Digital Government Strategy (Provisional Translation)

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Chapter 1 Introduction

The purpose of promoting e-Government is to achieve greater efficiency in administrative processes and make them more convenient for the public by harnessing IT in public administration. Starting with the Master Plan for Promoting Government-wide Use of IT (approved by the Cabinet on December 25, 1994), the government has put together many strategies for the use of IT in public administration. In particular, revisions to the approach to e-Government centered on strengthening IT governance and infrastructure development have been carried out swiftly since the post of Government CIO (Deputy Chief Cabinet Secretary for Information Technology Policy) was established in 2013.

Japan's population has already begun to decline, with an especially pronounced fall in the working-age population, who sustain economic activity. As such, it will be difficult to achieve sustainable economic growth without initiatives that harness IT to increase productivity. The environment surrounding public administration is changing rapidly, with global competition accelerating. Coupled with the severe financial situation facing both the national government and local governments, conventional approaches are no longer adequate to the task of delivering administrative services that address these changes. To enable Japan to continuously enjoy the affluence that it has built up to date, it is essential for us to tailor our nation's social structure to accommodate these changes, even if this transformation is a painful one.

Digital technology has become a powerful tool for achieving innovative change in social structures: we are seeing the advent of a new society in which, rather than bringing improvements that are simply an extension of achievements to date, digital technology is transforming business models from the roots up. In this kind of digital society, approaches to links between one person and another, and between people and society are undergoing a major shift, as typified by social media. Approaches to matters in the public realm are

also metamorphosing, with community issues being resolved by citizens and government bodies working together using IT.

As the environment surrounding e-Government is altered by social change and technological advances, transforming the social structure through the use of digital technology is becoming a pressing issue, so e-Government that accelerates this transformation must be brought to fruition. This strategy is guided by the Basic Act on the Formation of an Advanced Information and Telecommunications Network Society (Act No. 144 of 2000) and the Basic Act on the Advancement of Utilizing Public and Private Sector Data (Act No. 103 of 2016), and the Declaration to be the World's Most Advanced IT Nation and Basic Plan on the Advancement of Utilizing Public and Private Sector Data (approved by the Cabinet on May 30, 2017), which is based on both of these laws. It sets out the direction that e-Government aims to take in pursuing a digital society, focusing on approaches to services, so that the public and business operators can enjoy the benefits of the value created by administrative services.[1]

It is crucial to transform the approach to public administration itself by breaking down the barriers between administrative bodies that impede total optimization and rethinking administrative services in a way that transcends the boundaries between national and local government, and between the public and private sectors, with a central focus on making full use of digital technology and leveraging public-private partnerships. Specifically, pursuing digital government[2] tailored to the digital society is vital to resolve the social issues that our nation faces and achieve economic growth.

The government has already made the opening moves in its reform strategy through the e-Government initiatives implemented to date. This country's future cannot be assured unless the government builds on the foundations that it has laid to see these reforms through to completion. It cannot be achieved with reforms that do not cut right to the heart of the problem or makeshift measures that sugar the pill. The whole government needs to share this sense of crisis and address itself to reforms with unwavering resolve.

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[1] In this strategy, the concept of administrative services does not indicate only services delivered directly to the public and business operators, but also includes the whole range of services provided by government bodies to achieve specific strategy objectives, even if there is no direct contact.

[2] In this policy, the term "digital government" indicates a situation in which all layers of e-Government — namely services, platforms, and governance — have been transformed into a form suitable for a digital society. This strategy sets out the direction that e-Government aims to take in pursuing a digital society, fleshing out the details over the course of the document. Chapter 2 describes the background; Chapter 3, the society that our nation should aim to achieve; and Chapter 4, policies on initiatives.

Chapter 2 Background to This Strategy: Changes in the Social Environment and e-Government Initiatives to Date

[Background 1] Changes in the social environment and advances in digital technology

Japan's population is already shrinking, due to the progressive fall in birthrates and aging of the population. The working-age population is also dwindling, so increasing productivity is essential to achieving sustainable economic growth. In addition, there is a growing need to offer services with a global perspective, amid substantial rises in both trade with other countries and the number of international residents and travelers. Lifestyles and values are becoming ever more diverse, so it is essential to deliver services that achieve a good balance in combining standardization for greater efficiency and personalization to maximize value for users.

