

Declaration to be the World's Most Advanced IT Nation

May 20, 2016

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I. Outcomes to Date of the Declaration to be the World's Most Advanced IT Nation

Information technology (IT) is not only the key to achieving strong economic growth, but also an important tool for radically transforming Japanese society and creating a safe, secure, and comfortable life for citizens.

Based on this awareness, the government established the Declaration to be the World's Most Advanced IT Nation (hereinafter "the IT Declaration") in June 2013, to serve as its IT strategy. The government's aim in doing so was to conquer the sense of stagnation besetting the country and drive the resurgence of Japan by becoming the world's most advanced model for IT use, thereby creating a safe, secure, and comfortable life for citizens.

All parts of the government are working together to promote measures based on the IT Declaration, breaking down barriers between ministries to achieve cross-cutting coordination, under the guidance of the Deputy Chief Cabinet Secretary for Information Technology Policy (Government CIO), a new post established in May that year.

The initiatives undertaken over the last three years have now started to bear fruit; some of the principal achievements to date are outlined below.

I-1 Key Outcomes to Date

I-1-(1) Creating user-oriented administrative services via reform of administrative information systems

[Objective of the initiative]

The government will promote radical business process re-engineering (BPR) through IT utilization, breaking down the barriers between individual administrative areas with the aim of creating mechanisms to facilitate linkages between the information systems of central and local governments and business operators. Through these efforts, the government will ensure that public services are run efficiently, as well as being convenient for users.

Savings achieved via reductions in operating costs through the consolidation of administrative information systems and their migration to the cloud will be invested in efforts to enhance the value added by e-Government.

[Main outcomes]

- The government is putting in place the information systems for the Social Security and Tax Number System, using the savings achieved via reductions in operating costs through the consolidation of central government administrative information systems and their

migration to the cloud⁽¹⁾ to cover some of the cost of the system development and upgrades required (including security measures) for the introduction of the Social Security and Tax Number System, which will streamline administrative procedures in such areas as childcare and moving house.

- As part of BPR in the area of personnel and payroll administration, the government set up the Conference for Personnel and Payroll Business Process Reengineering (chaired by the Deputy Chief Cabinet Secretary) in August 2014, to achieve drastic efficiency improvements in business processes through the utilization of IT. Based on the improvement plan⁽²⁾ issued by the Conference, the government is promoting reforms aimed at standardization and rationalization.

In conjunction with this, the government is engaged in system upgrades aimed at improving performance, quality, and functionality, with a view to transitioning all ministries and agencies to the common personnel and remuneration system in FY2016.

- In April 2015, at the e-Government Ministerial Meeting established under the Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society (hereinafter “the IT Strategic Headquarters”), the government embarked upon initiatives aimed at BPR through IT utilization in central and local government. The government anticipates that this will make daily life safer and more convenient for citizens, because cost and human resource savings achieved as a result of local government initiatives⁽³⁾ will be used to improve the quality of other local government public services (for example, public-facing administrative services) and bolster security measures.
- The government is putting in place infrastructure for multilayer interoperability that consists of common vocabulary⁽⁴⁾ and Japanese character projects⁽⁵⁾. The government

(1) 908 central administrative information systems are forecast to be eliminated by FY2018 [down by around 63% from FY2012 (1,450 systems). The initial target was a 50% reduction]. In addition, the migration of central administrative information systems to the cloud is underway, with 316 systems due to be migrated to the government common platform by FY2021 (as of March 2015). Operating costs are forecast to be cut by more than ¥100 billion annually across all systems subject to cost reductions by FY2021 (down by around 28% from FY2013 [operating costs of approximately ¥400 billion]. The initial target was a 30% reduction (as of March 2016).

(2) Improvement Plan for Promoting Efficiency in Personnel and Payroll Business Processes (approved by the Conference for Personnel and Payroll Business Process Reengineering on March 27, 2015. Revised on August 7 that year).

(3) As of April 1, 2015, 728 local governments had migrated services to the cloud [of which, 293 migrated services to the local government cloud (joint migration by multiple local governments), while 435 migrated services to their own independent cloud (independent migration by a single local government)]

(4) Infrastructure facilitating easier data exchange and use through the establishment of common notation, meanings, and data structures for names, addresses, and other vocabulary.

(5) Infrastructure enabling formal and simplified ideographic variants of personal and company names to be recorded and used appropriately in administrative information systems.

anticipates that central and local government use of this infrastructure will enable administrative information systems to be linked across organizational and operational boundaries, facilitating smoother provision of public services.

- The government has been developing the “IT Dashboard” to publish detailed information about government investment in administrative information systems and the progress of various measures. The government anticipates that this will improve the quality of systems and IT investment by enhancing transparency.

I-1-(2) Making daily life more convenient for citizens using the Social Security and Tax Number System

[Objective of the initiative]

The government will strive to make daily life more convenient for citizens by such means as streamlining administrative procedures, achieve a fair and equitable society through a more even distribution of the benefits and burdens of public services, and increase the efficiency of government via back office partnerships.

[Main outcomes]

- To promote more widespread and effective use of the Social Security and Tax Number System, the government has put together an interim summary⁽⁶⁾ describing the areas on which central and local governments and business operators should work together. In particular, initiatives are underway to expand the scope for using Social Security and Tax Numbers in information management in the administration of family registers, passports, and Japanese national resident overseas⁽⁷⁾.
- Taking into account deliberations concerning technical trials and the development of systems to facilitate the utilization of Japanese Public Key Infrastructure, the government is promoting initiatives aimed at expanding the use of Individual Number Cards in a variety of

(6) Drafted on May 20, 2014 by the Social Security and Tax Number System Subcommittee of the Expert Panel on the New IT Strategy.

(7) The government will aim to take the requisite legislative measures in the area of family register administration during the ordinary session of the Diet in 2019. The government will also aim to take the requisite legislative measures in the area of passport administration during the ordinary session of the Diet in 2019, taking into account the status of deliberations concerning family register administration. In addition, it will consider approaches to the use of Social Security and Tax Numbers in managing information about Japanese nationals resident overseas, as well as examining the pros and cons of this, and will aim to take the requisite legislative or other measures during the ordinary session of the Diet in 2019, taking into account the outcomes of these deliberations.

settings, such as using kiosk terminals at convenience stores to issue family register certificates and providing health information concerning mothers and children.

- The central government is taking the lead in promoting the take-up and utilization of Individual Number Cards by progressively integrating national civil servant smart card IDs with Individual Number Cards, starting in FY2016, and is developing the common system required for integration⁽⁸⁾.
- The government will minimize Individual Number Card procurement costs and distribute Individual Number Cards to citizens free of charge.

I-1-(3) Promoting safe, secure data circulation

[Objective of the initiative]

The government will promote safe, secure data circulation and seek to improve the quality of life for citizens by such means as identifying (visualizing) and resolving issues affecting a super-aging society with a low birthrate, and creating new services based on data utilization.

[Main outcomes]

- The government is encouraging open data initiatives⁽⁹⁾ by central and local governments and incorporated administrative agencies to facilitate advances in Solution-oriented Open Data and the integrated promotion of data disclosure and utilization, based on the Open Government Data Strategy⁽¹⁰⁾, etc. These efforts will bear fruit in examples of the use of open data to resolve various issues.
- To support the open data initiatives of local governments, the government has formulated the Local Government Open Data Promotion Guidelines⁽¹¹⁾ and is distributing them to local governments. In addition, it is raising awareness of initiatives and expanding their

(8) The government has reduced procurement costs (by around ¥1 billion) via the bulk procurement of national civil servant smart card IDs for all ministries and agencies.

