourselves developing that capacity. But, also developing a toolkit for commissioners and managers. So we're also sharing that. We've got an online or virtual academy. People (only council officers in the Council D), perhaps in the spaces (two of the cycle), they're going through a virtual academy on design thinking.

INTERVIEWER" Can you tell me more about how do you share design knowledge and develop design capability within your organisation?

11:03 We've got a toolkit. So, people can say like what other tools they will use in this bit of the commissioning cycle, what other tools they will use in that and so on. And we are very much focusing in that space and building appreciation of design thinking through that.

11:23 I'm also responsible for a programme called Transformation. Some of it is tweaks rather than transformation. Some of it looking at digital fix. That's really about kind of efficiency, but doing the same thing, but just doing it through digital route. Some of it is about channel shift. Some of it is about back office changes. But, essentially still doing the same services. I guess, where we need to move to is what is in the transformation space, and what's in the changes to existing. 12:42 And potentially, this is where we need to get to be more innovative in our thinking. And, you know, instead of kind of gloriously admiring the problems that we've got. Like is the market for adult social care robust enough? And just kind of talking about what are we actually doing purposefully in that space, which might not be about our services but it's about the systems that we are part of. 13:18 And how do we execute our responsibilities? But actually we're dependant on things outside of ourselves to do that. So that's probably the more transformative stuff. And also what is going to be our relationship with our citizens. So you know those things that are gonna be slightly different. This feels like exploiting what digital can do, but still doing the same services whereas this is more in the what can we do in that relationship space? and what can we do with the marketplace.

14:36 We looked to Government Digital Service (GDS) to see how they work, using design thinking in that space, but obviously some of our service design may not be related to digital. It could be to do with how we carry out conversations with our citizens. So, once again, if we think about Adult social care, we need to be having conversations with them about what they can do, not whether they're eligible for services or not. We've got legislations. So we have a kind of check eligibility. So, in our team, we are quite interested in people who are just out of services to see how they are living their lives, and how they're maintaining themselves, and their lived experience not of council services, but of their life as a whole to see if we can learn from them. 15:52 In this space (Non-designer Model), focusing on service design, there's probably two in a bit, two probably. What I am doing here as a Head of Transformation and Change is more about trying to find links with the rest of the organisation where design can help. So, for example, we've got a big programme of reviewing Customer Journey. That's predominantly looking at kind of a process mapping approach. I am challenging that, and saying you know, mapping the process is one thing, but finding out about the process of the services, and what service does. So, trying to kind of shoehorn the human-centred design in to that space. 16:58 Trying to make sure that when we're thinking about how things could be different. We're trying to kind of hold all those different lens. So it's not just about getting money out , but it's also about improvement. But it's not just about improvement, it's also about the future. what will the future be like. 17:24 Also, what will be the expectations of the people, generations to come from us. So, yeah we are trying to hold those different thoughts.

INTERVIEWER: Can you talk about when did you recognise the advantages of design approaches?

CDP01:

17:55 I was introduced to it by a line manager who came to work with us, who came as a Director of finance. When she came, we had been doing a fairy traditional salami slicing approach to managing our financial challenges. And she introduced me to design thinking, put me in touch with some external people in the field and encouraged me to involve them in a particular challenges that we are looking at. And it was almost like the fit between my background which is organisational development. So, that kind of human aspects of how organisations operate with this then design thinking which's got a really strong connection. 18:48 So it's all kind of about the human interaction, human experience, the aspirations of people, and motivations of people, and seeing the potential for doing services differently. And then I had a real lightbulb moment when working with the external organisation when they took me through some ethnographic work that they've done which described lived experience of young man through his life from the age about five and what had been good times and bad times in his life. And when this sate had been involved, and what it demonstrated to me was the often we have a list, a menu of things, which we offer people so you're presenting with a particular set of situations or behaviours that mean you get a particular service, even if actually you don't want it doesn't make any differences to your core issues that you're dealing with.

20:04 And the example of this young man, and it kind of mapped him all the way through. Um, and the one example specifically that I still remember is him turning up at school, obviously not having had breakfast or something. So Social services then gave him vouchers to purchase breakfast. But that's really not what he needed. And it was all about, you know, they almost like an over prescription or a very prescriptive sets off interventions that probably ended up costing as more and certainly didn't achieve any real outcomes. So It's the combination of those things and also us thinking what are we actually delivering for the investment that we're making for our residents, and how do we know that it's actually adding any real value. That's kind of took me into the space with. It's a bit like a perfect storm of different things. So, that's really when I started to see the benefits of it. And then what I like about design thinking is it's still held you in a very disciplined space.

21:22 You know, go wide and do lots of discoveries. But you know at some point, you have to stop doing that and come back in. What I also liked was to encouraged us to think about what's the problem we're trying to solve rather than leaping to solutions and then once we locked on to solution, almost like post-rationalising it. That's going to be the thing that would make the difference because we've invested then in implementing solutions, but we haven't necessarily tested it.

21:59 And the other things that really opened my eyes was how it challenged or gave us the space to challenge some of the assumptions that we're holding about the situation and also the recipients of the services. So I was taken by how much people described from a professional perspective. The people who're in receipt of services are almost homogenous mass of people rather than a differentiated unique set of individuals. And therefore, designing services is almost for the worst case scenario.

22:56 What I'm now thinking is how do we build flexibility into our systems, so that we are able to disaggregate the resource appropriately. Another insight that I had was how often our assessment processes really focus on people's deficits rather than their strengths. We're a gatekeeper of the public purse. But that means that people are necessarily talking about what their needs are rather than what they can do and how then we shape services to make the most what they can do. We're in an iterative process, but what's in my mind all the time, is how do we build on things that are working well. And also how do we capitalise on the wider network that people have around them. So, we are not seeing ourselves is in the centre of the problem solving but we see people as part of a network and think about the network more broadly than we currently do. It is something that can help us to design things slightly differently because people have multifaceted lives, which we want part of.

INTERVIEWER: Can you tell me about who did in your council decide to embed design?

CDP01:

24:39 With the support of my line manager... We're in the process of really working out with her successor. He's with us as an interim. How seriously organisation is about embedding this as a way of approaching or thinking. Or it's just it's just like CDP01's and her strange design thinking. I don't think we've done it completely, but it's about how we build up the community of practice. Probably outside of the Embedded-designer model but more in the Non-designer, seeing things through that lens because it feels like that might have some marginal gains. And it's not necessarily badged as design thinking. I still think that's the bigger issues that need more, you know, more purposeful. But whether we can do that as a single authority or whether it's something we need to do more across the sector because you know we might do a little bit in our space.

INTERVIEWER: Can you talk about how do you manage to propagate this new way of working within your organisation?

CDP01:

26:48 I think it's about introducing it into the conversation every opportunity but not as a evangelical thing. So if I take this situation, we've got a group of people doing the customer journey mapping stuff. And they're very determined and they've got their list of services. It's almost like I think we can add something to the objectives that you want to achieve. so It's just kind of muscling into things and seeing where you can apply, not necessarily the whole tool kit, but even if you, um even if you just introduced some user research. They're just kind of suggesting, you know, perhaps we could do some light touch user research, as parts of the project, and that just introduces people to different elements. So taking those aspects of design thinking and seeing where best you can deploy them. 28:00 Even if people are gonna be up for discovery or they're not gonna have the time for discovery in a particular project, you can still use some 'What if' questions. So bringing people back to what is the problem we're trying to solve. It's tactically deploying it in that way. So you're adding to the language of the organisation. I think this is the way that we're doing at the moment. It's almost like a not overt, but covert spreading of that type of approach.

INTERVIEWER: Can you talk about some successful project?

CDP01:

28:52 We have gotten a number of projects we've worked on. Somewhere at the different levels of iteration really. So we use design thinking within our Design and Innovation board. So, anybody who has ideas and they wants to present to the board, is then held in a double diamond. So they kind of held and supported by a service design lead. So that's one way of introducing that. We also have overlapped with our design thinking agile project management to provide that kind of pace. It is almost like we've got a Double Diamond which obviously isn't double because they it keeps going and going and going, but for the sake of presentational and we would look at what is the project timeline in relation to that double diamond. So we are kind of creating the rhythm as well as... Okay, we're deliberately going to hold in the design phase. So, what we find is often people coming here with already what the solution is, we need one of those, we kind of like... no, no, no we need to look a bit more broadly. So we don't end up here having delivered that, but we've not really tested it. 30:03 So I think, we've got quite good at doing this bit, the first Diamond. What we need to focus on now is how we become more comfortable at this stage (the second Diamond) because there's a degree of comfort in that because you actually made any firm decisions. This is where we've got to find some additional money or we've got to reduce demand. You know, we've got to start to significantly change something. So I always almost like a double diamond to be that one is like that nice and tidy. But this one is much, much more elongated. 30:57 And also I think we need to become braver at prototyping. We are still not comfortable in the prototype space. So those would be I guess our challenges, if we are really going to remain vigilant around design thinking.

INTERVIEWER: Can you talk more about the project that you've applied design approaches?

CDP01:

31:24 We've got a couple. So, we did a project on SEN (Special Education Needs) transport (In partnership with FutureGov) and we've kind of got to this stage where we've done some Discovery. We'd come back and defined what the problems were. And we had some ideas about how might we take it forward. But we haven't because there were skills to take the prototype forward. It was a skill set, kind of outside of our normal one, because it was to do with business models and, you know, scaling things up, taking some risks then that didn't really get traction. However, it's still in our pockets because you're never going to lose that. It's almost like, sometimes I think it's about the timing and also that thing about is it desirable? It needs to be desirable, not just to the people who have done this bit, but to the people who would want to take it forward.

32:19 So there's something about, the feasibility and the viability of something. It is in and of itself, not sufficient. The desire ability is the kind of critical thing that's gonna make things move forward. But then in other areas, we did a piece of work on Foster care. We developed a new model for foster caring. And that's really gone through the whole cycle. So it's now business as usual because it was really desirable to the people who would have to implement it. And then we're doing one of the moment on homelessness prevention. But what we've got to there is probably a lot of the discovery. We're struggling to kind of like stop discovering and okay, so we're gonna focus on a couple of things. We're gonna take forward.

33:14 It's kind of quite interesting where we land in that double diamond and what you need to be successful at each of the stages.

INTERVIEWER: Can you talk about how do you engage citizens in the service development process?

CDP01:

33:35 We go. We do that very much in the discovery phase. And do it again in the prototyping phase. So, we do a lot in that space. And in terms of relating to the commissioning cycle, that's where we'll engage with the citizen in a bit in the analysis of need, in a bit what could the solution be. So we tend to go out. So we do user research with them.

INTERVIEWER: What is the satisfaction level of using design approaches?

CDP01:

34:30 If I take two examples again, I think it depends on how threatened the team. So I would say we've positioned it wrongly with the SEN (Special Education Needs) team because they felt that this was being critical of that current approaches. So they were less inclined to accept some of the information that was coming out of the Discovery phase. Whereas, with housing, they're much more open because they don't feel it's threatening. They think it's about helping them to design new solutions. So I think it's about the positioning. 35:19 We've also done some work with our team that's preparing children moving on from SEN schools into Adult social care. That's being tough for them. So I think sometimes it feels like, because it's suggesting that what they've been doing, maybe for a while, is not the right thing. So what we tried to do was got them as involved as possible in the user research so that they're hearing it, not from us, but they're hearing it from the parents or the young people those who were involved in the system. And we've tried very hard to say that the user research wasn't about a service satisfaction survey, asking about what people want and people were gonna want the world. But it's more about how people were leading their lives and how the service was part of that. And to what extent it was part of it. 36:23 So, I think there's just a kind of really very much education piece to do around this can only add value rather than detract from it. The other challenge we had was people in the services was directing us to who they wanted us to speak to. That could be people who are part of a lobbying group or carers groups. And we're saying that we think you know what they will say. We want to find out the people who we wouldn't normally have a conversation about what their lived experience is. 37:04 And then we also did some work on our website using design thinking. So we did lots of prototyping in that space and lots of kind of guerrilla user research and testing out. So actually looking at how people actively physically engaged with some of our services.

