Task Force 2:
Our Common Digital Future: Affordable, Accessible and Inclusive Digital Public Infrastructure

SERVICE-SOCIETY FIT: A GOVERNMENTAL FRAMEWORK FOR DESIGNING PUBLIC-INTEREST TECHNOLOGY

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Abstract

As they increasingly enable digitalisation of services, many governments fail to avoid the pitfall of net-centric solutionism and end up burdening public expenditure. To avoid this issue, G20 introduced the Digital Government Principles in 2018, which acknowledged the importance of providing a digital governance framework by leveraging market-led standards. In doing so, the government should adopt the 'service-society fit' framework—a modification of the 'product-market fit' that is broadly adopted in the start-up domain—as a framework for planning innovation. Therefore, digital technology developed by a bureaucracy will get through a strong validation process of public needs. To translate the framework into a concrete policy or government practice, the G20 should actively promote the framework through its Digital Economy Working Group (DEWG).

The Challenge

1

The growth in the start-up domain has contributed to digitalisation and today, 154 countries have established a dedicated government body to manage their digitalisation efforts.[1] With most users spending over six hours and 43 minutes per day online,[2] introducing digital services has become an increasingly sensible approach to reach citizens. A study of 138 developed and emerging economies between 2006 to 2016 found that the digital approach has increased the effectiveness of government services, especially in the developed world.[3]

However, many governments—including those in the G20—are still trapped in the 'net-centric solutionism' pitfall. The term was coined by tech-policy writer Evgeny Morozov in 2013, to address a phenomenon where innovators attempt to solve every problem using internet-based technology.[4] Governments are competing to introduce technological solutions, mostly through digital applications (apps). In Indonesia, for example, at least 24,000 apps have been developed by different offices, according to the Indonesian Ministry of Finance.[5] Many apps, however, are poorly maintained, as their development is often treated as a time-bound project in collaboration with third parties and is not followed by the establishment of a dedicated organisation to maintain it. Most apps also lack a significant number of users and therefore, fail to fulfil their initial purpose. This phenomenon is occurring across the world, especially in developing nations.[6] As the development of such apps is funded by public expenditure, they could be considered a wastage of people's tax money.

To reduce the likelihood of these failures, the G20 should ignite a rule-of-thumb for government innovation, especially in building technological solutions for government service and public interest. A policy reform may maximise the return on investment from digitalisation.[7] This rule-of-thumb would serve to reduce unnecessary government spending in developing digital solutions by ensuring that the end-product meets public needs.

The Role of the G20

2

Many G20 members have initiated innovations that were later adopted by other nations. This was also evident in the introduction of the use of technology in government bureaucracy. For example, in 2011, the government of the United Kingdom (UK) became one of the first G20 members to establish a dedicated agency, Government Digital Service (GDS), for handling digital transformation in the government. The United States also created a body with a similar role, called the 18F. India, meanwhile, pioneered the largest biometric identity system that has been able to reach citizens in the remotest areas of the country.

Almost all G20 members have now cemented their position in Category A of the GovTech Maturity Index.[8] It indicates their ability in supporting core government systems, enhancing service delivery, mainstreaming citizen engagement, and fostering government technology enablers.[9] Most members seem to excel in the digital transformation process, despite net-centric solutionism still occurring in their government bodies.

To avoid net-centric solutionism, the G20 introduced the Digital Government Principles in 2018, which encourage the application of digital government standards based on principles of openness, transparency, and consensus. By combining these principles with the experiences and best practices from its members, G20 may move forward to provide a more practical framework in digitising government service. This framework will assist the G20 members and non-members to adopt digitalisation and develop public-interest technology in a sensible manner. It may also help ensure that public expenditure is allocated effectively and delivers actual impacts.

The G20 Digital Government Principles acknowledge the importance of providing enabling frameworks for a digital government to seize new opportunities. This can be done through leveraging industry- and market-led standards. The private sector, which is riskier and more cost-sensitive, may offer insights into and set benchmarks on keeping innovation alive and ensuring efficiency even with budget constraints.

In the start-up economy, 'product-market fit' is broadly adopted as a framework for planning a new product with the goal of ensuring that its development stays cost-efficient and does not breach budget caps. It requires a strong identification and validation process for users and their unaddressed needs or problems in order to avoid a premature leap into the solution space. In such a way, a start-up may create new values for their product.

This Policy Brief focuses on a further modification to the product-market fit framework to translate the G20 Digital Government Principles into practice. As the government mostly deals with services as their end-product, barely looks for profit, and focuses on society's interests, the concept of the product-market fit may be modified into what this brief calls 'the service-society fit' framework.