Internet penetration among the population is now in excess of 80% and a society predicated on digital technologies is already here. Coupled with the spread of new technologies such as the IoT and AI, what this is bringing about are not simply improvements that are an extension of achievements to date, but innovative changes that will see a radical rethinking of services from the perspective of digital technology and the transformation of business models themselves. Rather than building all systems in-house, the combination of services that already exist in the cloud with other services by means of APIs and the like is becoming the main model of service delivery, as it enables services to be delivered swiftly and flexibly. Looking at modes of internet use, usage of smartphones and other mobile environments has now surpassed that of PC-based environments, so multiplatform use has become the basic assumption.

[Background 2] e-Government initiatives to date and remaining challenges

Under the Government CIO, the government has already set to work on a number of initiatives, including efforts to strengthen IT governance, reform government information systems, visualize IT investment, and upgrade information-sharing infrastructure. These have begun to yield some promising results, with a realistic prospect of achieving a cut of more than 60% in the number of government information systems by 2018, and a reduction of more than ¥100 billion in operating costs by FY2021.[3] In addition, systems

[3] Having set a target of halving the number of government information systems in FY2012 (1,450 systems) by FY2018, the government expects to achieve a 62% reduction (894 systems) [as of March 2016]. Regarding operating costs, the government set a target of achieving a 30% reduction from the level in FY2013 (approximately ¥400 billion) by FY2021 and currently expects to achieve

are being put in place to expedite the circulation and use of administrative data, such as the introduction of the Social Security and Tax Number System (including Individual Numbers, Individual Number Cards, Japanese Public Key Infrastructure using Individual Number Cards, the Individual Number Portal, and Corporate Numbers. The same shall apply hereinafter) and the enactment of the Basic Act on the Advancement of Utilizing Public and Private Sector Data.

At the same time, in the case of IT investment, the pivotal axis of e-Government initiatives to date has been cutting the sum invested (the denominator). Going forward, rather than restricting efforts to promoting greater efficiency within public administration, it will be necessary to undertake initiatives that focus on increasing the value of the services themselves (the numerator) that are provided to the public and business operators, in order to further boost e-Government's return on investment, while responding to our rapidly changing society. It is necessary to transform all layers of e-Government through to the platforms that serve as the infrastructure of service delivery and the governance that underpins them, based on the cornerstone of redesigning administrative services to maximize value for users. In short, a shift to digital government is required.

Such efforts should not be confined to national administrative bodies; local government bodies also need to pursue similar initiatives, as they have more frequent contact with the public in their everyday lives. To this end, administrative service reform predicated on digital technologies must be undertaken through even closer partnership and cooperation in the promotion of e-Government, not only between the national government and individual local governments, but also among local governments working together. In addition to collaborative promotion of e-Government by national and local governments, it will be necessary to pursue structural transformation to create mechanisms capable of accommodating the era of population decline and the rapid pace of globalization and social change by rethinking both cooperative relationships between national and local governments and the administrative procedures themselves.

While some challenges remain, e-Government has made steady progress. Moreover, these initiatives have revealed the barriers impeding future digitalization, in the form of systems predicated on paper and the submission of applications. Our success or failure in getting to grips with the review of systems that conflict with the goal of digitalization, and radically transforming old mechanisms will be the watershed for the promotion of this strategy.

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a reduction of 29% (¥110.4 billion) [as of March 2017].

Chapter 3 The Society That Japan Should Aim to Achieve and Future Approaches to Administrative Services

To enable every citizen to make the most of their individual abilities and enjoy a sustainable and enriched lifestyle, it is necessary to create a dynamic society by putting in place mechanisms that will enhance the environment for bringing up children, reform ways of working, improve productivity, and ensure safety and peace of mind for seniors. To achieve this, enabling the requisite services to be delivered in the optimal form according to people's needs, irrespective of time or place, is crucial. It is important to incorporate administrative services into private sector services that people use on a daily basis, so that members of the public are not conscious of their being administrative procedures. For example, this could mean enabling users to receive social security benefits tailored to their age, area of residence, or work style via private sector websites or social media.