INTERVIEWER: Can you tell me about how do you share and transfer design knowledge with other people? Do you have channels for that?

CDP01:

37:39 Yes, it's 'Innovate@Council D'. I can send that through to you. We've got Twitter feed entitled that. So we are trying to use Twitter for getting our ideas out there, but also making sure that we are linking with right people to kind of get their ideas. I've also set up a transformation network across London to try to see how others are engaging with Design thinking in there kind of reshaping of services, and to also see the commonalities that we could work on together and share their experiences.

39:13 I wonder whether really where we should be taking our design thinking is to those really tricky problems. I guess there is different layers that you can apply the Design thinking.

INTERVIEWER: Can you tell me more about what the benefits of applying design approaches are based on your experience?

CDP01:

So, what's done for us, I think, is given us a route to see the impact of austerity as something where there might be possible alternatives rather than just being alone, you know, we just got hold your hands up and give up. And also to stop the narrative that it's all about the cuts. I think, there are some things that we could do differently. There are about doing things better and using our money better.

41:00 There's something about the sustainability as well because you can take the money out but at some point you're going to reach rock bottom. So what then? Almost what do we do then? And so, yeah, I think it gives us a different conversation to have about what we're trying to achieve, but within a structure that gives us some... you know, in the state of uncertainty, I think, the double diamond kind of just gives you some sense of structure. And clarifying what problem you're trying to solve. You know, what is the purpose. For me, in the midst of all the uncertainty and ambiguity, it also gives me something to say. Okay, we'll let you know if we hold, If we can hold a bit to this process, or arrangement of way of thinking, then we might throw up some alternatives or some difference. Or we might just say, actually, we can get more from the money that we're investing. And if we get more from the money we're investing, that's gotta be good thing.

INTERVIEWER: Can you tell me about who's involved in which stage?

CDP01:43:42 We've got chief executive and corporate leadership team, and then there is my Director of Finance and Corporate Services. And then I've got other kind of what we would call our Extended Leadership Team. And then kind of managers in there. So often, in terms of design thinking, it would be here for the scoping in the design phase and possibly there as well. So we'd have a conversation across there and then, obviously the manager of whatever service it was. And so that would be in the what's in scope. And we might include, for some instances, depends on the kind of level. For example, we kicked off a piece of design work looking at the work that we're doing in stronger communities to strengthen our communities. Ao that would have been signed off a bit in terms of scope at that level. So all the way through in the scoping process. Then obviously in the research process, we're probably more likely to go to the managers, frontline staff, citizens, and any third parties. And by third parties, it could be like the voluntary sector. We might be delivering services. 45:37 In terms of defining, it would be at this level, research and discovery. That's the first bit, Yeah. So, then when we define kind of one of the issues that we're looking looking at, it would probably be leadership and frontline staff. Then, in terms of designing, it would be more involving the citizen, any people who were delivering it. So it probably looks a bit more like that. In terms of evaluating, what was gonna happen next, it would be at these levels. So that's kind of getting sign off for doing something and then launching and evaluating. Yet that would be looking at impact. That might be in the delivery, depending on who's delivering it. I think that's probably where we would get it. In terms of feeding back.

47:22 So originally we'd scope. Then we do the discovery, but then we'd come back as to what problems we trying to do? Then we'd go wide again. So guess that's reflected in. And then, obviously, who's involved in the implementation or kind of designing the implementation. So we'll probably call this. We might do some prototyping in there to check. And then this would be the launch. And then evaluation probably come back and go back to the Discovery or other phases.

INTERVIEWER: Can you tell me about how your team manage the demand for applying design approaches?

CDP01:

48:32The design and Innovation Board creates some of the pipeline. What we're finding with a lot of the Design and Innovation Board activities is that they could be owned in this space with a little bit of support. But actually we really wanted those people own that. And they would come back into the Board to let us know how they were getting on. And some of the bigger projects that may come through from usually come through from our setting our budget. So we normally start in January looking at where we need to explore further in order to set a balance for the budget. And from that kind of series of things. And we would look at what is the best part of the Diamond to apply to those because some might be actually quite straightforward. So, for example, we've got a project on Fees and Charges and making sure that we are getting right level of income from that we would meet to huge amount of discovery about that fairly kind of set but with homelessness one is obviously much broader. So,we would kind of look at what that list is then say okay where would they fit but I've done is almost in order to not turn people off by talking about Design thinking in case they think we gonna make new chairs of something. It's just almost described of five steps process (see the diagram) to what we're calling a Deep Dive which is where we shine real light on something.

50:25 But effectively, it's the same as the different aspects of the double diamond. One is about we call it, evaluation and scoping, and refining what's in scope. The next step is deep analysis of the current. So that's like making sure we're really interrogating understanding as is position. The next is then imagining alternatives. So those two are really combination of discovery and a little bit of going wide again. Then fourth bit is developing a business case. So what we gonna do differently, what we gonna do more of, what we gonna amplify, what we gonna potentially less of, and then moving into the implementation.

So, I kind of describe it to the organisation in that way, but effectively it is holding the same principles as the double diamond. But some people enjoy having conversations about double diamond of us think we kind of crazed.

So for those who are more linear in that thinking and more rational and logical, yeah, then thinking of it in five steps is easier for them for those who are more creative and like the idea that it's much more iterative and chaotic. That's kind of where I get to. But in my head, I was kind of have this thing about trying to hold on to the discovery aspects because one of the drawbacks I think of traditional project planning is that it focuses too much on. The implementation is an already defined solution rather than on creativity and thinking is not seen us as valid as logical.

What's really interesting for me is the elected representatives want us to be innovative. They'll describe we are not innovative enough. But I think they need a way of innovation being still evidence based, rather than entrepreneurial, or serendipitous or whatever. You know, most innovations come either from a mistake or former just happens chance kind of thing rather than a deliberate. But I think the culture that we need to create some sense of evidence base. And I think what design methodology does is almost give that evidence based.

INTERVIEWER: Do you think so? Some people in the private sector think design is the cost rather than investment because it's quite difficult to measure the benefit which you will get in the future.

CDP01:

54:52 Well. I guess, it depending on what their field is. The most commercial environments who are making things will invest quite a lot in their failures because they, you know, take a pharmaceutical environment if they making you something. But if they invest more in research and development, which is effectively their design. If they come across one drug, that is amazing, and you know, that's their business model, I guess they're not for reinventing the wheel or tweaking with an existing.

So, I think what it does is it provides a structure for those people who wanted to get super linear straight away. It kind of holds them. But in a random way, forever going discovery, discovery. It holds them in a way that just suspends their desire for action. So, they can still be doing things. But they're not landed on this is a solution. So for those people who have that mind set, it gives them something of what they need. But for those people who also need, for example, I can think of in the fostering project we had somebody who would be constantly in and yes and yes and yes and yes, I could do. So, this actually say what are we actually going to do? So, I think it matches those different mindsets.

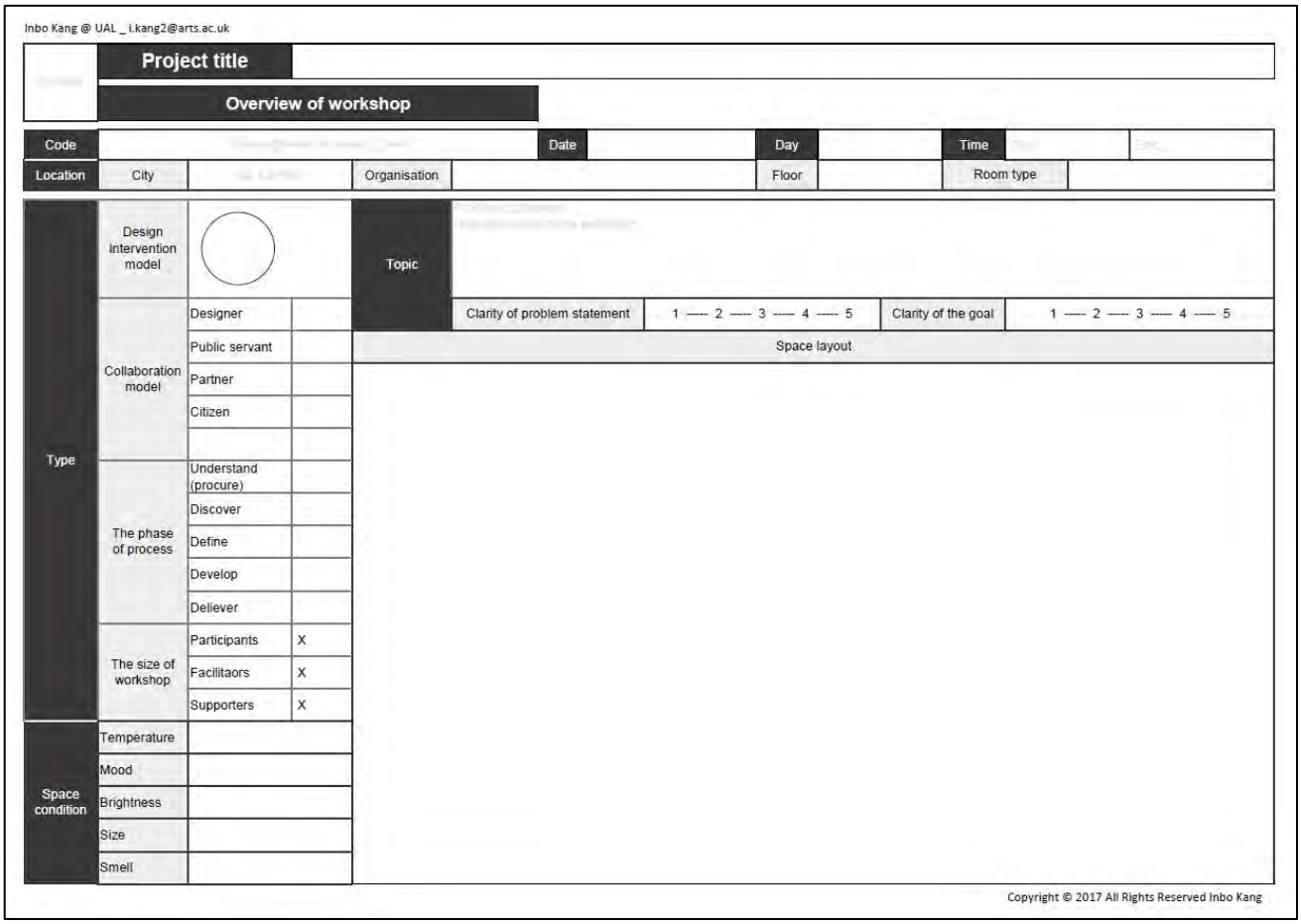
If it helps to lead us in the right direction, then it's an optimistic, It's based in optimism as in, there might be a solution out there or a different way of approaching a problem. So I think it's healthier from a kind of motivational perspective. So, yeah, I think it's got a lot to offer us.

What I'd be really interested in is, and I don't believe it includes this in your research. But actually, even if you didn't, if we didn't talk design thinking our people naturally doing some of that without having a label. You know, is that almost like a natural way thought processes evolving. You know, so we don't have to go, so we could always build on what people are already doing.

I'm just wondering whether also at some point you could come to a Design and Innovation Board meeting and talk about your research because most of the Design and Innovation Board people are in this space. So we've got people from finance. We've got people from HR, Legal, the services. It's chaired by our chief executive. So they're all non designers, but with a design lens. So that's one of our ways of kind of taking this forward. Okay, because I'm in the middle of the analysis of research.

Thank you. Thank you very much.