(9) The government has been improving the environment through such initiatives as establishing a government data catalog site (with around 16,000 datasets) and formulating the Government of Japan Standard Terms of Use (Version 2.0) [approved by the Inter-Ministry Council of Chief Information Officers (CIOs) on December 24, 2015].

(10) Approved by the IT Strategic Headquarters on July 4, 2012.

(11) Approved by the National Strategy Office of Information and Communications Technology (IT), Cabinet Secretariat on February 12, 2015. Revised on August 3 that year.

deployment through personnel-based support in the form of the appointment and dispatch of Open Data Evangelists⁽¹²⁾.

- With the revision of the Act on the Protection of Personal Information (Act No. 57 of 2003), the government is developing an environment conducive to activities such as the creation of new services, including revising the definition of personal information (addressing the “gray zone” where it is unclear whether or not information constitutes personal information) and putting in place frameworks enabling anonymized personal information to be utilized without the consent of the individual concerned.
- The government is currently promoting initiatives by medical institutions and insurers, among others, including the accumulation and consolidation of data such as medical and health information (medical insurance claims data, data from special health check-ups, cancer registration data, etc.) Promoting further utilization of such data is expected to yield such benefits as improving the quality of health and medical services for the public.
- The government is promoting initiatives aimed at the widespread take-up and utilization of the Corporate Number, including the formulation of rules concerning the specification of Corporate Numbers, and the formulation of a rule that ministries and agencies must specify their Corporate Numbers as well as names on their websites. Its aim in doing so is to encourage the utilization of Corporate Numbers to reduce costs incurred by central and local governments and business operators when searching for information about corporations, as well as facilitating the provision of information about corporations to the public.

I-1-(4) Strengthening international competitiveness via IT utilization in agriculture

[Objective of the initiative]

To address the severe labor shortage arising from such factors as the aging of the farming population, and deal with concerns about passing on know-how, etc. to the next generation, the government will seek to strengthen the international competitiveness of Japanese agriculture via the utilization of IT in agriculture to pass on the know-how, etc. of experienced farmers and to

⁽¹²⁾ Experts with an in-depth knowledge of open data, appointed and dispatched to local governments by the Cabinet Secretariat’s National Strategy Office of IT. Their role is to popularize and promote awareness of open data among local governments and support open data initiatives, using the Local Government Open Data Guidelines (which outline central government initiatives and the outcomes thereof), Open Data 100 (an anthology of examples of the use of open data), and the Open Data Package[the Open Data Introduction System for Local Government (source code due to be published in June 2016), which brings together the data catalog site and the dashboard as a single package].

enhance the quality of agricultural crops and improve productivity by using environmental and breeding data.

[Main outcomes]

- The government has formulated the Agriculture Information Creation and Distribution Strategy⁽¹³⁾, which summarizes the basic stance on the standardization of notation systems for agriculture information (names of crops and farm work, etc.) and details of deliberations on such matters as the attribution of agriculture information and rights to this. In addition, it has formulated guidelines⁽¹⁴⁾ (providing specific examples) based on this strategy. It is anticipated that this will promote the utilization of agriculture information, thereby encouraging new entrants to the agricultural sector and increasing agricultural output, among other outcomes.
- The development of the Agricultural Land Information System and centralized publication of information about agricultural land (April 2015) has made it possible for new entrants keen to enter the agricultural sector for the first time to look for farmland nationwide. Moreover, it is anticipated that its use by farmland intermediary management institutions, municipalities and agricultural commissions with a view to the accumulation and consolidation of agricultural land will lead to agriculture becoming a growth industry, by encouraging new entrants to the sector.
- To resolve such issues as the shortage of core farmers due to the demanding nature of the labor involved in production and the aging of the population, and to help to turn agriculture into a growth industry, the government is promoting initiatives including research and development focused on such areas as the use of self-driving technology in agricultural machinery, and trials aimed at using IT to make production management more advanced.
- In accordance with the IT Utilization Plan for Regional Revitalization⁽¹⁵⁾, the government is supporting⁽¹⁶⁾ local initiatives being undertaken by multiple local governments working in

(13) Approved by the IT Strategic Headquarters on June 3, 2014.

(14) Individual Guidelines on the Names of Crops Used in Agricultural IT Systems (Fully Operational Version), etc. (drafted on March 31, 2016 by the Agriculture Subcommittee of the Expert Panel on the New IT Strategy).

(15) Approved by the IT Strategic Headquarters on June 30, 2015.

(16) Using IT to develop high-added-value aspects of crops by utilizing information from sensors, etc. in Nichinan City in Miyazaki Prefecture (mangoes), Iwata City in Shizuoka Prefecture (functional vegetables), and Watari Town in Miyagi Prefecture (strawberries); using training systems developed using the experience, etc. of veteran farmers to pass on know-how to new farmers in Shizuoka Prefecture (Satsuma oranges) and Kagawa Prefecture (olives).

partnership, such as utilizing IT to develop high-added-value aspects of crops and to pass on the know-how, etc. of experienced farmers to new farmers.

I-1-(5) Achieving the world's safest, most environmentally-friendly, and most economical road transportation

[Objective of the initiative]

The government will further promote automated driving systems and other Intelligent Transport System (ITS) technologies to achieve safe, environmentally-friendly, and economical road transportation that will avert the risk of traffic accidents and congestion, and ensure safe, secure and smooth movement of seniors, etc.

[Main outcomes]

- The government has formulated the Public-Private ITS Initiative/Roadmaps⁽¹⁷⁾, which is a roadmap for automated driving systems and other ITS technologies that cuts across ministry boundaries. This has been revised to take account of such matters as trends in automated driving systems within Japan and overseas, and republished as the Public-Private ITS Initiative /Roadmaps 2016⁽¹⁸⁾.
- Based on these Roadmaps, the government is promoting initiatives that bring relevant ministries and agencies together with private sector companies in the development and commercialization of driving safety support & automated driving systems, and the utilization of traffic data.

I-2. Key Future Policy Initiatives to Achieve the Society That We Aspire to Create via IT

Utilization

-Deploy Successful National Initiatives at the Regional Level and Outstanding Local Initiatives Nationwide (Three Priorities for Further Promoting IT Utilization)-

As described above, the initiatives undertaken by the government over the last three years since the IT Declaration was formulated have started to bear fruit⁽¹⁹⁾.

(17) Approved by the IT Strategic Headquarters on June 3, 2014. Revised on June 30, 2015.

(18) Approved by the IT Strategic Headquarters on May 20, 2016.

(19) In the Global e-Government Ranking published by the UN Department of Economic and Social Affairs (UN DESA) in June 2014, based on the UN e-Government Survey of 193 UN member countries, Japan jumped to 6th place from 18th in the previous ranking in 2012. In the Global Information Technology Report 2015 published by the World Economic Forum in April 2015, Japan leaped to 7th place from 22nd the previous year in the ranking of government IT usage, and to 8th place from 16th the previous year in the ranking of its political and regulatory environment, which is indicative of the smooth development of legislation.

Accordingly, the next step toward achieving a safe, secure, and comfortable life for citizens by becoming the world's most advanced model for IT utilization will be to deploy across the country the initiatives that have been successful at the national or local levels. While implementing this basic policy of deploying successful national initiatives at the regional level and outstanding local initiatives nationwide⁽²⁰⁾, the government will strengthen initiatives to utilize IT in resolving such issues as the creation of a society in which all citizens are dynamically engaged, regional revitalization, active social participation by women, and promoting national resilience.

