

Defining Design as a Governmental Capability: Conceptual Foundations for an Emerging Public-Sector Practice

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Abstract

Design has expanded significantly in recent decades, moving beyond its traditional disciplinary boundaries to function as an important capability within government. Around the world, governments now draw on design as a set of practices, methods, tools, mindsets and abilities to address complex challenges. Yet despite its growing presence, design remains inconsistently understood and unevenly applied in public-sector contexts. A central barrier is the absence of a shared definition that captures its scope, purpose, and relevance for work in the public sector. Without common language, efforts to integrate design across jurisdictions and between sectors remains fragmented, limiting its potential and impact. This paper proposes a definition of design specifically articulated for use within the context of government. The study conducts a focused review of design-in-government literature, examining the terms *design*, *capability* and *government* to identify the range of interpretations and limits present in current discourse. It also analyzes the multiple meanings of design - as both noun and verb - in design theory and practice to clarify its identity and scope as capability in this context. Through comparative analysis, classification, and synthesis, the paper develops a working definition of design tailored to public-sector contexts. The resulting conceptualization offers a foundation for a more coherent, strategic and equitable application of design within government. It contributes to a broader ontological inquiry into design-in-government, advancing theoretical grounding for an emerging interdisciplinary field while supporting practitioners, researchers, and educators seeking to strengthen public-sector innovation.

Keywords: design-in-government, literature review, scoping review, capability, public sector

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Introduction

Design has always been a governmental concern. Across history, empires, regimes, states and the like have employed manifestations of design—including architecture, symbols, urban form, industrial aesthetics, communication systems, clothing and crafts—to shape collective life, assert authority, and pursue political priorities (Woodham, 2010). Twentieth-century governments formalized this relationship through national design bodies and strategic initiatives in countries such as Germany, Canada, South Korea, Finland, Denmark, and Great Britain, using design to modernize economies, construct national identities, and manage populations (Bason, 2014; Borja de Mozota, 2003). In the twenty-first century, design has become even more deeply embedded in governance: service design, strategic design, digital design, user-centred design, and inclusive design now appear in public-sector innovation units, digital service standards, regulatory frameworks, and cross-government labs around the world (European Commission, 2009; NESTA, 2017). These developments reflect a growing recognition that design can strengthen public services, support digital transformation, enhance regulatory quality, advance climate resilience, and rebuild citizen trust (Bason, 2017).

Yet despite this long historical lineage and expanding contemporary practice, design's place in government remains conceptually undefined, and its potential minimally exploited. Anecdotal evidence demonstrates its interdisciplinary value, utility, and use, but the theoretical foundations needed to legitimize design as a governmental capability have never been established (Heskett, 2005; Kimbell, 2013). The boundaries of design's role in public administration—its scope, identity, and function—remain unclear. This ambiguity is now a critical barrier. In addition, governments increasingly collaborate across borders to address transboundary crises such as pandemics, climate change, migration, and digital security. These intergovernmental efforts require shared language about the tools and approaches they employ (Saha, 2010). Without a common definition of design in governmental contexts, coordination is fragmented, evidence is difficult to compare, and design's potential remains underrealized (Whicher, 2015; Zitkus et al., 2018).

This paper addresses this foundational gap by asking: **What is design as capability in government?** To answer this question, the study conducts a systematic review of literature to examine and define design as a capability, analyzing its multiple meanings—as noun and verb—to clarify its identity, scope, and function within the public sector (Oxford Dictionary, 2013; Simon, 1969). Through comparative analysis, classification, and synthesis, the paper develops a working definition of design tailored specifically to governmental use. In doing so, it validates the conceptual scope and boundaries of design-in-government and provides shared language capable of supporting more coherent, strategic, and equitable application of design within and between governments (Buchanan, 2001).