Appendix O. Workshop observation sheets



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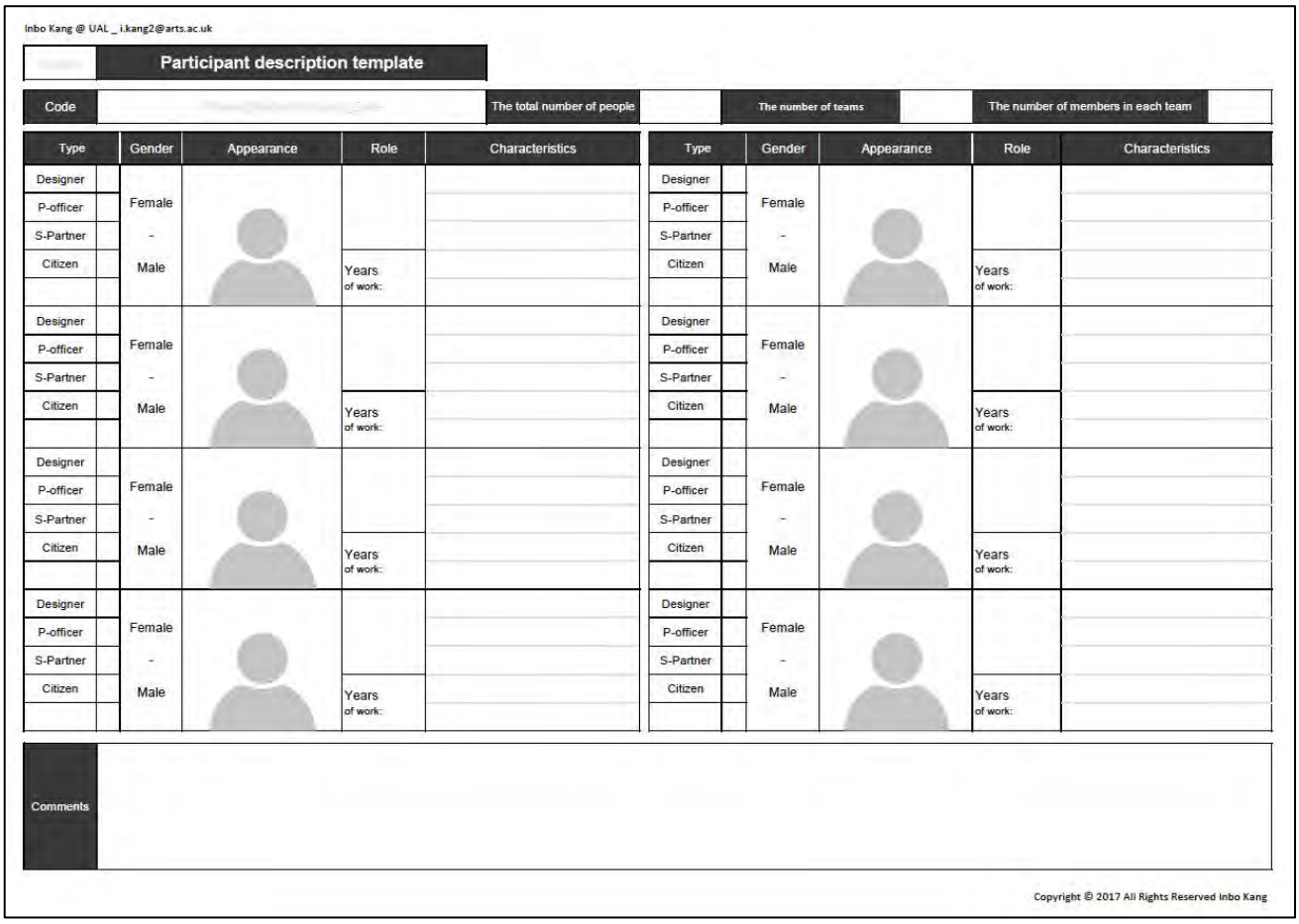
Project title

Overview of workshop

Code		Date		Day		Time		
Location	City		Organisation		Floor		Room type	

Type	Design intervention model		Topic				
	Collaboration model	Designer		Clarity of problem statement	1 —— 2 —— 3 —— 4 —— 5	Clarity of the goal	1 —— 2 —— 3 —— 4 —— 5
		Public servant		Space layout			
		Partner					
		Citizen					
	The phase of process	Understand (procure)					
		Discover					
		Define					
		Develop					
		Deliever					
	The size of workshop	Participants	X				
		Facilitaors	X				
		Supporters	X				
Space condition	Temperature						
	Mood						
	Brightness						
	Size						
	Smell						

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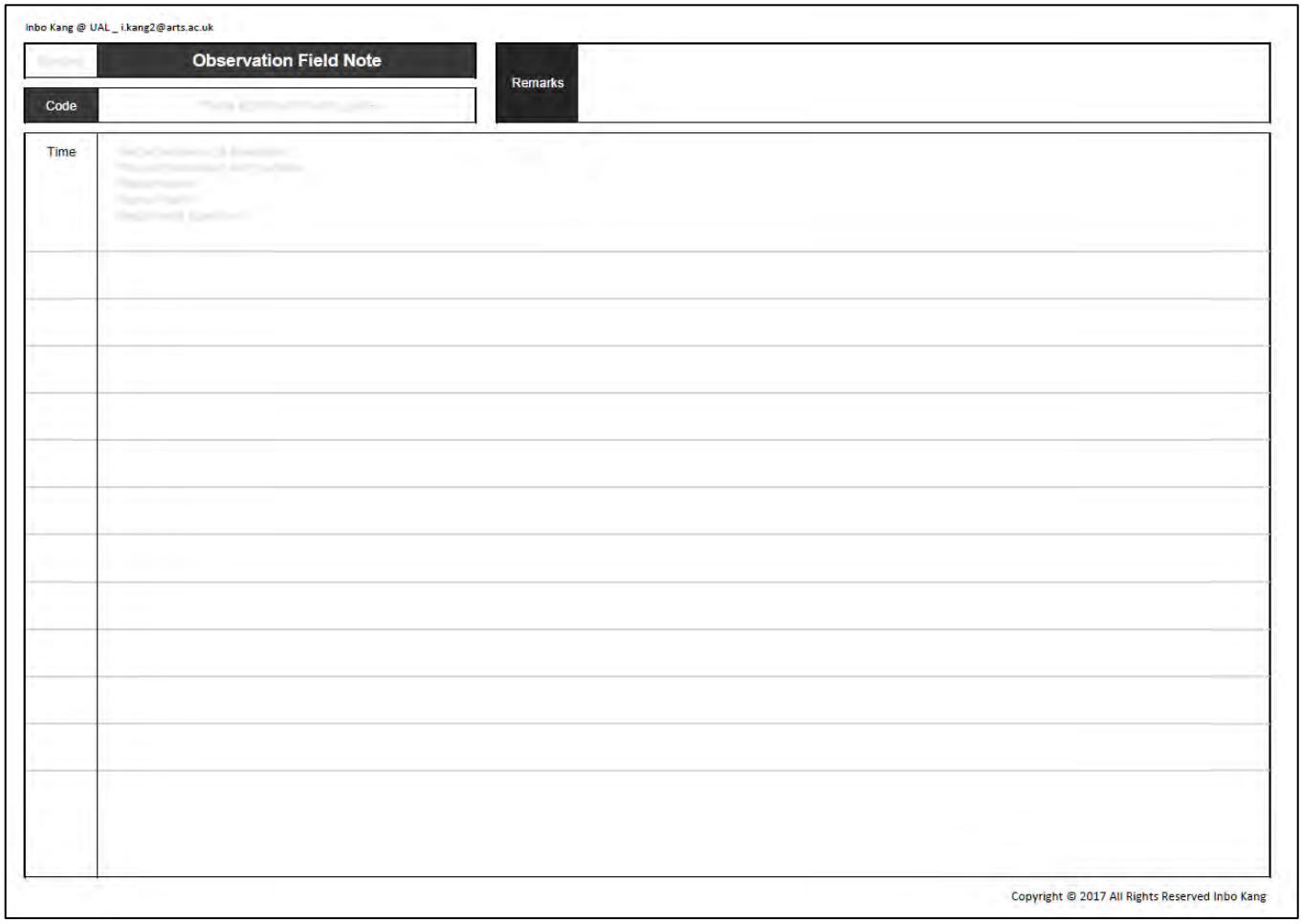
Participant description template

Code		The total number of people		The number of teams		The number of members in each team	

Type	Gender	Appearance	Role	Characteristics	Type	Gender	Appearance	Role	Characteristics
Designer	Female - Male				Designer	Female - Male			
P-officer					P-officer				
S-Partner					S-Partner				
Citizen			Years of work:		Citizen			Years of work:	
Designer	Female - Male				Designer	Female - Male			
P-officer					P-officer				
S-Partner					S-Partner				
Citizen			Years of work:		Citizen			Years of work:	
Designer	Female - Male				Designer	Female - Male			
P-officer					P-officer				
S-Partner					S-Partner				
Citizen			Years of work:		Citizen			Years of work:	
Designer	Female - Male				Designer	Female - Male			
P-officer					P-officer				
S-Partner					S-Partner				
Citizen			Years of work:		Citizen			Years of work:	

Comments	

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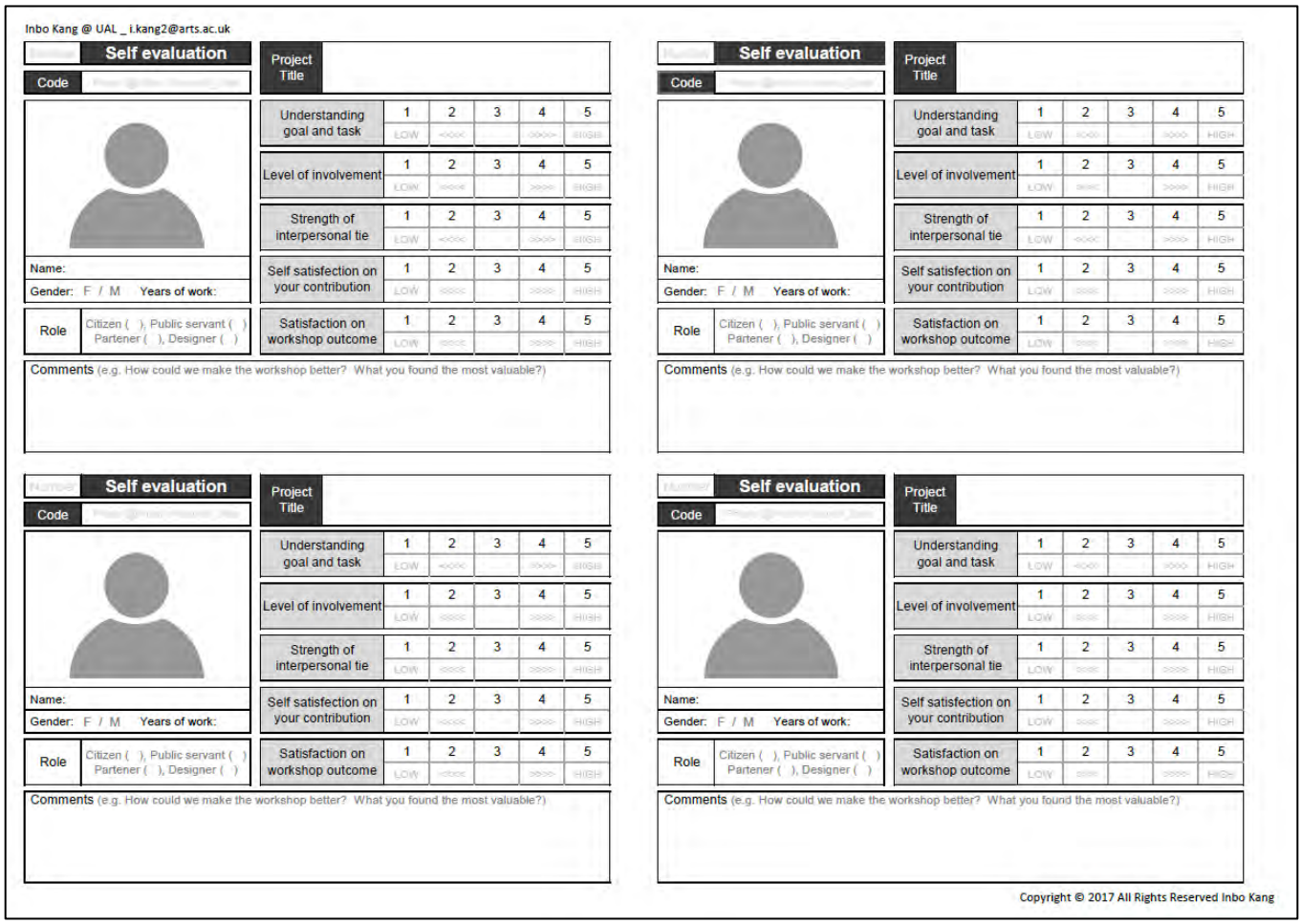
Observation Field Note

Code

Remarks

Time	

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Self evaluation

Code

Project Title

	1	2	3	4	5
Understanding goal and task	LOW	<<<<		>>>>	HIGH
Level of involvement	LOW	<<<<		>>>>	HIGH
Strength of interpersonal tie	LOW	<<<<		>>>>	HIGH
Self satisfaction on your contribution	LOW	<<<<		>>>>	HIGH
Satisfaction on workshop outcome	LOW	<<<<		>>>>	HIGH

Name:

Gender: F / M Years of work:

Role: Citizen ( ), Public servant ( ) Partener ( ), Designer ( )

Comments (e.g. How could we make the workshop better? What you found the most valuable?)