More specifically, as well as seeking more thorough reforms of administrative information systems and operations (including promoting online procedures), while responding to rapid innovations in the field of IT, the government will put in place a nationwide environment conducive to data circulation that is accessible to central and local governments and private sector business operators alike in order to resolve various issues via the utilization of data. Adopting the basic approach of undertaking these efforts in a comprehensive and systematic manner, to ensure that the various benefits will extend to all members of the public, including elderly people, and throughout society as a whole, central and local governments will work together to powerfully advance measures during the intensive period through 2020, focusing primarily on the following priorities.

[Priority 1] <II-1 Promote BPR through IT utilization by central and local government>

In addition to redoubling the efforts undertaken to date to reform administrative information systems at the national level, the government will extend the deployment of the outcomes of these initiatives across the entire nation, thereby establishing a cycle of investing limited financial resources in new measures (including Priorities 2 and 3) throughout the country.

[Priority 2] <II-2 Build an environment conducive to safe, secure data circulation and utilization>

Along with advances in technologies such as the Internet of Things (IoT) and artificial intelligence (AI), data circulation and utilization is a vital key to achieving sustainable economic growth and resolving issues in Japan's super-aging society with a low birthrate. Accordingly, the government will use financial resources garnered via Priority 1 initiatives to promote both

⁽²⁰⁾ IT can eliminate geographical and time constraints, and is a tool that has such benefits as economies of scale and scalability, so it is anticipated that the nationwide deployment of the successful outcomes achieved to date will yield even greater results.

technical and institutional efforts to build an environment conducive to data circulation and utilization.

[Priority 3] <II-3 Resolve issues specific to a super-aging society with a low birthrate>

While undertaking Priority 1 and 2 initiatives, the government will aim to implement specific initiatives to resolve the issues that Japan faces as a super-aging society with a low birthrate. Furthermore, it will seek to deploy successful national initiatives at the regional level and outstanding local initiatives nationwide.

II. Deploy Successful National Initiatives at the Regional Level and Outstanding Local Initiatives Nationwide
(Three Priorities for Further Promoting IT Utilization)

II-1. [Priority 1] Promote BPR through IT utilization by central and local government

[Objective of the initiative]

Investment in new efforts to enhance the value added by e-Government and new strategic investment, including Priorities 2 and 3, will be funded by savings achieved through initiatives to reduce operating costs via the consolidation of central government administrative information systems and their migration to the cloud. Furthermore, efforts to extend central and local government initiatives focused on BPR through IT utilization across the country are vital.

In conjunction with this, the government will aim to make public services even more convenient for users and further enhance public value through more advanced policymaking and evaluation and improvements in the quality of public services achieved by such means as the utilization of data across organizational and operational boundaries, with the goal of achieving more innovative and transparent e-Government.

[Outline of the initiative]

II-1-(1) Further promote BPR through IT utilization by central government

- As well as reducing the number of information systems by almost half of the FY2012 level (1,450) by FY2018, the government will aim to achieve a 30% reduction in operating costs from the FY2013 level (approximately ¥400 billion) by FY2021.
- The government will seek to achieve substantial reductions in operating costs by such means as Government CIO reviews of reforms and BPR focused on systems in areas including employment security, pensions, national taxes, and registration and incorporation. At the same time, it will promote reforms to achieve greater user-friendliness by undertaking cross-cutting information sharing between administrative bodies, including the utilization of the Social Security and Tax Number and Corporate Number systems. In conjunction with this, each ministry and agency will promote BPR of their own operations, undertaking system reforms and revising business processes.
- With regard to matters such as registration and incorporation, in the reform of the registration information system that the Ministry of Justice plans to begin implementing in FY2018, the government will promote flexible mechanisms for information sharing between

administrative bodies, including enabling registration information about corporations newly established online to be shared with administrative bodies. Through this, the government will seek to reduce the burden on citizens and make administrative processes more advanced by eliminating the need to append a Certificate of Registered Matters when carrying out each of the requisite procedures for starting a business.

- Regarding reforms of common processes and systems in the areas of personnel management and remuneration, travel expenses, procurement, and document management and approval, the government will promote further utilization of common systems, switch to electronic processing of administrative tasks as a general rule, and analyze and share the accumulated data (including adopting a fully integrated electronic process for government procurement that extends all the way to contracts, and sharing the outcomes of contracts). Through such efforts, the government will ensure proper, efficient, and effective budget implementation, while promoting efforts to reduce costs and streamline indirect administrative work.
- To ensure the efficient execution of work by administrative bodies, the government will switch to paperless meetings, use web conferencing, adopt electronic law drafting, and revise rules for consultations between ministries and agencies. In addition, it will carry out office reforms, including telework and hot-desking. Through such reforms, the government will move away from office- and paper-based ways of working and seek to develop a worker-friendly environment that enables staff to maintain a good work-life balance.
- The government will seek to improve the interoperability of characters, terminology, and interfaces, among others, in accordance with such policies as the Action Plan for Open Government Infrastructure⁽²¹⁾. In addition, it will review services for the provision of information concerning such matters as central and local government procurement. Through such efforts, the government will develop an environment conducive to the comprehensive utilization of information that is convenient for everyone, including the public.

II-1-(2) Promote BPR through IT utilization by local government

- From the perspective of expanding the deployment of successful outcomes of central government administrative information system reforms, the government will promote local government information system reforms, taking into account progress with the Roadmap for

⁽²¹⁾ Approved by the Inter-Ministry Council of Chief Information Officers (CIOs) on April 25, 2014.

Reforming Government Information Systems⁽²²⁾. In addition, it will expedite initiatives by bodies that have not yet introduced the local government cloud to do so, while establishing shared and standardized business processes, thereby seeking to achieve cost reductions in these information systems.

Moreover, the government will further enhance the quality of the local government cloud by such means as expanding the scope of business processes subject to migration to the cloud, via the establishment of additional shared and standardized business processes for bodies that have already introduced the local government cloud.

Through these initiatives, the government will seek to reduce (by 30%) the operating costs of local government information systems, and will undertake deliberations concerning measures for achieving further cost reductions and improving the quality of the local government cloud, aiming to reach a conclusion by this summer.

- To promote BPR through IT utilization in local government, the Government CIO and others will visit local governments to provide advice and exchange views about such matters as the introduction of the local government cloud, and the government will promote initiatives to support local governments in doing so, starting with those that are willing to implement reform.
- To promote the use of IT in school business and operational improvements by boards of education and schools, etc., in order to alleviate work-related pressure on teachers and improve the quality of educational activities, the government will consider matters including the development of model operational processes aimed at the widespread adoption of the Integrated Support System for School Work, approaches to common procurement and operation of equipment, networks, and systems and their migration to the cloud, and standard procurement specifications tailored to scale and the status of initiatives.

II-1-(3) Enhance the governance structure

- Based on the Comprehensive Policy for Enhancing the Development of Security and IT Human Resources at Governmental Organizations⁽²³⁾, the government will seek to secure and develop personnel with a certain level of expertise, as well as steadily promoting initiatives in such areas as cybersecurity measures, system reforms and BPR, and the promotion of IT

⁽²²⁾ Approved by the Inter-Ministry Council of Chief Information Officers (CIOs) on December 26, 2013. Revised on March 4, 2015.

