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limitations and opportunities**

Kim, A.; van der Bijl-Brouwer, M.

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Understanding the current practice of design in government: limitations and opportunities

KIM Ahmee and VAN DER BIJL-BROUWER Mieke

Delft University of Technology, the Netherlands

*corresponding author e-mail: a.m.kim@tudelft.nl

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Design is today suggested as an alternative way of working in government contexts. Many developed nations are trying to embed design in their public organizations. Yet recent studies have shown that design is not easily permeating into everyday practice of public organizations. This research therefore aims to understand what the current practice of design-embedding in government is like and its limitations by interviewing six experts in the design for government field. The research findings reveal that the changes created by the current design-embedding practice in government are not being actively sustained or amplified. Based on an understanding of organisations as complex systems, we suggest a further practice of design-embedding in which designers steward and stimulate design-led change energy within public organizations. This study shows that embedding design capability in professional organizations is more about design-led organizational change than passing on a design skillset to the organizational members.

Keywords: Embedding design in government, design for policy, complex systems, design-led organizational change, design capability building

Introduction

We are living in a hyper-networked society that generates wicked problems – the ones defined as “complex, unpredictable, open-ended or intractable” (Head & Alford, 2015, p.712). As governments cannot properly handle these problems in their old ways, they are trying to make changes in their ways of working. Design in this situation has risen as an alternative way of working in government contexts. The experimental, human-centered and co-creating approach of design is praised as opposed to government’s bureaucratic, risk-averse, hierarchical and siloed ways of working (Bason, 2010). As a result, in recent years hundreds of public innovation labs using design as their core methodology have been created worldwide (Fuller & Lochard, 2016; Mortati, Christiansen, & Maffei, 2018).

Design has engaged in complex problems of business and service areas before, but in the unique context of government design is faced with many challenges. Firstly, designers are criticized for the lack of policy-relevant skillset and knowledge and the lack of commitment to implementation (Mulgan, 2014). Secondly, recent studies have revealed that the aforementioned design-led public innovation labs are having a hard time entering mainstream policy practice (McGann, Blomkamp, & Lewis, 2018; Mintrom & Luetjens, 2016). Lastly but not least, the closing of leading public innovation labs such as Helsinki Design Lab and Mindlab seems to suggest some challenges in the current approach of embedding design in government. Overall, despite its merits in government context, design is not easily permeating into the day to day practice of public



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organizations. Designers and public leaders interested in the design-led public sector innovation have not yet fully grasped how to embed design in government.

Therefore, this research aims to understand the current practice of embedding design in government and its limitations, by interviewing six experts who are working inside and outside of governments in the design for government sector. This preliminary study for a doctoral thesis will serve as a starting point for further development of practical knowledges for design practitioners and public leaders who are interested in the design-led public innovation and especially those who are in the stage of scaling design-led change in public organizations.

** Explanation of the term 'design/ designer' in this paper*

In this paper, the term 'design' refers to the design practice (or its approach) conducted in solving societal problems by the public sector. It is often used interchangeably with design thinking or designerly ways of working. Design as an approach to problem solving is characterized by abductive thinking and act of framing (Dorst, 2011). Design in the public sector deals with problematic situations where the desired values are known but what causes the situations and how to achieve the values are unknown. Thus, the design process involves co-evolution of the problem and the solution as well as the act of adopting certain "working principles" to describe the problematic situations (Ibid, p.525). This designerly way of problem solving is considered to be fundamentally different from the deductive thinking processes commonly preferred in public organizations. 'Designer' in this paper concerns both design-trained and non-design-trained people who practise design in the public sector.

Literature review

In this section we will briefly explain why design is desired in government contexts. Then, it is examined how design literature illustrates what 'embedding design in government' means and how to practise it. Lastly, we define the concept of embedding design in government based on the understanding of organizational change and development theories.

Why design is desired in government context

Policy can be defined as a course of actions that a government takes to solve societal problems while governing the state (Colebatch, 2009). If policy is the act of problem-solving, the making of a policy entails operations similar to designing such as defining the given problem, setting a preferred goal, and deliberately attempting to achieve the goal (Ibid). In fact, the concept of policy design has existed since 1950 in policy context (Clarke & Craft, 2017). However, today's policy design is more about co-designing a policy with multiple actors in open and networked systems as opposed to the closed and siloed ways of policy designing by a few actors in the past.