Self evaluation

Code

Project Title

	1	2	3	4	5
Understanding goal and task	LOW	<<<<		>>>>	HIGH
Level of involvement	LOW	<<<<		>>>>	HIGH
Strength of interpersonal tie	LOW	<<<<		>>>>	HIGH
Self satisfaction on your contribution	LOW	<<<<		>>>>	HIGH
Satisfaction on workshop outcome	LOW	<<<<		>>>>	HIGH

Name:

Gender: F / M Years of work:

Role: Citizen ( ), Public servant ( ) Partener ( ), Designer ( )

Comments (e.g. How could we make the workshop better? What you found the most valuable?)

Self evaluation

Code

Project Title

	1	2	3	4	5
Understanding goal and task	LOW	<<<<		>>>>	HIGH
Level of involvement	LOW	<<<<		>>>>	HIGH
Strength of interpersonal tie	LOW	<<<<		>>>>	HIGH
Self satisfaction on your contribution	LOW	<<<<		>>>>	HIGH
Satisfaction on workshop outcome	LOW	<<<<		>>>>	HIGH

Name:

Gender: F / M Years of work:

Role: Citizen ( ), Public servant ( ) Partener ( ), Designer ( )

Comments (e.g. How could we make the workshop better? What you found the most valuable?)

Self evaluation

Code

Project Title

	1	2	3	4	5
Understanding goal and task	LOW	<<<<		>>>>	HIGH
Level of involvement	LOW	<<<<		>>>>	HIGH
Strength of interpersonal tie	LOW	<<<<		>>>>	HIGH
Self satisfaction on your contribution	LOW	<<<<		>>>>	HIGH
Satisfaction on workshop outcome	LOW	<<<<		>>>>	HIGH

Name:

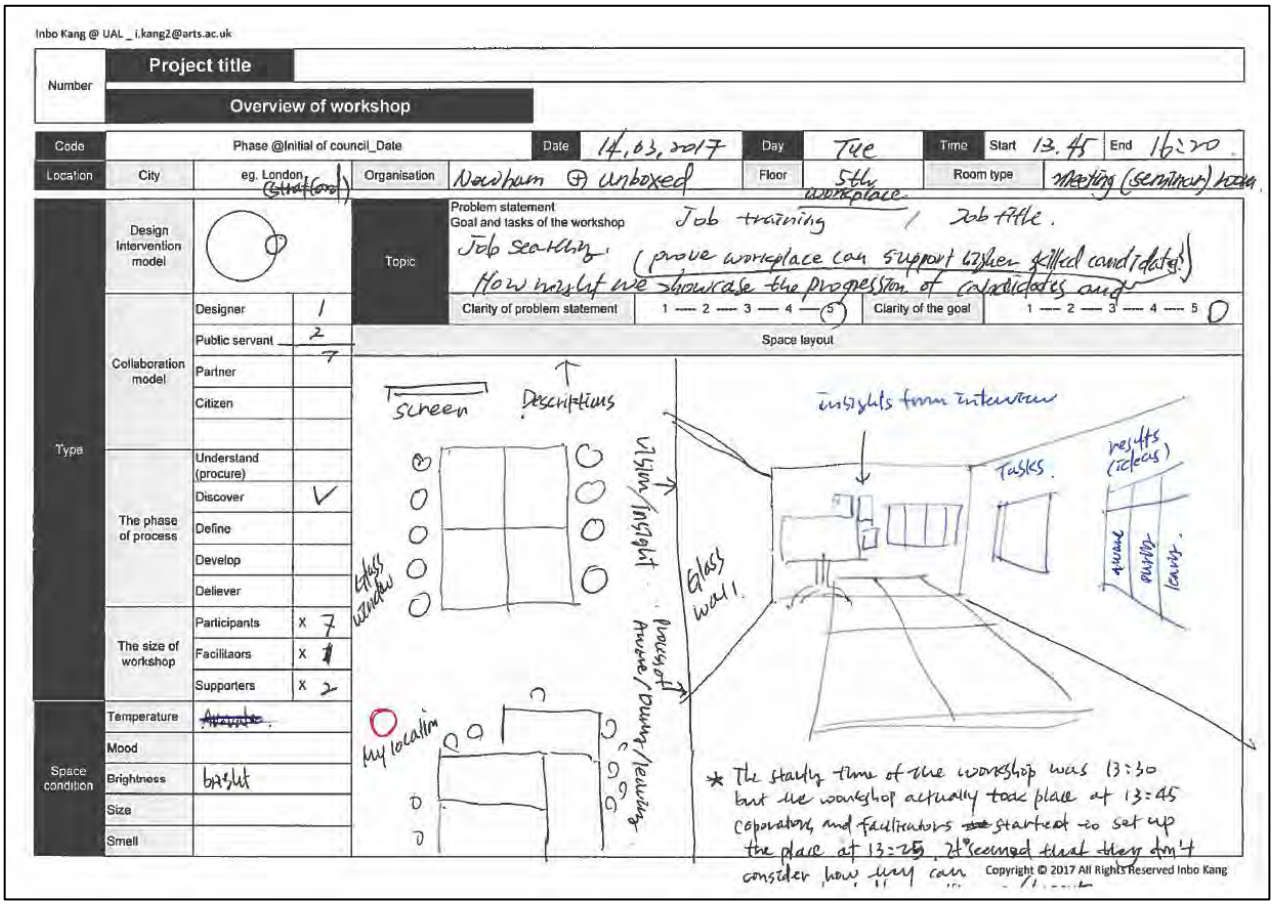
Gender: F / M Years of work:

Role: Citizen ( ), Public servant ( ) Partener ( ), Designer ( )

Comments (e.g. How could we make the workshop better? What you found the most valuable?)

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Appendix P. Sample observation field note & participants feedback _ Council A



Inbo Kang @ UAL _ i.kang2@arts.ac.uk

Number: Project title

Overview of workshop

Code: Phase @Initial of council_Date | Date: 14.03.2017 | Day: Tue | Time: Start 13.45 End 16:20

Location: City: eg. London (Stratford) | Organisation: Newham + Unboxed | Floor: 5th | Room type: meeting (seminar) room

Type

- Design Intervention model: 9
- Collaboration model: Designer 1; Public servant 2; Partner 7; Citizen
- The phase of process: Understand (procure); Discover V; Define; Develop; Deliever
- The size of workshop: Participants x 7; Facilitaors x 1; Supporters x 2

Topic

Problem statement / Goal and tasks of the workshop: Job training / Job title. workplace.

Job Searching. (prove workplace can support ~~by~~ when skilled candidates)

How might we showcase the progression of candidates and

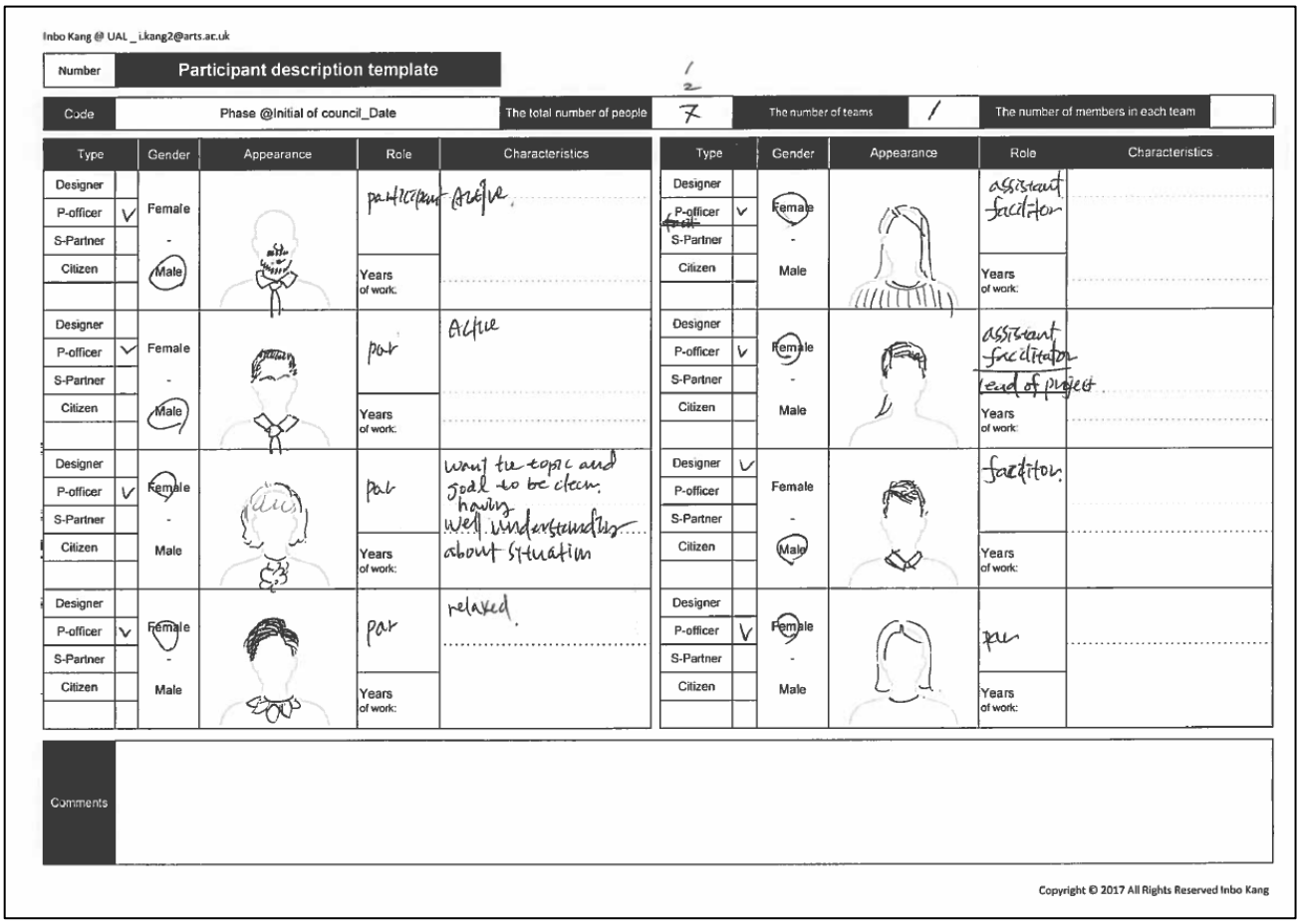
Clarity of problem statement: 1 — 2 — 3 — 4 — (5) | Clarity of the goal: 1 — 2 — 3 — 4 — 5 (0)

Space condition

- Temperature: ~~Warm~~
- Mood
- Brightness: bright
- Size
- Smell

Space layout

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Number: Participant description template 1/2

