New IT Reform Strategy

– Realizing Ubiquitous and Universal Network Society Where Everyone Can Enjoy the Benefits of IT –

January 19, 2006

IT Strategic Headquarters

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Introduction

When considering the future of Japan, there is one social transformation taking place that needs to be addressed above all others, and that is the issue of our decreasing and aging population. Adding to this issue, as local economies increasingly globalize, the era of mass-production- and consumer-generated wealth is drawing to a close as we enter into a new economy in which knowledge produces values. In order for us to continuously be in a position to act as a world leader as well as to realize a high quality of life for our citizens in this era of dramatic social and economic change, it is necessary for Japan to implement persistent reforms which aim to put in place a steady base that will serve to appropriately support a new society.

During the five years since the e-Japan Strategy was first implemented, Japan has promoted the IT strategy along with the implementation of various structural reforms. By promoting structural reforms while removing the social restrictions that stood in the way of a greater utilization of IT, utilization of IT will increase rapidly. At the same time, this greater and more effective utilization of IT is causing transformations in the ways in which we work and live, and these changes are themselves leading to further structural reforms. In this way, structural reforms are inseparable from our greater utilization of IT, and social reforms are able to progress only when these two factors are integrated.

The issue to which we next need to focus our attention in this new strategy is to work on carrying out the reforms utilizing information technologies as well as to work to develop the necessary infrastructure for these technologies. Efforts to be undertaken shall include: promoting necessary structural reforms for medical services by utilizing IT to provide the nation with effective medical services; establishing e-Government based on the relaxing of various regulations and procedural improvements in order to realize truly small and effective government; working to realize the safest and most people-friendly society on earth through the effective utilization of IT; fully utilizing IT in order to realize the world’s most competitive industries; and investing in technologies, the network infrastructures that support these reforms as well as investing in the children who will take up the important roles in the future. These efforts are the best and only means for Japan to continue thriving in a future characterized by a

decreasing and aging population.

Reforms normally generate resistance. However, it is necessary for us to meet the challenges of Japan’s 21st century without allowing resistance to slow us down. By utilizing IT to promote reforms, we shall harness the collective power of our nation, and linking the development of technology to these reforms we shall aim to realize a self-sustaining IT society. The IT strategic Headquarters will take a major role in this effort to utilize IT to bring about the completion of these reforms which will reform our entire society.

I. Basic Principles

1. Aims

In order to be in a position to continue economic prosperity and quality of life for the people of our nation into the 21st century, it is necessary to transform our social infrastructure from the present model, which evolved based on the industrial society model of the 20th century, into one suitable for a new information-oriented society in which information and knowledge become the basis for added-values. Based on this vision, Japan, with the aim of developing an IT infrastructure that will serve as a base for the revolution of our society, has enacted the IT Basic Law and policies such as the e-Japan Strategy. These are part of an overall effort, being implemented under the leadership of Japan's IT Strategy Headquarters, to make Japan's IT Revolution a high priority under the banner of turning Japan into the world's most advanced IT nation by 2005.

During the past five years since the e-Japan Strategy was first unveiled, Japan has become the world's most advanced IT nation, and the remarkable results achieved have included, the development and utilization of one of the world's most advanced broadband infrastructures; the world's leading usage of sophisticated mobile phones; and the development of an environment for e-commerce and its expansion into one of the world's largest e-commerce markets. In addition, during the process in which we were working toward the realization of these achievements, we have achieved extremely positive results in the development of a mechanism for the further expansion of IT utilization in our country, such as public-private partnership and the establishment of an assessment system concerning our IT strategy. During these past five years, we have witnessed our self-transformation from a country which was working to catch up with other developed countries with regard to IT, to one that is now leading the world in establishing a 21st century IT society. Japan now has in place one of the world's most advanced IT infrastructures along with one of the world's most sophisticated population of IT users. And, with one of the largest markets and its cutting-edge technical environment, Japan, indeed, has become the world's most advanced IT nation.

However, while our achievements have been remarkable, work still remains before us. Therefore, we next need to turn our attention to remaining issues,

such as the fuller and more effective IT utilization in government administrative services and in fields such as health care and education to ensure a higher quality of life for our citizens. Other remaining issues include working toward correcting the IT utilization divide, which exists between regions and generations; the promotion of IT security measures, disaster prevention and damage control measures; the efficient utilization of IT for corporate management; the further strengthening of international competitiveness; and international contribution activities.

Due to the fact that various restrictions involving time and geography can be transcended utilizing IT, the technology's inherent potential is significant. This technology is so great that it has the potential of serving as a springboard for the reformation of our existing social structures. Using the inherent potential of this technology, we should now turn our attention towards improving the lives of the people of the nation and raising our industrial competitiveness by utilizing IT effectively from the point of view of the user. We should also work toward taking on various social issues facing our country and then share our achievements with the rest of the world. In order to be able to realize these aims, we first need to realize a ubiquitous network society that anyone can use at anytime from anywhere for any purpose, while working to ensure IT security and the protection of individual privacy. Achieving this, we must then ensure that we continue to keep our edge as one of the world's most advanced IT nation maintaining our highly advanced infrastructures, potential utilization capacities, and technical environments. When these aims have been achieved, IT utilization from the viewpoint of citizens will become a reality and this will improve people's lives and increase our industrial competitiveness.

With the above domestic goals in mind, Japan, as a leading country in the world's IT revolution, has formulated a new IT strategy which should help move us toward achieving these aims for our nation. The new strategy has also been formulated in order to help contribute to the creation of a borderless co-existence and co-prosperity society with Asia as its center. The IT Strategic Headquarters declares that by FY 2010—ahead of all other nations—through the implementation of this new strategy, Japan will achieve a complete transformation of itself through the utilization of IT to achieve, sustainable

development becoming an autonomous and collaborative IT society in which all citizens can proactively participate.

2. Principles

This new IT strategy has been formulated based on the following three principles:

(1) Significant Advancement through Structural Reforms

Previous IT strategies formulated by the administration have focused on the establishment of the IT infrastructure as well as the dissemination of IT-related equipment. From this point in time onward, however, it is necessary for us to raise the level and improve the utilization of IT, and start taking significant steps toward the revolution of our society using the structural reform powers of IT.

