

Digital Government in Japan: Historical Foundations, Future Ambitions, and the Digital Agency

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Abstract

Japan has always played a leading role in technological innovation, but when it comes to research on Japan's digital government, there is a noticeable absence of literature. This practitioner paper addresses this by providing an overview of Japan's history with digitalisation, delineating the country's journey from pioneering IT infrastructure initiatives to establishing a comprehensive digital society. The paper uses this historical exploration to frame a discussion on the creation of the Digital Agency, which may be categorised as a digital government unit, in 2021 as a response to the challenges experienced during the COVID-19 pandemic. Through an examination of policy documents and governmental reports, the study outlines the agency's strategic role, its efforts in promoting digital transformation, and the broader implications for future digital governance in Japan. Ultimately, this paper contributes important insight into the evolution of digital government in Japan, its current state, and its future trajectories.

Keywords

Digital Government, Artificial Intelligence, Japan, Digital Transformation, Public Administration, Government

1. Introduction

Japan has always been at the forefront of innovation, both organizationally and technologically. Organisationally, it was Japanese firms and management scientists who can be credited with developing managerial practices, such as SCRUM and Kanban, that are still highly influential today - especially in digital organisations. Technologically, Japanese industry (especially in the 1970s and 1980s) was and is a global leader in innovation and technological development. From these strong technological and innovative foundations, the first visions of an information society began to emerge.

Writing in 1981, Yoneji Masuda set out his views on the technological future of government and society in his seminal work "The Information Society as Post-Industrial

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Society". In it, Masuda describes the technological future of Japanese society but, more importantly, also sets the initial foundations for inquiry into the development of a global technology-enabled societal transformation. While much has changed over the past decades, it is hard to ignore the important role that Japan has played in influencing the way that the world thinks about digital technologies and their role.

This is especially true in the area of digital government, historically "e-Government". Though Japan has always had an interest in the digitalisation of the public sector, the extant English literature is rather scant on this topic. This is unfortunate, especially at a time when interest is growing in digital government research after the COVID-19 pandemic exposed the inadequacies of many countries in their ability to deliver public services digitally; Japan was no exception to this. To counter challenges that emerged during the COVID-19 pandemic, then-Prime Minister Yoshihide Suga and his Cabinet created the Digital Agency in 2021 to "establish leadership and control" over the state of digitalisation [4].

The Digital Agency may be categorised as a "digital government unit" (DGU), which are governmental units "dedicated to digital service delivery and broader transformation of public management practices" [3, p358]. Though there is a large amount of research into DGUs, as noted by [9], there is still a need to "analyse how particular DGUs evolve over time, and how they fit in and align with the rest of the public sector" [9, p28:3]. Thus, this short practitioner paper aims to address a clear gap in the research and make two core contributions at the same time. First, to provide an important and empirical descriptive account of the history of Japan's digitalisation ambitions. Second, to provide new insight into a recently created DGU in Japan and its role in advancing digital government.

2. From an "IT-infrastructure" based nation to a "Digital Society" nation

Japan is a unitary state with both national and local governments, which can be further broken down into regional-level prefectures and local-level municipalities [2]. This paper focuses specifically on the evolution of digitalisation policy at the national level as it provides the clearest overview of the country's digital trajectory. Within this area of focus, the research looks specifically to white papers on information and communications published by the Ministry of Internal Affairs and Communications, which is one of the ministries leading digitalisation efforts in the country.

2.1. E-Government (IT Nation)

While the groundwork had been laid in the preceding decades, the first mention of the term "e-Government (denshi seifu)" in Japan was in the 1994 plan titled "Master Plan for Promoting Government-wide Use of Information Technology". Here, e-government was defined as a "highly information-oriented administration" enabled by technologies and aimed to improve the quality of administrative services [13, 21, 25]. This plan implemented infrastructure-based initiatives such as delivering one device per civil servant, creating a local area network for the central ministries, and publishing information online as a part of one-stop administrative services [21].