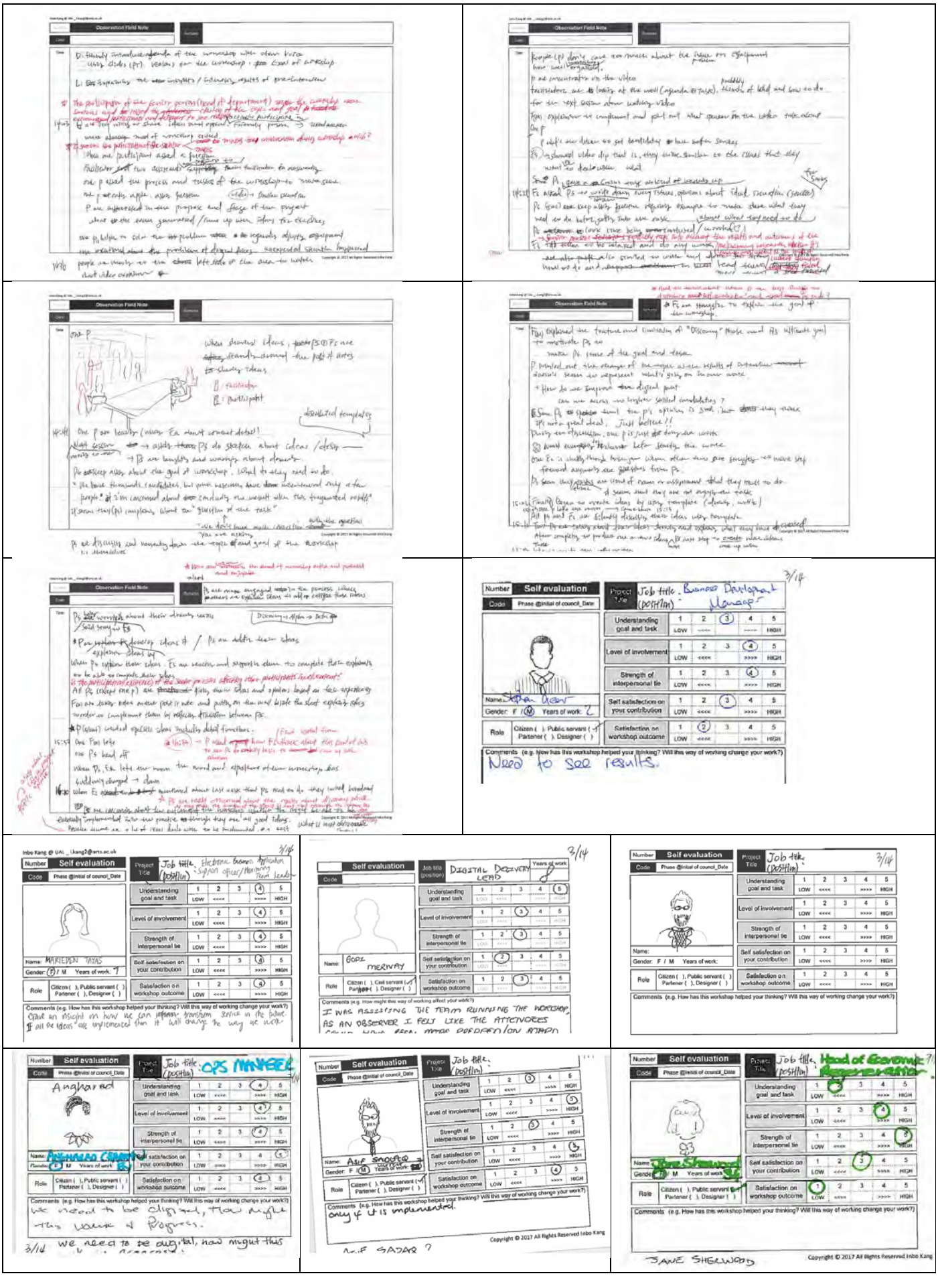
Code: Phase @Initial of council_Date | The total number of people: 7 | The number of teams: 1 | The number of members in each team:

Type	Gender	Appearance	Role	Characteristics
Designer / P-officer V / S-Partner / Citizen	Female - Male		participant / Years of work:	active.
Designer / P-officer V / S-Partner / Citizen	Female - Male		por / Years of work:	Active
Designer / P-officer V / S-Partner / Citizen	Female - Male		par / Years of work:	want the topic and goal to be clear. having well understanding about situation
Designer / P-officer V / S-Partner / Citizen	Female - Male		par / Years of work:	relaxed.

Type	Gender	Appearance	Role	Characteristics
Designer / P-officer V / S-Partner / Citizen	Female - Male		assistant facilitator / Years of work:	
Designer / P-officer V / S-Partner / Citizen	Female - Male		assistant facilitator lead of project / Years of work:	
Designer V / P-officer / S-Partner / Citizen	Female - Male		facilitor. / Years of work:	
Designer / P-officer V / S-Partner / Citizen	Female - Male		par / Years of work:	

Comments

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Overview of workshop observation						
Local gov	**Collaborating department**	**Design intervention model**	**Date**	**day**	**Time**	**Aim**
Council A	Workplace in Stratford	Internal | external	14/03/2017	Tuesday	13:45 - 16:20	How might we showcase the progression of candidates and prove workplace can support skilled candidates?

Workshop environment





Workshop activities





Visual analysis



Task: Second day of five days long workshop (selecting ideas & Building storyboard)

Specific scope: what if my child is behind of the children?
* What's the journey of your child
* The importance of the workshop is feedback from participants to go further.

Project title

Overview of workshop

Code			Date	16/05/2017	Day	Thursday	Time	9:30
Location	City	London	Organisation	Nadrun	Floor		Room type	(HALL)

Type

- Design intervention model: (circle)
- Collaboration model: Designer 1; Public servant 9; Partner; Citizen; PS (assistant) 3
- The phase of process: Understand (procure); Discover; Define; Develop; Deliver
- The size of workshop: Participants x 9+H; Facilitaors x 4 5; >20P Supporters x

Space condition

- Temperature: Open space
- Mood
- Brightness: Average
- Size
- Smell

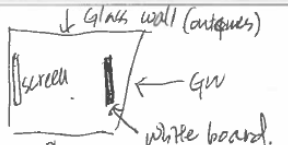
Topic: Design sprint.

Aim to create a community of families feel secure, healthy happy, engaged and supported by the council.
A new and improved service Journey of child

Clarity of problem statement: 1 — 2 — 3 — 4 — (5)

Clarity of the goal: 1 — 2 — 3 — 4 — (5)

Space layout



Time limitation of every session even comments



* should need to understand the rule and concept of "Sprint"

Status. (information about.

* check the rule of the sprint and plan for the workshop.
* The number of participants are change as time goes by the stage go through

---

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Number

Participant description template

changed ~~do~~ as the stages goes by.

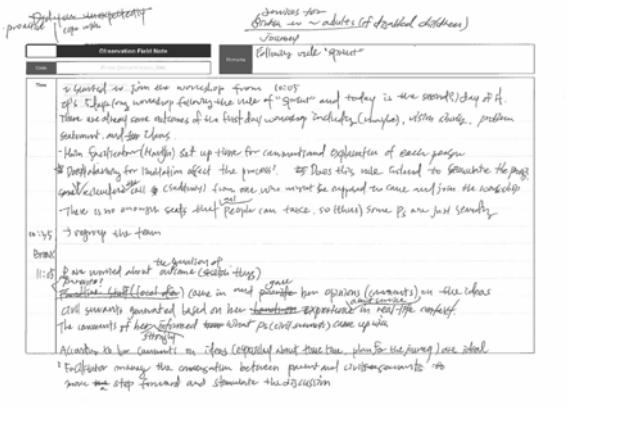
Code	Phase @Initial of council_Date	The total number of people	The number of teams	The number of members in each team

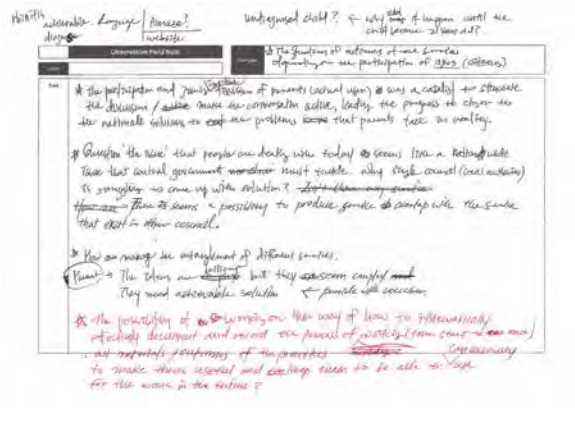
Type	Gender	Appearance	Role	Characteristics
Designer	Female - Male		Years of work:	
P-officer				
S-Partner				
Citizen				
Designer	Female - Male		parent ~~Social Worker~~ Years of work:	has autism child (7) four children/ have different needs
P-officer				
S-Partner				
Citizen ✓				
Designer	Female - Male		Facilitar (Assistant) Years of work:	
P-officer				
S-Partner				
Citizen				
Designer	Female - Male		Years of work:	
P-officer				
S-Partner				
Citizen				

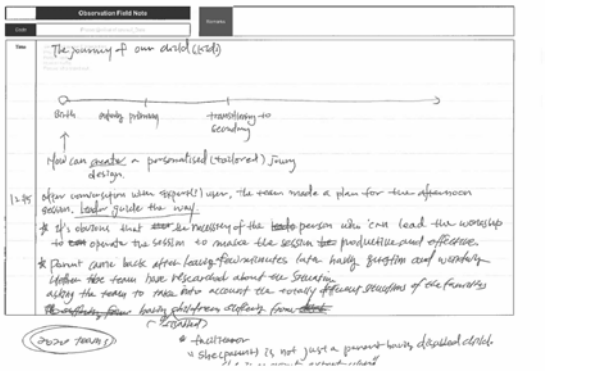
Type	Gender	Appearance	Role	Characteristics
Designer	Female - Male		Ian Child care commissioning officer Years of work:	He is in charge of developing website
P-officer				
S-Partner				
Citizen				
Designer	Female - Male		External partner Facilitator Years of work:	digital developer Jizel
P-officer				
S-Partner				
Citizen				
Designer	Female - Male		Facilitator (Main) Years of work:	
P-officer				
S-Partner				
Citizen				
Designer	Female - Male		Service Designer Years of work:	
P-officer				
S-Partner				
Citizen				

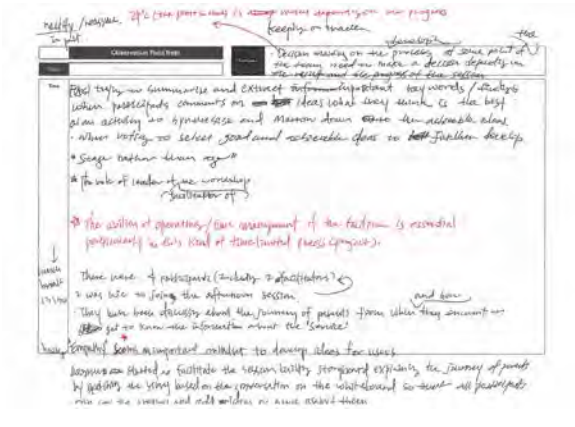
Comments

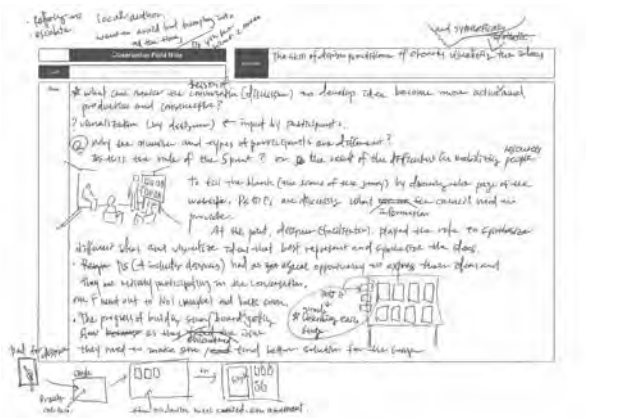
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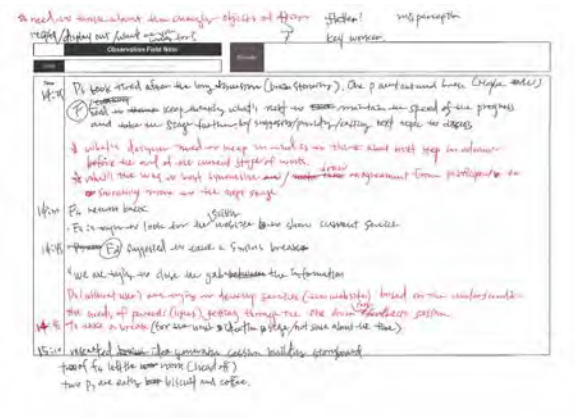