When IT begins being utilized on a high level, it will significantly alter the manner in which people live and work. That is, the introduction of various systems for IT utilization will themselves lead people to more effectively utilize IT and lead to the utilization of the systems themselves. And these changes would often force changes to existing structures and interests. This is what we mean by the structural reform powers of IT.

Harnessing this potential, the promotion of structural reforms should be encouraged for existing social structures as well as for any forces that have been resisting the various reforms that have been implemented up till this time. In the process, Japan shall aim to significantly advance into becoming a society in which more people actively have a vision and dream for the future.

The number of the issues Japanese society faces in the 21st century is not a few. These issues include problems such as, coming up with measures to address the problems of dwindling birthrates and an aging population, environmental problems, and the realization of a safe and secure society. For example, it will be necessary as one part of the structural reforms for the health care system to put in place a system for putting the existing medical billing system online and to establish convenient and effective e-Government with the aim of truly realizing small government. In order to solve the various social issues facing our nation in the 21st century, we need to remove any social restrictions that have been standing in the way of the development and utilization of IT; and, at the same

time, we need to promote reforms by fully utilizing these information technologies.

Turning to industrial competitiveness, Japan internationally dominates in the technical areas of mobile communications and RFID tags, etc. It is now necessary to use industries where we already have a technical advantage, and at the same time further improve business efficiency to establish an upward growth cycle through IT-related industries that have the capability of creating new added-values. In addition, it is necessary to promote reforms for industrial structures through the establishment of IT-based management that will serve to help maintain and strengthen our international industrial competitiveness in such a way as to create a state where, instead of struggling to catch up, Japan is rather leading the world.

Japan's IT Strategic Headquarters seeks to actively harness the problem-solving powers of IT and to utilize the structural reform powers of IT to revolutionize our Japanese society.

(2) Emphasizing Users and Citizens

When considering information technology, it's easy to remain focused on advanced technologies rather than the people who need to use these technologies. We believe, however, that it is essential to formulate IT policies in terms of IT users and people. It is also preferable that IT technologies become infrastructures that users can utilize forgetting these technologies are even there—much like air and water. In other words, IT technologies should exist in such a way that people will experience convenience and feel their outstanding effects in all areas of their lives. And, through these various improvements in our daily lives, a society will emerge in which various intellectual and cultural values will be created out of the interactions and collaborative activities that occur between people of differing backgrounds and through an environment whereby knowledge and information is freely and easily circulated and exchanged.

The first stage of Japan's IT revolution was a five year catching-up period, and policies concerning this period were covered in the e-Japan Strategy and e-Japan Strategy II. Now, Japan finds itself entering the second stage of its IT

policy in which our IT revolution is set to be completed. Five years ago, Japan found itself in a situation whereby it was lagging behind other nations in embracing the worldwide IT revolution. However, with a sense of crisis in the background, from the suppliers' point of view, Japan has achieved remarkable results in catching up with the world by actively implementing IT-related investment with the promotion of IT as a one of the countries major objectives. While the results from the supplier side are seen as being outstanding, when it comes to IT user satisfaction, our results were not necessarily seen as being sufficient.

We now are embarking on the final stage of the IT revolution in which we will see the creation of a society where people are able to truly enjoy the benefits of these new information technologies, and during this final stage, it will be the perspective of IT users that shall remain paramount.

(3) International Contribution and the Strengthening of International Competitiveness

Both the tough and uncompromising nature of Japanese consumers and the uncompromising drive to perfection of Japanese industry, which has itself been diligently trying to live up to customer expectations, have together nurtured Japan's strong domestic industries in a variety of areas—from IT to materials, automobiles, and appliances. They have also nurtured Japan's IT industry, and now, in addition to the strength of our IT industries, Japan has some of the world's most advanced ultra high-speed broadband (utilizing optical fiber technology, etc.) IT infrastructure and this infrastructure shall now serve as a foundation for the development of our IT society.

Solving important social problems that face all humankind by making use of the unique characteristics of our nation and by further emphasizing the perspective of the consumer and citizen as we go forward with our IT revolution to put in place a ubiquitous network, we will be in a position to provide various solutions to world problems, and these solution models along with our power for reform can serve as areas where Japan can—and should—contribute globally. It is particularly in Japan's own interest to actively make such global contributions in the IT area focusing on the Asia region.

Japan ought to refashion itself as a country that is able to attract the attention of the world and as a place that people from all over the world hope to visit. We should aim to make a country that we all can be proud of by encouraging people—including children—to participate in creating a future Japan. In addition, we should also remain aware of the fact that our abilities for solving problems are things which will have a direct impact on the further strengthening of Japan's industrial competitiveness.

3. The Future Society to Be Realized

Japan is embarking on the second stage of its IT strategy, a stage in which we shall put in place a society in which people can truly enjoy the benefits of information technology. Our efforts toward creating the world's most advanced ubiquitous network, which can be used anytime, anywhere, for anything, and by anyone, are presently becoming a reality. Our aim is nothing other than promoting the introduction of IT in order to realize what the people of this country desire, and this effort now being made toward the completion of the IT revolution is at the core of our current IT policies.

Japan now faces the serious problem of having an aging population and rapidly declining birthrate to an extent which is unprecedented anywhere else on earth. Facing these problems, Japan must also implement structural reforms that will ensure the continuation of an economically prosperous society, such as is desired by the people of this country. At the same time, Japan must overcome various other issues, such as the realization of safe and secure lifestyles for all its citizens; ensure an appropriate environment for child-raising; help give a sense of purpose in life for the aged, and promote the participation in society of people with disabilities. We also must work to raise even further the level of industry, and work toward the establishment of small government.

The economically strong society that we aim to realize through the promotion of Japan's IT revolution, which will be promoted from the perspective of IT users and all citizens, is a society such as described below. Our 2nd stage IT strategy has been formulated with the aim of realizing such a society through the full utilization IT technologies.

<A vibrant, aging society with fewer children>

- A society that is supportive of working parents and one in which parents are able to place their children in a safe and secure care environment while working
- A society in which the aged are able to live their remaining days with purpose of life (such as through work, social participation, etc.)
- A society in which all people have access to high-quality and efficient medical insurance, medical care and social services

<A society that contributes to environmental/energy issues>

- A society that is able to maintain continuous results in reducing its environmental burden (green house gas emissions, etc.) by effectively utilizing its resources and energy sources

<Realizing a safe and secure society>

- A safe and secure society able to minimize the impact from disasters, such as terrorism or earthquakes
- A safe and secure society in which the aged and people with disabilities can walk the streets in safety; in which families can feel safe; and which has safe methods of transportation
- A leading information security society that has protected itself against the dangers caused by the Internet by putting in place measures which fully address issues concerning illegal or harmful information, unauthorized access, etc.