Following this, in 2000, the "Basic Act on the Formation of an Advanced Information and Telecommunications Network Society" was passed which provided the definitions and

principles for the development of an “advanced information and telecommunications network society” [16]. Importantly, this act also established the “Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society” (hereinafter called “IT Strategic Headquarters”), which would lead the country’s digitalisation efforts for the next two decades. The IT Strategic Headquarters’ first course of action was to publish the national IT strategy – the 2001 “e-Japan Strategy” [14]. This strategy prioritised infrastructure throughout the nation and set a goal for Japan to become the world’s leading IT nation within five years [10, 13].

The strategy was viewed as successful after significant targets, such as increasing Internet access, were achieved earlier than expected [14]. Building off this success, in 2003, the new “e-Japan Strategy II” was launched to address further the usage of ICT and the provision of basic infrastructure. This digitalisation strategy included specific action points on public services that were not often used, thus impacting its overall cost-effectiveness [11]. It was further setback by issues with citizen satisfaction, a growing digital divide, natural disaster-related security countermeasures, and a lack of international competitiveness [14].

The subsequent strategy, the “New IT Reform Strategy” of 2006, addressed many of these issues through the promotion of a “ubiquitous” society, where anyone at any time can access the network through whatever means [14]. In 2009, the notion of developing a human-centric digital society through the ubiquity of the network to encourage socio-economic transformations was expanded upon as part of the “i-Japan Strategy 2015” development plan. This plan called for “digital inclusion”, positioning the inclusion of digital technologies in society like air and water, and “digital innovation” for those technologies to reform the economy and society [12, 14].

The following year, in 2010, the “New Information and Communication Technology Strategy” pivoted to prioritising cooperation between various ministries, local administrations, and citizens [14]. This pivot was a result of a further need to create a “popular sovereignty-led society” assisted by the coordination between ministries and policies [24], hinting at a whole-of-government approach. To support these ambitions, Japan launched the “Declaration to Be the World’s Most Advanced IT Nation” to tackle data, organisational and service-related areas. This declaration also created the role of a government Chief Information Officer (CIO) position to oversee inter-ministerial digitalisation efforts and design user-centric services [20].

While concepts such as human-centricity and a whole-of-government approach are now ascribed to “digital government” rather than “e-Government” [3], this is not the case in Japan, where these attributes have played a pivotal role in digitalisation strategies since the beginning.

2.2. Digital Government (Digital Nation)

Japan experienced a key turning point in its approach to digital government in 2018 when the concept of a “digital nation” was introduced by the IT Strategy Headquarters as part of the “Outline of the Declaration to be the World’s Most Advanced Digital Nation/Basic Plan for the Advancement of Public and Private Sector Data Utilisation” [14, 21]. In this document, a digital nation was defined as an inclusive society where citizens can benefit from

technology, with a notable emphasis on citizens compared to the initial scope of information technology of the 1990s. Core to the creation of the proposed digital nation was the digital reimagining of public services [14]. By 2019, the government passed a series of bills and initiatives encouraging the digitalisation of public administration based on principles of digital-first, once-only, and connected one-stop shops [1]. These ideals reflected a more integrated digital government compared to the previously mentioned one-stop service from the early 2000s.

However, these plans were delayed and disrupted by the arrival of the COVID-19 pandemic, which highlighted numerous problems, including information security, digital literacy, inadequate use cases, and shortfalls in infrastructure and device availability [15]. The need for further digitalisation became evident, especially in government and public administrations. To counter these problems the Prime Minister at the time convened a “Ministerial Conference on Digital Reform” at which the creation of the Digital Agency was discussed and ultimately established [23]. At this meeting, then-Cabinet Office Minister of Special Missions Takuya Hirai, who became the first Minister for Digital Transformation, discussed the digitalisation organisations of the United Kingdom, the United States, and Singapore as examples for the new Digital Agency [23]. Then-Prime Minister Suga stated the Digital Agency would act as a “command post” to lead the digitalisation of society allowing for a much-needed reform in both the economy and society [23].