The reason why the co-designing ways of policymaking receive attention today has to do with a change in governance paradigm. In the current governments of developed countries, there are three paradigms of governance - traditional public administration, new public management, and networked governance. Hartley (2005, p.29) explains that all the three paradigms coexist as "layered realities," but it is reported that "significant elements of networked governance are seen in countries such as the UK, the USA and Australia" (Bason, 2010, p.10). Furthermore, it is known that the wicked societal problems of today are best dealt with in the networked and collaborative ways of policy-making, as involvement of multiple actors improves the understanding of a problem and ensures that needs of citizens are taken into consideration (Sørensen & Torfing, 2016). Thus, public servants and policymakers are asked to have the design capability that helps them understand the given problematic situation, find a real problem, and co-design its solution with other policy actors.

Design is also favoured for the sake of government innovation. Mulgan and Albury (2003, p.3) point out that current "practices, structures, cultures and modes of operation of public services, government departments and agencies" are shaped in the time when the needs of citizens were homogeneous. For the systems of public organizations are no longer suited for the diverse needs of citizens and wicked societal problems of today, the public sector is urged to change (Ibid; Hartley 2014). In this context, design is proposed as a major driver to the public sector transformation. Design is believed to help government not only design public service and policy but also "achieve wider long-term aims of growth and quality of life for its citizens" (Design Council, 2013, p.4).

What 'embedding design in government' means and how to practise it

Despite the increasing interest in 'embedding design in government,' what the concept means is not sufficiently discussed yet. How we define the concept is important since its definition can influence how to practise it. We firstly examine how current design literature explains what embedding design in government means and how to practice it, and secondly propose how the concept can be newly defined based on organizational change and development theories, as design in a government context is a change or innovation.

The British Design Council (2013, p.8) (BDC) made a model called the public sector design ladder to describe different levels of design used in public organizations. In this progressive three-step ladder model, embedding design is explained in the second step "design as capability," where, as BDC explains, design "becomes part of the culture of public bodies and the way they operate and make decisions." In this model, embedding design is a step below "design for policy," the stage where design is used by policymakers. However, in reality design can be used by policymakers before design becomes embedded in public organizations. This model is therefore rather confusing to explain the concept of embedding design in government properly.

The Scottish service design firm Snook and Design Managers Australia (2014) describe embedding design in government by three different embedding activities: embedding design capability and skillset, embedding design thinking, and embedding a lasting environment for design practice. This understanding seems to be more comprehensive than the design ladder model as it interprets embedding design as building not only design capability but also an environment for the sustainable practice of design. Nonetheless, a limitation of this explanation, as well as of the design ladder, is that it does not acknowledge the complexity in the design-led organizational change process in the design-embedding practice.

Design literature has paid less attention to the complex organizational change process also in explaining how to practise design-embedding in government, how public employees and organizations are transformed through design experiences. Sangiorgi (2011, p.29) claimed that the design process – the co-design process, precisely speaking, as co-designing is the norm in the public sector – "necessitates the concomitant development of staff, the public and the organization." It is also asserted that design process is not necessarily a change management process and "leaving the participants with the tools and capacity to continue to adapt and innovate means [...] that organisational change will continue to happen" (Burns, Cottam, Vanstone, & Winhall, 2006).

However, such optimistic prospects about organizational change contrasts with the general opinion of organizational change experts. Roehrig, Schwendenwein and Bushe (2018) claim that "without an amplification strategy in place, chances are the energy and momentum [of a change] will dwindle." Only few design scholars such as Deserti and Rizzo (2014, p.86) criticized the pervasive idea that introducing design practice in public organizations will work "per se." They warned that designers' lack of concern for managing and fostering a design-led change process could "lead to the rejection of the new practices or confinement of them to a cosmetic role"(Ibid, p.87).

According to the theories of organizational change and development, 'embedding' of any change or innovation is the last stage of a change process (Hayes, 2018; Roehrig et al., 2018). It is a state where the change is sustained so that people in the organization no longer go back to their old ways of working. Behavioural changes are observed in leadership and people's roles, and cultural and structural changes are followed (Hayes, 2018). Most importantly, embedding design in this understanding means not only introducing and implementing design practices in government but also "encouraging and growing the energy, inspiration, and networks" of design-led change that will eventually make changes in every aspect of government- mindset, culture, practice, leadership, decision-making, and structure (Roehrig et al., 2018, p.325). In sum, embedding design in government based on the organizational theories can be defined as a combined effort of introducing design practice and sustaining and amplifying design-led change energy until it transforms the public organization.