A society that makes it as easy as possible for businesses to operate at a global level is required for economic growth. To this end, public administration must function not as a bottleneck hindering businesses, but as a platform that expedites economic activity. As such, it is necessary to put in place an environment that enables businesses to create new services by blending data and/or services from several administrative bodies. For example, this could mean further enhancing open data and the provision of information tailored to advances in mobile and other technology, so that the information required for business activities can be readily obtained in a digital format that is easy to use; another possibility is adopting an open approach to administrative services themselves. In addition, it is desirable to reduce administrative costs that act as an obstacle to business activities to as close to zero as possible through the use of digital technology or digital data, or through the reform of systems for their use, so that, for example, information processing can be carried out automatically within public administration, without the need for the submission of various documents.

In addition, given the severe financial situation at present, government bodies need to pursue data-based smart public administration that is both objective and logical by actively utilizing data in the planning and formulation of policy as well, in order to effectively and efficiently address a variety of social issues.

The following outlines the approaches to administrative services that will be required from now on, to achieve the kind of society described above.

(1) User-centered Services Based on the Utilization of Digital Technology

To develop administrative services tailored to an increasingly diverse, rapidly changing society, it is necessary to offer user-centered services, designing administrative services

with the perspective of the user (customer side) in mind, rather than focusing on the viewpoint of the service provider (supply side), as has been the case hitherto. Moreover, with limited administrative resources, fully leveraging digital technology is essential to finely tuned service delivery. Combining the user-centered approach with the utilization of digital technology will make it possible to maximize value for users, while reducing costs for both users and providers.

First, it is necessary to radically rethink service delivery processes from a digital perspective. Operational processes predicated on digital processing in the form of back office linkages that eliminate the need to submit documents are required, to drastically reduce procedural costs for users. In doing so, rather than merely digitalizing existing processes, it is vital to build the whole service on the assumption of digital delivery, including eliminating systems and practices that impede digitalization. At the same time, the user-centered approach must enable everyone, in all their diversity, to enjoy its benefits. For example, it is necessary to consider the design of services in formats tailored to individual needs, so that people who want to use services anywhere and at any time can do so online, while those who need to receive services based on face to face communication can do so in person at the relevant service desk.

Moreover, it is not necessarily the case that users constantly deal with a single administrative organization when using administrative services. For example, child-rearing support is composed of a variety of services, including the public nursery schools run by local governments, various allowances and benefits provided by the national and local government, and support systems offered by private sector companies at places of employment. Value for the user can be increased if the services not only of national organizations, but also of local governments and the private sector can be linked to function as a seamless service.

In addition, promoting user involvement from the policy-making phase is crucial to designing user-centered administrative services. As well as enhancing the provision of information to users through proactive use of social media and tie-ups with private sector websites, it is necessary to leverage digital technology in gathering information on needs and get users involved in service design.

(2) Fostering Innovation Through Public-Private Partnership

In a society in which all entities have the potential to connect to each other via a network, a diverse array of entities can work together using IT. The new trends in service development and delivery are mashups, which create new businesses by using APIs and the like to combine services delivered by others, and crowdsourcing, in which the general public are invited to contribute their ideas and work.

In the field of public administration, too, approaches to matters in the public realm are

also metamorphosing, as can be seen in the emergence of private sector solutions that enable information about national and local government grants to be viewed in a way that cuts across the boundaries between individual bodies, and also in the spread of civic technology (civic tech), which involves citizens themselves using IT to resolve local issues. With limited administrative resources, it is becoming difficult to meet the diverse needs of users via the conventional method of administration, which involves administrative bodies planning and delivering services singlehandedly. The key to solving social issues quickly and flexibly will be public service delivery based on public-private partnerships, in which administrative bodies work with a wide array of private sector bodies.

Promoting public-private partnerships will not only assist in solving social issues, but also contribute to our nation's economic growth. Linking administrative data and services to private sector data and services will increase the value of those services and enable new business opportunities to be created. For example, this could involve combining financial accounting applications with administrative service information, to provide the user with information about grants and support programs that they can utilize.