Recommendation: The Service-Society Fit Framework

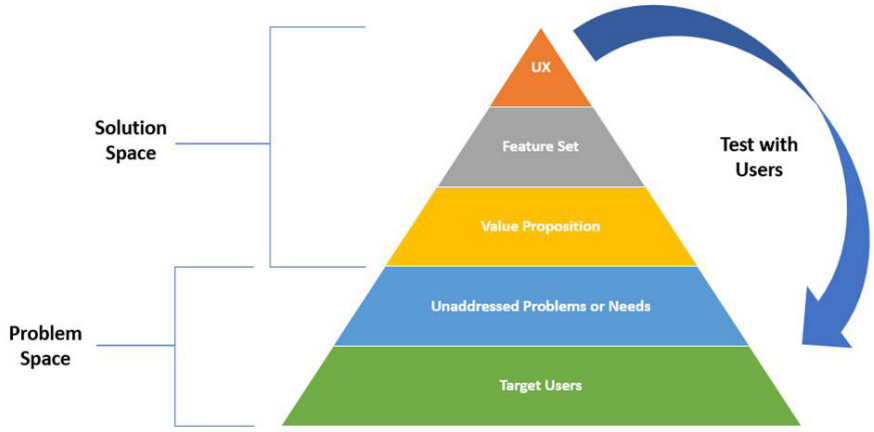
3

The service-society fit framework enters implementation through a model called the 'service-society fit pyramid'—a modification from 'the product-market fit pyramid' by Dan Olsen.[10] In governmental and public interest technology development, the concept of 'product' and 'market' were twisted into 'service' and 'society' to emphasise the nature of government as a service provider of public goods and its central objective to serve society.

As indicated in Figure 1, the service development process is divided into two spaces—the 'problem' space and the 'solution' space. The problem space consists of a strong identification and validation process of users' needs. This is meant to address the inefficiency behind users' interactions with government services and creates room for improvement.

i. Preconditioning the service-society fit by institutionalising a digital culture. As a policy framework in digitising government services, the service-society fit should be preceded by the establishment of a digital culture within a government organisation. There are three reasons that lead to the failure in an organisation's efforts to adopt digitalisation or digital transformation—external landscape, internal landscape, and limited skillsets.[12] An organisation is often unable to comprehend the complex nature of digital transformation, including the required fundamental

Figure 1: The 'Service-Society Fit' Pyramid



Source: Olsen,[11] modified.

changes in organisational culture. Additionally, they may lack the ability to adapt to rapid changes in users' needs. Digitalisation also requires a dedicated team with different skill sets, able to quickly align with changes, which differs from conventional scopes of work. Therefore, there are several requirements for institutionalisation to be implemented well, including political support, leadership, organisation, a well-skilled team, and clear purpose.[13]

The situation may become more complex in the context of the requirements and its implementation in a governmental setting. Governments are strict and bounded in established culture, which often poses obstacles while adopting digitalisation.[14] It is contrary to many guidelines in digitalisation and digital transformation in the private sector, which promotes the 'lean framework' in developing a solution, product, or service. An organisation built on a lean framework is based on a feedback-loop of developing a product, measuring what matters, and learning from the insights. Instead of shipping a fully functional solution with perfect features, a lean framework encourages the introduction of the most viable product (MVP). MVP is meant for testing the initial hypothesis when building a product. As it receives more feedback from users, this MVP is improved. This loop happens in a relatively short time, and improvements are made over a two-week development process, often called a 'sprint'.[15]

A conventional government body may struggle to adapt to such pace of work. Therefore, many countries decide to create a fully separate body, responsible for managing the digitalisation process for the whole government or a particular department, with greater flexibility in its business process and compliance with standard digitalisation procedures.[16] It is not surprising that such organisations adopt the lean framework. This also includes some G20 members.

The first benchmark of such organisations comes from the UK, in the form of GDS, which started as a small team that was set up in 2011. At that time, the UK government had to deal with over 2,000 different websites, and one of their principles while designing a technological solution involved starting with a small solution or a pilot that actually worked.[17] It is similar to the concept of MVP in the lean framework. Another example is 18F, a digital service agency within the General Service Administration of the United States

government. The agency adopts the lean framework while delivering digital services and technological solutions for the government.

If a government has limited ability to quickly adapt to the flexible nature of digitalisation, it may partner with private sectors. It should be noted that such a partnership is different from usual third-party vendors that a government engages for a limited time to build an app. Such a third-party partnership should be designed to fully operate the complete lean feedback-loop, wherein they are responsible for measuring the relevant matrix, iterating, and improving the solution they build. This approach has been implemented by the Indonesian Ministry of Education and Culture, which is partnering with Telkom Indonesia, Indonesia's largest telecommunication provider owned by the government, to create GovTech Edu and ship several digital solutions that address problems in Indonesia's educational system.

Such a different approach to establishing a digital culture within the limits of bureaucracy is the first requirement to successful digitalisation and the digital transformation process. It precedes creating public interest in the technology itself.