⁽²³⁾ Approved by the Cybersecurity Strategic Headquarters on March 31, 2016.

utilization, under the guidance of the Deputy Directors-General for Cybersecurity and Information Technology, among others.

- The government will promote initiatives to enhance the skills (IT management ability) of staff in such areas as utilizing figures, etc. needed to gain a precise understanding of systems and processes and to improve the quality of services, and carrying out appropriate project management. To this end, it will ensure that the knowledge and know-how gained from system reforms and BPR is amassed and shared throughout government.
- ※ **To ensure that the financial resources made available through the aforementioned Priority 1 initiatives and those secured through the revision of the existing IT measures of ministries and agencies can be put toward Priorities 2 and 3, the Government CIO will evaluate the IT-related measures of ministries and agencies and the government will revise existing measures, while reflecting selected specified measures in the budget to facilitate investment in these as a priority.**

II-2. [Priority 2] Build an environment conducive to safe, secure data circulation and utilization

II-2-(1) Building a user-oriented platform for data circulation

[Objective of the initiative]

Public and private sector systems in Japan are not interoperable across organizational and operational boundaries, limiting the smooth circulation of the data essential to such technologies as the IoT and AI⁽²⁴⁾, which hold the key to open innovation⁽²⁵⁾.

Developing a platform for cross-cutting data circulation based on coordination and collaboration between public and private sector systems will make it possible to share and utilize a diverse array of data throughout society. Accordingly, the government will aim to utilize technologies such as the IoT and AI to generate new investment, create employment, and make daily life more convenient for citizens, among other goals.

In particular, it is essential to be conscious of the user's perspective when developing a platform for data circulation and to give full consideration to ensuring that the platform will give rise to a diverse array of services by making it easily accessible not only to large corporations, but also to small and medium-sized enterprises and startup companies.

[Outline of the initiative]

(Develop a platform for data circulation)

- The government will promote an initiative focused on linking public and private sector systems in 11 fields⁽²⁶⁾, including ITS and manufacturing, by around FY2020 (Society 5.0). It will also seek to increase data compatibility between multiple business operators, etc. through further linkages of public and private sector systems, including the standardization of data vocabulary and API linkage⁽²⁷⁾.

⁽²⁴⁾ Initiatives aimed at the adjustment of data formats to facilitate smooth data circulation and utilization have not progressed in Japan. In the EU, the public and private sectors have jointly developed and published FIWARE, a standard specification for app development and data sharing that can be used in all sectors. Collaboration with other overseas initiatives is also required, including Industry 4.0 in Germany, the Advanced Manufacturing Partnership in the U.S.A., and China Manufacturing 2025.

⁽²⁵⁾ Techniques for maximizing the efficiency of innovation by such means as putting together the optimum combination of in-house and external elements in innovation to minimize uncertainty arising from new technology development, while expediting the development of newly required technology, thereby maximizing savings in product development time and achieving maximum effectiveness.

⁽²⁶⁾ Optimizing the energy value chain; building a global environment information platform; maintenance, upgrade and management of an efficient and effective infrastructure; achieving a society resilient to natural disasters; Intelligent Transport Systems; new manufacturing systems; integrated material development systems; integrated community care systems to create a nation with good health at its core; hospitality systems; smart food chain systems; and smart production systems.

⁽²⁷⁾ Application Programming Interface. A set of protocols specifying the programs required for connecting (linking) multiple applications, etc.

- With the aim of linking all public and private sector systems encompassing the aforementioned 11 fields, the government will promote initiatives focused on standardizing data vocabulary and API linkage, standardization required for data linkage between IoT devices and the like, ensuring ease of accessibility to data, and encouraging integrated utilization of data held by central and local governments and private sector business operators, etc.

(Develop technologies to support the platform)

- The government will promote research and development focused on networks and other technologies to support the platform for data circulation [fifth-generation mobile communications systems (5G), software control, utilization of virtualization technology, etc.], as well as international standardization, comprehensive trials, and social implementation of such technologies. Moreover, it will undertake initiatives to promote competition policy, such as ensuring the necessary conditions for fair competition between business operators, facilitating access to a cheap, high-speed broadband environment.
- To deal with such issues as the huge demand for addresses for IoT devices arising from the advance of the IoT society, the government will promote the transition of mobile networks and other communications infrastructure to IPv6 by conducting surveys of progress in the adoption of IPv6 and providing support in this area, among other efforts. In addition, to address increased traffic in the age of big data and the IoT, the government will promote IT infrastructure environment development, including efforts to secure frequencies that take into account the regional distribution of data centers and new radio wave usage needs.
- To contribute to encouraging data utilization in a variety of fields from a technical perspective, relevant ministries and agencies will work in partnership to provide strong backing for research and development of innovative key technologies in such areas as AI.
- Regarding the social and ethical issues raised by the spread of AI and its increasing use in networks, the government will promote ongoing discussions within Japan and overseas on such matters as the formulation and revision of principles to serve as an international point of reference concerning AI research and development considerations, and will take any other steps required.

II-2-(2) Promoting the smooth circulation and utilization of data

[Objective of the initiative]

An increasingly large, diverse array of data – including data concerning individuals – is circulating, due to the widespread popularity of smartphones, IoT devices, etc. Amid this situation, the government will promote smoother circulation and utilization of data, with the aim of resolving the problems specific to a super-aging society with a low birthrate by such means as the development and provision of new services.

In doing so, to encourage greater data circulation and utilization, it will be vital not only to develop the aforementioned platform for data circulation, but also to strive to foster social awareness of the benefits of data circulation and utilization, and to consider such matters as approaches to the involvement of the individual in relation to personal information in the context of data circulation.

In conjunction with this, it will also be necessary to undertake human resource development, etc. to cultivate personnel with an understanding of IT and the ability to utilize data to resolve social issues in a variety of fields, so that Japan can adapt to future structural changes in industry and employment stemming from the advent of a society in which technologies such as the IoT and AI form the basis of our socioeconomic activities.

[Outline of the initiative]

(Promoting the smooth circulation and utilization of data)

- To foster social awareness of the benefits of data circulation and utilization for business operators and individuals, the government will gather and analyze data circulation and utilization use cases and publish the results. Its aim in doing so is to help business operators make their businesses more efficient and develop new services, while raising awareness among individuals about the benefits to them, such as increased ability to adapt to the diverse needs of individuals and enhanced convenience across society as a whole, as well as promoting efforts to educate individuals in data utilization.
- With the objective of encouraging the smooth circulation and utilization of data, the government will promote efforts to identify issues and examine solutions from both technical and institutional perspectives in relation to a number of new mechanisms. These include a mechanism for individual involvement in data circulation (system that enables individuals themselves to manage the parties to which their data is provided, etc.), approaches to the formation of a sound data trading market, and the Data Credit Bank Scheme (also known as

the “Information Bank”), under which individuals could entrust their data to a reliable party, which would use it to benefit the individual or society. In doing so, the government will also take into account the rights of the business operators utilizing such data.

