

## **A New Strategy in Information and Communications Technology (IT)**

May, 2010

### **I. Basic recognition**

Information and communications technology (IT) revolution is in essence a revolution of sovereignty over information. Transformation of a government-driven (information supplier) society into a citizen-driven (taxpayers and consumers) society involves a prerequisite – that the government must become more transparent freeing all information that it holds. IT plays a significant role in the transformation process.

In a citizen-driven society, knowledge and information are shared at the citizen's level; it becomes a true knowledge-information society; and the quality of the citizens' lives improves dramatically.

The new IT strategy is in no way an extension of the previous IT strategies. Instead, it is a strategy with focused emphasis (with three areas of objectives) that will support non-linear leaps and bounds in establishing a new society where the citizens hold sovereignty. This new IT strategy, in conjunction with a new national growth strategy (separately developed), should support a continuous growth of the country.

Accordingly, in implementing this IT strategy, we shall thoroughly investigate the reasons why the previous related policies have been ineffective. We shall advance the coordination between the new IT strategy and other policies; and the collaboration among related governmental agencies, between the national and local governments, and between the government and private sectors. Our commitment is to implement the IT strategy rigorously throughout the country such that a country of citizen's sovereignty may be achieved at an early date.

### **II. Three areas of the objectives and goals**

In the interest of promoting citizens' sovereignty, we shall first enforce IT revolution within the government to achieve a citizen-oriented electronic administration. Second, we shall recreate bonding in local communities by taking utmost advantage of what IT applications

might offer. Third, we shall aim at innovatively creating new markets and internationally expanding them.

To realize these three-pronged objectives, we shall set up concrete goals as listed below.

### **1. Delivering a citizen-oriented electronic administration**

- By 2020 the citizens will no longer be required to visit the governmental offices to file applications or obtain certificates that are closely related to their daily lives. All that is required is to make just one stop at home or work as required for the process 24 hours a day, 7 days a week. By 2013, our goal is to enable over 50% of the citizens to start using the electronic services through the administration terminal booths installed in convenience stores, governmental agencies, post offices and such.

- By 2013 the electronic administration shall be available frugally and efficiently at the national government level (by 2020 over 50% of the local governments). The electronic service shall be impartial and convenient enabling the citizens to monitor the administration and control their own personal information held by the government, and to feel the presence of a transparent and reformed administration.

- Also by 2013 we shall disclose administrative information in formats that will allow secondary applications while giving due consideration to the protection of personal data. As a rule, disclosure will be made on the Internet. The citizens will then be able to feel the presence of an open government.

### **2. Recreating bonding in local communities**

- By 2020 we shall enable every citizen, regardless of his or her location, to receive high-quality medical services through effective applications of IT. Also by 2020 all citizens, senior citizens included, shall be able to receive medical, care and watching services right at home, again through effective use of IT.

- Also by 2020 we shall establish an institutional and lifelong educational environment through IT applications in order to create a society where every citizen may make use of information and communications technology at will.

- By approximately 2015, we shall have completed fiber-optic "highways" enabling every household to enjoy a broadband service. The service will contribute to dramatic improvement in medical, educational, governmental, and other services related to the citizens' daily lives and result in revitalizing their communities.

### **3. Creating new markets and expanding internationally**

- We shall promote the development of cloud computing and other new information technologies and the elimination of restrictions related to them in various areas – for example, environmental and energy fields, medical and health care services, local tourism, and community revitalization. Eventually, by 2020, we shall create new related markets worth 70 trillion yen, while eyeing Asian markets as well.

- By 2020 a smart grid network shall become a common practice. We shall also see the home and business sectors spearheading the reduction in CO2 discharge as the IT-aided zero-energy architecture becomes a reality in typical new homes and in all new public buildings. Also by 2020, we shall accelerate reduction in automotive CO2 emission through the use of the intelligent transport systems (ITS) while aiming at reducing traffic congestion on major highways by 50% of the current level.

- By 2013 we shall advance the concentrated collaborative research and development among the industrial, academic and governmental sectors in such strategic fields as: new-generation fiber optic network, next-generation wireless technology, cloud computing technology, next-generation computers, smart grid, robotics, revolutionary devices like next-generation semiconductors and displays, embedded systems, three-dimensional (3D) video, voice translation, and software engineering. The goal is to enable the country's IT enterprises to strategically acquire intellectual property rights and international standards in major overseas markets and deploy them internationally.