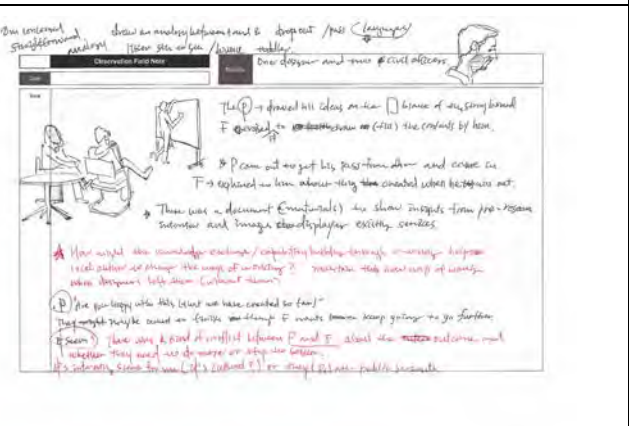






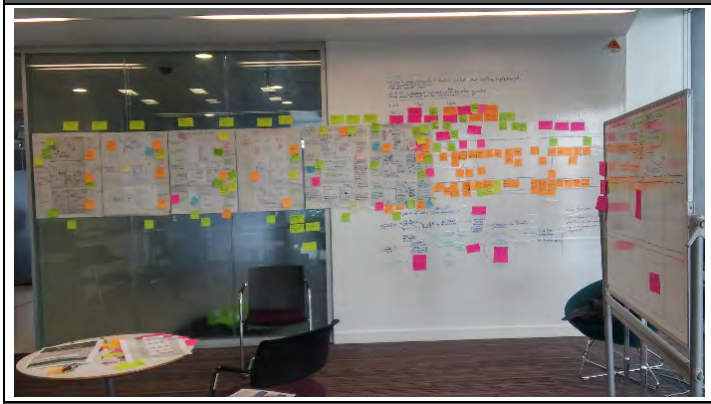






Overview of workshop observation						
Local gov	**Collaborating department**	**Design intervention model**	**Date**	**day**	**Time**	**Aim**
Council A	Childcare	Internal | external	16/03/2017	Thursday	09:30 - 15:40	It aims to create a community of families feeling secure, healthy, happy, engaged and supported by the council.

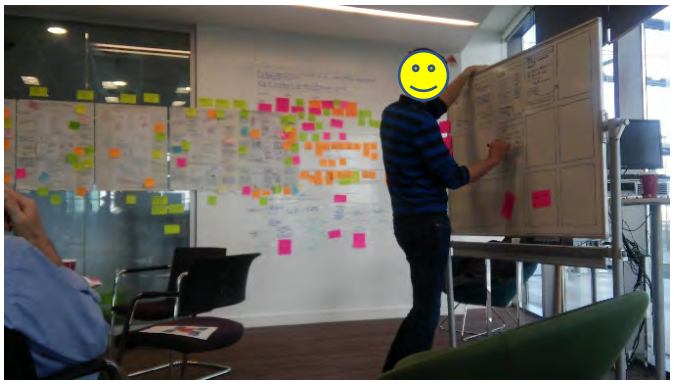
Workshop environment





Workshop activities





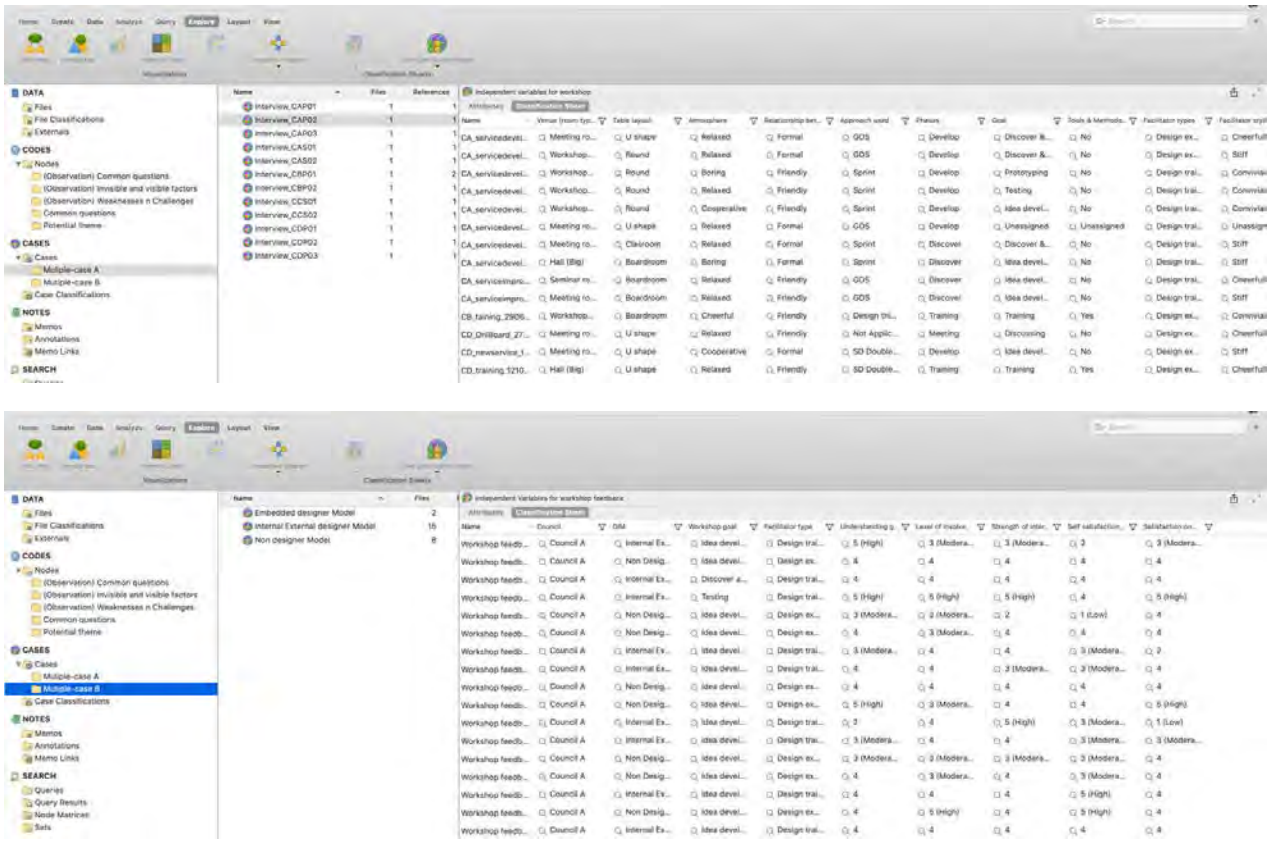
Visual analysis



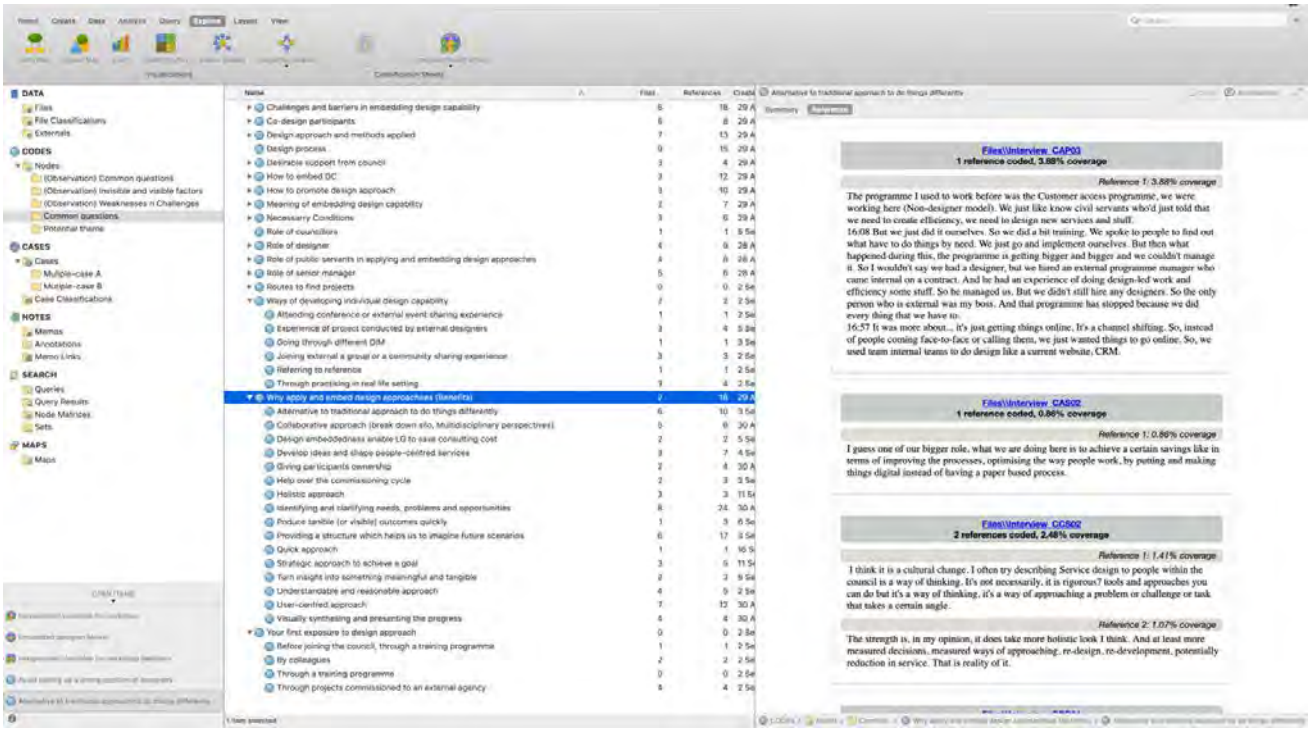
Appendix Q. Sample process of thematic analysis: coding → clustering → redefining themes