To move forward with the initiatives described above, governmental organizations must change their perception that public administrative bodies are the only public service providers, and deliver administrative services and provide information based on the assumption that private sector entities will also be involved in services, depending on the suitability of the service field. Initiatives to this end will be predicated on a more open approach to public administration that ensures that the administrative data held by the government and the function of administrative services are readily available in an easily understood, user-friendly format.

Chapter 4 Digital Government Strategy

The government has already set to work on initiatives in such areas as government information system reforms centered on cost reductions, as well as strengthening IT governance, and these have started to bear fruit. With the digital society approaching, it is necessary to undertake fresh initiatives to maximize the value created by administrative services for users, while sustaining and improving existing endeavors.

Accordingly, bearing in mind the society that Japan should aim to achieve and future approaches to administrative services described in Chapter 3, the government will work toward the transformation of all layers of e-Government — namely services, platforms, and governance — into a form suitable for a digital society; in other words, it will seek to make digital government a reality. The government's initiatives aimed at achieving this goal will focus on three key pillars: user-centered administrative service reforms that fully

utilize digital technology, platforms for public-private partnerships, and IT governance that creates value.

As well as fully examining the return on investment, the government will need to take the requisite steps to ensure information security and protect personal information within each specific individual measure as part of these initiatives, taking into account relevant legal systems and rules based on these, while seeking to achieve a balance with operational efficiency and convenience.

[Strategy 1] User-centered administrative service reforms that fully utilize digital technology

The government will promote user[4]-centered administrative service reforms by fully utilizing digital technology in redesigning administrative services themselves to make digital service provision the basic premise. Through these efforts, the government will aim to bring to fruition seamless administrative services that are instantly accessible, simple, and convenient from the perspective of users.[5]

To achieve this, the government will incorporate service design thinking into approaches to promoting reforms, taking into account the suitability of the service field in question. Service design thinking is an approach that involves designing an entire service with a focus on the series of actions undertaken by users when using that service. In this approach, it is not only the process from the start of a procedure through to its end — in other words, the actual contact with the administrative body alone — that is regarded as the service. Rather, the end-to-end process from the user's perspective, from their actions before using the service through to their actions after using the service, is regarded as falling within the scope of the service. This approach involves designing the whole service with the goal of not simply making a procedure more convenient for users, but rather making the entire user experience (UX) — including the user's state of mind and behavior — the best that it can possibly be, by considering the reasons behind a user's

[4] In service design thinking, users are not only the public and business operators who receive services, but also the national and local government staff who use relevant systems and operational systems to provide services.

[5] More specifically, it will aim to create new digital services that are instantly accessible, by eliminating, as far as possible, system constraints and time-consuming tasks to be dealt with before the user can start using the system, such as the need to ensure the right PC environment is in place or complicated system set-up procedures. In addition, the government will seek to ensure that the procedures are made easy to understand, with adequate consideration given to operability, so that users find these new digital services simple to use once they actually begin using them, as well as aiming to ensure that these services are convenient, offering services and information that users find beneficial.

decision to use that procedure, the process through to the point where the user begins using the procedure, and the user's actions after using it as being part of the whole service process.

In putting this approach into practice, it is essential to ensure an accurate perception of the diverse realities experienced by users, starting from the service planning stage. Moreover, rather than focusing on front-end service delivery alone, it will be necessary to continue to implement business process re-engineering (BPR) aimed at the integrated rethinking of processes, including internal operational processes within public administration. In addition, rather than being bound by conventional values, in which administrative bodies are the only service providers, designing services in partnership with private sector bodies already offering services that are widely and routinely used by the public will be crucial.

Furthermore, in disseminating information, it is necessary to ensure that information about administrative services can be delivered to the necessary entities accurately, addressing the diversification of user needs and the growing prevalence of mobile technologies and the like. Administrative bodies need to break away from the uniform approach to distributing information, in which information is just posted on a website; instead, they must diversify their approach to this task by, for example, using push notifications for actively distributing information or combining information dissemination with private sector services.

In light of this, the government will promote user-centered administrative service reforms that fully utilizes digital technology as described below.