Context

The author's background as an international designer, public practitioner, researcher, and educator influenced the musings from which this topic originated. This research represents phase one of the author's PhD thesis investigation concerned with answering the question: *what is the capability of design in government?* (Geraghty, 2022). Phase two contextualizes the literature from this study through a scoping review according to Arksey and O'Malley (2005) to:

- define the scope of the field and its limits;

- understand the nature of the field as a whole (general) and identify gaps; and
- understand (specifically) how the literature relates to the research question.

It became evident during the search stage of the literature review process that design exists in a multitude of contexts and its existence in the realm of government had not been formally demarcated. This insight was also uncovered by the European Commission in their 2010 report on *Design as a Driver of User-Centred Innovation* (European Commission, 2010). In the report, the absence of the contextualization of design was noted as a barrier experienced by government practitioners. An isolated regard of what design is in this specific context (outside of its other varied contexts) did not exist. Generally, the area spans the theoretical and practical domains of design and of government, with influences from other fields including business management and economics (Borja de Mozota, 2003; Dunne & Martin, 2006).

The lack of a clearly defined boundary (in terms of the research scope) became a necessary precursor in order to situate and examine the research question. Hence, a more appropriate type of review was required to assess and demarcate the parameters, size, and scope of the research and its literature. In examining other types of reviews—such as narrative reviews, meta-analysis, research synthesis, and structured reviews—the purpose of the literature for this study was consistent with those found in a scoping review of literature (Pettigrew & Roberts, 2006).

Through the analysis of the scoping review, a conceptual framework (CF) for the emerging area of Design-in-Government was developed (Geraghty, 2022). This content is further discussed in a subsequent publication, but the thematic area of “design” from the framework is referenced as part of this study (Table 1) to provide context and support sense-making of the results from this investigation.

Table 1
Thematic Area of Design From the Design in Government Conceptual Framework (CF)
Scoping Review Summary of Findings

Category	Content
Thematic Heading	Design
Operations (Design-in-Government System)	Inputs
Philosophical Considerations	What design is
Descriptor	General: design philosophy, history, theory, criticism. Concerned with the spectrum of design as capability and resource, including practice, industry, knowledge, skills, abilities, processes, and design qualities (collaborative, impactful, human-centered).
Areas Included	General: Design philosophy; design history; design theory; criticism; etymology (noun, verb, tangible, intangible). Key thinkers include Dewey (1933); Dilnot (1982, 1984); Cross (2006, 2011); Krippendorff (2006); Buchanan (1992, 1995, 1998, 2001); Heskett (2005, 2017); Woodham (2010); Margolin (1995, 2002);

	Manzini (2015); Willis (2006). Design as capability and resource: Design as practice, industry, knowledge, skills, abilities. Practice disciplines: Design-as-practice vs. design-in-practice (Kimbell, 2009, 2013, 2016). Sub-disciplines: design research; design strategy; design management. Expanded contributors include Liedtka (2015) and Martin (2009) for design strategy. Practice outputs: Communication, object, action, thought (Buchanan, 1992, 1998). Industry (collective): APDIG (2013b, 2014); Design Council (2007); Cox (2005). Design value: Economic (Heskett, 2005, 2017; Borja de Mozota, 2003; Porter, 1985). Social (Dilnot, 1982, 1984; MindLab, 2009; Manzini, 2015; DOTT 07). Environmental (Fry, 2009; Manzini, 2015). Systemic (Bason, 2014, 2017; Kimbell, 2013, 2016; NESTA, 2017; Mulgan, 2014; Sangiorgi, 2011). Design qualities: Collaborative; human-centered; user-centered; impactful (Norman, 2005, 2013; IDEO/Brown, 2009; Fry, 2009; Bason, 2017).
Sub-Questions	What is design? What is design in this context?

Methodology

A systematic review of literature was selected as the appropriate method to explore the theoretical constructs of the area of design as it exists as capability in research and practice. The systematic approach was deemed necessary due to the nature of the research and its target audience of public practitioners. Hart (1998) notes that a systematic approach contributes the “appropriate breadth, depth, rigor and consistency, clarity and brevity, effective analysis and synthesis” necessary to inform government direction. Systematic reviews are also a valuable means of reviewing all evidence on a specific question and are a particularly effective tool that can summarize, appraise, and communicate the results and implications of otherwise unmanageable quantities of research (Pettigrew & Roberts, 2006).