- The government will aim to take the requisite legislative measures in 2017 to build a framework for activities and businesses that safely and securely collect, manage and anonymize large quantities of data concerning treatment and examinations, so that information from medical and other fields can be used in research into new drugs and therapies.
- The government will study the use cases for Personal Health Records (PHRs) which chronologically manage and utilize an individual’s medical care and health information over the course of their life, the issues they entail, and approaches to mechanisms for resolving those issues. By the end of FY2018, the government will examine measures aimed at the verification, establishment, and widespread deployment of these use cases.
- Regarding the introduction of a medical and health care ID system and online medical insurance eligibility checks, the government will consider such matters as specific mechanisms and practical matters relating to these systems before the end of FY2016, taking into account reports including the Report by the Study Group on the Use of an ID Number System in Medical and Other Fields⁽²⁸⁾. It will then begin to develop the system in FY2017, aiming to begin its phased introduction in FY2018, with the goal of starting full-scale operation in 2020.
- The government will examine ways of utilizing IT to achieve greater efficiency and standardization in processes for reviewing medical service fees, reaching a conclusion by the end of 2016. It will then promote initiatives aimed at achieving high-quality medical care in the era of data-based health care.
- Regarding personal information held by administrative bodies and incorporated administrative agencies, among others, the government will seek to ensure the enactment of reform bills for laws including the Act on the Protection of Personal Information Held by Administrative Organs (Act No. 58 of 2003) at the earliest possible opportunity. In addition, to ensure the smooth circulation of data, it will undertake deliberations concerning such matters as standards for the selection, processing, and security of data subject to processing to

⁽²⁸⁾ Drafted by the Study Group on the Use of an ID Number System in Medical and Other Fields on December 10, 2015.

render it unidentifiable (anonymized), and promote initiatives that will enable information rendered unidentifiable to be utilized effectively, while also seeking to protect the rights and interests of individuals.

Moreover, the government will undertake specific deliberations to encourage the integrated use of personal information held by central and local governments and private sector business operators, among others, in fields where this will make a particular contribution to promoting the public interest.

- The Personal Information Protection Commission, which was established in January 2016, will strengthen frameworks for ensuring the smooth circulation of data, while protecting the rights and interests of individuals. In addition, it will promote proactive initiatives aimed at the smooth international circulation of data, by such means as Japan's official participation in international cooperative frameworks for the first time and the development of cooperative relationships with enforcement authorities in other countries.

(Response to new services)

- Sharing economy services utilizing idle assets, etc. are a new form of economic activity based on the smooth circulation of data; to support the sound development of such services, the government will consider the establishment of voluntary rules by private sector groups and the like, as well as other measures required from the perspective of encouraging new business creation.
- The Investigative Committee on Approaches to Private Room Rental (*Minpaku*) Services, which was set up by the Ministry of Health, Labour and Welfare and the Japan Tourism Agency, will examine such matters as the development of rules on private room rental and draft its final report by June 2016, or thereabouts. The government will then work on the necessary legislation, based on this report.

(Human resource development)

- The government will comprehensively implement the Comprehensive Human Resource Development Initiatives for the Fourth Industrial Revolution⁽²⁹⁾ to ensure that Japan achieves victory in the Fourth Industrial Revolution. These are measures that seek to cultivate general abilities – including the logical thinking and creativity required to solve various problems and

⁽²⁹⁾ Submitted by the Minister of Education, Culture, Sports, Science and Technology at the 26th meeting of the Industrial Competitiveness Council on April 19, 2016.

the ability to utilize information – at the elementary and secondary education level, while helping to address the particularly pressing issue of developing and securing personnel at the higher education and researcher level in the fields of the IoT, big data, AI, and security, and the data scientists who lay the foundations for their work. In doing so, ministries and agencies will work in partnership with industry to revise the Curriculum Guideline and enhance the IT infrastructure environment, to promote programming education. Moreover, the government will promote the requisite institutional, environmental, and other initiatives, taking into account deliberations aimed at the introduction of digital textbooks and teaching materials.

- The government will support initiatives by private sector companies and others to secure personnel capable of utilizing technologies such as the IoT, big data, and AI in operational processes and business, with the aim of strengthening corporate competitiveness through the creation of new services, as well as creating re-employment opportunities, among other objectives. To this end, it will consider mechanisms for retraining technical personnel (recurrent education) and developing human resources to drive IT utilization at private sector companies and the like.
- To address the shortage of IT personnel in provincial areas of Japan, the government will consider measures for the effective use of IT utilization personnel in these regions, in conjunction with efforts to promote the development of new human resources dealing with data circulation and utilization. These measures will include using the human resource savings achieved via BPR through IT utilization by local governments to invest in enhancing new added value in such areas as the IoT, AI, security, and open data.

(Eliminating the digital divide (reaping the benefits of the smooth circulation and utilization of data))

- With the baby-boom generation entering their 70s in 2017, the government will selectively promote initiatives to encourage IT utilization and improve IT literacy among seniors by 2022, when this generation will become “late-stage elderly.” Its objective in doing so is to promote initiatives aimed at ensuring the safety and security of seniors (including encouraging them to use social media, etc. to prevent isolation) and expanding consumer spending by providing support for online shopping and the like.
- In light of the entry into force of the Act on the Elimination of Discrimination against Persons with Disabilities (Act No. 65 of 2013), the public and private sectors will work together to promote such initiatives as studies of web accessibility for people with disabilities

and seniors, and efforts to develop and supply IT equipment and related services that are easy for people with disabilities and seniors to use.

- To ensure that an environment conducive to IT utilization is available to all citizens, the government will promote initiatives (including eliminating dead zones such as Shinkansen (bullet train) tunnels, which are currently out of reach of mobile networks) focused on developing and securing local IT infrastructure (ultra-high-speed broadband and mobile communications) in outlying islands and other unprofitable areas, taking into account the specific attributes of each area.

II-2-(3) Implementing Solution-oriented Open Data (Open Data 2.0)

[Objective of the initiative]

In conjunction with efforts to develop a platform for data circulation and further the smooth circulation and utilization of data, the government will seek to achieve concrete progress in promoting Solution-oriented Open Data, to facilitate the sharing and use throughout society of data held by central and local governments and private sector business operators, among others.

In supporting open data initiatives by local governments, it will be necessary to bear in mind the need to encourage an independent approach that takes into account local characteristics, rather than adopting a uniform approach nationwide.

[Outline of the initiative]

- As well as encouraging the open data cycle⁽³⁰⁾ by establishing prioritized areas on the basis of Japan's policy issues (achieving a society in which all citizens are dynamically engaged, and the Tokyo Olympic and Paralympic Games), the government will request the cooperation of private sector business operators and others in open data initiatives, within certain areas (cooperative rather than competitive areas).
- In the case of open data initiatives by local governments, the government will concurrently promote both open data initiatives in common fields that span multiple regions, such as disaster risk reduction, and open data initiatives tailored to the specific attributes of individual regions.

⁽³⁰⁾ The phenomenon in which, when promoting open data in a specific field, new data disclosure needs, etc. arise as users gain insights into issues and resolve them, leading to further progress in making open data available.

- As well as formulating new indicators focusing on the utilization of open data, taking into account fields relating to issues common to all countries, such as disaster risk reduction, the government will work with the Organisation for Economic Co-operation and Development (OECD) and other international organizations, etc. to deploy these indicators overseas. In conjunction with this, the government will promote initiatives focused on the dissemination to other countries – primarily in Asia – of such tools as the Open Data Package, which was developed for local governments.

II-3. [Priority 3] Resolve issues specific to a super-aging society with a low birthrate

[Objective of the initiative]

While making effective use of Priorities 1 and 2, the government will also promote specific initiatives to resolve issues inherent to a super-aging society with a low birthrate, which is a challenge for the entire country. Furthermore, the government will deploy successful national initiatives at the regional level and outstanding local initiatives nationwide.