[Strategy 1-1] Promoting business process re-engineering (BPR) based on service design thinking

- Fields where there is a high level of need among the public or business operators and which can be expected to demonstrate results at an early stage will be identified as priority fields for undertaking the first projects. Digital technology will then be fully utilized in conducting business process re-engineering (BPR) based on service design thinking in those priority fields, with the following objectives in mind. In addition, efforts will be made to expedite administrative service reforms throughout government by applying the fruits of these initial endeavors in similar areas or expanding them into related fields.
  - Based on service design thinking, the government will analyze and re-engineer business processes with a focus on the whole series of actions taken by users when using a service. In analyzing user behavior, the government will analyze the end-to-end process from the user's perspective to clarify user needs and identify issues faced by services. It will then make improvements to ensure the

best possible user experience throughout the entire service.

- When undertaking business process re-engineering, the government will seek to fully understand the reality of each and every process based on the facts, visualizing issues and clearly identifying the causal relationships before considering and implementing the necessary improvement measures. This re-engineering will encompass not only the front-end elements of services, but also back office business processes, as well as systems and practices that are an obstacle to digitalization, such as the need for paper document submission, the principle of application in person, and the requirement to affix one's seal to documents.
- To radically improve the efficiency and convenience of services, the government will make full use of digital technology — including technologies such as the IoT and AI, which could fundamentally change operational processes — to bring to fruition service design predicated on digital processing (digital-first); one-stop services that cut across organizational boundaries, including private sector services (connected / one-stop); mechanisms that do not, in principle, require information previously received by an administrative body to be re-submitted (once-only); and linkages with local government or private sector services by means of APIs, etc.
- While promoting the digitalization of services, the government will consider service delivery in forms that suit each individual, including the use of digital technology in face to face service delivery, so that everyone can benefit from the convenience of digital technology in the optimal form for them.
- To grasp user needs and achieve better administrative services, the government will actively incorporate the views of the public in the service planning process by such means as the use of marketing technologies. Moreover, when enhancing the user front-end elements of administrative service delivery via websites and the like, the government will increase convenience for users through the creation of prototypes and swift rollout by means of beta version service releases, as well as undertaking continuous improvements.

- In conjunction with the aforementioned initiatives, the government will seek to expedite efforts to achieve greater efficiency and convenience throughout administrative services by strategically and systematically promoting the use of IT in administrative services. This will be based on the attached Action Plan for the Use of IT in Administrative Procedures and Private Transactions (Digital First Action Plan), which sets out in a focused manner the targets, basic directions, and specific initiatives for translating the digital-first, connected/one-stop, and once-only principles into reality.

[Strategy 1-2] Revising approaches to providing information to adapt to digital technology

- In light of the widespread use of mobile environments, the government will make it a basic principle to prepare content predicated on multiplatform use. It will also rethink approaches to the distribution of information, promoting the standardization of website data formats and the publication of database APIs, with a view to linkages to other services, including private sector services. Moreover, to ensure that the requisite information can be delivered accurately to the entities that need it using digital technology, the government will work on the use of push notifications for information distribution, as well as the personalization of information provision.

[Strategy 2] Platforms for public-private partnerships

In addition to the perspective of reforming administrative services, efforts to bring user-centered services to fruition can be further promoted by building platforms for public-private partnerships and encouraging the delivery of services by a diverse array of entities.

A platform for public-private partnerships is a mechanism capable of resolving social issues and improving convenience for the public, as well as creating new business opportunities, by enabling data and services within the realm of public administration to be opened up and linkages formed among a diverse array of entities, including private sector and local government bodies. With limited administrative resources, it is becoming difficult to meet the diverse needs of users via the conventional method of administration, which involves administrative bodies planning and delivering services singlehandedly. A shift in thinking is required, away from the mentality that administrative bodies are the only service providers, toward an approach that incorporates administrative services into the various services that surround users in their daily lives.

The basic premise of this approach will be the ability to readily obtain administrative data and administrative services in a digital format that is easy to use. Accordingly, it will be necessary to put in place interfaces for utilizing public and private sector data, by such means as the promotion of open data and the development of APIs.

Moreover, it is vital to ensure interoperability, to enable administrative data to be exchanged smoothly among a variety of entities. Environmental enhancements to encourage data circulation will be required, such as the development of data and technology standards and efforts to promote the use of the Social Security and Tax Number System.