## **III. Strategy by the field**

### **1. Developing a citizen-oriented electronic administration**

## **(1) Accomplishing IT-aided administrative reform and a transparent administration**

### **Priority Measures**

- We shall identify among the administrative services only those services which are most frequently used, hence most beneficial to the citizens if offered 24 hours, 7 days a week (for examples, issuance of the Certificates of Residence, Certificates of Registered Seal, and Certified Copies of Family Register); and provide such services on-line, or off-line (for example, at public administration terminal booths) possibly upon collaboration from the private sector.
- We shall develop a citizen identification (ID) system to serve as the common infrastructure for electronic administration, usable by the governmental and private sectors alike, which would enhance the citizen's confidence in the social security system and will be implemented integrally with the taxation system. The national and local governments shall develop a system that will allow individuals to monitor and control the way the government utilizes their own personal information.
- We shall install government Chief Information Officer (CIO) that will be the commanding post specifically mandated to advance electronic administration to streamline the administration in conjunction with administrative reforms. Streamlining efforts are to be premised on reviewing the cost-effectiveness of previous IT-related governmental investments and compiling the lessons learned from them. In advancing the electronic administration together with the foregoing policies, we shall use the lessons so learned as the basis to implement operational reviews (i.e., administrative reform) focused only on highly cost-effective achievements. We shall ultimately develop a universal IT infrastructure. The infrastructure development shall include the utilization of cloud computing technology and other such technologies and coordination of company coding systems.

### **Specific Undertaking**

We shall first install a task force under the Planning Committee, and with the national and local governments mutually collaborating as required, implement the measures listed below.

i) Reviewing previous IT-related investments; and Implementing administrative reform based on the lessons from review

During FY2010 we shall be conducting reviews of government operation (i.e., administrative reform) in collaboration with the Government Revitalization Unit while summarizing the lessons learned from the previous IT-related investments. We shall ultimately develop a basic policy for advancing the electronic administration on the principal that we invest only for reforms ("no reform, no investment"). The development shall include expeditious installation of the government CIO and other promotional mechanisms.

(Cabinet Secretariat; Cabinet Office; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

ii) Developing plans related to on-line access to administrative services

Within FY2010 we shall develop plans related to on-line access to the administrative services on the principle: we first study the cost-effectiveness and other aspects of on-line services; adjust the standards for the scope of the services to be offered; and only then review the operational processes from the bottom up.

(Cabinet Secretariat; and Ministry of Internal Affairs and Communications)

iii) Implementing fundamental reform in the administrative portal; and improving access to administrative services

Within FY2010 we shall study "Government Portal Site" ("e-Gov") for possible improvement in the convenience of the portal and the convenience and expansion of the application of public personal authentication service. Actual improvement shall be implemented expeditiously. Also studied and developed within FY2010 are specific plans and a roadmap for expanding the certification issuance and other services available in the administration terminal booths.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Justice; Ministry of Economy, Trade and Industry; and others)

iv) Initiating a citizen identification (ID) system; and preparing citizens' administration-monitoring system

By 2013 we shall institute a citizen identification (ID) number system as a common electronic administration infrastructure in line with the on-going study of a common numbering system for social security and taxation systems. The ID system shall, while ensuring to protect personal data, enable data coordination between the different government agencies and local governments.

Concurrently, we shall create a third-party agency to monitor the status of operation and access by the administration; and consolidate the official-purpose IC card systems. We shall also study possible collaboration with private-sector ID systems so as to provide convenient services over the Internet.

Furthermore, we shall be promoting the administrative agencies to utilize their internally held information appropriately so that a citizen filing an application, for example, would no longer be required, as a rule, to enter or attach such information to the application. We shall also be developing a system that will enable the citizens to check and verify their own personal data held by the administrative agencies.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Finance; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; and others)

v) Consolidating and aggregating governmental information systems

As to the governmental information systems, we shall further a cost-effective design and renovation only after reforming governmental operations thoroughly. As part of the program, we shall use "Government Common Platform System" incorporating cloud computing technology to consolidate and aggregate the governmental information systems, which are currently built up and operated separately at different government agencies. We shall also establish an inter-agency framework for developing and implementing a common information system.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; and others)

vi) Achieving a nation-wide universal electronic administration service

With respect to electronic administration at the local governmental level, we shall advance

the consolidation and aggregation of information systems by applying cloud computing technology in the interest of reducing burden on the users and improving administrative efficiency. Also advanced shall be mutual collaboration among the national and local governments and private sector to develop a nationwide universal digital format for all administrative procedures and coordinate company-coding systems. We shall also promote a back-office collaboration and operational process reform using standardized specifications between different local governments.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Justice; Ministry of Economy, Trade and Industry; and others)

vii) Utilizing the Forum for National and Local Governments

The Planning Committee shall utilize the Forum for National and Local Governments to ensure that the national and local governments will advance the foregoing measures in a manner consistent with one another while respecting the autonomy of local governments.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Justice; Ministry of Economy, Trade and Industry; and others)

