

Adopting digital government shared-services centers: A case from Iceland

Illugi T. Hjaltalin

illugi20@ru.is

Department of Business Administration

Reykjavík University, Iceland

ABSTRACT

The overall objective of this study is to understand how shared services adoption by governments can affect public sector reforms and public value. In this ongoing research paper, a case study involving a deployment of a government digital shared-services center is outlined. The adoption process is analyzed through a framework inspired by systems theory and public value theory. Initial results suggest that networked collaborative governance in the form of cross-sector collaborations can play an important role in public value (co)creation. However, the findings also indicate a barrier to public innovation. This involves a zero-error culture in state agencies. In this context, strong leadership skills and diverse use of relevant administrative instruments at various stages in the innovation process are found to be critical factors for the successful adoption of shared services. This study contributes empirically and theoretically to the latest research on ICT and public value by scrutinizing a successful case of a shared-services unit within central government.

CCS CONCEPTS

• **Social and professional topics** → **Systems analysis and design**; *Socio-technical systems*.

KEYWORDS

shared services, public value, public management, reforms, digital government, innovation

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1 INTRODUCTION

In the past four decades, many governments have launched extensive reforms that have fundamentally altered their administrative practices. New public management (NPM), introduced in the 1980s and 1990s, has shifted the focus from bureaucratic practices to an increased emphasis on efficiency gains. The NPM movement

promoted a more business-like approach to public administration and public managers should have a high level of autonomy in decision-making [9]. NPM reforms have emphasized distributed power through a decentralized public sector and more autonomy for public managers. It has been found that this combination, i.e. power distribution and increased autonomy, gives rise to a more diverse application of administrative instruments (e.g., risk management, quality management, user testing, etc.) [10]. Moreover, the same study shows that varied use of administrative instruments leads to better results in public sector reforms. Nonetheless, NPM reforms have constructed organizational silos making coordination and collaboration between state agencies difficult.

At the same time, different management ideas have been adopted by governments to provide efficient and effective public service. For example, the *shared services* idea has been diffused in the public sector in the past two decades that has led to increased synergy and enhanced service quality [23]. Similar services once provided by different public agencies, such as IT services [7], have been relocated and organized into shared-services centers (SSCs). This has reduced costly duplication in public administration and made the use of IT infrastructure more effective [8]. The popularity of the shared service idea has been explained in terms of the opportunities it presents to governments and public organizations for enhanced value creation [7]. However, there is limited understanding how e-government services can be combined or configured to implement shared services [11].

Kristinsson and Matthíasson [10] argue that there may be a relationship between varied use of administrative instruments and successful public sector reforms. In an extensive review covering over 500 NPM reform studies in Europe, Pollitt and Dan [14] highlight a need to better assess the impact of NPM reforms because empirical evidence is scarce. Based on the EC's COCOPS dataset, both studies indicate a general need for research into the outcomes and results of public sector reforms. Our study meets this need by examining the adoption of the shared services idea by the government. The overall objective is to understand how shared services adoption by governments can affect public sector reforms and public value. This paper contributes empirically to the public value literature and to public sector innovation research by applying a systems theory and public value theory to explore administrative instruments required for public value creation in government digital shared-services centers (GD-SSCs).

2 THEORETICAL FOUNDATIONS

2.1 Centers of excellence and innovation

Ulbrich [23] highlights different types of SSCs in terms of the center's primary goals:

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Among them are centers of excellence, which focus on professional and advisory services and provide expert knowledge on specific tasks [...] The literature suggested creating centers of excellence by moving existing specialists from decentralized units into one common center for service provision [23, p. 251].

GD-SSCs are centers of excellence in digital government and ICT-enabled reforms in the public sector. They are based on the shared services idea which is a management idea that has been adopted by many governments.

Rogers [16, p. 11] defines innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption". In this study, the GD-SSC idea represents innovation, and the unit of adoption is the Icelandic government. Ulbrich [23] performed a similar study where he examined the adoption of a shared-services idea in the Swedish public administration. He found that the idea or innovation is not merely adopted but transformed "into a specific configuration that reflects the organization's individual conditions" (p. 249). In the remainder of this section, the innovation process is divided into three stages, implementation, configuration, and deployment. Following a description of each stage, a research question related to that stage is presented. The section concludes with our discussion of public value theory.