- The values of design approaches for local governments

1) Setting up a case



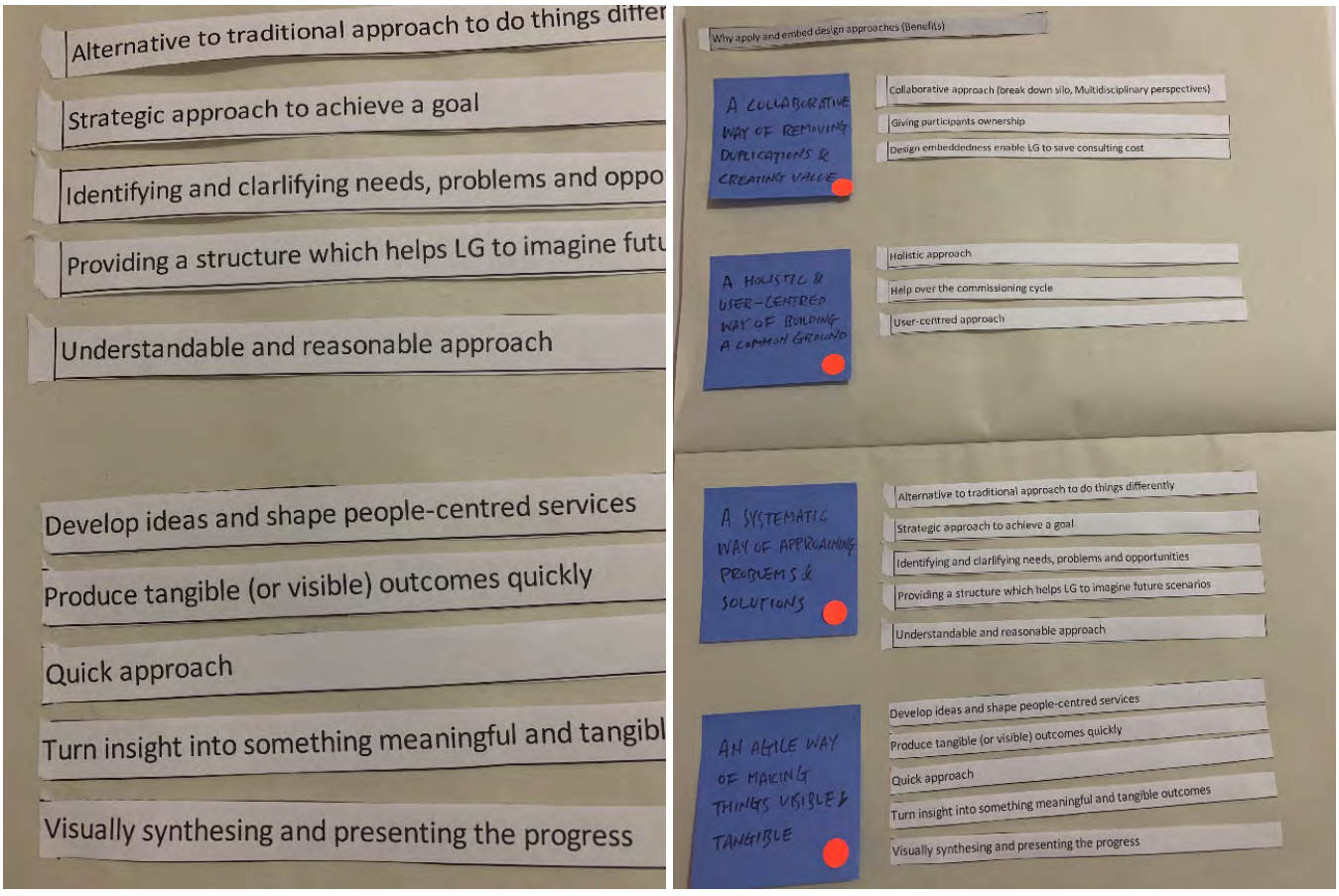
2) Coding



3) Initial Themes Created after Clustering Codes

Why apply and embed design approachees (Benefits)	2	18
Alternative to traditional approach to do things differently	6	10
Collaborative approach (break down silo, Multidisciplinary perspectives)	5	6
Design embeddedness enable LG to save consulting cost	2	2
Develop ideas and shape people-centred services	3	7
Giving participants ownership	2	4
Help over the commissioning cycle	2	3
Holistic approach	3	3
Identifying and clarlifying needs, problems and opportunities	8	24
Poduce tanible (or visible) outcomes quickly	1	3
Providing a structure which helps us to imagine future scenarios	6	17
Quick approach	1	1
Strategic approach to achieve a goal	3	5
Turn insight into something meaningful and tangible	2	3
Understandable and reasonable approach	4	5
User-centred approach	7	12
Visually synthesing and presenting the progress	4	4

4) Clustering and Redefining Themes based on the Initial Themes



- Redefined themes and their links to the references about the values of design approaches for local governments

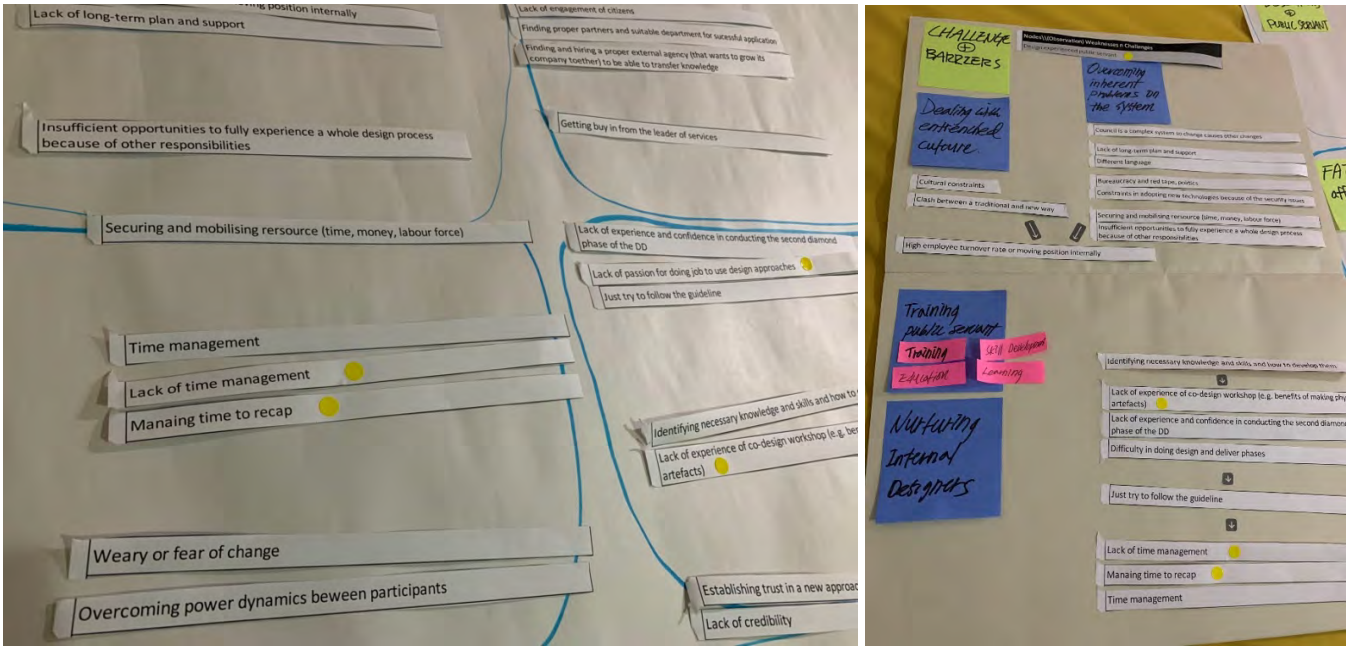
Sub-Themes	Themes synthesised	Description	Reference
Collaborative approach (break down silo; Multidisciplinary perspectives)	**A collaborative way of removing duplications and creating value**	A design approach is a participatory approach which involves people from different departments and various internal and external third parties who are concerned with the issue of the products or services.	**<Files\\Interview_CAP02> -§ 1 reference coded [1.75% Coverage]** It is more collaborative approach clearly because you've got this aim and you need a lot of people involved to make it possible. It helps to break down silos. When you're working with services who'd like to work in their own areas. Service design approach can help to say, "Okay this is actually the vision, and this is what we've worked towards. It doesn't matter that you're over there today. **<Files\\Interview_CCS02> -§ 2 references coded [5.99% Coverage]** It sounds really simple, the biggest issue that we faced in that project is that people simply did not know what others are doing. Now they do the opportunity for creating ideas and understanding where things are overlap and where things are duplicate. It always solves itself. So, in practical term, simply by putting on kind of design workshop can say what is a current situation, what do you want to achieve, and give a very early idea on how we might want to go about it for our priorities. Simply by doing that putting people from different departments in the same room, they said Oh we do have?, Oh we do this way? Simply put people in the same room and let them talk each other. See how happens. That leads to paradise. **<Files\\Interview_CAP03> -§ 1 reference coded [2.36% Coverage]** You know it's hard because [Pause]. So, basically, the big story, bigger picture is like the council doesn't have the money to carry on hiring someone like Aency U. So, if we think they have the skills that we need, we need external partners, but that cost a lot of money. So whole plan is to do knowledge transfer. So one day we can just do ourselves. And I think that we do then as like Agency U in terms of like, especially the process of how to get people thinking in the right space. So like the workshops we'd get people thinking about the resident more.
Giving participants ownership			
Design embeddedness enable LG to save consulting cost			
Help over the commissioning cycle	**A holistic and user-centred way of building a common grround**	A design approach is a way of thinking which based on a structured process consists of three to five phases which require completing tasks including decision-making. The process allows change or service development agents to have a more holistic view and a user-centred perspective on the issues.	**<Files\\Interview_CAS02> -§ 1 reference coded [2.31% Coverage]** I would certainly say that what we are doing here, yes, we are trying to employ a human-centred design approach. Is everyone in the council employing that? Probably not. So, that's part of what we are trying to change, trying to shift focus from their own services and goals to... You know it's very kind of siloed, looking at it very vertically rather than across the council. you get the project based on short term goals. Possibly because people need to deliver something. So we are trying to change it a little bit. We are trying to shift conversation a bit to think more about the bigger system that has a long term effect on it. **<Files\\Interview_CCS02> -§ 1 reference coded [5.07% Coverage]** The strength is, in my opinion, it does take more holistic look I think. And at least more measured decisions, measured ways of approaching, re-design, re-development, potentially reduction in service. That is reality of it. It gives you the opportunity to strategically re-engineer something as a whole rather than just cutting a bit of it which has worked up until now I think in local government because there has been enough but you can cut off the piece of work still function. We're getting to a point now that so much has been sliced off. That slicing more off means it's unviable. That actually have to re-work the whole thing, re-work how it functions. That's to me is where the strength of Service design comes in to get that whole system look at things and to get that broad view of all the different factors come into it and people who're evolved it. And also get the ideas in. So, the opportunity to get people who would otherwise contribute to the ideation process putting forward ideas that actually could revolutionise things, but we just don't know because we haven't talked it yet. **<Files\\Interview_CDP03> -§ 1 reference coded [1.96% Coverage]** the project was quite wide so it was bringing schools together children social care, adult social care, help the community and how do we respond to the need enabling young people to stay at home. Keep their network, their contacts that care had all this time. How do we do that? So you had children social care with all their priorities, their budget, adult social care their priorities their budgets, school etc etc. And there was a lot of tension
Holistic approach			
User-centred approach			
Alternative to traditional approach to do things differently	**A systematic way of approaching problems and solutions**	Design approaches have their own structured processes which have been refined and developed continuously in order to approach problems systematically and come up with best possible solutions effectively.	**<Files\\Interview_CDP01> -§ 7 references coded [9.90% Coverage]** what is the purpose. For me, in the midst of all the uncertainty and ambiguity, it also gives me something to say. Okay, we'll let you know if we hold. If we can hold a bit to this process, or arrangement of way of thinking, then we might throw up some alternatives or some difference. Or we might just say, actually, we can get more from the money that we're investing. And if we get more from the money we're investing, that's gotta be good thing. **<Files\\Interview_CBS01> -§ 1 reference coded [2.37% Coverage]** Because processes are kind of the heart of so much what we do. You pick up elements of what we need to change this document or this form as you're doing the process stuff. So they know where this come in. Actually they are re-writing a letter, and re-typing the form. We'll have some impact. They are going to see the initial work. We had a discussion with them. They've said, actually. So, we've asked the questions. Sometimes just looking at it prompts them to us questions themselves as well. They would do most of the work. We just have another look at it to make sure it doesn't fly together. But in a lot of those circumstances, we are providing the space, tools, asking the right questions to let them basically redesign it themselves. **<Files\\Interview_CBP01> -§ 1 reference coded [1.54% Coverage]** The second element was when I was hired, when I was started, it was very much as a digital only role. And Government Digital Service (GDS) in central government are heavily influenced by Design thinking. And their structure for the development services is based around Design thinking and Alpha and Beta and the other work. As a result, that seemed like the best model to follow. And when the role got expanded to include the non-digital
Identifying and clarifying needs, problems and opportunities			
Providing a structure which helps LG to imagine future scenarios			
Strategic approach to achieve a goal			
Understandable and reasonable approach			
Develop ideas and shape people-centred service	**An agile way of making things visible and tangible**	Each phase in the process of a design approach engages various stakeholders into different activities which require to produce several visible and tangible outcomes in an agile way.	**<Files\\Interview_CAS01> -§ 1 reference coded [0.96% Coverage]** That something that I would say I really appreciate that skill (visualisation). They are able to somehow synthesise what's going on and present back in such a way that people feel ownership of it. But it also helps them get to the next place. **<Files\\Interview_CAS02> -§ 2 references coded [4.39% Coverage]** I think generally people within the council are quite used to the fact that in order to produce anything tangible, it takes really really long time to get there. We're here within the month and we had some interesting things to show that people can click on. So I think that's what really they find quite useful and interesting. Especially, because they thought it is based on, what we talked about, users. [...] Making an actual prototype that they've never gone through. That's they found it interesting. What interesting for them is turning those insight into something more even very quick time. **<Files\\Interview_CCS02> -§ 2 references coded [5.65% Coverage]** Service design team would be effectively the engine room of ideas. We'd come and use participatory design techniques to understand people's needs and assets, how they want service to be. We would work internally with current services or commissioned services to understand their situations. We would develop a range of options and ideas around what could be done. In theory we would prototype it at least sort of paper type prototyping level before you've got a small ? public line ? and then we would commission it with procurement team and once that has been commissioned as a service to ?
Produce tangible (or visible) outcomes quickly			
Quick approach			
Turn insight into something meaningful and tangible outcomes			
Visually synthesing and presenting the progress			