As a descriptor, the literature informing this area includes general theory foundational to the area of design—including design philosophy, history, theory, and criticism—as well as more contemporary literature theorizing dimensions of design, its identity, and its use within the context of government. The literature in this area is also concerned with the spectrum of design as resource or capability, including design practice, industry, knowledge, skills, abilities, processes, and outputs (Buchanan, 1998), as well as design’s qualities such as human-centeredness, collaboration, and impact (Table 1).

Researcher Reflection

Researcher reflection was a tool employed throughout the entire research process to make sense of what was being seen and understood, particularly as it relates to the information gleaned from direct and indirect interactions with stakeholders and industry. The concept of practitioner reflection was first introduced in the early theories of John Dewey (1933) based on his exploration of experience, interaction, and reflection. Influenced by Dewey's theories, philosopher and author Donald Schön (1983) later familiarized the concept of the Reflective Practitioner. Schön (1983) defines reflective practice as practice by which professionals become aware of their implicit knowledge base and learn from their experience. Boud and Walker (1998) affirm that reflection is one of the key ideas and features of all aspects of learning from experience. This was the experience in this research. The reflective process served to legitimise the understanding of results based on the author's tacit knowledge.

Data Analysis

The process employed to analyse this exploration is akin to Heskett's (2005) strategy used to navigate a similar task of defining design. Confronting what he describes as the "confusing variables" surrounding design, Heskett argues that meaningful inquiry must proceed in two directions: first, by identifying the generic patterns of activity that underlie design's proliferation across domains, and second, by tracing these patterns historically to explain how contemporary conceptual ambiguity emerged. His approach—part conceptual pattern analysis, part historical genealogy—demonstrates that defining design requires both abstraction and contextualization.

This paper extends Heskett's logic into the governmental domain. Whereas Heskett sought to clarify design's broad disciplinary identity, the present study applies a similar analytic strategy to define design specifically as a governmental capability, mapping its interdisciplinary scope and tracing its evolution in public administration. In doing so, it builds on Heskett's insight that conceptual clarity emerges only when underlying patterns are made explicit and their historical development understood.

The results from this study are presented as a descriptive narrative of the synthesized information available at the time of the investigation. The data is summarized into a definition of design specific to the context of government.

Results

The results of this study reveal that design's identity—and the understanding of what design is—has evolved through centuries of inquiry by practitioners, theorists, and scholars who have interrogated its nature both within and beyond the traditional aesthetic-industry paradigm. As the manuscript notes, generations of thinkers "explored its existence from within its parameters and also dared to see beyond the limitations of the imposing traditional industry 'practice' paradigm," revealing the diverse dimensions that comprise the *what* and *how* of design (Kimbell, 2013). This long-standing discourse has examined design's etymology, attributes, and interdisciplinary connections to science (Simon, 1969), business and management (Boland & Collopy, 2004; Dunne & Martin, 2006), economics (Borja de Mozota, 2003), and other fields. It is within this broadened intellectual landscape that the present study situates design-in-government, stepping back to examine the theoretical

foundations that undergird design's past, present, and future capability in governmental contexts.

Challenges in Defining Design Capability and Government

The analysis confirms that the central challenge in this domain is conceptual: the core terms *design*, *capability*, and *government* are broad, multifaceted, and inconsistently defined across literature and practice. As the manuscript states, "design is a broad, multifaceted and complex word with a context that is unspecified" (European Commission, 2009; Heskett, 2005). This ambiguity complicates communication among stakeholders and hinders strategic integration of design in public administration. Dilnot's observation that design research must "bridge the divide between understanding and misunderstanding" (Dilnot in Heskett, 2017) is particularly relevant here, as practitioners and policymakers frequently report the absence of a shared reference point for the term (APDIG, 2014; Whicher, 2015; Whicher et al., 2012).

