The GovTech Challenge – GovTech and Public Value Creation

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ABSTRACT

Governments struggle to harness emerging technologies to improve public services, address social needs, and produce public value. In response, we see a rise in GovTech startups and other non-government actors trying to bring innovative solutions to governments. While some public agencies welcome such help, many are reluctant to rely on external organizations to provide digital identities, data wallets and AI-based services to citizens, businesses, and the government itself. Many also fear engaging a dynamic ecosystem of small non-government actors working together and gaining more experience in the process. Consequently, the GovTech supply and demand are misaligned with each other and the public value imperative. Public tendering may help but does not protect against vendor lock-in and innovation-blocking. Co-creation of public and private solutions may be technically possible but may face institutional void, calling for trust frameworks, steward-ownership, ecosystem building or other alternative instruments. This paper presents a research challenge to examine GovTech evidence, learn about applicable theories, methods and knowledge gaps, and formulate theoretically and empirically well-grounded recommendations on GovTech and public value creation. It also outlines the response to the challenge: organizing a dg.o 2024 workshop and developing a special issue of Government Information Quarterly (GIQ).

CCS CONCEPTS

• **Applied computing**; • **Computers in other domains**; • **Computing in government**; • **E-government**; • **Social and professional topics**; • **Computing / technology policy**; • **Government technology policy**; • **Professional topics**; • **Computing industry**;

KEYWORDS

GovTech, public services, public value creation, AI, data wallets, trust frameworks, ecosystem building, digital governance, digital government architecture, digital transformation

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1 INTRODUCTION

Globally, tech firms have successfully wielded the potential of digital identities, Artificial Intelligence (AI), blockchain, data wallets, Internet of Things (IOT), immersive technologies, digital twins and other emerging technologies. This potential has not gone unnoticed in the public sector. Taxpayers and civil society expect the public sector to address societal problems, foster economic development, and create public value, often with fewer resources. Emerging technologies can help fulfil such expectations by reshaping the interactions between government and citizens, delivering proactive and personalized services, fostering resilience within the public sector, etc. However, many governments are struggling to harness such potential. While they need to find new ways to do things better (innovate) and scale up (automate), they are too risk-averse to engage with untested technology, too legalistic to experiment, and too rigid to innovate.

One way to bring the potential of emerging technologies to government is through GovTech, an innovation ecosystem where private sector startups and other non-government actors use new technologies to deliver products and services to public sector clients [1]. The rise of GovTech is a response to such expectations [2]. This response must go beyond mere digital replication of government processes and engage digital transformation and new technologies to improve such processes [1]. While those looking for guidance will find that academic work on GovTech is scarce, they will also discover a growing record of GovTech programs operating in different countries worldwide [3], [4].

The objective of this paper is threefold: (1) to recall the evidence on GovTech and public value creation; (2) to propose a research challenge aimed at uncovering further evidence, learning about applicable theories, methods and knowledge gaps, and formulating recommendations on GovTech and public value creation; and (3) to propose a response to this challenge.

The rest of this paper is structured as follows. Section 2 presents the empirical evidence drawing from the European GovTech Incubator program. Section 3 presents the research challenge on GovTech and public value creation. Section 4 presents two community responses to this challenge: the dg.o workshop on "GovTech and Public Value Creation" and the GIQ special issue on the same topic.

2 INITIAL EMPIRICAL EVIDENCE

Multiple studies emphasize the potential of GovTech to bring digital innovation into the public sector and open new application areas,

including but not limited to public services [5], [6]. In the EU, GovTech responds to the dependence on BigTech [7], and governments are investing in GovTech to drive public sector innovation and support entrepreneurs [3], [8].

What emerges from the study of the EU national GovTech programs [3]is a great variety of institutional arrangements – within government, managed by government, independent but backed by government; and activities – challenges and prizes, hackathons, acceleration programs, piloting, research, development grants, ecosystem building. The lessons learned include [4]: building close relationships with the executive power, choosing program designs to fit program goals, maintaining or scaling up small teams, relying on champions, setting up clear goals, focusing on public value, funding at the right time, innovating with administrative procedures, and setting standards to facilitate entry.