- Challenges and barriers to applying and embedding design capability

Initial Themes Created after Clustering Codes

Name	Files	Reference
Challenges and barriers in embedding design capability	5	18
Weary or fear of change	5	7
Time management	8	9
Securing and mobilising rersource (time, money, labour force)	7	14
Overcoming power dynamics beween participants	2	5
Lack of long-term plan and support	5	12
Lack of experience and confidence in conducting the second diamond phase of the DD	4	18
Lack of engagement of citizens	2	4
Insufficient opportunities to fully experience a whole design process because of other responsibilities	4	7
Identifying necessary knowledge and skills and how to develop them	8	16
High employee turnover rate or moving position internally	5	10
Getting buy in from the leader of services	6	8
Finding proper partners and suitable department for sucessful application	4	7
Finding and hiring a proper external agency (that wants to grow its company toether) to be able to transfer knowledge	1	3
Establishing trust in a new approach and engaging people	8	19
Difficulty of Measuring impact and providing statistical evidence	9	21
Difficulty in doing design and deliver phases	3	8
Different language	4	5
Cultural constraints	7	14
Council is a complex system so change causes other changes	4	6
Constraints in adopting new technologies because of the security issues	4	5
Clash between a traditional and new way	6	9
Bureaucracy and red tape, politics	6	10
Building self-efficacy that public servant can have a user-centric view and make change	7	16

Clustering and Redefining Themes based on the Initial Themes

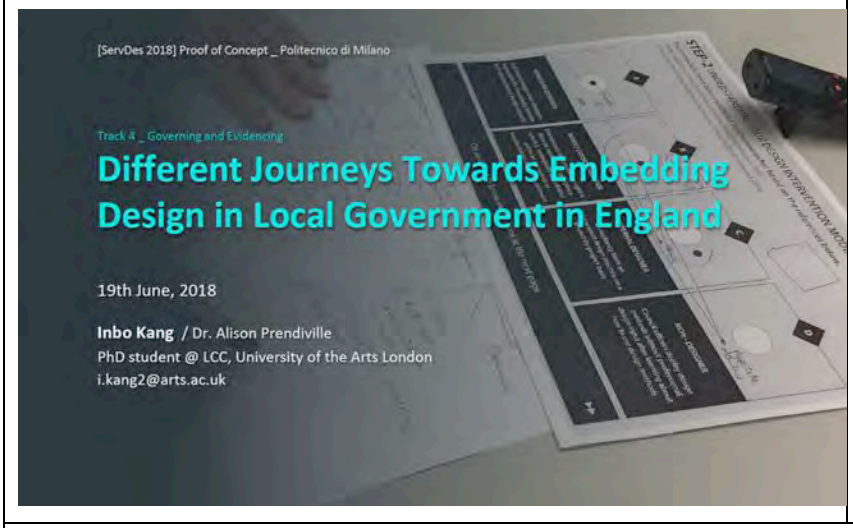


- Redefined Themes and Their Links to the Codes

Sub-Themes	Themes synthesised	Description	Reference
Collaborative approach (break down silo; Multidisciplinary perspectives)	**A collaborative way of removing duplications and creating value**	A design approach is a participatory approach which involves people from different departments and various internal and external third parties who are concerned with the issue of the products or services.	**<Files\\Interview_CAP02> -§ 1 reference coded [1.75% Coverage]** It is more collaborative approach clearly because you've got this aim and you need a lot of people involved to make it possible. It helps to break down silos. When you're working with services who'd like to work in their own areas. Service design approach can help to say, "Okay this is actually the vision, and this is what we've worked towards. It doesn't matter that you're over there today. **<Files\\Interview_CCS02> -§ 2 references coded [5.99% Coverage]** It sounds really simple, the biggest issue that we faced in that project is that people simply did not know what others are doing. Now they do the opportunity for creating ideas and understanding where things are overlap and where things are duplicate. It always solves itself. So, in practical term, simply by putting on kind of design workshop can say what is a current situation, what do you want to achieve, and give a very early idea on how we might want to go about it for our priorities. Simply by doing that putting people from different departments in the same room, they said Oh we do have?, Oh we do this way? Simply put people in the same room and let them talk each other. See how happens. That leads to paradise. **<Files\\Interview_CAP03> -§ 1 reference coded [2.36% Coverage]** You know it's hard because [Pause]. So, basically, the big story, bigger picture is like the council doesn't have the money to carry on hiring someone like Aency U. So, If we think they have the skills that we need, we need external partners, but that cost a lot of money. So whole plan is to do knowledge transfer. So one day we can just do ourselves. And I think that we do then as like Agency U in terms of like, especially the process of how to get people thinking in the right space. So like the workshops we'd get people thinking about the resident more.
Giving participants ownership			
Design embeddedness enable LG to save consulting cost			
Help over the commissioning cycle	**A holistic and user-centred way of building a common grround**	A design approach is a way of thinking which based on a structured process consists of three to five phases which require completing tasks including decision-making. The process allows change or service development agents to have a more holistic view and a user-centred perspective on the issues.	**<Files\\Interview_CAS02> -§ 1 reference coded [2.31% Coverage]** I would certainly say that what we are doing here, yes, we are trying to employ a human-centred design approach. Is everyone in the council employing that? Probably not. So, that's part of what we are trying to change, trying to shift focus from their own services and goals to… You know it's very kind of siloed, looking at it very vertically rather than across the council. you get the project based on short term goals. Possibly because people need to deliver something. So we are trying to change it a little bit. We are trying to shift conversation a bit to think more about the bigger system that has a long term effect on it. **<Files\\Interview_CCS02> -§ 1 reference coded [5.07% Coverage]** The strength is, in my opinion, it does take more holistic look I think. And at least more measured decisions, measured ways of approaching, re-design, re-development, potentially reduction in service. That is reality of it. It gives you the opportunity to strategically re-engineer something as a whole rather than just cutting a bit of it which has worked up until now I think in local government because there has been enough but you can cut off the piece of work still function. We're getting to a point now that so much has been sliced off. That slicing more off means it's unviable. That actually have to re-work the whole thing, re-work how it functions. That's to me is where the strength of Service design comes in to get that whole system look at things and to get that broad view of all the different factors come into it and people who're evolved it. And also get the ideas in. So, the opportunity to get people who would otherwise contribute to the ideation process putting forward ideas that actually could revolutionise things, but we just don't know because we haven't talked it yet. **<Files\\Interview_CDP03> -§ 1 reference coded [1.96% Coverage]** the project was quite wide so it was bringing schools together children social care, adult social care, help the community and how do we respond to the need enabling young people to stay at home. Keep their network, their contacts that care had all this time. How do we do that? So you had children social care with all their priorities, their budget, adult social care their priorities their budgets, school etc etc. And there was a lot of tension
Holistic approach			
User-centred approach			
Alternative to traditional approach to do things differently	**A systematic way of approaching problems and solutions**	Design approaches have their own structured processes which have been refined and developed continuously in order to approach problems systematically and come up with best possible solutions effectively.	**<Files\\Interview_CDP01> -§ 7 references coded [9.90% Coverage]** what is the purpose. For me, in the midst of all the uncertainty and ambiguity, it also gives me something to say. Okay, we'll let you know if we hold. If we can hold a bit to this process, or arrangement of way of thinking, then we might throw up some alternatives or some difference. Or we might just say, actually, we can get more from the money that we're investing. And if we get more from the money we're investing, that's gotta be good thing. **<Files\\Interview_CBS01> -§ 1 reference coded [2.37% Coverage]** Because processes are kind of the heart of so much what we do. You pick up elements of what we need to change this document or this form as you're doing the process stuff. So they know where this come in. Actually they are re-writing a letter, and re-typing the form. We'll have some impact. They are going to see the initial work. We had a discussion with them. They've said, actually. So, we've asked the questions. Sometimes just looking at it prompts them to us questions themselves as well. They would do most of the work. We just have another look at it to make sure it doesn't fly together. But in a lot of those circumstances, we are providing the space, tools, asking the right questions to let them basically redesign it themselves. **<Files\\Interview_CBP01> -§ 1 reference coded [1.54% Coverage]** The second element was when I was hired, when I was started, it was very much as a digital only role. And Government Digital Service (GDS) in central government are heavily influenced by Design thinking. And their structure for the development services is based around Design thinking and Alpha and Beta and the other work. As a result, that seemed like the best model to follow. And when the role got expanded to include the non digital
Identifying and clarifying needs, problems and opportunities			
Providing a structure which helps LG to imagine future scenarios			
Strategic approach to achieve a goal			
Understandable and reasonable approach			
Develop ideas and shape people-centred service	**An agile way of making things visible and tangible**	Each phase in the process of a design approach engages various stakeholders into different activities which require to produce several visible and tangible outcomes in an agile way.	**<Files\\Interview_CAS01> -§ 1 reference coded [0.96% Coverage]** That something that I would say I really appreciate that skill (visualisation). They are able to somehow synthesise what's going on and present back in such a way that people feel ownership of it. But it also helps them get to the next place. **<Files\\Interview_CAS02> -§ 2 references coded [4.39% Coverage]** I think generally people within the council are quite used to the fact that in order to produce anything tangible, it takes really really long time to get there. We're here within the month and we had some interesting things to show that people can click on. So I think that's what really they find quite useful and interesting. Especially, because they thought it is based on, what we talked about, users. [..] Making an actual prototype that they've never gone through. That's they found it interesting. What interesting for them is turning those insight into something more even very quick time. **<Files\\Interview_CCS02> -§ 2 references coded [5.65% Coverage]** Service design team would be effectively the engine room of ideas. We'd come and use participatory design techniques to understand people's needs and assets, how they want service to be. We would work internally with current services or commissioned services to understand their situations. We would develop a range of options and ideas around what could be done. In theory we would prototype it at least sort of paper type prototyping level before you've got a small ? public line ? and then we would commission it with procurement team and once that has been commissioned as a service to ?
Produce tangible (or visible) outcomes quickly			
Quick approach			
Turn insight into something meaningful and tangible outcomes			
Visually synthesing and presenting the progress			

Appendix R. Activities to promote research project

Conference





Paper presentation @ServDes 2018 in Milan

Kang, I., & Prendiville, A. (2018, July). Different journeys towards embedding design in local government in England. In *ServDes2018. Service Design Proof of Concept, Proceedings of the ServDes. 2018 Conference, 18-20 June, Milano, Italy* (No. 150, pp. 598-611). Linköping University Electronic Press.

Exhibition during London Design Festival