2.2 The innovation process and research questions

First, the implementation stage follows the discovery and initial planning phase. It involves formulating the implementation strategy and identifying the relevant stakeholders. The national digital strategy may serve as a high-level point of departure. A central administrative instrument at this stage is a joint strategic plan where stakeholders have been consulted outlining clearly defined agreed-upon objectives to be pursued by the innovation team as well as the estimated time and budget. Resource acquisition may involve relocating staff from different public organizations which can be a challenge, e.g. employees may resist relocating for personal reasons [23]. Successful adoption of shared services takes more than simply implementing a strategy in its original form. It must be adapted to fit the local political and social circumstances [5].

RQ 1 - How are strategies concerning GD-SSC defined and implemented by government?

Second, the shared services idea is configured and adapted to the available resources and fitted into the policy context. The innovation may require specialized talent and possibly changes to, or the creation of new, policies. Thus, policymakers within the government may be mobilized to facilitate a smooth roll-out of the innovation. At this stage, a bundle of administrative instruments comes into the mix which may put great stress on the management team. This includes accessibility of services, moral code, risk management, quality management, public consultation, etc. [10].

RQ 2 - Who are involved in the adoption process and which administrative instruments characterize various adoption stages?

Third, successful implementation and configuration stages lead to the final and perhaps most important stage, i.e., deployment of the

innovation. This requires buy-in from stakeholders who represent the beneficiaries or users of the shared services. A successful roll-out demands strong administrative capacity (e.g., adequate contract management skills, leadership skills, and strategic planning skills). It has been noted that possessing leadership skills and experience of close cooperation with the private sector have been found to have a positive effect on performance [14, p. 40].

RQ 3 - How is public value affected as perceived by the employees at a GD-SSC?

2.3 Public value and co-creation

Public value involves public service delivery and policy development outcomes including social and economical aspects of administrative practices. The term, originally coined by Moore in 1995 [12], is encompassing and considers input, throughput and output, as well as social aspects in the evaluation of public sector reforms. It has been applied to evaluation frameworks in e-government as its socio-economic view on public sector reforms is more applicable than evaluation frameworks used in the private sector [4]. The latter having a too narrow focus only assessing efficiency and performance outcomes (i.e. output) that seems ill-suited in the public sector context. Public value theory is widely used in public administration to evaluate outcomes of different public policy and service programs [2] including e-government initiatives [1, 17]. *Co-creation* captures a recent transformative trend where various public and private actors contribute to the creation of public value. This involves close collaboration between the parties involved in the development of new or improving existing solutions to shared problems and challenges [22].

One can argue that public value (co)creation is ultimately the aim of shared services. Indeed, a key success factor in the governance of shared services was found to be "a common vision about shared services among all stakeholders" [15, pp. 4-5]. It makes sense that a common vision is attained only through a close collaboration and careful deliberation between all of the participants. This study contributes to the public value literature by proposing a public value framework (Figure 1) to assess shared-services performance in public value terms. Senior management can use the model as a decision-support and evaluation tool to assess the success of its shared services.

3 METHODOLOGY

3.1 The framework

From a systems theory perspective, the inputs are actual and factual. The actual inputs stem from people involved in the adoption of the GD-SSC and the factual inputs consist of strategies and objectives informing their actions. The throughput represents the innovation process.