<New styles of government, industry and individuals>

- A society that has realized small government; that is convenient, simple and transparent through the total computerization of administrative services
- A society in which companies compete strongly through the full utilization of IT technologies and can operate internationally
- A truly prosperous society in which people who want to work throughout their lives can do so and one in which people have access to learning when needed

<A society without a digital divide>

- An IT society that adopts universal designs, in which all people, including the aged, people with disabilities, and foreign nationals can live with convenience regardless of physical constraints, knowledge or language barriers
- A society without a digital divide, in which broadband access is available throughout the country

<A future Japan that we can all be proud>

- A society in which all industries are in a position to compete internationally at a high level as a result of upward growth cycles created by IT industries and IT demand
- A society capable of contributing to the world—including Asia—by providing the attractive model of Japan's "soft power"

4. Implementation Framework

(1) Role of the IT Strategic Headquarters

In order to promote the structural reforms that Japan urgently needs to address, it is necessary to harness the structural reform powers of IT. The leadership of the IT Strategic Headquarters (with the Prime Minister serving as Director-General) will be essential in solving problems that may come up in the process of promoting these reforms by determining policies that incorporate the wisdom of our member experts from the academic world as well as that of our private sector industry experts. The IT Strategic Headquarters will be instrumental in helping facilitate the smooth implementation of the reforms laterally between the Ministries as well as tackling various cross-sectoral issues.

In an effort to realize the total optimization of society through the continuous review and ensuring the effectiveness of regulations, etc, the IT Strategic Headquarters shall implement, as necessary, measures which include a review of the IT Strategic Headquarters functions. These measures shall be implemented on a flexible basis after priority policy issues have been selected.

In order to meet our IT-implemented 2010 structural reforms goals, the role of the IT Strategic Headquarters shall be examined and a drastic refashioning of the government's IT strategy functions for the entire government shall be carried out keeping in mind the changes in issues which Japan faces, such as changes in the environment.

(2) Assessment System

The Expert Committee on IT Strategy Evaluation started its activities in line with the formulation of e-Japan Strategy II. It was put in place in order to clarify goals and implement strict evaluations of the Administration's IT investment policies to ensure the continuous expansion of the benefits of information technologies for the people of Japan. In addition, employing a PDCA cycle, a highly effective system was set up in which the IT Strategic Headquarters fulfills new policies based on the Committee's assessments.

Finally, in order to meet our reforms through the utilization of IT within the next five years, clear and specific goals shall be set in terms of the IT user's point of view. In addition, in order to ensure continuous efforts shall be made, a steady implementation of the PDCA cycle for mid-term goals is necessary. To do this, an assessment system that remains continuously abreast of individual issues as well as being both neutral and effective is necessary.

For this reason, issue-specific committees in reference to selected priority policy issues are to be set up under the guidance of the Expert Committee on IT Strategy Evaluation so that a system that is able to conduct the appropriate assessments necessary for furthering the promotion of continuous evaluations is maintained. Issue-specific committee evaluation results shall be reported to the IT Strategic Headquarters using the channel of the Expert Committee on IT Strategy Evaluation, and based on these reports, the IT Strategic Headquarters shall then instruct the relevant ministries responsible for each of the policies to implement reviews of the related policies after consultations have been made with the Ministers responsible for the specific issue policies.

(3) Priority Policy Program

In order to maximize the structural reform powers of IT to ensure the promotion of reforms, it is necessary to implement measures based on the policies proposed by the IT Strategic Headquarters along with their appropriate evaluations. For this reason, in the Priority Policy Program, while the policies based on the Strategy are prioritized, other policies shall be accelerated or narrowed down according to needs.

The IT Strategic Headquarters shall be responsible for its judgment concerning policy prioritization and the prevention of redundant investments with policy evaluations to be considered as part of the process of budget requests. The It Strategic Headquarters shall also be responsible for policy progress management as part of the process of policy implementation in addition to post-implementation evaluations. And concerning Ministries cross-cutting issues, the IT Strategic Headquarters shall also maintains consistent and effective policy implementation by ensuring the involvement of the Ministries.

(4) Cooperation with Other Councils

The promotion of structural reforms through the utilization of IT outlined in this new strategy is meant to eradicate regulatory problems and systems that hinder private sector economic activities and shall be instrumental to making the continuous development of Japan's economy possible for the future. The promotion of these reforms should also highlight the issues for shared responsibility with the Council on Economic and Fiscal Policy and Council for the Promotion of Regulatory Reform. In addition, it is needless to say that the strategic development of scientific technologies will serve as the foundation to support the development of Japan's IT society.

The IT Strategic Headquarters will specify sharing of roles for related councils, such as the Council on Economic and Fiscal Policy, Council for the Promotion of Regulatory Reform, and Council for Science and Technology Policy; and these bodies will have a lively exchange of opinions, and the IT Strategic Headquarters will closely cooperate with these related councils for the proposals and implementation of policies in order to maximize the benefits.

II. Priorities in IT Policies by 2010

The goals of this strategy are the realization of the Ubiquitous Network Society that anyone can use at any time from anywhere for any purpose, and through such a society to maintain Japan's status as a cutting-edge IT nation with the world's most advanced infrastructure, markets, and technical environments to improve and reform lifestyles from the perspective of the general public.

To achieve this, the priorities of future IT policies will be the effective use of IT structural reform capabilities from the perspective of users and ceaseless efforts to improve public life and industrial competitiveness. The priorities also include reforms to address the major societal problems confronting Japan and sharing the results of these efforts with the rest of the world.

It will be necessary to undertake strategic and priority action in accordance with the objectives and principles of this strategy in order to complete IT reforms by FY 2010 in advance of other countries around the world and for Japan to transform itself into an self-sustaining, collaborative IT society that is capable of continuous development and in which every individual can participate actively in social activities.