The results also show that misalignment of terminology occurs across local, regional, national, and international levels—an issue with significant implications given that design is increasingly used to address complex social, economic, environmental, and systemic challenges. Contributing factors include the persistence of the aesthetic paradigm, the rapid evolution of design practice disciplines, historical precedents of design use in government (Woodham, 2010), and the proliferation of design-related terminology across unrelated professions. These dynamics collectively underscore the necessity of defining design clearly and coherently within governmental contexts.

Conceptual Considerations: Design as a Construct of Concepts

The results affirm Dilnot's (1982) assertion that design "is constructed from words-as-concepts," containing tacit and aphoristic dimensions that shape distinctive modes of reasoning and practice. The notion of design as a *resource*—possessing the ability to evoke change—emerges as a central conceptual anchor. This perspective expands design beyond its tangible manifestations to include ideas, experiences, and intellectual activity, all of which are essential to understanding design's potential as a governmental capability (Cross, 2006; Krippendorff, 2006).

Capability, Design Capability and Government

The analysis of capability reveals three core meanings—ability, potential, and function—each of which appears in design-in-government literature. As summarized in the manuscript, capability may refer to natural ability, the "range of ability of doing or to do something," or the capacity to carry out specific operations. The literature on design capability reflects this diversity: some sources define it as individual skill (DeEP, 2014), others as sectoral human capital (Moultrie & Livesey, 2009), and others as organizational capacity for design use (European Commission, 2009). These interpretations span latent inputs, expressed outputs, and ranges of capacity.

The results show that this diversity contributes to confusion, particularly when paired with the inherent complexity of the term *design*. To address this, the study adopts capability as *potential*, defined as the range of ability of design to impact government. This framing encompasses both input (design's abilities) and output (design's effects), providing a unifying conceptual baseline that integrates the varied interpretations found in the literature. As the

manuscript notes, this perspective aligns with longstanding claims about design's "heroic capacity" to address global challenges (Papanek, 1972; Simon, 1981) and supports the development of a framework for documenting design's ability and impact in government.

Government as a Holistic System

The results also clarify the term *government*, adopting a high-level, whole-of-government perspective consistent with pan-government frameworks used by organizations such as the United Nations (Saha, 2010). This view treats government as a system encompassing policymaking, service delivery, governance instruments, administrative operations, and economic, social, environmental, cultural, systemic, and political dimensions. This holistic framing enables the study to consider design's potential impact across all areas of government and aligns with contemporary design-in-government literature (Bason, 2014; NESTA, 2017).

Design: Duality, Tangibility, and Intangibility

The results reaffirm that design's etymology positions it as both noun and verb—"a thing (object) as well as an activity (action or thought)" (Merriam-Webster, 2013; Oxford Dictionary, 2013). This duality reveals design's tangible and intangible manifestations, a foundational insight for understanding its interdisciplinary potential. Historically, design has been rooted in its identity as object, reflected in aesthetic expressions such as imperial architecture, national manufactories, and graphic identity programs (Woodham, 2010). Yet theorists such as Simon (1969) and Papanek (1972) expanded design's conceptual scope, defining it as a universal human activity aimed at changing existing situations into preferred ones. This broader view positions design as an agent of change, comprising intellectual activity relevant to social, economic, and political leadership.

Contemporary theorists further illuminate design's multifaceted nature. Buchanan's (1992, 1998) orders of design—communication, construction, strategic planning, and systemic integration—provide a framework for examining design's tangible and intangible dimensions. Kimbell's distinction between design-as-practice and design-in-practice clarifies design's routinized professional activities and its emergent, evolving outcomes (Kimbell, 2009, 2016). Dilnot (1984) highlights the "impasse in design understanding," emphasizing the need to explicate design's abstract processes, modes of reasoning, and conceptual foundations. Together, these perspectives reveal design as profession, practice, activity, class, phenomenon, and thought—each contributing to its interdisciplinary potential and each complicating efforts to establish common language.