The process is divided into three stages: (1) implementation, (2) configuration, and (3) deployment. These correspond to the three RQs as depicted in Figure 1. Administrative instruments are used to manage the process including people who carry out the work necessary to complete each stage of the process. The actual and factual outputs consist of different outcomes, that may involve the creation (or the destruction) of public value. The success of these reforms can be assessed in public value terms [13]. Public value is

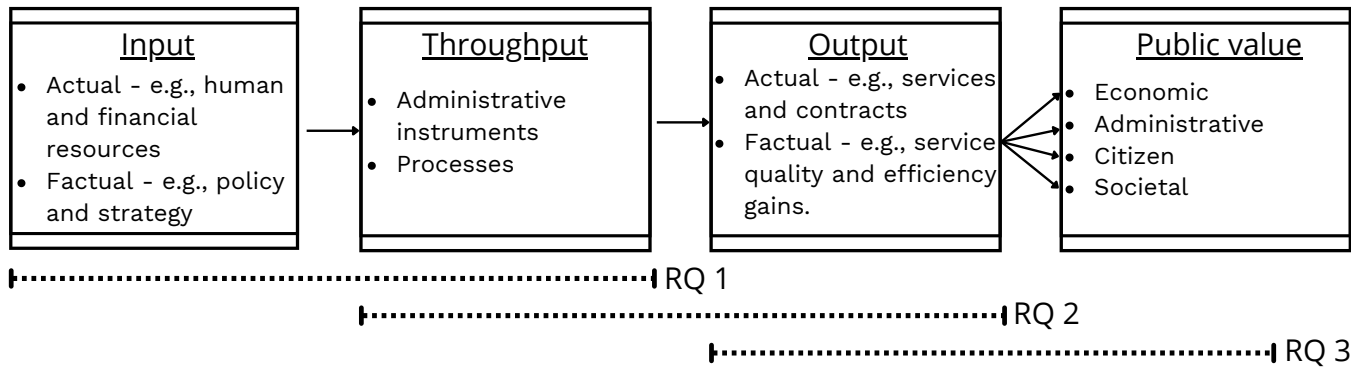


Figure 1: Conceptual framework

grouped into different value categories, economic, administrative, citizen, and social values.

3.2 The case study

In this section a brief description of the approach and the case is presented. The case is appropriate and relevant to understand the public value creation by a GD-SSC deployment. First, it is appropriate because of its relatively small size, making it feasible because everyone in the organization can be interviewed thereby eliminating sampling bias. Second, it is relevant because it has recently been established, making it a current phenomena, only partially retrospective. Thus, the respondent memories of the events is likely to be accurate. Triangulation of data as proposed by Yin [24] will be used to complement respondents' testimonies of the events that took place thereby increasing the reliability of findings.

3.2.1 Analytical approach. Data for the longitudinal case study was collected from multiple sources as suggested by Yin [24] including primary and secondary data. This approach is appropriate when examining a process such as the adoption of an innovation. The primary data is principally interview transcripts derived from 13 interviews with employees at the ministry (FJR). They were interviewed in the period September 15th 2021 - June 2nd 2022. 10 respondents work in the GD-SSC/SÍ and three at the Department of Public Management and Reforms, the latter being responsible for defining and implementing the national digital strategy. I asked them about their background, projects they have worked on after joining the team and the shared services project, e.g. its successes, failures, politics, etc. The respondents were asked open-ended questions to allow them to freely formulate or articulate their lived experiences. Observation data were also collected from SÍ meetings, the annual SÍ conference, online media discussions, and reporter interviews with SÍ's executive manager. The aim was to get a comprehensive picture of the way the public perceives SÍ and its work. In addition, government documents, either publicly available or shared with the researcher, were used where appropriate.

3.2.2 Case description. Although the name Stafrænt Ísland (digital Iceland, SÍ) did not appear publicly until 2018, the foundation on which it is based was formed a year earlier. In this context, at least

two significant events took place (see timeline). First, a declaration was signed in Tallinn in October 2017 where digital leaders in the Nordics pledged to align their e-government strategies with Europe's coordinated strategy for 2016-2020. Second, a new government was elected in November 2017, and government IT issues were transferred from the Ministry of Transportation to FJR [18]. Prior to the transition, a team of IT leaders in government was in the process of defining a strategy for an IT-SSC at FJR involving cloud technologies and office applications. This predates SÍ but two members of the initial team currently work in SÍ. Initially, SÍ was only a small team of three managing internal ICT reforms and central e-government issues. In fact, the project was so vast that by the end of the year 2019 the issues were split into two, an IT-SSC (Umbra) and a GD-SSC (the PMO for digital Iceland, SÍ). Both SSCs belong to FJR (see Figure 3).