Table 1: Regular Third-Party App Vendors vs. Indonesia's GovTech Edu Model

	Third-Party Vendor	Indonesia's GovTech Edu Model
Organisation Model	Mostly a private entity or an individual consultant, hired through government procurement process	A business department in a state-owned enterprise that works closely with Ministry of Education officials
Project Lifetime	Time-bound and project-based	Continuous
Output	Apps-only	Apps and its iteration cycle. It means that the organisation is not only responsible for building apps but is also required to deliver the apps to its users and gather data and insights for further development.

ii. Adopting the service-society fit as the main framework in developing public-interest technology. In many cases of public-interest technology development, the bureaucracy often jumps to a solution and creates an app for it before clearly comprehending the root causes in their services. This solution is often an educated guess by government officials and may be implemented by individuals who lack digital skills, working within an organisation that has a gap in digital culture. It would therefore not be surprising if the solution fails, since it does not reflect user needs nor is it maintained properly.

Therefore, designing a digital solution in the service-society framework should always start by stating the problem, which can allow the digital transformation team to work together to discuss future users' identity as well as problem hypotheses. A good solution may not be the universal answer to every problem. Instead, such a solution is begun by identifying and segmenting the most benefited users. It helps the team focus and prioritise what matters. After the persona of the user is created, the process moves into identifying the user's underserved needs, especially based on the formulated hypothesis.[18] This identification process may be conducted through quantitative and qualitative research methods, such as surveys, in-depth interviews, focus group discussions, and ethnography. In 18F, this process is called 'Path Analysis', which aims to enable a basis for solution-design.[19]

As the organisation gains insight from this process, they have all the justification to enter the solution-space. In this area, the organisation may create a value proposition that tries to address users' underserved needs. After identifying users' problems and needs, the organisation must decide which one to address by considering the capability of their organisation as well as the most important need for users. It is further translated to the product design, before being shipped to users for the iteration process. This process ideally makes room for public participation, especially of stakeholders who will get affected.

In practice, this whole framework is often operated by a dedicated product manager. Such a role is often missing in existing government structures. An organisation entering the digitalisation process without the intention to build

a public interest technology should hire someone with adequate skill sets to fill the product manager role.

iii. Implementing citizen-centric design as the interface of the service-society fit. On the government-side, a proper service-society fit may help save a lot of money, as shown by the UK's GDS. By introducing service designs by GDS that address actual user problems, the UK government claimed that they were able to save over GBP4 billion in expenses, four years after the GDS was set up in 2011.[20] However, cost-effectiveness is not the only primacy of good service design; it also helps the government offer actual solutions for what the public needs. If the implementing government follows the path of the service-society fit, they should embrace public participation in almost every step. In the other words, the service-society fit framework is manifested through citizen-centric design.

There are several indicators of designs that meet citizens' needs. It should be easy to understand, simple, and meet a clear user need.[21] Many G20 members have received praises for their efforts in implementing these citizen-centric design maxims in public-interest technology. Argentina introduced a platform called Consulta Publica, which promotes public participation in the policymaking process and through which the public may start a debate with governmental stakeholders and increase civic engagement.[22]

Another benchmark in delivering a simple and effective solution is Unified Mobile Application for New-Age Governance (UMANG). This app stands as the single entry-point for 2,000 of India's central government digital services. This addresses the problem of having too many apps, which often arises in many governments. The unification of all digital services into one super-app may serve the citizen with seamless experience and avoid further confusion in accessing government services.

Promoting a citizen-centric design also means that the word 'technology' as a tool for improving government service in public-interest technology cannot always be interpreted as 'digital'. The United States Citizenship and Immigration Service's (USCIS) effort to digitise its immigration system between

2005 and 2016 is one such example. After spending more than 11 years and US$1 billion, the project then needed to be restarted.[23] Moreover, the end-product burdens the operation unit with new tasks rather than simplifying their jobs.[24] Therefore, it is important to comprehend the business process behind a service before trying to transform the service; sometimes, the solution may be the improvement of existing procedures or a reduction in unnecessary paperwork.

Recommendations to the G20

4

The G20, through its Digital Government Principles, has acknowledged and emphasised the importance of creating responsible innovation in government services by learning from the private sector. However, this still needs to be implemented in a more practical manner. The service-society fit aims to address this challenge by ensuring digital technology developed by a bureaucracy gets through a strong validation process of public needs. Its citizen-centric nature also creates room for contextualisation in different states of bureaucracies.

The next step is developing the framework into a concrete policy or government practice. Therefore, the G20 should actively promote the service-society fit framework to its members and non-members. This effort and commitment can be included in the Digital Economy Working Group (DEWG) agenda, with the objective of delivering general guidance to achieve a service-society fit.

Attribution: Arasy Pradana, "Service-Society Fit: A Governmental Framework for Designing Public-Interest Technology," *T20 Policy Brief*, May 2023.

Endnotes

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