To reinforce GovTech, the European Commission has launched the GovTech Incubator with co-funding from the Digital Europe Program. The aim is to support the emergence of an EU-wide GovTech marketplace, offer opportunities for startups to transform innovations into market-ready products, and strengthen collaboration between EU Member States while ensuring interoperability, cross-border and cross-domain exchange, and reusability of solutions.

3 THE GOVTECH CHALLENGE

Documenting and analyzing GovTech program's performance against design decisions and contextual conditions is ongoing. Still, the initial evidence highlights several challenges that impede the performance of GovTech:

- A mismatch between GovTech supply by market parties and demand specified, allowed, or sourced by agencies.
- Institutional void – unclear rules for government engaging with startups to co-create innovative GovTech solutions. Academia may help evaluate digital innovations against scientific evidence, and enhance them accordingly.
- Lack of trust, particularly for agencies with experience in vendor lock-in, in engaging non-government actors.
- Uncharted and uncomfortable business models, often revealing the real cost of public sector inefficiencies.
- Public value concerns when leaving public services in the hands of GovTech agents driven by their business goals.
- Lack of frameworks for relying on GovTech ecosystems to advance from prototypes to products.
- The complexity of managing GovTech actors working together brings creativity, experimentation, and innovation against governments' long-term, risk-averse, and legalistic performance.
- Sustainability challenges, i.e., making sure that GovTech programs and ecosystems continue delivering value to government despite the ongoing change in the ecosystem.

The challenges call for GovTech design measures and support mechanisms including infrastructure access, innovation-friendly regulation, implementation sandboxes, financial incentives, peer learning, etc. To decide on them, we need well-founded recommendations that cover GovTech design and operational context and put public value at the center.

Research to produce such recommendations should be informed by evidence and grounded in theory. Different metaphors can describe the GovTech challenge and guide the research process. The market metaphor entails misalignment between GovTech demand by governments and supply by GovTech actors. Moving beyond the market mechanism, the coordination metaphor describes how GovTech programs intermediate technology provision by GovTech actors to government agencies, making different decisions and managing risks in the process. Outside such programs, uncoordinated technology provision occurs when a need, opportunity and (manageable) risk exists. However, GovTech actors and agencies vastly differ in their goals and operations. The innovation vs. stability metaphor describes how GovTech connects dynamic ecosystems of technology agents, bringing innovation to agencies that prioritize predictability, stability, and control.

4 RESPONDING TO THE GOVTECH CHALLENGE

Responding to the GovTech challenge, the basic premise is engaging the digital government community to examine existing and gather new evidence, analyze such evidence with established methods and theories, and formulate well-founded recommendations. Under this premise, the response involves organizing the dg.o workshop on "GovTech and Public Value Creation" and developing a Government Information Quarterly special issue on the same topic.

The workshop would be organized as part of the dg.o 2024 to take place in Taiwan. The goal is to identify the members of the community who have the interest, capability and access to contribute to the GovTech challenge, and commence a discussion on the questions to be tackled under this challenge. The workshop will be organized in three parts:

- In the first part, workshop organizers will introduce GovTech, including the concepts, examples, and problems uncovered by the EU GovTech Incubator project, and present the nature of the GovTech challenge.
- In the second part, workshop participants will share their views on the nature and response to challenge, guided by the questions from the organizers. Using the public value perspective, the participants will share the GovTech cases, challenges and insights, and identity concepts and theories to respond to the challenge.
- In the third part, participants will decide on the list of topics to be tackled as part of the challenge, express commitment to take ownership of them and declare how and with whom they plan to conduct research. The leading questions are: What do we know? What do we need to know? How do we get there?

As a leading journal on public sector technology, GIQ is a natural target for publishing the "GovTech and Public Value Creation" special issue. The development would commence by submitting the GIQ special issue proposal shortly after the workshop. The workshop would provide further evidence of the GovTech practice worldwide, the understanding of the nature and constituents of the GovTech challenge, and a frame of reference for individual submissions to facilitate generalization and synthesis. The topics and commitments expressed at the workshop would translate into

the planned submissions, but the organizers will also announce the open call. All submissions will undergo a regular GIQ review process with 2-4 rounds of reviews and revisions. As reviewers, we will involve the authors of the leading GovTech publications, the members of the GIQ Editorial Board, and the contributors themselves. The special issue will be promoted among the institutions involved in the GovTech practice.

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