The first phase for SÍ involved the implementation of ICT infrastructure and architecture that could serve state agencies in their digital transformation. This included a cloud stack that facilitates the development of digital solutions as well as a data exchange platform for effective and safe sharing of data between agencies. SÍ inherited legacy systems that needed an upgrade, e.g., an authentication service, a self-service portal, and a mailbox. The team quickly became overloaded, as noted by one of the respondents (8): "These were my first projects at SÍ and in principle way, way too much! We were of course so few. We were getting things started, you see." SÍ delivers its e-services through its website, Island.is, and an app that was launched in 2021. The site serves the public including businesses and citizens with a wide variety of public services. Its use has been steadily growing since 2018. This growth has been proportionate to the number of new services being continuously added to the site. The aim of this study is to uncover the secrets behind the success and remarkable resilience of SÍ in its efforts to transform public services in Iceland.

4 INITIAL RESULTS AND FUTURE WORK

4.1 Sub-systems of SÍ

4.1.1 Factual inputs. SÍ operates horizontally across all departments and ministries (see Figure 3). One respondent (2) describes it as a "huge transformation project" integral to a larger reform

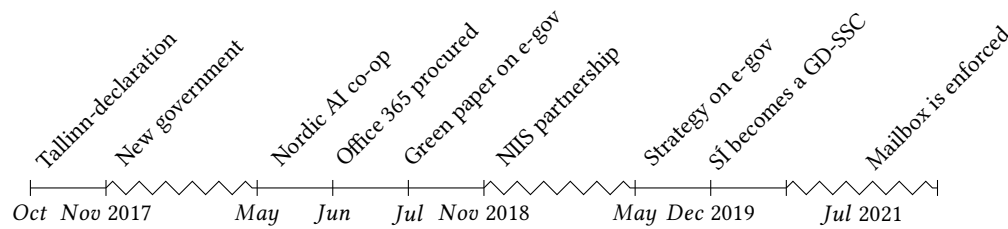


Figure 2: Significant events in SÍ's history (Source: The author)

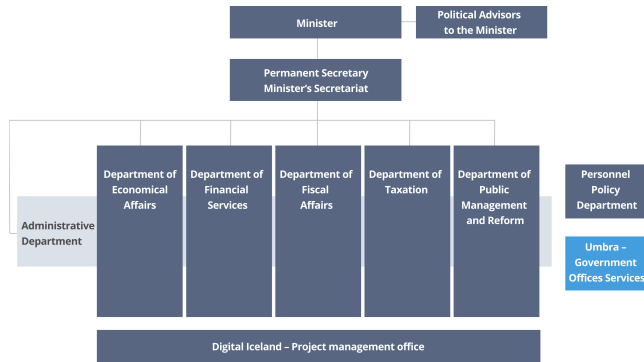


Figure 3: FJR's organizational chart [6]

within government, e.g., shorter working days for civil servants: "Digital Iceland is just in the middle of this huge change process and technology is just such a big part of it." Public agencies cannot ignore the fact that digital services are necessary for this change process, e.g., offering their services to citizens 24/7. SÍ is responsible for building the infrastructure and digital services to make this change possible. State agencies are nonetheless responsible for public service delivery. "The [agency] or someone else is responsible for the service itself but we are there to help them to change it, but the responsibility is still with the [agency]."

Another respondent (9) states that SÍ's role is to advance the digital transformation of the State that has been lagging behind. She says that it surprised her to see "how much work there is left undone, especially regarding the infrastructure." The State is "still under-developed in terms of data and access to data", she says and adds that it "came as a surprise to me, also as a citizen, because the public has been ready for some time. The public is ready to use digital solutions, but they just have not been available".