Furthermore, to achieve efficient, effective platform development, the government will not merely standardize the functions provided on the platforms, but rather aim to ensure

their use by a diverse array of entities and actively utilize private sector knowledge and services.

In light of this, the government will build platforms for public-private partnerships by means of the following initiatives.

[Strategy 2-1] Developing an environment that encourages data circulation

- All information systems and operational processes relating to data held by public administrative bodies will be planned, developed, and operated on the premise of open data (Open Data by Design).
- To facilitate the smooth distribution of administrative data both within administrative bodies and with external bodies, such as data linkages between information systems, the government will put in place standards relating to administrative information systems and undertake initiatives to ensure interoperability. These efforts will include the development of common data layouts, vocabulary, codes, and characters, and their standardization.
- Going forward, the government will promote the utilization of the Social Security and Tax Number System, to encourage data circulation. To this end, the government will consider the introduction of information sharing using the Social Security and Tax Number System when planning new services or updating information systems, and will also consider the introduction of Japanese Public Key Infrastructure. In addition, the government will move forward with a rethink of application procedures and forms, on the assumption that the Social Security and Tax Number System will be utilized.

[Strategy 2-2] Developing an interface for utilizing public and private sector data

- Taking into account the needs of the public and business operators in relation to administrative data and administrative service delivery, the government will develop APIs and make them available to the private sector for their use. In particular, the government will ensure that information sharing by means of APIs is the basic premise in the design and build process, when putting new information systems in place or updating information systems.
- The government will develop common designs and publication rules for websites and promote the standardization of data structures, taking into account existing standards used in the private sector, to make automated information gathering and data mashups possible in relation to the information distributed by public administrative bodies on their websites.

[Strategy 2-3] Sharing platforms and utilizing private sector services

- For the purpose of efficient, effective platform development, the government will promote the development and enhancement of common systems and common services, based on the premise of common use. While moving forward with business process re-engineering, including the standardization of operations and data, the government will continually enhance and strengthen inter-ministry IT systems and further promote the local government cloud.
- In the case of local government services, which need to be delivered to an identical standard nationwide, the government will promote the consolidation of services through various means, including the local government cloud, so that each entity does not need to develop its own individual information system. In addition, the government will encourage the shared use of functions through the use of broader-based clouds and integration between groups.
- As part of the development of shared-use platforms, the government will promote the development of common infrastructure to improve productivity and facilitate more diverse ways of working, such as the creation of shared teleworking and remote access environments for administrative bodies.
- Rather than adhering to a self-sufficient approach in which public administrative bodies build all functions themselves when introducing information systems, the government will actively use private sector clouds and private sector services. This will facilitate a shift away from an approach in which administrative bodies own and manage everything themselves, toward one in which they use only what they need for the period required. This will enable the government to introduce the latest technologies as early as possible and at the right time, as well as increasing the return on investment. Regarding government information systems that the national government needs to own and manage itself, the government will promote standardization and the development of common systems. In addition, it will promote a shift to a government common platform after thoroughly reviewing the return on investment.

[Strategy 3] IT governance that creates value

To achieve the transformation in administrative services described in Policies 1 and 2, it will be necessary to strengthen IT governance in a form tailored to this; in other words, IT governance that creates value will be required.

Reforms that would be difficult for a single ministry working alone to achieve must be pursued through service linkages that cut across ministry boundaries, to deliver user-centered administrative services. Accordingly, it is necessary to reinforce both strategic

systems centered on the Government CIO and systems within individual ministries and agencies, thereby putting in place an environment in which IT governance can be carried out across the government as a whole.

While continuing to promote the cost reductions that have been pursued so far under the Government CIO, the government will, from now on, manage IT investment with an emphasis on maximizing value for users.

The strengthening of IT management to ensure the success of projects will be required, to ensure that the value that can be gained from investment is achieved without fail. It will be vital to enhance common rules in such areas as strengthening project management and ensure that IT management becomes more prevalent throughout government. In addition, from the perspective of maximizing the return on investment, it will be necessary to consider the balancing appropriateness of expenditure with operational efficiency in IT investment, taking all possible measures to ensure that business processes and systems are not made over-complicated and that expenditure and operational costs do not become excessively high as a result.