In particular, efficient investment via IT utilization and improved productivity through innovation are essential to achieve a society in which all citizens are dynamically engaged, regional revitalization, active social participation by women, and national resilience. Accordingly, focusing on the following three fields, the government will implement nationwide IT utilization initiatives to contribute to efforts to promote such strategies as the “three new arrows (a strong economy that creates hope; childcare support to help people pursue their dreams; and social security that ensures peace of mind)”⁽³¹⁾.

- (1) Use of big data to transform the social security system
- (2) Use of the Social Security and Tax Number System to transform administrative services for childcare
- (3) Initiatives helping to solve issues via IT utilization

[Outline of the initiative]

⁽³¹⁾ The targets of the three new arrows are to achieve nominal GDP of ¥600 trillion, a desirable birthrate of 1.8, and no one forced to leave work to provide nursing care.

II-3-(1) Use of big data to transform the social security system

- The government will promote the standardization of operational processes in nursing care by analyzing data such as that utilized by nursing care staff to ascertain the status of service users. In addition, it will examine ways of enhancing the quality of nursing care services and improving productivity, including considering proper and meticulous nursing care for service users and mechanisms for evaluating that care. Moreover, the government will promote initiatives aimed at enhancing the quality of services and improving productivity⁽³²⁾ by such means as the utilization of nursing care robots.
- The government will move forward with efforts to develop intelligent⁽³³⁾ medical care via 8K and other high-resolution imaging technology and the mass collection and analysis of data from medical examinations and medical receipts held by insurers. In addition, it will promote initiatives focused on improving the quality of medical and health care services via research to support efforts to promote diagnosis and data-based health care.

II-3-(2) Use of the Social Security and Tax Number System to transform administrative services for childcare

- To reduce the burden of childcare experienced by the public in relation to pregnancy, childbirth, and child rearing, the government will consider developing one-stop services for child-rearing using the Social Security and Tax Number System, so that Individual Number Cards can be used to carry out procedures in a single online process, including the submission of applications to local governments for various childcare services. At the earliest, it will seek to start bringing these services to fruition in July 2017, when the local government Cooperation Network System for Personal Information is due to begin operating.

As well as undertaking the necessary deliberations and arrangements by the end of FY2016, the government will continue to promote deliberations concerning other services. In the case of local government procedures which require face to face meetings to ascertain the status of the household or coordinate services with other support required, the government will give adequate consideration to this aim.

⁽³²⁾ The government has launched pilot initiatives in Miyakojima City in Okinawa Prefecture and Shodoshima Town in Kagawa Prefecture, focused on using big data to improve the quality of nursing care services.

⁽³³⁾ This refers to the changes brought about by the advanced utilization of big data, which will become possible as a result of improved computer and communications network performance, and more sophisticated artificial intelligence technology due to advances in deep learning technologies and neuroscience research.

- With a view to further expansion of one-stop services for child-rearing, the government will promote deliberations regarding such matters as approaches to future linkages with the Individual Number Portal, so that members of the public can use their Individual Number Cards to carry out the full range of childcare-related procedures in a single process, such as obtaining the supporting documents needed for applications without having to visit a local government office in person or apply for them by post.

II-3-(3) Initiatives helping to solve issues via IT utilization

II-3-(3)-(i) Strengthening industrial competitiveness

(Agriculture)

- The government will promote efforts to protect producer rights and digitize the know-how of experienced farmers via the nationwide deployment and widespread adoption of guidelines⁽³⁴⁾ summarizing specific examples of the attribution of agriculture information (names of crops and farm work, etc.) and rights to this. In addition, it will work on promoting the development of AI-based robots to carry out agricultural work and using the IoT to achieve greater efficiency in logistics involving agricultural produce, among others, in order to achieve dramatic productivity improvements in agriculture and peripheral industries, thereby accelerating efforts to boost the industrial competitiveness of agriculture and enhance international competitiveness.
- To encourage new entrants to agriculture, the government will promptly update the data in the Agricultural Land Information System. In addition, it will promote efforts to make such information as government data and research outcomes in the field of agriculture available as open data.

(Tourism and the Tokyo Olympic and Paralympic Games)

- The government will promote initiatives to build a comfortable environment that enables everyone – including foreign visitors to Japan – to access the most appropriate information and find their way around on foot without a guide or assistance, by such means as providing information tailored to individual attribute information, using transport-related smart cards,

⁽³⁴⁾ Individual Guidelines on the Names of Crops Used in Agricultural IT Systems (Fully Operational Version), etc. (drafted on March 31, 2016 by the Agriculture Subcommittee of the Expert Panel on the New IT Strategy) (described above).

smartphones, and cloud infrastructure, among other technologies. It is anticipated that this will enable cities to function on a more advanced level and promote economic revitalization by expanding inbound tourism.

- To implement an innovative approach to immigration screening using cutting-edge technology, the government will obtain information for personal identification in advance via the introduction of Biocard⁽³⁵⁾, thereby helping to reduce waiting times at airport immigration counters for foreign visitors to Japan.
- Based on studies and analyses of the movements and interests of foreign tourists visiting Japan carried out using big data concerning GPS location information and comments on social media by foreign travelers, among others, the government will draft and publish a guide for DMOs⁽³⁶⁾, etc. in each part of the country concerning the use of big data and promote initiatives aimed at its use in developing regional tourism destinations.
- To provide a Wi-Fi environment that foreign travelers and others can access easily even when sightseeing or in the event of disaster, the government will promote the development of free Wi-Fi environments in key locations at major tourist attractions and disaster management bases (including schools, etc. designated as evacuation shelters/sites [estimated total: 29,000 locations⁽³⁷⁾]) by 2020, based on a development plan to be drafted by the government. Moreover, the government will promote initiatives⁽³⁸⁾ to build authentication linkage mechanisms that facilitate seamless Wi-Fi connections across the boundaries between business operators.

(Road transport)

- Based on the Public-Private ITS Initiative/Roadmaps 2016⁽³⁹⁾, the government will promote initiatives that bring relevant ministries and agencies together with private sector companies

(35) A device that separates off the process of providing information for personal identification (fingerprints and photograph of the face) from the rest of the screening procedures conducted at immigration counters, enabling the information for personal identification to be obtained in advance while waiting to see an immigration officer.

(36) Destination Marketing/Management Organizations. This is the generic term for tourism business management functions/organizations, involving such tasks as drafting and promoting marketing-based tourism strategy and building consensus among a wide range of stakeholders in the region.

(37) The number of locations will be scrutinized further going forward.

(38) By 2018, the government will promote initiatives to build authentication linkage mechanisms that facilitate seamless Wi-Fi connections across the boundaries between business operators at more than 200,000 locations, by such means as promoting the effective utilization of existing Wi-Fi access points.

(39) Approved by the IT Strategic Headquarters on May 20, 2016 (described above).

in the development and commercialization of safe driving support and automated driving systems, and the utilization of traffic data, etc.

- In particular, in the area of automated driving systems, the government will promote initiatives such as the development of systems and infrastructure so that automated driving systems on expressways and unmanned autonomously driven transport services in limited areas are available by 2020, including carrying out the requisite field tests by 2017.

(Development of new businesses)

- Based on the awareness that developing an environment conducive to smooth social implementation of the IoT, big data, and AI is a matter of urgency to ensure that the evolution these technologies leads to innovation, the government will, via the IoT Acceleration Consortium, identify and select advanced projects and provide funding and support for regulatory reforms.

In conjunction with this, the government will promote IoT-related technology development, trials, and international standardization, as well as encouraging data circulation and formulating security guidelines.