Utilising this political momentum, the “Basic Act on the Formation of a Digital Society” was passed in September 2021 as a successor to the initial Act of 2000. This abolished the IT Strategic Headquarters and the government CIO position and instead established the Digital Agency [5, 8, 19]. The Act outlined the definition and principles of a digital society based on the inclusion of all citizens to enjoy the benefits of technology, the promotion of economic structural reforms, and the vitalisation of local communities [17]. This Act marked a new stage for Japan’s two-decade-long digitalisation efforts, which is displayed below

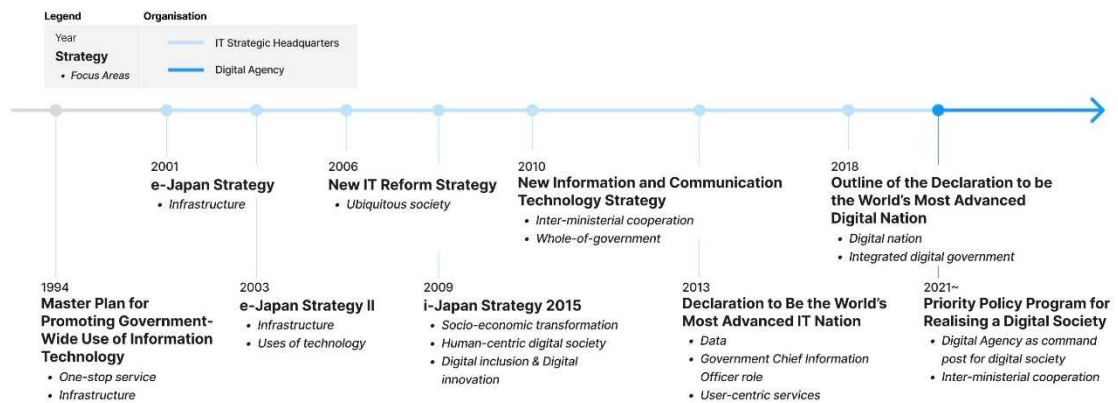


Figure 1: Timeline representation of Japanese government digitalisation efforts.
 Source: Authors.

3. Digital Agency and its Role in Supporting a Digital Society

Since the Digital Agency's establishment in 2021, it has grown to over 1,000 expert staff members who have joined from both the public and private sectors. According to its Establishment Act, the Agency's scope extends to "assisting the affairs of the Cabinet concerning the formation of a digital society together with the Cabinet Secretariat based on the basic principles for the formation of a digital society" and "swiftly and intensively enforcing administrative affairs concerning the formation of a digital society based on the basic principle" [18]. The Act also grants the Agency's Minister for Digital Transformation the authority to endorse recommendations to "relevant administrative organs" which they must "fully respect", and to require those organs to report back [18]. Other ministries and agencies do not possess such authority [26].

One of the responsibilities of the Agency, as stated in the Establishment Act, is to create an annual program, "Priority Policy Program for Realising a Digital Society", to outline specific measures for the government to promote a digital society. The then-Prime Minister's statement to make the Digital Agency a "command post" is inscribed in every program since 2021, reflecting the significance of the Agency to be at the forefront of Japan's societal digitalisation efforts [7]. However, the Agency's cooperation with other ministries is crucial for digitalising society, as the strategy's role is "to clarify the overall picture of efforts" [7]. In areas such as promoting communication infrastructure and fostering private sector growth for digital transformation, the Agency collaborates with the Ministry of Internal Affairs and Communications and the Ministry of Economy, Trade, and Industry, respectively. Specifically, in driving digital government, the Agency has the jurisdiction to centrally supervise projects of the national information system (IS) with the cooperation of the project management offices of each ministry and agency. This subsequently grants the Digital Agency the authority to consolidate individual ministries' and agencies' budgets into a lump-sum budget for these projects [7].

The Digital Agency has ten key roles that include designing the overall architecture of the IS, planning, and coordinating the shift to cloud computing with other ministries, planning the foundation for identification and authentication, creating interoperability standards for private and quasi-public sectors, and others [7]. Within these ten key roles, one of the main initiatives of the Agency as a command post is to provide common features for the digitalisation of public services for the citizens. These include the production of a new application for citizens to verify their identity via devices, expanding the use of the national identification card, reviewing up to 10,000 provisions of laws and regulations to ensure they are ready for the digital society, creating the "Government Solution Service (GSS)" across central ministries to reform working practices, developing the "Government Cloud" to further the one-stop principle by connection municipalities, agencies and ministries through a shared infrastructure, and various other projects [6].