Research methodology

Out of the literature study, we drew a preliminary conclusion that the current practice of embedding design in government may lack the practice of sustaining and amplifying design-led change within the public organization. To further explore this topic we set up a study that aimed to answer the following research questions:

1. What is the current practice of embedding design in government?
2. What kinds of changes are being made by the current design-embedding practice in government?
3. How are these design-led changes being managed (sustained or amplified)?

This research is based on the worldview of social constructionism. Social constructionism believes that the meaning of reality depends on social interactions and agreements between members of society, and thus communication and interaction shape the reality (Barrett, 2018). In this epistemological stance, this research aims to understand the practice of embedding design in government by interviewing six experts who are practicing design in the public sector.

Interview participants are recruited through networks of the researchers as well as using the snowball method. Out of the total six participants, three were experts working outside of government, and the rest were experts working inside government. Their work experience was limited to more than and equal to two years, and three of them were in senior positions in their organizations. Their geographic base varied such as Singapore, Australia, Finland, Canada, and the U.K. Please note that selecting participants from developed countries only limits the generalisability of this study, and we acknowledge that the results discussed in this paper might not apply to governments in other parts of the world.

The interviews lasted approximately thirty minutes to one hour in a semi-structured way through Skype. The interviews were recorded under the consent agreement of participants. We examined the data through thematic analysis and interpreted the results through the theoretical lens of complex systems. Interview questions included for example: Do you perceive change in terms of the adoption of design in the way government works? How do you ensure the change will be ongoing? In an ideal future, what would design in policy context look like?

Table 1: information about interview participants

<i>Experts no.</i>	<i>Type of organization they worked/ work for</i>	<i>Design training</i>	<i>Type of activities with government</i>	<i>Overarching view on design-embedding practice in gov.*</i>
1	Senior designer in design research center of university	Yes	Design capability building, design projects for policy	It is a very slow process, but design-led change is happening in government.
2	Researcher in university	Yes	Design projects for policy	One big challenge for design to enter government is designers' tenure - how to make a team of permanent nature that can pull strings over the long period of policy projects.
3	Designer in social innovation lab	Yes	Design capability building, design projects for policy	Government is a significant lever in social change but should be regarded much like other stakeholder groups who are part of a system.
4	Senior public manager in ministry's innovation team	Yes	Design capability building, design projects for policy, strategic design for policy	If we develop design leaders who understand the matters and needs of senior leaders and policymakers, design-led change can scale.
5	Senior public manager in state government's innovation team	No	Design capability building, design projects for policy, strategic design for policy, innovation management	We're still figuring out how to scale but we think it is more of how you set off networks to work so that change and momentum become viral.
6	Public manager in central government's innovation team	No	Design capability building, design projects for policy, strategic design for policy	Bureaucratic funding model and governance (of a project) are big barriers of design practice in government.

* These are not direct quotes but edited by the authors.

Results

The interviews revealed some limitations of the current practice of design-embedding in government but also suggested possible directions to overcome them. The first and second themes answer the three research questions of this study: what the current practice of design-embedding is like, what changes are being made by the practice, and whether the changes are being managed. The third and fourth themes explain the directions that may improve the current practice of design-embedding in government. The last one is an ancillary theme about the design practice in government.

1 The current practice of embedding design in government

The aforementioned design ladder model divides the general activities of design-embedding practice in government into design capability building, design project for policy, and strategic design for policy (Design Council, 2013). Most experts interviewed were engaging in the two activities of design capability building and design project for policy. Three out of the six experts were involved in the policy designing at a strategic level. One interesting thing was that while other experts are practising these activities on their own, one expert reported that her team is outsourcing the practice of design capability building and design project for policy. Her team seemed to be more concerned with innovation management as she described below. As we will see later, this is a very rare practice in the current design-embedding in government.