Based on this, IT governance by the government will be enhanced as follows.

[Strategy 3-1] Developing promotion systems tailored to service reforms

- To promote government-wide administrative service reforms, the government will strengthen cross-cutting governmental systems centered on the Government CIO and support reforms from the service planning stage onward, primarily focusing on reforms that would be difficult for individual ministries and agencies working alone to bring to fruition. In supporting reforms, the Cabinet Secretariat and Ministry of Internal Affairs and Communications will take the lead and establish a team to promote cross-cutting reforms.[6] This team's mandate will include supporting individual initiatives, promoting trial initiatives, and deploying the know-how gained from these initiatives in other areas.
- To strengthen IT governance in each ministry and agency, the government will clarify the roles that should be played by each part of the system within those ministries and agencies, including the Ministry CIOs, Deputy CIOs, Executive Advisors to CIOs, PMOs, and PJMOs. In addition, it will build collaborative frameworks encompassing relevant departments, including accounting, human resources, and public relations. The government will also promote the deployment of appropriate personnel suited to the roles that they are expected to fulfill, and

[6] Dedicated organizations promoting administrative service reforms through the use of digital technology exist in a number of other countries, including the Government Digital Service (UK), Policy Lab (UK), 18F (USA), and GovTech (Singapore).

human resource development that includes training to increase the digital literacy of employees who use information systems and data.

- The government will integrate various initiatives relating to the promotion of e-Government, including investment management, cost reductions, and efforts to promote the use of online methods. These will be strategically promoted on the basis of a medium- to long-term plan, under the leadership of each Ministry CIO and Deputy CIO.
- To ensure the steady progress of initiatives by local governments, particularly small and medium-sized local government bodies, the government will support efforts to strengthen IT governance in each region in forms appropriate to the specific circumstances of each local government body, based on the development of systems and other initiatives at the national level. This support will include assistance in applying both the know-how gained from business process re-engineering through IT utilization at the national level and examples of success by other local governments.
- In terms of international efforts to promote e-Government, the government will seek to raise Japan's profile in the international community through international partnerships and contributions, including ongoing information gathering and dissemination, forging networks of relationships with key figures overseas, and being involved in international standardization.

[Strategy 3-2] Ensuring thorough IT management and maximizing the effect of investment

- The government will steadily promote government information system reforms, including cost reductions, that have been conducted to date under the leadership of the Government CIO.
- The government will rethink conventional investment management frameworks by means of an approach to evaluation that attaches importance not only to achieving greater operational efficiency and adjusting costs, but also to maximizing value for the user.
- To ensure transparency in administrative operation and promote initiatives involving collaboration with the public, the government will provide visualizations of both the processes and the results of service reforms and IT investment initiatives.
- The government will actively utilize data in policy planning, implementation, and appraisal, including the use of the IoT, AI, and other new technologies. By doing so, it will achieve a shift away from administrative operation focused on tackling

conventional issues, toward predictive and preventive administrative operation that seeks to forecast phenomena that could occur in the future and take steps to counter those phenomena before they arise.

- To ensure that costs can be adjusted and policies brought to fruition in an appropriate way, while also dealing with the speed of environmental change, the government will rethink approaches to the procurement of information systems and consider a mechanism for information system installation and operation that enables budgets to be flexibly and appropriately allocated and executed.
- From the perspective of ensuring the success of projects and maximizing the value that they create, the government will strengthen IT management by such means as considering more effective procurement techniques, reinforcing quality control functions, and introducing a third-party verification scheme for projects that entail a level of risk. Moreover, it will promote economically rational IT investment, while taking care to achieve a balance with security and other considerations.

Chapter 5 Formulation of an Action Plan

This strategy sets out the direction to be taken in the government's efforts to achieve the transformation to digital government. Putting it into practice will require the clarification of specific initiatives and their implementing bodies and implementation period, as well as KPIs for this.

Accordingly, the government will seek to gain a precise picture of individual measures based on the facts and steadily put together details of their content, starting with those that are feasible. Then, before the end of 2017, it will prepare an action plan that fleshes out this strategy. As well as undertaking ongoing enhancement and review of the content of the action plan, the government will conduct follow-up checks on its progress.