**(2) Establishing an open government and others**

**Priority Measures**

- We shall rigorously release administration-held information in formats that are convenient for secondary use, and as a rule, offer all such information over the Internet for easy access.
- In compiling statistics and conducting investigations, we shall aggregate and convert respondents' personal information into anonymous formats to prevent personal identification of data. We shall promote the creation of new enterprises by releasing all such information, as a rule, over the Internet for easy access, and in formats that will facilitate secondary application of data.

**Specific Undertaking**

The government, after installing a task force under the Planning Committee, shall take the initiative in undertaking the following measures, and so shall the local governments as required:

i) Promoting release and offering of administrative information; and promoting citizen participation in policy making and other political activities

Following thorough operational reform, we shall continue digitizing documentation control and official document archives. We shall rigorously disclose priority information to the citizens at “Government Portal Site” ("e-Gov") and other websites; and promote the citizens to participate in making policy decisions.

(Cabinet Secretariat; Cabinet Office; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

ii) Utilizing information held by administrative agencies

We shall promote the further utilization of geo-spatial and statistical information held by the administration while taking such privacy-protective measures as the aggregation and rendering of data into an anonymous form to prevent personal identification.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Land, Infrastructure, Transport and Tourism; Ministry of Economy, Trade and Industry; and others)

## **2. Recreating bonding in local communities**

### **(1) Undertaking in the healthcare field**

#### **Priority Measures**

- A national-level information service shall be created to allow the citizens to electronically manage and utilize their own medical and health-related information in order to create an environment where the citizens may receive medical care based on their medical records anywhere in the country and undertake their own health management. As the first step toward this end we shall create a mechanism enabling individuals to electronically manage their own medication and other information. We



shall also create a mechanism wherein anonymized medical insurance claims are listed in databases so that they may be utilized in the process of standardizing and improving the efficiency and quality of services related to medical care.

### **Specific Undertaking**

All relevant governmental agencies shall undertake the measures listed below following the installation of a task force under the Planning Committee.

i) Bringing the "My Hospital Everywhere" (Japan's Personal Health Record service) concept into reality

We shall implement the "My Hospital Everywhere" (Japan's Personal Health Record service) concept that will enable individuals to electronically manage and utilize their own medical and health-related information wherever they may be. By 2013, at the latest, we shall start partial services based on the concept (management of medication and other records). To bring this concept to a reality, we shall reach decisions within FY2010 on the methodology of digitizing the detailed receipt for medical charges and dispensing records and also other elements of the concept, such as the management structure and the ownership and handling of the treatment and health records. We shall also study possible benefits that the concept may offer to the emergency medical system.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; and others)

ii) Implementing seamless community-collaborated medical services

Within FY 2010 we shall decide on a specific policy for developing data-sharing environment by 2015, at the latest, which is to be centered on a regional medical care support hospital to deal with lifestyle-related diseases and the like. This structure will enable IT-aided critical paths for community-wide collaboration and seamless sharing of data by medical, care and other health-related facilities. We shall also advance expansion and standardization of medical information systems, while promoting community collaboration in adopting autopsy imaging (Ai) to investigate the cause of deaths where seasoned doctors in this field are scarce.

Furthermore, we shall study the methodology for popularizing telemedicine to improve

convenience of patients in communities of few doctors ,which will include electronic issuance of prescriptions, defining the permissible extent of telemedicine, and setting appropriate fee schedules for providing telemedicine.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; and others)

iii) Planning for efficient medical services using medical insurance claim data and others

We shall promote further the project of Ministry of Health, Labour and Welfare to manage anonymized medical insurance claim and related data. Within FY2010 we shall be installing a team of experts to investigate and decide on the rules for utilization of such data. Based on the decisions, we shall by early FY2011 externally offer medical insurance claim data (including the Diagnosis Procedure Combination (DPC) coding data), the Specific Health Checkup data, and Specific Health Guidance data.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare; and Ministry of Economy, Trade and Industry)

iv) Promoting pharmaceutical safety through the use of medical information database

We shall aim at developing a society where pharmaceutical products may be used safely and with confidence. To that end, we shall establish a mechanism of utilizing databases of medical insurance claims and electronic medical records to improve and reinforce safety measures against pharmaceutical products whose side effects shall be monitored in real time.