4.1.2 Actual inputs. Some respondents were surprised by the scope of the work and the scarcity of resources for its implementation. "It has surprised me how enormous this project is", says Respondent 9. "Within the FJR the magnitude of the issues is huge and handled by only a few individuals ... We are 10. You go to Denmark and there are 300", says Respondent 2. He adds that a person at SÍ may very well be responsible for administrative tasks that perhaps are performed by a dozen individuals in Norway. Financial resources are also limited, "... the other side of things is that it cannot cost anything. We cannot afford to run an administration of this size" (Respondent 2). One respondent (9) claims that SÍ has credibility

and trust in the public sector. This, she explains, is because it (1) employs competent and knowledgeable individuals, (2) has a clear mandate for action, and (3) has financial capital or budget (its annual spending or turnover is 2.2 billion Icelandic kroner or 15.8 million Euros). "These three things make it possible for us to actually do something. Not just state that we intend to do something or want to or creating a strategy for it but go and do it (Respondent 9)".

4.1.3 Throughput. One respondent (2) shared in some detail a large digitization project implemented by SÍ involving multiple state agencies. Its approach was to, first, establish a basis for partnership. This required "building bridges between different partners" and engaging with relevant stakeholders. However, figuring out who are the "real players involved" can be complicated as the process may touch on services delivered by multiple state agencies. In this context, defining ownership was a crucial factor. This can be a challenge for the agencies because it involves taking certain risks and no one wants to be held accountable if something goes wrong. He described the difference between working for a private vis-à-vis a public organization which highlights this: "The rhythm is completely different. Decision-making is quicker, and actions are taken faster [in the private sector], while [in the public sector] decision-making is slow, and the fear of taking decisions is great. The fear of change is really enormous". Respondent 2 stated that the project needed access to data but was unsuccessful because the agency was unwilling to provide the access. In this situation, SÍ's response was to launch the service with limited functionality, while the agency came to decision concerning data sharing. This minimum viable product approach is new in the public sector. Historically, the solutions have been verified and thoroughly tested before deployment. This example gives an indication of the rapid pace of innovation happening at SÍ. It moves much quicker than its counterparts in the public administration. One could say that SÍ has a license to innovate.

4.1.4 Outputs. Respondent 4 described the output of SÍ's work as a digital platform that businesses can leverage to create value. For example, by developing web services (APIs) through X-Road, state agencies can provide access to its data for both public and private organizations. Increased data access can be used by private companies to create innovative solutions that can be sold in the market, he says, and adds that businesses complement SÍ's platform by building their solutions on top of it. This increases the value of its platform.

Relying on private companies to develop public services is mostly perceived as beneficial among the respondents. SÍ's contractual