Our goal isn't to do the innovation. We're not innovators per se. Our role is to try and bring the good things that are happening in and help leverage them and grow them in government. (expert no.5)

2 No practice to sustain or amplify the design-led change

All the experts confirmed that design is creating some changes in government. The changes are of different levels - individual, team, or organizational – and in different features – awareness, skillset, attitude, mindset, practice, culture, leadership, or structure, though it is not always clear to classify them. The most observed changes were in individual or team level in awareness, skillset, attitude, or mindset. Changes in practice were also reported but they were in singular projects, not in everyday practice.

Changes were often better-observed in long term design projects. Experts emphasized the long term is an essential condition to make a substantial impact in the mindset of participating public officers, as well as in the project success.

over the course of eight months, the impact was felt there, where there was definitely buy-in from different levels and different parts of government. Once they saw the outcomes to invest more into it, you could see the team change and become the team who was actually working alongside of us change to be confident in the thinking and the mindsets and the implementation and the leadership. (expert no.3)

[A] really exciting thing is that through the process all of the participants have been exposed to a different way of working and it created a relationship and appetite for ongoing working together around how it can have a continued development together. (expert no.5)

However, many times changes were seen in individuals who participated in the projects, and most experts did not have clear strategies to sustain the individual changes or to amplify the individual changes to a group or organizational changes. Only one expert seemed to be explicitly engaging in change management practice in her organization. Experts working outside of government were not given the opportunities to steward the changes when their contracts with government ended.

I think that the main impact we can point to right now is more the one on one change like the first degree of change that we can see [with] the immediate people that we worked with. I think what will take a lot more time is to see how much further that change goes outside of the immediate team that we engaged with. (expert no.3)

I guess you could say yes there is an influence. But how much they are prepared to let that influence to change all the ways they work, you know, I don't know. It's hard to know. (expert no.1)

Besides, two experts reported some difficulties in design capability building practice. The challenges were that public organization's rather tokenistic approach to the design training – short term or one-off training – and new design knowledge not integrated within the organization after the training, the phenomenon expressed as “tissue rejection.”

over 20 weeks we ran that program to help cycle people through and get experience of what was so kind of experience and that was good. The challenge was that the project ... because it was built in our environment in terms of the space and the ways of working, they just simply couldn't reintegrate back into the department they come from because it was like tissue rejection. (expert no.6)

Nonetheless, design capability building is considered important in terms of raising design awareness in government. Three experts expressed their concern that design being regarded as exogenous and inessential to policy context is a major barrier of design-embedding. The expert who experienced the tissue rejection also suggested not to underestimate the “creative energy smoke, even if there's no fire.” Additionally, one expert emphasized that design capability training should be as much about attitude and mindset such as agility, resilience, action orientation, courage, and resilience as about skillset.

3 Understanding the organizational context of government

Government as an organization is unique and different from private organizations. Four out of the six experts had work experience in both private and public sectors, and we asked them how their design practice in public organizations was different from that in private organizations. One expert who had a long career history in diverse organizations replied that government is the most complex operating system that she has ever seen. She explained further as below. Her point was that government has its own system of “culture, rhythm, process, and structure.”

Australian government lasted for how many... Westminster government as a form of organization for 300 years. The average corporates peak at 60 at max at the moment, and those are the exceptions. So, you know, there's something about it. (expert no.5)

Other experts described the distinctive ways of working in government as political, risk-averse, and bureaucratic. One expert called it a paradox that governments are “bloody careful not to do anything wrong” despite desiring innovations so much. Another paradox seemed to be that despite the governments' risk-averse culture, some aspects of their system are prone to failure.

Government has tended always deliver software the way they deliver bridges in that you spec everything at front and you deliver it on a fixed schedule and you assume it's all going well as you planned. [...] It means by all that is this cultural aversion to failure. People are scared to throw the hands up and say, hey- this didn't work. (expert no.6)

They genuinely feel that they want to make change for the good. So, their hearts are in the right place. It's just the structure that doesn't allow them to be as positive and courageous. (expert no.1)

While the bureaucracy of government was criticized the most, one person inside government showed a neutral opinion about it. She explained that “bureaucracy is all about standardization, compliance and risk management” that only contrasts with design, which is “all about exploration, iteration and change.” It reminded us what policy scholars explain about the “ambidextrous” approach in public sector innovation – “running business as usual” at the same time as supporting innovation (Hartley, 2014, p.228). Another expert inside government made a similar comment,

if you were to build the government from scratch today and you had a completely blank slate starting fresh, you'd build it in the way that Google builds Google or Amazon builds Amazon. [...] The challenge is when transitioning a huge behemoth machine to work that way while keeping the lights on because it [has]is a lot of moving parts. (expert no.6)

Overall, embedding design in government is about transitioning large organizations with long history and their own distinctive systems of culture, rhythm, process and structure. To successfully work on this transition, as in the ambidextrous approach, designers should be able to understand the organizational context of government

well enough. Designers' understanding of the organizational context of government can influence the practice of design-embedding in government.