Specifically, we will respond to the societal problems that must be overcome in the twenty-first century including pressing issues concerning the healthcare that will support a society with a low birth rate and an aging population as well as environmental problems. At the same time, we will take measures to create a safe and secure society; implement IT operations and establish the world's leading e-Government to support the socio-economic activities of the twenty-first century. In addition, it is important to enjoy the benefits and conveniences of IT through the creation of an IT society without digital divides that will serve as a foundation as well as through the promotion of development of environments that allow for the use of IT with a sense of security, human resource development and education, research and development, and the concrete utilization of advanced regional models. It is also essential for Japan as a leading country to enhance its presence in international competitive society and to make contributions to other Asian countries by sharing with the rest of the world its problem-solving models using IT structural reform capabilities.

This strategy takes a long-term perspective in setting goals for priority responses in the coming five years, adopting policies to achieve those goals, and setting evaluation indicators. Steady implementation by the entire nation will fulfill Japan's duties as a frontrunner that can lead global IT innovation in the future and promote the development of a country with a proud standing in the world.

As will be explained in greater detail in the next and subsequent sections, the priority IT policies are as follows.

The first category of policies is policies that seek the resolution by the use of IT of various problems confronting Japan through the pursuit of IT structural reform capabilities. Within this category, we consider policies concerning the following three areas, discussed in greater detail in Part 1, to be of particular importance.

(1) Measures using IT intended to resolve issues confronting Japan in the twenty-first century in advance of other countries

- Structural reform of healthcare through IT
- An environmentally-friendly society that utilizes IT

(2) Measures designed to create a society in which people can live safely and securely

- A world-leading safe and secure society
- The world's safest road traffic environment

(3) Measures to promote effective and meaningful activities by government, business, and individuals.

- The world's most convenient and efficient e-Government
- Business competitiveness enhanced through the use of IT in management
- Prosperous lifestyles throughout people's lifetimes

The second category of policies concerns the development of the foundations for the support of IT structural reform capabilities and for the creation of the Ubiquitous Network Society. Within this category, we consider policies concerning the following four areas, discussed in greater detail in Part 2, to be of particular importance.

(1) Measures for the creation of an IT society with no disparities in information levels and for the advancement of ubiquitous networks.

- An IT society that adopts universal designs
- Development of infrastructure that can be used anytime, anywhere, for anything, and by anyone and that has no digital divide

(2) Measures intended to create environments that allow for the safe use of IT

- The world's most secure IT society

(3) Measures to promote human resource development that will support the foundations of the IT society

- Development of human resource bases with an eye towards the next generation
- Development of high-level IT human resources that are competent anywhere in the world

(4) Measures for Japan to lead the world in the research and development that will support IT societies

- Promotion of the research and development that will form the foundations for the next-generation IT society

The third category of policies concerns international contributions through the transmission from Japan to the rest of the world of the results achieved through the other two policy categories—that is, the pursuit of IT structural reform capabilities and the development of the infrastructure that will support those capabilities. Within this category, we consider policies concerning the following two areas, discussed in greater detail in Part 3, to be of particular importance.

(1) Measures to enhance the presence of Japan in international competitive society

(2) Measures to make contributions to other Asian countries by providing problem-solving models

1. The Pursuit of IT Structural Reform Capabilities

(1) Responding to Social Issues that Should Be Resolved in the Twenty-First Century

Structural reform of healthcare through IT
– Full online processing of all medical insurance claims and lifetime self healthcare management—

Current Conditions and Issues

Since the adoption of the e-Japan Strategy II, priority measures have been taken for the computerization of healthcare as one of seven leading areas, but computerization remains at low levels.

Medical insurance claims, for example, is handled almost entirely on paper, but this tends to lead to higher healthcare insurance administrative costs for medical institutions and claims data cannot be used adequately for preventive care. Also, electronic records are effective in ensuring the safety of treatment and in promoting collaboration between medical institutions, but they have yet to come into common use. Consequently, it is necessary to actively promote computerization through measures to reduce the costs of introduction and the use of incentives while considering adequately the protection of personal information and security.

It is expected that national healthcare costs will rise dramatically in the future, and consequently, prevention of disease, increasing the quality and effectiveness of treatment, and streamlining healthcare costs are becoming pressing issues. Maximizing IT structural reform capabilities will be essential in resolving these issues.

Targets

1. Drastically reduce healthcare insurance administrative costs through the complete computerization and online processing of medical insurance claims no later than the beginning of FY 2011 and use databases of medical insurance claim information for epidemiological purposes to promote preventive treatment and streamlining of national healthcare costs.

2. Build by FY 2010 the foundations for using individuals' healthcare information throughout their lifetimes, supporting self management by individuals of their health conditions and efforts to maintain and enhance health.
3. Promote remote healthcare to eliminate disparities in the level of healthcare among different regions including access to advanced treatments and employ terrestrial digital broadcasting to provide effective instructions and information to patients during emergencies.
4. Clarify the objectives of introduction and promote the widespread use of healthcare information systems including electronic medical records to enhance the quality of healthcare, ensure the safety of medical treatment, and encourage greater collaboration among medical institutions.
5. Promote comprehensive and effective computerization throughout the medical, healthcare, nursing, and social welfare fields.

Policies

Use of full online processing of medical insurance claims for medical, dental, and pharmaceutical service to reduce administrative costs and to promote preventive treatment

1. Online submission and receipt of billing documents among medical institutions, pharmacies, and screening and payment institutions will be possible starting in FY 2006, and in principle all claim submission and receipt must be performed online no later than the beginning of FY 2011 (the deadlines for institutions falling in the categories of major hospitals and pharmacies, medium-size hospitals, and small hospitals and clinics will be set during FY 2005). All billing documents submitted and received on electric media or online by medical institutions, pharmacies, and screening and payment institutions will be in data formats that allow for analysis of all data categories.
2. Submission and receipt of medical insurance claim documents between screening and payment institutions and insurers will be performed on electronic media or online starting in FY 2006 and in principle all billing submission and receipt must be performed online no later than the beginning of FY 2011. All claim documents submitted and received on electric media or online by screening and payment institutions and insurers will be in data formats that allow for analysis of all data categories.
3. Introduce by FY 2006 incentive measures designed to promote submission and receipt of medical insurance claim documents online (evaluation of

diagnosis and treatment payments to medical institutions and other measures) and introduce measures to limit the submission and receipt of claim documents on paper and electronic media (extension of deadlines for diagnosis and treatment payments) in phases until the beginning of FY 2011. In addition, promote in phases the use of standardized codes for all billing computer systems sold in the future and complete by FY 2010 so that information system introduction and modification necessary for online processing of medical insurance claims by medical institutions can be performed at appropriate prices.
4. By the beginning of FY 2008, simplify and clarify diagnosis and treatment payment systems and prepare and adapt electronic diagnosis and treatment tables for the effective use of computer processing and billing data.
5. Develop a national database and implement systematic responses by FY 2010 to enable the scientific (epidemiological) use of medical insurance claim data.