It is anticipated that this will not only promote the smooth social implementation of the IoT, big data, and AI, but also create new business models, leading to industrial development and economic revitalization.

- The government will promote initiatives focused on the utilization of Corporate Numbers to (1) reduce costs associated with the gathering of information by central and local governments and private sector business operators, among others; (2) streamline tax administration, social insurance, and other procedures required when starting up a business, and enable business operators and others to revitalize business by developing a one-stop service for online procedures; and (3) make administrative work faster and more efficient.

In conjunction with this, in light of the November 2015 introduction of a rule requiring ministries and agencies to specify Corporate Numbers as well as organization names on their websites, in January 2016, the government began progressively making information about corporations and their Corporate Numbers available as open data, including matters relating to procurement, licenses, permits and approvals. The Biz Portal (tentative name) is due to begin operating in January 2017.

- In light of the outcomes of initiatives focused on the revision of systems based on the Basic Guideline for IT Utilization⁽⁴⁰⁾ and private sector needs, among others, the government will revise the Intensive Action Plan for Regulatory and Institutional Reform to Expand Utilization of IT⁽⁴¹⁾ by the end of 2016 to provide strong backing for IT utilization in administrative procedures and business transactions.
- The government will aim to utilize big data resulting from growth in cashless transactions to gain an accurate understanding of the increasingly diverse needs of domestic consumers and foreign visitors to Japan, among others, promote development of excellent products and services, and further stimulate inbound demand. To this end, during 2016, it will promote initiatives such as efforts to develop an environment conducive to the consolidation and utilization of a diverse array of data generated throughout the supply chain, including standardizing the requisite data concerning credit card payments and purchase information, and using electronic tags⁽⁴²⁾ and other forms of IT.
- Following the prompt enactment of the Bill for Partial Amendment of the Banking Act to Address Advances in Information Technology and Other Environmental Changes, which was submitted to the Diet in March 2016, the government will put in place the requisite ordinances without delay to ensure that it enters into force as soon as possible, including responses to virtual currencies and technological innovations arising from advances in IT. Moreover, with a view to further deploying FinTech⁽⁴³⁾, among other developments, the government will continue deliberations concerning such matters as institutional issues relating to finance, based on the report by the Financial System Council (published February 2016), including the positioning of intermediate service providers in the payment process.

II-3-(3)-(ii) Achieving regional revitalization

- The government will provide more effective support for initiatives by local governments and citizens contributing to regional revitalization, by seeking to augment the data that can be utilized by the Regional Economies Analysis System (RESAS) and enhance the ways in which it is used, in order to further encourage the utilization of data held by the public and private sectors concerning regional economies.

⁽⁴⁰⁾ Approved by the IT Strategic Headquarters on June 30, 2015.

⁽⁴¹⁾ Approved by the IT Strategic Headquarters on December 20, 2013.

⁽⁴²⁾ Contactless technology capable of instantly reading information from multiple tags.

⁽⁴³⁾ FinTech is a portmanteau word coined from the words “finance” and “technology” and mainly refers to innovative financial service businesses that utilize IT.

- To promote the emergence of an entrepreneurial spirit among Japan’s small and medium-sized enterprises and provincial regions, as well as the resolution of regional issues and the revitalization of local industry, the government will encourage initiatives aimed at identifying human resources with good future prospects, providing expert support, and reutilizing talent with skills and experience, taking into account analyses of the value and effects of the government’s package of IT-related measures (the Entrepreneurship by IT Package)⁽⁴⁴⁾.
- The government will identify priority fields contributing to efforts to solve regional disparities and other problems in daily life; these fields will include communications, broadcasting, the agriculture, forestry and fishery industry, medical care, cities and homes, and tourism. In addition, the government will promote deliberations aimed at putting in place the systems needed to encourage data utilization, while also considering security and privacy.
- The government will support the nationwide expansion of examples⁽⁴⁵⁾ of regional efforts to utilize IT in improving productivity, such as initiatives in Nichinan City in Miyazaki Prefecture (mangoes), Iwata City in Shizuoka Prefecture (functional vegetables), and Watari Town in Miyagi Prefecture (strawberries) (using IT to develop high-added-value aspects of crops by utilizing information from sensors, etc.), and will support the establishment of these as business models.
- The government will promote i-Construction, which is an initiative aimed at achieving more appealing construction sites by improving productivity through IT utilization in all building production processes, from initial surveys to design, construction, testing, maintenance and management, and upgrading.
- The government will endeavor to further strengthen the international competitiveness of the shipbuilding industry based in various regions of Japan (which procures 90% or more of components domestically and has a production rate of 90% or more in provincial areas) to expand shipbuilding exports, achieve regional economic growth, and boost employment. To

⁽⁴⁴⁾ The Package of IT-Related Measures to Foster an Entrepreneurial Spirit (First edition approved by the Deputy Chief Cabinet Secretary for Information Technology Policy on October 30, 2014. Second edition approved on March 31, 2015). It sets out in cross-cutting “clusters” the IT-related measures to be undertaken by relevant ministries and agencies to foster an entrepreneurial spirit, covering everything from the development of entrepreneurs to the cultivation of startup companies.

⁽⁴⁵⁾ Other projects include initiatives in Shizuoka Prefecture (Satsuma oranges) and Kagawa Prefecture (olives) (described above), initiatives in Miyakojima City and Shodoshima Town (described above), an initiative in Shiojiri City in Nagano Prefecture focused on using sensors to prevent damage by birds and wild animals, an initiative in Maniwa City in Okayama Prefecture involving using the cloud to share information about forestry resources, and an initiative in Nanao City in Ishikawa Prefecture using cloud-based services to achieve greater operational efficiency in the traditional ryokan inn sector through the sharing of data about guest accommodation history.

this end, it will promote i-Shipping, which is an initiative aimed at fostering innovation and improving productivity via IT utilization in all phases of shipbuilding, from vessel design to construction and operation.

- Relevant ministries and agencies will share information about challenges faced in introducing telework and will examine effective measures linked to telework promotion measures to contribute to solving these problems, with the objective of using telework to facilitate a good work-life balance, achieve greater operational efficiency, improve productivity, and contribute to regional revitalization, among other goals. In particular, national civil servants will take the lead in telework and ministries and agencies will carry out fact-finding surveys to promote the widespread adoption of telework throughout society, and will publish the findings along with examples of telework initiatives. Moreover, the government will promote the nationwide deployment of “Hometown Telework,” to encourage people and work to flow back to provincial regions.

II-3-(3)-(iii) Making daily life more convenient for citizens using the Social Security and Tax Number System

- As well as starting to share central and local government procurement information in FY2016, the government will streamline central and local government procurement procedures, application procedures and regular administrative procedures using Individual Number Cards, and move forward with deliberations on proposals for their utilization in cases where they will be highly effective in making processes more convenient for citizens. In addition, the government will promote effective initiatives aimed at helping private sector business operators and others to reduce operational costs and revitalize business through information sharing.
- The government will consider diverse access methods and institutional measures aimed at the authentication of rights in corporate transactions using Japanese Public Key Infrastructure, and will submit a bill to the Diet as soon as possible.
- The government will establish a mechanism enabling both the public and private sectors to use the official identity authentication functions of Individual Number Cards and will progressively develop their uses in conjunction with the full-scale launch of the Individual Number Portal in July 2017. These uses will include receiving public and private sector identification documents using delivery services provided by private sector business operators,

one-stop services for procedures relating to child-rearing support, moving house, and death, among others, and offering diverse methods of accessing electronic administrative procedures using televisions, smartphones, and terminals in convenience stores.