4. The Japanese Digital Government and Emerging Technologies

Moving forward, the Digital Agency recognises a multitude of problems and initiatives they must tackle to realise the digital society. However, the emergence of new technologies, such

as artificial intelligence (AI) provides an opportunity to solve these problems. In the 2023 Priority Policy Program document, the Agency stated the need to shift from digitalisation to using these new technologies to reimagine business processes and designs and is currently undertaking various uses of AI in government [7]. As a whole, the Japanese government is attentive to areas, particularly AI, as various ministries, agencies, and councils discuss the benefits, risks, and implications of AI at all levels and all sectors. Japan will need to consider these new technologies as it realises its digital nation, and it is in a position where it is more likely to reap its benefits because it is at the forefront of societal issues such as decreasing populations.

The creation of the Digital Agency to help overcome such changes represents a fundamental shift in how the country thinks about digitalisation, a process that has been unfolding for decades. As an organisation born out of the COVID-19 pandemic, it is important to understand how these circumstances have shaped the Digital Agency and how it will further influence its future. This case also provides a new and interesting empirical case that lies outside the dominating European and North American contexts. Looking toward the future, further empirical and longitudinal research focusing on the Digital Agency may lead to clear contributions to the broader study of DGUs. This paper takes the first steps to realise such contributions by discussing the history of digitalisation in Japan, outlining the creation of the Digital Agency, and discussing Japan's future digital ambitions, thus laying the foundations for future research.

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Conflicts of Interest

Sara Takamatsu, Masaki Wakao, Takuo Inoue, and Chikako Masuda are employed by the Digital Agency at the time of writing and publication.

References

- [1] Cabinet Secretariat. (2019). デジタル手続法案の概要について [Overview of the Digital Procedures Bill]. URL: <https://www8.cao.go.jp/kisei-kaikaku/suishin/meeting/bukai/20190305/190305bukai05.pdf>
- [2] CLAIR. (n.d.). An Outline of Local Government in Japan. CLAIR Fact Sheet, n.a.(n.a.), n.a. URL: http://www.clair.or.jp/j/forum/pub/docs/m_fact_en02.pdf
- [3] Clarke, A. (2020). Digital government units: What are they, and what do they mean for digital era public management renewal? *International Public Management Journal*, 23(3), 358–379. doi:10.1080/10967494.2019.1686447.
- [4] Digital Agency. (2021a, January 9). デジタル庁発足式を行いました [Inauguration Ceremony of the Digital Agency was held.]. URL: <https://www.digital.go.jp/news/uWAA9Dcp>

- [5] Digital Agency. (2021b). 第 1 回デジタル社会推進会議 [The First Digital Society Promotion Council] URL: <https://www.digital.go.jp/councils/social-promotion/zvKTxKMK>
- [6] Digital Agency. (2023a). Digital Agency Activity Report. URL: https://www.digital.go.jp/assets/contents/node/basic_page/field_ref_resources/ed91c288-7d40-4a9b-9d86-1007f256ada6/b6075ecd/20231107_en_annual_report_01.pdf
- [7] Digital Agency. (2023b). デジタル社会の実現に向けた重点計画 [Priority Plans for the Realization of a Digital Society]. URL: https://www.digital.go.jp/assets/contents/node/basic_page/field_ref_resources/5ecac8cc-50f1-4168-b989-2bcaabffe870/b24ac613/20230609_policies_priority_outline_05.pdf
- [8] Gen, T. (2021). 政府 CIO と CIO 補佐官は廃止へ、デジタル庁発足で民間 IT 人材の登用は全面再編 [Government CIOs and Assistant CIOs Abolished, Launch of Digital Agency with private sector IT personnel to restructure]. Nikkei XTech. URL: <https://xtech.nikkei.com/atcl/nxt/column/18/00001/05064/>
- [9] Kattel, R., & Takala, V. (2023). The Case of the UK's Government Digital Service: The Professionalisation of a Paradigmatic Public Digital Agency. *Digit. Gov.: Res. Pract.*, 4(4). doi: 10.1145/3630024
- [10] Ministry of Internal Affairs and Communications. (2001). 第 1 部 「e-Japan 戦略」の策定とブロードバンド化の急速な進展 [Part 1: Formulation of the "e-Japan Strategy" and rapid progress of broadband]. URL: https://www.soumu.go.jp/main_sosiki/joho_tsusin/policyreports/joho_tsusin/joho_bukai/010719_1-1.pdf
- [11] Ministry of Internal Affairs and Communications. (2009a). 第 1 部 特集 「スマート ICT」の戦略的活用でいかに日本に元気と成長をもたらすか [Part 1: Special Feature How Strategic Use of "Smart ICT" Can Bring Vitality and Growth to Japan]. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h25/html/nc121110.html>
- [12] Ministry of Internal Affairs and Communications. (2009b). i-Japan 戦略 [i-Japan Strategy]. URL: https://www.soumu.go.jp/main_content/000030866.pdf
- [13] Ministry of Internal Affairs and Communications. (2021a). デジタル・ガバメントの推進等に関する調査研究の請負成果報告書 [Report on the results of the contracted research study on the promotion of digital government]. URL: https://www.soumu.go.jp/johotsusintokei/linkdata/r03_03_houkoku.pdf
- [14] Ministry of Internal Affairs and Communications. (2021b). 序章 我が国におけるデジタル化の歩み [Introduction: The History of Digitalization in Japan]. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r03/pdf/n0000000.pdf>
- [15] Ministry of Internal Affairs and Communications. (2021c). 第 2 章 コロナ禍で加速するデジタル化 [Chapter 2: Digitalization Accelerated by the COVID Disaster]. URL: <https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r03/pdf/n2400000.pdf>