Develop the infrastructure for using individuals' healthcare information throughout their lifetimes

1. Establish systems (categories of data to be collected, standard data formats, management and operational methods, etc.) for the continuous collection and appropriate management of medical examination results in electronic form throughout patients' lifetimes by FY 2007.
2. Start development of the infrastructure for the utilization by individuals and insurers of healthcare information such as examination results collected in the form of electronic data (databases for managing healthcare information, functions for accessing one's own healthcare information using IC cards, etc.) by FY 2008 and promote widespread use by FY 2010.
3. Establish measures for using the collected healthcare information for the prevention of disease by FY 2010.

Realization of effective communications in healthcare

1. Expand the scope of application of remote treatment technologies to a greater range of conditions to promote remote treatment services in isolated regions and outlying islands and encourage the development of use environments by FY 2010.
2. Conduct testing of interactive terrestrial digital broadcasting services and IC cards to provide pre-examination healthcare services such as emergency

treatment instructions when ambulances are requested and children's emergency healthcare consultation hotlines by FY 2007 and put such systems into practical use nationwide by FY 2010.

Development of healthcare computerization infrastructure

1. Develop indicators for evaluating appropriately the need for and degree of use of computerization according to objectives, taking into consideration the functions, scale, and individual characteristics of each medical facility by FY 2007.
2. Introduce in most medical institutions with 200 or more beds comprehensive healthcare information systems (ordering systems, comprehensive electronic medical records, etc.), to increase operational efficiency, enhance healthcare safety, and provide diagnosis and treatment information (installation at institutions with 400 or more beds to be completed by FY 2008; installation at institutions with less than 400 beds to be completed by FY 2010).
3. At small scale medical institutions where the introduction of comprehensive healthcare information systems would lack cost effectiveness, use electronic medical records suitable for linking diagnosis and treatment information at low cost to achieve comprehensive healthcare collaboration by FY 2010.
4. Start the application by system venders of standard data formats and standard data exchange protocols to healthcare information systems in FY 2006 to achieve linking of diagnosis and treatment information among medical institutions and to lower system costs through the use of multi-vender systems.
5. Promote the utilization of ubiquitous network related technologies such as RFID tags by FY 2010 to achieve high levels of healthcare safety and higher administrative efficiency at medical institutions.
6. Develop healthcare public key infrastructure (HPKI) and safe and secure network infrastructure by FY 2008 to achieve safe exchange of and access to healthcare information including rigorous identification of individuals.
7. Study the concept of chief information officers (CIO) in medical institution who enhance the value of healthcare computerization infrastructure use through the provision of advice and guidance to support effective computerization and create systems for human resource development by FY 2008.

Development of computerization promotion structures and adoption of a grand design for computerization

1. Develop structures to oversee IT policies throughout the medical, healthcare, nursing, and social welfare fields by FY 2005 and adopt a grand design for computerization indicating inter-field computerization policies and specific action plans by FY 2006.

Key Evaluation Points

1. (1) Percentage of medical insurance claims processing handled online; (2) Reduction in administrative expenses by medical institutions, screening and payment institutions, and insurers.
2. The status of standardization of healthcare categories and electronic data formats.
3. The number of locations that employ pre-examination healthcare services using terrestrial digital broadcasting.
4. (1) The rate of use of comprehensive healthcare information systems; (2) The indices indicated in Part 1 of Development of Healthcare Computerization Infrastructure.
5. (1) The status of development of comprehensive IT policy promotion structures throughout the medical, healthcare, nursing, and social welfare fields; (2) The status of adoption of a grand design for computerization in the medical, healthcare, nursing, and social welfare fields.

An environmentally-friendly society that utilizes IT
—Efficient use of energy and resources—

Current Conditions and Issues

The use of IT can increase the efficiency of socio-economic activities such as transport of people and goods and production activities and can lead to make it more efficient energy and resource consumption. Consequently, various environmental measures that use IT such as energy management are being promoted under a number of environmental plans, for example, Japanese national plan to achieve the goals of the Kyoto Protocol.

In addition, further use of IT is needed from the perspective of the capability to give easily-understood and timely environmental information to promote environmental efforts by citizens, companies and other various organizations. Each of these efforts and actions is the key factor in overcoming environmental problems.

Moreover, the utilization of IT is expected to contribute to the resolution of various environmental issues, such as recycling, waste management, and reducing illegal dumping.

At the same time, however, in conjunction with the advancement of the IT society, IT equipment is becoming more widespread and performs additional functions, resulting in greater energy consumption and CO2 emissions, and consequently, responding to this is a pressing issue.

Targets

1. Reduce the environmental impact of socio-economic activities through environmental measures using IT with respect to advanced energy management and improvement of the efficiency of logistics and transportation efficiency, and so on.
2. Promote further efforts addressing environmental issues by citizens and various organizations through the efficient collection of environmental information and systematic organization, analysis, accumulation, and provision of that information using IT.
3. Control energy consumption through the use of IT devices.
4. Improve the traceability of industrial waste transfers through the use of IT to

prevent environmental pollution caused by illegal dumping. To achieve this, with promoting the use of RFID tags and other technologies through collaboration between the public and private sectors, digitize 80% of former paper-based transactions of manifests (industrial waste management documents) issued by businesses generating large volumes of waste (covering 50% of all businesses generating waste) by FY 2010.

5. Promote fair resource recycling by improving waste traceability using IT, taking into consideration the facilitations of international transfer of waste.

Policies

1. Monitor the progress and steadily promote measures that contribute to reductions in environmental impact by using IT such as office and household energy consumption management (BEMS, HEMS), telecommuting, alleviation of traffic congestion through the use of intelligent transportation systems (ITS), and the creation of logistics systems in collaboration with various environmental plans.
2. Draw up policies by FY 2007 concerning the optimal methods for using IT to collect and systematically organize environmental data in Japan from the user's perspective and to provide that data to various bodies.
3. Draw up plans concerning improvement of the energy efficiency by IT devices by FY 2007.
4. Create structures that can use electronic manifests to report to various government agencies by FY 2008.
5. With respect to electronic manifests, support measures that will enable systems to monitor location data concerning collection, transport, and disposal and advanced measures such as efforts to make possible collaboration between internal databases and electronic manifests.
6. Start the full-scale development of systems for improving by using IT the traceability of waste undergoing international transfers by FY 2008, in collaboration with other countries, in order to facilitate international resource cycles.