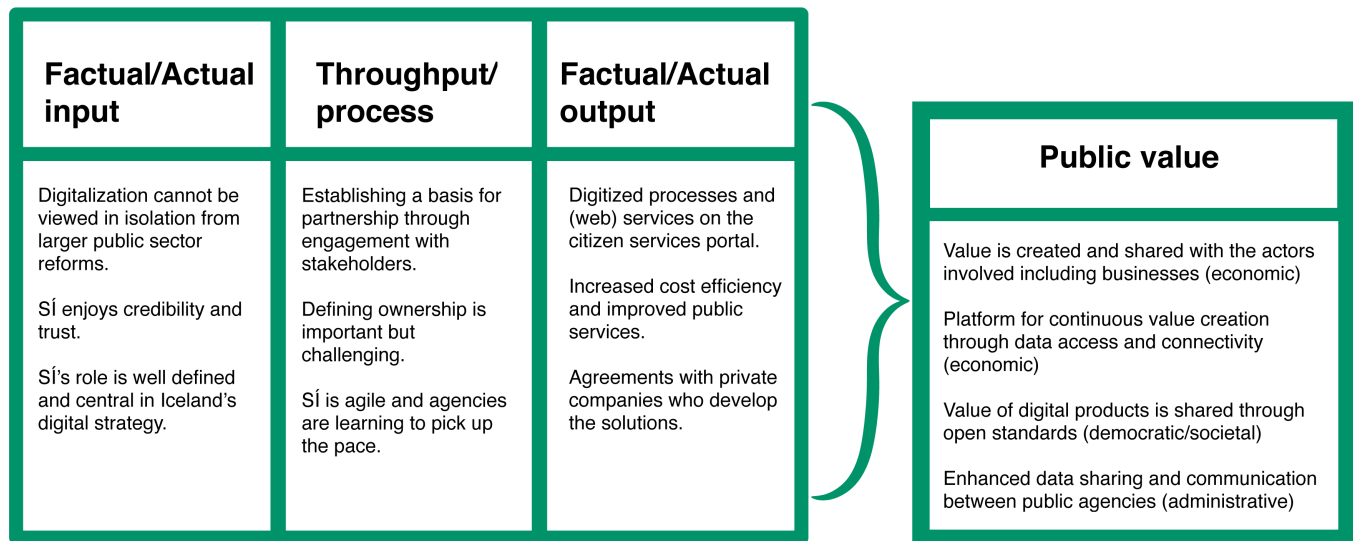


Figure 4: Overview of initial results

agreement contains a requirement which involves that the solution must be created using open standards and non-proprietary. Consequently, its platform and services can be replicated and used by other private or public organizations or governments. In addition, outsourcing the development of SÍ's solutions is seen as more beneficial than relying on in-house developers, as described by Respondent 4, who states that "we (SÍ) are using the most competent people currently available on the private market".

4.1.5 The system overall. Another important outcome of SÍ's shared services is the experience gained from government digital initiatives. The accumulative experience in SÍ's team strengthens the whole system performance. Hence, its capability to create public value will likely grow with time. As SÍ operates a public-private model the value is shared with multi-sector actors involved in public value co-creation. SÍ takes on a facilitator role in these networked collaborative arrangements. This includes coordination between actors, providing the necessary administrative mechanisms and involving senior management if needed throughout the innovation process.

Points of resistance were identified in the system's throughput concerning certain administrative values and policies that are not well suited for digital transformation. For example, a change in policy was required in some cases, i.e. to digitize an application for tour operator permit and an automated tax repayment plan.

4.2 Discussion and future work

Figure 4 contains an overview of initial results and a brief summary of the study's findings. The results suggest that co-creation is key in the success of shared digital services in government. This finding receives support elsewhere [19]. Addressing the research questions (RQ 1-3), policies and strategies such as resource allocation, planning, data access, open standards, and the like, must be configured to enable co-creation of public value in GD-SSCs. Not surprisingly, accountability issues arise when it comes to access to and sharing

of data. These barriers can be related to organization's self-interests over common goals, and are well known barriers in collaborative e-government [3]. Here a combination of different governance approaches (i.e. adapted governance) may be more effective to resolve problems and move things forward than solely relying on a single approach [21]. Thus, in the configuration stage, top management might need to step in to resolve any disputes or resistance towards digitalization. In this context, management can leverage different administrative instruments akin to heightened inclusion and consultation with front-line civil servants such as co-designing digital services thereby enabling a sense of shared ownership of the final product. Indeed, such management practices are suited to produce superior products that citizens like. Moreover, effective collaboration requires strong leadership and a shared agreement on goals and strategies [3].

In this ongoing research paper, I have outlined a case study involving the adoption of a shared services idea by the Icelandic central government: SÍ. As a key player in the State's digital transformation, SÍ not only serves as a center of excellence in digital government, it also represents a new institutional design that may perhaps serve as a model for an emerging approach to public management. Could SÍ be an exemplary case of a GD-SSC needed to reap the fruits of co-creation? Torfing, et. al [22] claim that more studies are needed to explain "how and why institutional designs work in practice and studies of how public leaders can lead processes in which a broad range of public and private actors with different experiences and ideas are participating on a voluntary basis" (p. 819). This ongoing research attempts to meet this need by examining SÍ practices and interrogating its leaders, both within the SSC and FJR (i.e. the ministry).

However, the findings indicate a barrier to public innovation. This involves a zero-error culture in state agencies. This requires systemic change where risks need to be weighed against the potential benefits of an innovation [22] and the application of the

appropriate administrative instruments such as risk management [10] and public engagement.

To conclude, this study complements latest research on ICT and public value (cf. [20]) by adopting a comprehensive approach to better understand the co-creation of public value in a more holistic way. Future work may include a cross-national comparison between digital transformation of public administrations that share a similar governance structure, e.g. in Denmark and Iceland.

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