- [16] Ministry of Justice. (2000, Dec 6). Basic Act on the Formation of an Advanced Information and Telecommunications Network Society - English. Japanese Law Translation. URL: <https://www.japaneselawtranslation.go.jp/en/laws/view/3339/en>
- [17] Ministry of Justice. (2021a). デジタル社会形成基本法 - 日本語／英語 - 日本法令外国語訳 DB システム . Japanese Law Translation. URL: <https://www.japaneselawtranslation.go.jp/ja/laws/view/4447>
- [18] Ministry of Justice. (2021b). デジタル庁設置法 Act on the Establishment of the Digital Agency . URL: <https://www.japaneselawtranslation.go.jp/ja/laws/view/4419>
- [19] Murata, T. (2021). デジタル社会形成基本法案について [About the Basic Act on the Formation of a Digital Society] URL: https://www.iais.or.jp/articles/articlesa/20210415/202104_01/
- [20] Ohnishi, K. (2013). 政府の新しい IT 戦略と今後の電子行政のあり方 [The Government's New IT Strategy and the Existence of Future Denshi-Seifu].
- [21] Otsuka, N. (2001). E-government and government information. 情報管理 [Joho Kanri], 44(6), 430–430. doi: 10.1241/johokanri.44.430
- [22] Ozawa, T. (2018). 「世界最先端デジタル国家創造宣言・官民データ活用推進基本計画」の概要 [The Overview of the Outline of the Declaration to be the World's Most Advanced Digital Nation/Basic Plan for the Advancement of Public and Private Sector Data Utilization]. URL: <https://www.iais.or.jp/articles/articlesm/20181010/201810/>
- [23] Prime Minister's Office of Japan. (2020, September 23). デジタル改革関係閣僚会議議事録 [Minutes of the Ministerial Conference on Digital Reform]. URL: https://www.kantei.go.jp/jp/singi/digital_kaikaku/dai1/gijiroku.pdf
- [24] Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society. (2010). 新たな情報通信技術戦略 [New Information and Communication Technology Strategy] URL: <https://warp.ndl.go.jp/info:ndljp/pid/12187388/www.kantei.go.jp/jp/singi/it2/100511honbun.pdf>
- [25] Taniguchi, Y., & Kou, K. (2020). 日本における電子政府の現状と課題 [Current Status and Issues of e-Government in Japan]. 中央大学経済学研究会 [Chuo University Economics Research Group]. URL: <https://ndlsearch.ndl.go.jp/books/R100000002-I000000006347-i4847630>
- [26] Yamaguchi, A. (2022, August 31). デジタル庁発足 1 年 河野太郎氏は「伝家の宝刀」を抜けるのか [One Year after the Inauguration of the Digital Agency: Will Taro Kono Pull Out His “Last Resort”?]. Mainichi Shinbun. URL: <https://mainichi.jp/articles/20220830/k00/00m/020/285000c>