- The government will consider measures to make Individual Number Cards more convenient and the advisability of those measures, examining such matters as the continued use of their public key function as an electronic certificate for user identification after relocation overseas; enhancement of the details provided on the card, such as inclusion of the individual's former family name; efforts to encourage effective and efficient use through cloud-based access to local government services such as public facility reservations and local government reward schemes, using the Personal Key elements (official identity authentication functions, etc.) of the Individual Number Card; and promoting the use of points from such reward schemes in shopping districts and the like. The government will then progressively implement these measures, starting with those that are feasible right away.

II-3-(3)-(iv) Creating a safe and disaster-resilient society

- The government will promote the repair of local communications and broadcasting infrastructure damaged by the Kumamoto Earthquake. In addition, taking into account such matters as the extent of the damage there, the government will seek to make communications and broadcasting infrastructure more resilient, including helping to support efforts to secure personnel within the region, as well as ensuring a stable flow of information and promoting supply chain management⁽⁴⁶⁾, with a view to preparing for future major disasters.
- The government will promote initiatives including the construction of information infrastructure for disaster prevention and mitigation that enables all members of the public to use reliable and diverse communication techniques to obtain accurate information in the event of a disaster. This will be achieved through the use of geospatial intelligence (G-spatial information) and space infrastructure such as the quasi-zenith satellite system. The government will examine the effectiveness of approaches to disseminating and gathering information – including under normal circumstances – using private sector services such as social media and maps of routes that are passable following a disaster, based on experiences from disasters such as the 2016 Kumamoto Earthquake. It will then categorize pioneering

⁽⁴⁶⁾ A management technique focused on comprehensively managing order placement and receipt with suppliers/clients, material/component procurement, inventories, production, and product delivery, among other aspects, and making them more efficient in order to increase corporate earnings.

initiatives and compile them into a guide to which various regions can refer. It will also promote its extensive use by local governments.

- The government will promote initiatives aimed at commencing nationwide operation of the L-Alert system, which simultaneously transmits local disaster information and the like to a diverse array of media. In addition, it will promote initiatives aimed at rapid information transmission, and encouraging efforts to enhance and utilize the information transmitted.
- Based on considerations including the status of initiatives by local governments and others, the government will examine approaches to sharing information (including reviewing the Social Security and Tax Number System) so that the Social Security and Tax Number System can be used to ascertain evacuation status more accurately, swiftly, and efficiently in the event of a disaster or when providing support to help people to rebuild their lives. The government will then aim to draft a policy on such initiatives before the end of FY2016.
- The government will promote the development of data centers in provincial areas of Japan in order to encourage decentralization of data centers to areas outside the Tokyo metropolitan area, where they are currently concentrated. Its objective in doing so is to promote IT utilization in the event of a major disaster and the nationwide deployment of IoT services in the future.
- The government will promote initiatives that will enable social infrastructure to be used safely for longer. To this end, it will promote the development and utilization of technology including advanced sensors, robots, non-destructive inspection, and computer-aided construction to ascertain and build up an accurate understanding of the status of social infrastructure and render this in visual form.
- The government will promote initiatives aimed at utilizing IT to achieve a disaster-resilient society capable of saving those lives able to be saved, without fail. These include the use of geospatial intelligence (G-spatial information) and space infrastructure such as quasi-zenith satellites to deal with the situation at the site of a disaster, including evacuation guidance, firefighting, confirming the safety of those affected by the disaster, and enhancing the functions of evacuation shelters. They also include detailed earthquake and tsunami damage forecasts using advanced simulations and the development of cutting-edge supercomputers that will assist in this forecasting process.

III. Implementation Structures, etc.

The government will engage with its targets in specific terms as well as in a comprehensive manner and undertake cross-cutting coordination to ensure that ministry and agency initiatives interlock with each other and make strong progress toward their goals. Through this, the government will aim to achieve an upward spiral via timely and appropriate operation of the PDCA cycle, so that Japan can become the world's most advanced model for IT utilization.

III-1. Exercise of the Government CIO's guidance functions

The Government CIO will exercise guidance functions to ensure that the government makes strong and steady progress in implementing the IT Declaration.

- Focusing on the initiatives for Priorities 1 through 3, the Government CIO will work in close partnership with relevant ministries and agencies to formulate an action plan that cuts across ministries and agencies to facilitate the smooth and efficient implementation of each measure (exercise of policy coordination function).
- In promoting the IT Declaration, the Government CIO will formulate the government's policy (policy on cost estimates) for achieving total optimization by redoubling efforts aimed at more focused, efficient IT investment (ensuring cooperation between each ministry and agency and undertaking targeted investment in specific fields).
- The Government CIO will also prepare guidelines specifying technical and specialist matters to enable ministries and agencies to implement specific measures relating to the IT Declaration in an integrated manner. In addition, the Government CIO will evaluate the promotion of measures (effect of investment, progress status, etc.) at each stage in the PDCA cycle.
- To ensure that the financial resources made available through the Priority 1 initiatives and those secured through the revision of the existing IT measures of ministries and agencies can be put toward Priorities 2 and 3, the Government CIO will evaluate the IT-related measures of ministries and agencies and the government will revise existing measures, while reflecting selected specified measures in the budget to facilitate investment in these as a priority.

III-2. Frameworks for partnerships with relevant headquarters, etc.

In light of the fact that IT is becoming central to social change, the IT Strategic Headquarters will work even more closely than before with various bodies in promoting the government's IT-

related policies. These bodies include the Intellectual Property Strategy Headquarters, the Strategic Headquarters for Space Policy, the National Resilience Promotion Office, the Headquarters for Healthcare Policy, the Cybersecurity Strategic Headquarters, the Headquarters for Overcoming Population Decline and Vitalizing Local Economy in Japan, the Headquarters for Japan's Economic Revitalization, the Headquarters for the Promotion of Administrative Reform, the Committee for the Advancement of Utilizing Geospatial Information, the Council on Economic and Fiscal Policy, the Council for Science, Technology and Innovation, and the Council for Regulatory Reform.

In particular, investment in security helps to ensure the safety and peace of mind of users by increasing the trustworthiness of IT systems, so the government will continue to strive to bolster public and private sector security measures based on the Cybersecurity Strategy⁽⁴⁷⁾.

III-3. Designation and management of evaluation indicators for progress management

The government will set and manage key performance indicators (KPIs) to quantitatively measure whether or not the targets and specific measures for achieving those targets are being executed according to plan, to check the progress status and outcomes of the specific initiatives based on the IT Declaration.

In order to ensure more appropriate evaluation indicators, the government will ceaselessly conduct reviews to confirm whether or not the policy effects, targets, KPIs, and measures correspond with each other.

III-4. International deployment to make an international contribution and enhance international competitiveness

To promote the IT Declaration and help to create a safe, secure, and comfortable life for citizens, the government will pursue the international deployment of successful models that provide comprehensive solutions using IT.

In doing so, it will make an international contribution and enhance Japan's international competitiveness via international deployment that comprehensively utilizes strategic external PR, pilot programs, support for human resource development, and the provision of funding⁽⁴⁸⁾, among other approaches.

⁽⁴⁷⁾ Approved by the Cabinet on September 4, 2015.

⁽⁴⁸⁾ Investment, etc. by the Fund Corporation for the Overseas Development of Japan's ICT and Postal Services (Japan ICT Fund; established November 2015).