(Cabinet Secretariat and Ministry of Health, Labour and Welfare)

## **(2) Working with senior citizens**

### **Priority Measures**

○In light of the fast-expanding aging society, we shall apply IT to promote senior citizen employment and society participation; to enable families and others to check on the conditions of lone seniors; and to make care-related information available to those providing medical, care and other services at the recipients' homes. We shall also attempt to improve hardware and software thoroughly to help senior citizens and persons with

disabilities to take advantage of IT.

### **Specific Undertaking**

i) Advancing in-home medical, care, watching, and other services for the aged

A revision to the remuneration schedule for medical services and care is planned for 2012. As we study how the medical and care services should collaborate with each other, we shall start studying during FY2010 the content of information to be shared between the in-home medical and nursing services. We shall also review practical methods of sharing the information. We shall promote wide use of systems for watching lone senior citizens.

Additionally, we shall study the methodology of applying IT to assist those suffering from depression, which is found to lead to the committing of suicides.

(Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

ii) Developing and disseminating hardware and software friendly to senior citizens and the persons with disabilities.

Within FY2010 we shall install an investigative structure composed of related governmental agencies and industries to decide on the required hardware and software concepts, proposals for new technological developments, methodology for disseminating existing technologies, approaches to standardization, and such. With the government agencies and private sector collaborating, we shall start implementing and promoting the development and disseminating hardware and software, as required, in FY2011.

(Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

iii) Promoting teleworking

We shall advance the development of an appropriate environment and public education to help promote teleworking. Teleworking contributes to prompting the aged and physically impaired to engage with the world, creating employment opportunities for persons of diverse employment needs – for example, women who are forced to stay home to raise their children or to care for someone – and revitalizing local communities.

(Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare;

Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; and others)

### **(3) Undertaking in the educational field**

#### **Priority Measures**

○ We shall develop an environment conducive to creating an appropriate school system for the 21st century. In such a school system, information and communications technologies will be used to (i) develop easy-to-understand classroom environment where children teach and learn from one another; (ii) reduce burden on the teachers and staff; and (iii) expand children's capability to utilize information. We shall also aim at reducing gaps in the citizens' abilities to use information, and promoting lifelong learning through the use of IT.

#### **Specific Undertaking**

Within FY2010 Ministry of Education, Culture, Sports, Science and Technology shall establish a basic policy for informatization of education. The ministry shall first present a vision of a revolution that IT applications might bring into the classroom. In order to realize such a vision, the ministry shall subsequently collaborate with other related governmental agencies to advance general use of IT in hardware, software and human resources in education in such various areas as conducting easy-to-understand classes using one information terminal or digital set for each child; promoting office support systems, with possible application of cloud computing technology, to reduce workload on teachers and staff; enhancing digital textbooks, teaching materials and other content; improving teachers' capability in teaching IT applications; enhancing school-supporting infrastructure; and supporting learning environment in the home and community.

The ministry shall also undertake measures against the shady sides of IT—promoting countermeasures against harmful information, education in information morals, and effective classroom programs to improve skills in use of information. Efforts shall also be made to promote lifelong education through effective use of community centers, libraries and other socio-educational facilities, and colleges of the air, e-Learning and the like to

enhance literacy education.

(Ministry of Education, Culture, Sports, Science and Technology; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

#### **(4) Moving toward establishment of community sovereignty and safety**

##### **Priority Measures**

○ We shall promote various measures in order to make community sovereignty a reality through IT applications, such as: utilizing white space (in broadcasting) and such to expanding the citizens' media nationally; producing and transmitting hometown content on the community culture, tourism, and products; revitalizing rural areas through IT applications; sharing of disaster information among the disaster-prevention agencies throughout the country for fast and appropriate response to a disaster; and distributing information to the residents.