Understanding organizational change dynamics and nurturing design-led change energy

Then, how can we diffuse design practice and embed it in government? Three experts answered that we need more designers in government. One of them argued that we need a clear designer career track to encourage more designers to enter the public sector.

[The] Finnish public sector is big and that's what they call [the] Nordic model. The public sector produces a lot of GDP. And they do very much with little. [...] compared to that, the number of designers they have and the number of design project they hire is miniscule. (expert no.2)

designers have got to be infiltrated. They've got to be in there in the government as part of the hierarchy, part of the important... (expert no.1)

I think maybe with things like a career pathway you signal to designers that it is a core specialization that is valued in government. Cause we have career pathways for things like economist or legal or engineering like that. But we don't have a career path for designer as yet. (expert no.4)

However, it is to be careful that simply hiring more designers in government may not have as much impact as expected since organizational change in complex systems does not happen by few powerful individuals but emerges from multiple local interactions of organizational members (Stacey, 2018). In this respect, we were drawn to some other comments made by the three experts inside government describing internal organizational change dynamics. Consciously or not, they were talking about the local interactions in the design-led organizational change process.

When you're not inside government, I don't think you completely understand the tensions that the decision-makers face. (expert no.4)

You need to change the way people work and interact and that's hard. You can't do that from outside. For its own sake, it needs to be owned and lived by the participants in the culture and that's a self-reflecting change. [...] It's not developed out of the great seething cauldron that we're working. (expert no.5)

You could only slowly do that before we start [to] bang [our] head so much that you can't do anymore and that's really hard. (expert no.6)

Another interesting remark was one expert talking about a 'burning platform' - the term used in change management literature arguing that a desperate need like setting a fire in a platform is required for people to change. She hypothesized that policymakers are not willing to adopt design because there is no absolute need for them as they for long had no trouble of making policies without the help of design. However, some scholars of complex systems theory disagree with the extremity of the burning platform idea and contend that encouraging the system's "creative and curative power" works better in changing the organization (Roehrig et al., 2018, p.327).

In conclusion, embedding design in government is about design-led public organizational change that needs to be owned and lived by the members of the organization. In this change process, the designer's role is to understand the organizational change dynamics and to nurture the system's creative change energy until the energy transforms the organization thoroughly.

It is often not clear what design practice in government means

During the interview, we found it interesting that four experts were hesitant to call their ways of working 'design.' One of them even told us that her team had been practising design principles for long without recognizing it as design.

It would have people with a process which is similar to design. Let's not say it's a design process but it's... it has many of the aspects of the way designers work... (expert no.1)

do we actually have to call it design or can we just call it more integrative working, or can you call it more democratic way of involving participants or citizens into the process? (expert no.2)

It is known that in public innovation sector, many non-design trained people are practicing design. Designers, on the contrary, are reflecting their own practices and questioning what other disciplines are needed to better comprehend complex societal problems. This ambiguous state of who to include as designers and what to include in design practice must be natural as design has expanded to a new territory of public innovation. Dorst (2015, p.31) claimed that “contradictions” in design field are what continuously “feed(s) discussion in the field” and what defines the culture of design.

What is clear though is that more experiments, reflections, and researches are required about the design practice in government context as one expert pointed out,

It's kind of like a method design exercise in the government contexts. Instead of going this is what design looks like and you should be doing this, it needs to go more to, this is the operating system that you're moving, how can we integrate as much of the good things and the good outcome of design [...] how we can fit in it, how we can start to bring these principles and new ways of thinking. (expert no.5)

Discussion

In the literature study we redefined the concept of ‘embedding design in government’ as a combined effort of introducing design practice and sustaining and amplifying the design-led change energy within public organizations. Based on this understanding, we concluded that the current practice of design-embedding in government may lack the practice to sustain and amplify the design-led change in public organizations.