Key Evaluation Points

1. The status of progress and evaluation of environmental countermeasures using IT in various related plans.
2. The percentage of the population using environmental information obtained

through IT as a direct opportunity to engage in environmental activities.
3. The energy efficiency of IT devices.
4. The percentage of electronic manifests of all manifests.

(2) Realization of a Safe and Secure Society

The world's leading safe and secure society
—Using IT for disaster prevention, public safety, and food safety and security—

Current Conditions and Issues

Japan was once thought to be the safest country in the world, but today, the public has experiencing a sense of unease.

In the field of disaster prevention and response, a number of major earthquakes and typhoons in recent years have caused extensive damage, and it is expected that large-scale earthquakes including earthquakes in the Tokai, Tonankai, and Nankai ocean regions will occur in the future, and therefore, additional disaster prevention and response measures are urgently needed.

With regard to public safety, numerous atrocious crimes have been committed in Japan and the threat of terrorism is expanding globally. Consequently, effective measures designed to restore public safety are needed.

Also, with respect to food safety, there has been a spate of problems including bovine spongiform encephalopathy (BSE), and although measures are being taken to create a system for tracing beef products, additional action must be taken to improve the safety and security of food and the public's confidence in the food supply.

In the future, it is necessary that we use and utilize IT to the maximum possible extent to resolve these varied issues and to create a safe society in which all people can live with a sense of security.

Targets

1. The information and telecommunications network and the equipment and materials, which enable us to collect, organize, and transmit data quickly and accurately in order to enhance public safety and minimize damage in the event of acts of terrorism or natural disasters, shall be realized. Specifically, by FY 2014, use IT so the public can appropriately minimize harm from earthquakes

and tsunami, sources of great concern to the public because of the potential for extensive damage, thereby halving by FY 2014 the expected damage from earthquakes in the Tokai, Tonankai, and Nankai ocean regions.
2. Make it possible by FY 2010 for large portions of the public to confirm production and distribution data for major domestic perishable foodstuffs with high consumer demand by the Internet and other means and for the public to use that information in selecting foodstuffs.

Policies

Disaster prevention and response and public safety

1. The provision of information about disaster prevention to the public, such as emergency earthquake reports, tsunami forecasts, and weather warnings shall be promoted, and the pace and accuracy of information collection shall be increased. Also, the technology to reduce damage from such disasters by using this information through means, such as control of equipment that can cause accidents or fires, shall be realized.
2. Information and telecommunication network for disaster prevention and public safety, such as Disaster Management Related Communication Network and Emergency Communication Network, shall be more advanced and reliable for the rapid and accurate collection, organization, and transmission of information. In particular, by FY 2007, the technology for the transmission of disaster related information by using emergency signal in terrestrial digital broadcasting shall be realized. And its use shall be promoted, and its infrastructure shall be created through various means.
3. The shared disaster information platform* shall be expanded into a comprehensive system that can be used in collaboration by regional public bodies, local residents, public utility companies and other businesses.
4. The adoption of business continuity plans shall be promoted so that government agencies and businesses can continue crucial operations even in the event of unanticipated harm. Also assessments of measures about disaster management by businesses and the publication of the information shall be promoted.
5. The use of IT shall be promoted in various public safety related measures including counter-terrorism measures and the prevention of atrocious crimes as well as the security of children.

Food

1. By FY 2007, adopt guidelines concerning the introduction of traceability systems for each category of main food on the basis of consumer needs and societal concerns, and adopt JAS standards for certification by third-party organizations of production data. In addition, adopt JAS standards for certification by third-party organizations of distribution data as soon as possible.
2. Enhance public understanding through measures to disseminate information on the importance of food traceability and promote awareness in order to achieve plentiful and secure dietary practices through food traceability.

Key Evaluation Points

Shared indices

1. Status of development of a safe society in which people can live with a sense of security.

Disaster prevention and response and public safety

1. Disaster damage reduction effects (earthquakes in the Tokai, Tonankai, and Nankai ocean regions).
2. Percentage of government agencies and businesses that have adopted business continuity plans.
3. Percentage of businesses that have evaluated their disaster response measures and made the information available publicly.
4. Status of development of the shared disaster information platform.
5. Number of penal code offenses known to the police and arrest rate.

Food

1. Status of introduction of systems that enable the public to use the Internet and other means to confirm production and distribution data for major domestic perishable foodstuffs with high consumer demand.
2. Consumer’s awareness of food traceability.

* Shared disaster information platform: A shared information system that uses national disaster information and collects and shares among agencies geographic information system (GIS) map data for use by disaster response agencies for responding to natural and other disasters.

The world's safest road traffic environment
—Reducing traffic fatalities to 5,000 or below—

Current Status and Issues

Although the trend of traffic fatalities has been declining recently, the number of traffic accidents remains high, and the government has set a goal of reducing traffic fatalities to 5,000 or below by the end of 2012, and consequently, it is urgent that we reduce the number of accidents. Looking at a breakdown of accidents by the age of the victim, persons aged 65 years and older account for approximately 40% of all fatalities, a very high percentage. Also, an examination of accidents by cause indicates that the majority are caused by delayed or mistaken "discovery," "judgment," or "operation." In addition, approximately half of all fatal accidents occur in the area of intersections.

Measures that can contribute to reductions in traffic accidents include stricter traffic enforcement, greater traffic safety education, and further development of road and traffic environments, but it is also thought that the use of IT can also be effective. The use of IT can make substantial contributions to improve traffic safety by enhancing human abilities including perception and judgment as well as reducing errors resulting from inattention and minimizing the impact in the event of an accident.

In the past, various actions have been taken through collaboration between the public and private sectors to put intelligent transportation systems (ITS) into practical use as a means of alleviating problems relating to traffic accidents, and although there have been numerous measures in the testing phases, the systems have not gone into practical application or even if they are put into practical applications the adoption is not sufficiently widespread. In the future, the prevention of traffic accidents and accelerating the pace of rescue activities following accidents will require collaboration between the various involved government agencies as well as the private sector to realize advanced ITS that can integrate pedestrians, roads, and vehicles and leads Japan into the world's safest road traffic society.