Evolving Practice and Contemporary Shifts

Finally, the results acknowledge the evolving nature of design practice. As the manuscript notes, methodological shifts over the past fifty years have expanded design beyond product-focused disciplines to include human-centred, collaborative, systemic, and evidence-based approaches (Di Russo, 2013; Rapp, 2020). These shifts highlight design's characteristic commonalities—user-centredness, problem-solving, collaboration, sustainability, and strategic integration—which Fry (2009) describes as elements of design's "agency" or "character." These intangible dimensions underscore design's potential as a governmental capability and reinforce the need for conceptual clarity.

Discussion

The results of this study demonstrate that design's identity within government is multifaceted, interdisciplinary, and historically grounded. Yet despite its longstanding use, design's conceptual foundations in governmental contexts have remained underdeveloped. This gap has contributed to confusion, misalignment of terminology, and inconsistent application across jurisdictions (Whicher, 2015; Zitkus et al., 2018).

The synthesis presented here addresses this gap by articulating a structured, holistic understanding of design as capability. By integrating design's tangible and intangible dimensions, its manifestations, tools, outcomes, and characteristic qualities, the study provides a comprehensive conceptualization that aligns with both design theory and public-sector practice (Buchanan, 1992; Fry, 2009; Kimbell, 2013).

A central contribution of this research is the proposed definition of design as capability within government:

Design exists in tangible and intangible dimensions as a resource to government. Within this context, design makes change through its process and outcomes manifested as signs and words, things, action and thought. Design exists as a field, ability and process, utilizing knowledge, skills and tools, producing tangible and intangible outputs that are impactful.

This definition fills several critical gaps identified in the literature and practice:

1. **It expands design's identity beyond narrow industry classifications** (Moultrie & Livesey, 2009).
2. **It establishes a common baseline of understanding for design-in-government** (European Commission, 2009).
3. **It eliminates the need for future researchers to define design before conducting analysis**, addressing a challenge noted across multiple design-policy studies (Cox, 2005; Design Council, 2007; Raulik-Murphy & Cawood, 2010).
4. **It clarifies the design industry's scope and contributions**, supporting efforts to articulate design's economic and social value (APDIG, 2013b; Heskett, 2005).
5. **It provides constructs needed by practitioners and policymakers working in this emergent field**, responding to calls for clearer terminology and conceptual grounding (APDIG, 2014; Whicher et al., 2012).

Importantly, this definition also supports intergovernmental collaboration. As governments increasingly work together to address transboundary crises—pandemics, climate change, migration, digital security—a shared language for tools and approaches such as design becomes essential (Bason, 2014; Saha, 2010). Without such shared terminology, coordination remains fragmented and design's potential impact underrealized.

Conclusion

This study provides the first structured, theoretically grounded definition of design as a governmental capability. By synthesizing interdisciplinary literature, tracing conceptual patterns, and aligning findings with a comprehensive conceptual framework, the research establishes the conceptual boundaries of design-in-government and offers a shared language for scholars, practitioners, and policymakers (Geraghty, 2022).

The proposed definition serves as both a strategic and tactical tool. As Buchanan (2001) notes, “definitions serve strategic and tactical purposes in inquiry... they allow an investigator or a group of individuals to clarify the direction of their work and move ahead.” In this spirit, the definition developed here provides a foundation for more coherent, strategic, and equitable application of design within and between governments (Bason, 2014; European Commission, 2009).

Taken together, these results establish a coherent conceptual foundation for understanding design as a governmental capability and proved a structured vocabulary for navigating its complexity. The framework developed in this study offers a transferable, analytically robust way to describe design’s identity, potential, and value across diverse contexts. By clarifying design’s conceptual terrain, this work enables governments - and any sector seeking to integrate design strategically-to move beyond fragmented interpretations toward a shared, holistic understanding. This conceptualization not only supports more deliberate and effective use of design in public administration, but also lays essential groundwork for subsequent empirical research, capability assessment, and policy development.

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

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