In the interviews with six experts, these literature-based conclusions were further confirmed. The changes reported were mostly individual or team changes in skillset, awareness, attitude, or mindset, and no experts mentioned changes in everyday practice, culture, and structure on an organizational level. It showed that the ‘concomitant development of participating individual and organization’ in the co-design process is not always guaranteed. For the individual changes to become group or organizational changes or for the changes in skillset and mindset to become changes in everyday practice and culture, there should be some strategies and practices to amplify the change energies. However, five out of the six experts did not have such strategies and practices in place.

In addition, it was found that designers’ understanding of the organizational context of government can influence the practice of design-embedding. It means that for designers who work with government as external consultants, their relatively low understanding of the culture, rhythm, process and structure of government can be a barrier to their practice of embedding design in government. Another finding in the interviews was that three experts inside government were more sensitive to internal organizational dynamics than other three experts outside of government. This also confirmed the disadvantage of being an external designer in the practice of design-embedding.

The common activities of current practice of embedding design in government are: design capability building, design project for policy, and strategic design for policy. If the goal of embedding design in government is the transformation of public organizations, the current activities may not be enough to make the transformation. Embedding design in government is about design-led public organizational change that needs to be owned and lived by the members of the organization. The designer’s role in the change process is to understand the organizational change dynamics and to sustain and amplify the system’s creative change energy. It might be a new role for designers, but we cannot confine the design practice in government as it is practiced now. This role, of course, will not apply only to designers inside government. Designers outside of government should be able to find ways to engage in the design-led organizational change process too.

More studies are required on how the designers can sustain or amplify the design-led change energy in practice. At this point, we find the clues in literature of complex systems theory. Stacey (2018, p.152) says that an organization is shaped by the “interplay of all the choices, intentions, and strategies of all the group and individuals both in organization and in all other organizations,” and thus the organizational future is inherently unpredictable. Nonetheless, aggregated intentions of people in the organization make some patterns to emerge so that designer can plan certain “attractors” to stimulate or support certain activities (Hasan, 2014, p.51). Thus, there is a possibility that designers can stimulate design-led change energy using various attractors.

So-far-known attractor factors based on our literature study are conversation, power, and learning. Conversation is how we make sense of our experience and how we construct our social reality: in this sense, changing conversation in an organization could change the organizational reality (Marshak, Grant, & Floris, 2018). Power is itself an important part of organizational reality since everyone is interdependent and thus constrained and enabled by the relationships (Stacey, 2018). Lastly, learning is important in a workplace because to work means to learn practice as the “shared way of doing things” (Gherardi, 2009, p.356). For a new practice is always challenged to be institutionalized, it should be proactively facilitated and nurtured through “inter-organizational networks of sharing and comparing” by designers like gardeners (Hartley, 2016, p.101).

Summarising, designers might be able to sustain and amplify the design-led organizational change by following conversations of people in the organizations, understanding power dynamics in-between individuals and groups, paying attention to the learnings of people in the organization as well as those of themselves, and eventually figuring out what to design and what to expect to emerge in the design-led public organizational change process.

This research does not intend to provide any concrete answers to how to embed design in public organizations. However, we would like to propose that paying more attention to organizational change dynamics and attractor factors in the change process may provide designers with opportunities to sustain and amplify the design-led change energy and eventually succeed to embed design in public organizations. To further explore these opportunities, our future research will be aimed at investigating how the attractors may work in real contexts, what are known and unknown attractors, what are context-free and context-specific attractors, and how designers can monitor the organizational change.

Conclusion

This study aimed to understand the current practice of embedding design in government and its limitations. The study results showed that the current practice of design-embedding in government are generally the three activities of design capability building, design project for policy, and strategic design for policy, and change management is rarely practised. Thus, the changes created by the current design practice mostly remain on an individual level and do not touch the deeper parts such as everyday practice, culture, and structure of the public organizations. The practice of sustaining and amplifying the design-led changes in public organizations is largely missing.

Study findings also showed that embedding design in government is about design-led public organizational change, and the designer’s role in the change process is to understand the organizational context and change dynamics and nurture design-led change energy within the organization. We therefore suggested a new practice of design-embedding in which designers steward and stimulate design-led change energy within public organizations as well as future research directions on design-led change amplification strategies.

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