##### **Specific Undertaking**

###### **i) Revitalizing local communities**

By approximately the summer of 2010, we shall arrive at a policy for effective utilization of white space in the broadcasting spectrum and other new frequencies; and promote measures to meet community needs. In particular, we shall promote the creation of hometown content and development of a transmitting infrastructure to foster creative-work industry and the like; and dissemination of suitable voice-translating systems for the tourism field. We shall advance strategic IT investments by small community enterprises; and encourage collaboration between communities, small enterprises, and IT-related enterprises.

Also promoted shall be the expansion of domestic and overseas markets for agricultural, forestry and fishery product markets through IT applications. We shall also advance the evolution of these primary sector of economy into the "sixth" sector enterprises (that is, the primary sector enterprises to take on such secondary and tertiary sector functions as production, processing, distribution, and others); and promote the development of a system for agricultural land information (map data) as well as for the newly-arriving farmers to learn the "tricks of the trade" from practical farmers.

(Ministry of Internal Affairs and Communications; Ministry of Economy, Trade, Industry and Science; Ministry of Agriculture, Forestry and Fisheries: and others)

ii) Advancing measures against disasters, crimes and accidents

Relevant government agencies shall collaborate with the Cabinet Office to complete the standardization of data held by the agencies themselves and data from local governments as soon as possible. We shall also further the development of a mechanism and network enabling the relevant local government agencies to seamlessly share their disaster-related information with the national government's Disaster Control Headquarters. The national government, while taking appropriate information security measures, shall offer disaster-preventive information, so shared, over the Internet for easy access, and as a rule, in a format that allows secondary application. Also advanced shall be sophisticated schemes for resident evacuation and bi-directional information exchange between the governments during a disaster.

We shall advance government-private sector collaboration – that is, between the government, local financial institutions, commercial facilities, and local governments – to establish a mechanism and infrastructure to enable use of information from surveillance cameras in criminal investigations for early arrest of suspects; sharing of crime-preventive information for suppression of crimes; and such. We shall also advance the adoption and deployment of cooperative driving safety support systems using IT to reduce traffic accidents.

(Cabinet Secretariat; Cabinet Office; National Police Agency; Ministry of Internal Affairs and Communications; Ministry of Land, Infrastructure, Transport and Tourism; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry; and others)

### **3. Creating new markets and expanding internationally**

#### **(1) Achieving low-carbon society through integration of environmental and IT technologies**

##### **Priority Measures**

- We shall promote Smart Grid in Japan and abroad by integrating energy networks and

IT to achieve a low-carbon society where environmental technology and information and communications technology are integrated. We shall also rigorously promote energy-saving houses and offices taking advantage of IT applications, and green transport of people and goods through an intelligent transport system (ITS). Also promoted shall be the development, standardization and propagation of new technologies using IT or in the IT field that achieves a reduced environmental burden.

### **Specific Undertaking**

#### **i) Promoting Smart Grid and low-carbon homes and offices**

We shall create, through collaboration between relevant governmental agencies and industries, an energy management system optimized for a given locale. The system will consist of smart grid technology—achieving efficient use of energy by connecting solar, wind, and other reusable energy, home appliances, storage batteries, electric automobiles, and others together—combined with surplus-heat sharing systems, transport systems, and such. We shall actively expand our country's model, not only to Europe and the US but also to the developing countries such that we would acquire a smart grid market that expands worldwide.

In conjunction with the foregoing, we shall aim at turning energy-saving home and office IT equipment, home energy management systems (HEMS), building energy management systems (BEMS) and others into practical and widespread use at an early date. (Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

#### **ii) Advancing green transport of people and goods**

We shall advance green intelligent transport systems (ITS) that collects and distributes wide-scale road traffic information, including real-time vehicle travel (probe) information, and also uses such information for road traffic control. To this end, we shall establish an ITS-related task force within the Planning Committee to study the methodology of collecting, distributing and utilizing the information and implementing the system, and draw up a practical road map within FY2010.

(Cabinet Secretariat; Cabinet Office; National Police Agency; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; Ministry of Land,

Infrastructure, Transport and Tourism)

iii) Reducing environmental burden by the IT field

We shall advance the undertaking of the measurement, publication, and standardization of an energy-saving index, including the study on establishment of a new index, toward an energy-saving data center. Concurrently, we shall promote the dissemination of guidelines that will prompt network business operators to use low-carbon-type IT equipment. We shall promote the development, standardization, and dissemination of new technologies that would reduce the environmental burden by the IT field.

(Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Economy, Trade and Industry; and others)

## **(2) Advancing IT-related R&D where we excel**

### **Priority Measures**

- We shall concentrate on research and development in the particular IT-related fields in which our country excels, and aim at putting the resultant products on the market at an early date.

### **Specific Undertaking**

We shall identify and concentrate our research and development efforts in the technological fields where a global market growth may be expected and our country is strong at (for example, new-generation optical network, next-generation wireless, cloud computing, next-generation computers, smart grid, robotics, next-generation semiconductors and displays and such other innovative devices, embedded systems, 3-D video, voice translation, and software engineering). We shall concurrently promote under international partnerships acquisition of international standards (both de jure and de fact) and intellectual property management that will lead to utilization of intellectual property. We shall advance the development and upgrading of an innovative computing environment to meet the needs of a wide range of users. We must conduct state-of-the-art IT-related research and improve the institutions of higher education that may attract capable instructors from abroad.



(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Economy, Trade and Industry; and others)

### **(3) Creating and expanding new enterprises using the younger generations' capabilities**

#### **Priority Measures**

- We shall develop an environment that is conducive to taking advantage of the capabilities of the younger “digital native” generations, and promote the creation and development of new content- and IT-related enterprises.

#### **Specific Undertaking**

##### **i) Expanding the digital content market dramatically**

In the interest of the Intellectual Property Promotion Plan 2010 (scheduled for release in May), we shall advance such projects as: supporting overseas deployment of content; developing human resources and collecting foreign human resources into Japan; archiving and networking in pop culture and the like; developing a legal system and effective usage of radio frequencies to promote use of new media; investigating problems with the existing copyright system; and implementing measures against Internet content that is in copyright violation. Digital archiving shall be advanced in non-commercial fields to help popularize digital books. In the commercial fields, we shall support the undertaking of development of standards by the private sector; establishment of right-handling rules and business models; and software and hardware (terminals) development.

(Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Economy, Trade and Industry; and others)

##### **ii) Creating new markets using spatial information services and other digital information**

Within FY2010 we shall study encoding systems for indoor/outdoor spatial data, standardized information exchange protocols, and spatial information encoding

mechanisms in order to develop a 3-D indoor/outdoor spatial information service; and promote the use of geo-spatial information in collaboration with related governmental agencies.

(Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and Ministry of Land, Infrastructure, Transport and Tourism)

iii) Developing human resources and others related to advanced IT

Within FY2010, we shall develop a practical roadmap for developing and recruiting human resources in advanced IT. The roadmap development shall be based on requirements for the future human resources in the advanced IT field, including the qualifications, abilities, and number of the personnel, which are commonly recognized by those concerned in the private sector—economic circle, universities, vocational institutions, and the like—and the relevant governmental agencies. The roadmap shall include measures for children in the elementary and middle school levels. We shall also promote venture entrepreneurs and corporate managers to take advantage of IT applications in their operation.

(Applicable Cabinet Secretariat; Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Economy, Trade and Industry; and others)

#### **(4) Securing competitiveness of cloud computing service**

##### **Priority Measures**

- We shall focus on developing a suitable environment—such as creation of new industries that take advantage of available data, promotion of data centers in Japan, and standardization of relevant technologies—to ensure the competitiveness of cloud computing services, which would contribute to improving public convenience and expanding the scope of the user industry.

##### **Specific Undertaking**

All relevant governmental agencies shall collaborate in advancing various projects: developing the next-generation cloud computing technology; ensuring mutual connectivity and compatibility between cloud computing services; establishing an application

environment such as guidelines for the use of clouds; developing domestic sites for efficient data centers; and others. Within FY2010 we shall investigate possible relaxing of the regulations related to installation of container data centers, possibly providing creation of special districts, in order to promote highly efficient data centers in Japan.

(Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry)

### **(5) Promoting acquisition and deployment of international standards and export and investment by developing an all-Japan structure**

#### **Priority Measures**

- We shall promote strategic acquisition and deployment of intellectual property rights and international standards, and export and investment on major foreign markets in strategic fields that hold high promise for growth by developing an all-Japan structure across the government agencies, private and industrial sectors, and intensifying research and development efforts.