Targets

1. Reduce the number of traffic fatalities and serious injuries by deploying

Cooperative Driving Safety Support Systems.*
2. Reduce the time from detection of traffic accidents to admission of injured persons at medical facilities.

Policies

1. Form a joint committee from the public and private sectors in early 2006 to work towards the realization of Cooperative Driving Safety Support Systems with the goal of preventing traffic accidents, investigate the best form of effective services/systems including comparisons of the characteristics of various communication media, and investigate the content of verification experiments.
2. Based on the results of the above investigations, conduct large-scale verification testing of Driving Safety Support Systems through collaboration between the public and private sectors on the selected regional public roads while maintaining harmony with local traffic patterns, investigate the best form of effective service systems, and make quantitative assessments of the contribution to reductions in traffic accidents by FY 2008.
3. Deploy Driving Safety Support Systems throughout the country with a focus on sites where traffic accidents occur frequently and promote the widespread use of on-board equipment that are compatible with those systems by FY 2010.
4. Develop through collaboration between the public and private sectors the technologies necessary for interactive communications systems for pedestrians, roads, and vehicles** that will contribute to reductions in the number of pedestrian fatalities by FY 2010.
5. By FY 2007, define the technology specifications necessary for rapidly sharing data on the location of traffic accidents with medical facilities including emergency response vehicles using cell phones and other means of communications, promote the introduction of systems by local governments and medical facilities, and promote the additional use of on-board equipment.
6. By FY 2010, test the effects of fast emergency vehicle preemption systems (FAST), which give emergency vehicles priority traffic signal control, and promote their use in major urban areas.

Key Evaluation Points

1. The number of traffic accidents, serious injuries, and the rest sites.
2. Automobile user satisfaction with Driving Safety Support Systems.
3. The time from detection of traffic accidents to admission of injured persons at

medical facilities.

* Cooperative Driving Safety Support Systems that cooperate with traffic infrastructure: Systems that allow vehicles to obtain information from infrastructure devices (including roadside facilities, devices installed in other vehicles, and devices carried by pedestrians) using wireless communications and when necessary provide information to driver of issue warnings or alerts to enable the driver to respond to traffic conditions beyond the range of what can be detected from a vehicle.

** Interactive communications systems for pedestrians, roads, and vehicles: One part of Cooperative Driving Safety Support Systems with traffic infrastructure that identify the location of pedestrians and provide that information to vehicles and roadside facilities by wireless communications.

(3) Socio-Economic Activities in Twenty-First Century

The world's most convenient and efficient e-Government
—Handling of 50% or more of all filings online and
creating a small and efficient government—

Current Conditions and Issues

As a result of progress in the development of infrastructure including the coming into force of three laws intended to promote online handling of government procedures, it is now possible to perform most procedures handled by the national government online. The use of e-Government services by individuals and businesses, however, is not increasing substantially because of a lack of convenience from the perspective of users and other reasons, and the introduction of electronic processing by local governmental bodies linked to residents services is inadequate, and users including individuals and businesses do not feel that convenience and the quality of services are increasing.

Also, although measures are being taken to optimize operations and information systems including reviews of legacy systems, the implementation structures of the various government ministries are not always adequate, and additional measures for the optimization of government information systems throughout the national government are needed.

In the future, operational and administrative reforms to promote the maximum use of IT will be necessary to promote fiscal soundness, simplify and increase the efficiency of administration, and enhance services.

Targets

Apply IT in administrative areas to increase the convenience to individuals and to simplify, increase the efficiency, raise the level, and improve the transparency of governmental operations.

1. Create e-Government (on the national and local government levels) that provide a sense of convenience and enhanced services and process at least 50% of applications and filings online by both national and local government by FY 2010.
2. Have government ministries procure information systems and develop

evaluation structures, have the IT Strategic Headquarters create systems for evaluating information systems throughout government, and optimize operations and information systems throughout government to achieve efficient e-Government. Also, the development of similar systems on the local government level will also be promoted.

3. Ensure the reliability and security of national and local government information systems and raise security levels while keeping in mind the enhancement of convenience to users, thereby nurturing and promoting the widespread adoption of cutting-edge technologies through the expansion of e-Government.

Policies

1. With regard to those online procedures to be promoted, adopt and announce publicly in FY 2005 an action plan to promote use of online government services that includes procedure usage goals and achieve at least 50% processing of such procedures online by FY 2010.

2. To promote the use of online services, investigate measures to improve systems and operations relating to electronic filing of income and business tax returns and measures to increase online payment of taxes and other fees.

3. Review and improve procedures from the perspective of users including the acceptance of electronic versions of documents that must be included with filings or simplifying or eliminating them, eliminating procedures, providing incentives, reducing processing times, and simplifying identification methods (create instances in which electronic signatures may be omitted) and implement measures to reform the awareness of government workers to move away from processing procedures on paper.

4. Promote the use of the Basic Residential Registers Network System in accordance with the law including confirmation of the status of national and employee pension recipients and land registry procedures and simplify various administrative procedures by FY 2010. With respect to the development of systems to link national government ministries to local government bodies, promote integration with the local government wide area networks (LGWAN) and the use of standardized, joint systems.

5. Develop electronic filing systems compatible with public personal identification systems in all prefectures by FY 2008 and in all cities, town, and villages by FY 2010.

6. Promote the standardization of information system data by national and local

governments. Also, develop information system collaborative infrastructure and achieve standardization by FY 2007 and also promote reforms of the information systems of local governmental bodies based on these standards to enable one-stop handling of all administrative procedures in the event of permanent or temporary change of residence and joint implementation of services such as disaster response activities among local governmental bodies.

7. Promote the safe, rapid, and certain provision of services using IC cards for national and local government filing procedures as well as in the healthcare, nursing care, pension, and other public fields and investigate the optimal methods of introduction to reach conclusions by the summer of 2007.

8. In early FY 2006, create an organization (Program Management Office (PMO)) with responsibility for planning, development, operation, and evaluation of information systems in the various government ministries under the authority of the chief information officer (CIO) of each respective office and with the support and advice of the deputy CIOs and engage in strategic procurement of information systems according to budgetary appropriations that allow for flexible implementation. Also, promote systematic training that is integrated among the various government ministries of internal human resources that are well versed in information systems and can promote operational reforms. In addition, promote the development of local government organizations through human resource development and joint implementation.