#### **Specific Undertaking**

##### **i) Undertaking in the Asia-Pacific region**

To promote the Asia-Pacific region to transform into a knowledge-oriented economy and grow integrally with Japan, we shall further the development of IT infrastructure and infrastructure for electronic commerce; and support the deployment and penetration of Japan's training and evaluation tools for the IT-related human resources in the region. We shall collaborate with other Asian countries in promoting the development and standardization of IT-related fields where our country excels. We shall dispatch missions to the region to give seminars on information security measures and to diagnose the energy-saving performance of plants and data centers there. The relevant governmental agencies shall collaborate with one another to discuss specific drafts of agendas to be proposed to the 2010 Asia-Pacific Economic Cooperation (APEC) conference. The agenda shall aim at making socio-economic activities, such as environmental, medical, public service and disaster readiness, smart and upgrading infrastructures by applying IT. The

objective will be to advance IT utilization in the APEC region and create deployment opportunities to Japan's IT industries in the Asian countries.

(Ministry of Foreign Affairs; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

ii) Constructing a common cargo tracking network for international distribution system

We shall construct a common cargo tracking network for containers and other modes by making effective use of the radio frequencies allocated to international distribution purposes; promoting international standardization of digital tags used in international distribution; in cooperation with the APEC countries. Such a tracking system will drastically improve the international cargo traceability from the consignor to the consignee. We shall also advance the best optimized production and distribution management all over the world for the manufacturer and facilitate chattel mortgage financing. Also promoted shall be green international multimodal transport; enhanced cargo security; and the like.

(Ministry of Internal Affairs and Communications; Ministry of Foreign Affairs; Ministry of Economy, Trade and Industry; and Ministry of Land, Infrastructure, Transport and Tourism)

iii) Supporting the establishment of a global IT consortium

Within FY2010 the related governmental agencies shall install a mechanism to investigate and support the establishment of a private-sector-driven global IT consortium (which will implement developmental investigations, planning for projects, financing, and the like); and shall establish specific action plans including the definition of roles of the government and private sectors. The consortium would promote overseas deployment of Japan's IT-related systems.

(Ministry of Foreign Affairs; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

iv) Expanding public procurement market through IT

We shall apply IT to advancement of the dissemination of information related to our country's domestic public procurement in a consolidated manner in English or otherwise and have a framework established multilaterally to promote sharing of public procurement information by standardizing the format for public procurement information among the US and various European and Asia-Pacific region countries including local governments. In

doing so, we shall be furthering the transparency of the public procurement markets of these countries thereby promoting these countries to mutually participate in the public procurement markets of one another. Ultimately, we shall be promoting Japan's enterprises to enter overseas public procurement markets.

(Ministry of Foreign Affairs; Ministry of Internal Affairs and Communications; Ministry of Economy, Trade and Industry; and others)

#### **4. Realizing safe and reassuring information security environment**

We shall advance the “strategy for information security for the protection of our citizens” such that by 2020 we may turn the country into “the world’s most advanced country in information security” where every citizen may actively take advantage of information and communications technology in a safe and reassuring environment.

#### **5. Digitizing political activities**

The administration shall study the establishment of infrastructure and environment from the point of view of smoothly advancing the digitization of the following specific political activities:

##### **(1) Using the Internet in election campaigns**

The use of the Internet in election campaigns to help the voters collect campaign material easily.

##### **(2) Electronic voting**

Promotion of electronic voting to facilitate the exercise voting rights by the voters.

##### **(3) Digitizing Diet activities**

Enhancement of the quality and transparency of deliberation at the Diet through the use of paperless discussion material and reinforcement of information dissemination through the use of the Internet.

#### **IV. Items for future consideration**

### **1. Establishing a framework for implementation**

By May of this year, the Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society (IT Strategic Headquarters) shall establish progress charts specifying schedules of concrete actions, government agencies in charge in order to ensure the implementation of the strategy. We shall also establish a framework specifically for the collaboration among the related governmental agencies at the same time.

The Planning Committee shall take the lead in following up on the progress, and in the subsequent fiscal years, amend the measures to be undertaken or the schedule as required so as to ensure that each measure is implemented in its PDCA (plan-do-check-action) cycle.

We shall hereafter thoroughly verify its cost-effectiveness of each measure before and after its startup to demonstrate to the citizens that no tax is wasted.

### **2. Investigating thoroughly into existing systems that hamper IT applications**

The Planning Committee, with the Government Revitalization Unit collaborating, shall also take the lead in thrashing out any existing system that may hamper IT application and making an Act for Collective Advancement of IT Applications in order to overhaul the systems. The results of the reviews shall be reflected on each measure as required.