9. In early FY 2006, establish under the IT Strategic Headquarters an E-Government Evaluation Committee (tentative name) made up of external experts who are well acquainted with the use of IT for operational reform to conduct rigorous audits and evaluations including evaluations from the perspective of cost effectiveness with respect to the optimization of operations and information systems in each government ministry, provide the necessary support and make recommendations concerning information system planning, development, operation, and evaluation, and evaluate the status of PMO activities in each ministry. Also, with respect to joint government operations and systems, develop in early FY 2006 the systems to conduct coordination for the efficient implementation of process management, specification coordination, confirmation of cost effectiveness and expenses under the IT Strategic Headquarters to promote collaboration between the ministries in charge and efficiently and effectively implement development and operations.

10. When constructing new ministry information systems of updating existing

systems, determine the cost effectiveness including review of legacy systems currently in use and ensure that the following three standards are met, with the exception of measures that are truly necessary to ensure system reliability and security, etc.: (1) the system will contribute to financial and administrative reform including reductions in information system related expenditures, processing times, and personnel; (2) the system is based on appropriate development plans including optimization plans; (3) the system will contribute to usefulness. In addition, promote outsourcing of that work that is suitable for outsourcing.

11. Adopt guidelines on the procurement of information systems in FY 2005, implement procurement by each government ministry in accordance with those guidelines, and expand competitive opportunities to businesses with technological capabilities. Also, periodically follow-up on the status of procurement in accordance with the guidelines by each ministry and make improvements as necessary.

12. Investigate the creation of shared e-Government infrastructure that will contribute to the comprehensive improvement of convenience, efficiency, safety, and security functions. Also, as information and communications hardware is updated and replaced in the future, new equipment will as a general rule be IPv6 compatible by FY 2008. Furthermore, investigate technologies that are thought to be necessary for future development geared towards the realization of an advanced and secure e-Government and based on the results of those investigations, promote the development of the necessary technologies through collaboration between the public and private sectors.

13. Promote comprehensive reviews of operations and systems including internal management procedures by adopting optimization plans by FY 2007 for independent administrative agencies in accordance with government arrangements in order to increase the efficiency and streamline the operations and information systems of such agencies.

Key Evaluation Points

1. Percentage of filings and notices submitted online.
2. Time and fees required by filers for filings and notices.
3. Number of uses of government portal sites.
4. Reduction in information system related expenditures, processing times, and personnel.

5. Status of IC card introduction in public services and improvements in public services from the use of IC cards.

Enhanced business competitiveness through establishment of management by utilizing IT
—Achieving the world's leading IT management—

Current Conditions and Issues

Although the introduction of IT by enterprises is progressing and IT has become a crucial management foundation for the conduct of global business by some enterprises, but there are many instances in which IT is not utilized effectively, and even when it is utilized, it is often limited to a single division within the enterprise. Thus, there are few enterprises that are utilizing IT to its full potential. Small and medium enterprises in particular are not utilizing IT effectively such as low rates of use of electronic commerce compared to large enterprises.

These circumstances are caused by human resource related issues including a lack of knowledge, use, skills, and awareness concerning IT and expense related issues such as high introduction costs and unclear cost effectiveness. In addition, when small and medium enterprises utilize IT, differences in electronic commerce specifications among industries and enterprises also present problems.

In the future, the world's highest levels of competitiveness will be established through active measures to eliminate issues concerning human resource development and installation costs and to create electronic commerce environments harmonized internationally, corporate management reforms achieved through IT, and enhancement of capabilities to solve management problem.

Targets

1. Raise the percentage of large and small and medium enterprises that have optimized corporate management in ways that transcend divisions and enterprises utilizing IT to the world's highest levels by FY 2010.
2. Increase the percentage of small and medium enterprises of middle scale (enterprises with annual sales of 500 million yen to 2 billion yen) that utilize IT for fundamental businesses to 60% or more by FY 2010.
3. Construct general-purpose shared infrastructure that enterprises can jointly use for electronic commerce and is harmonized internationally (e.g., EDI

platforms) and increase the percentage of enterprises that use such shared infrastructure to 60% of all enterprises that engage in electronic commerce by FY 2010.
4. Increase the trade partners of small and medium enterprises that engage in electronic commerce to 50% or more of total trade partners by FY 2010.

Policies

1. Adopt Action Guidelines for the Strategic Introduction of IT (tentative name) by FY 2006 and promote their use to encourage enterprises to engage in strategic investment intended to enhance operational integration, manufacturing control, and supply chains through the utilization of IT, thereby raising productivity and customer satisfaction.
2. Promote the appointment of chief information officers (CIO) in large enterprises and public corporations by FY 2010.
3. Create corporate skill standards for the use and utilization of IT by FY 2006 and promote the introduction of IT training programs for employees to enhance corporate IT skills.
4. Publicize at least 1,000 cases of successful use and utilization of IT in corporate management by FY 2010 to encourage greater understanding on the part of managers of the utility of introducing IT.
5. Support the development, customization, and widespread adoption of industry-wide and inter-industry software and package software for use in electronic commerce as well as support to small and medium enterprises that use EDI platforms and RFID tags and engage in digital content business.
6. Construct mechanisms for creating corporate databases of technical skills by FY 2008 and promote their use to ensure the continuation of superior technical skills within enterprises that engage in manufacturing.
7. Create and promote the adoption of environments in which small and medium enterprise managers can engage in training on a daily basis through the utilization of SME Universities and private agencies by FY 2007 to enhance management skills through the utilization of IT and make it possible for small and medium enterprises to utilize their own technologies more effectively.
8. Support utilization of external experts such as IT coordinators with knowledge that can be useful to management in IT investment and collaboration utilizing IT among small and medium enterprises that have management resources in different fields to encourage management reforms using IT by small and medium

enterprises.

Key Evaluation Points

1. The percentage of enterprises that have optimized corporate management utilizing IT.
2. The percentage of small and medium enterprises that utilize IT in fundamental businesses.
3. The percentage of enterprises that use general-purpose shared infrastructure among all businesses that engage in electronic commerce.
4. Status of use of electronic commerce by businesses.
5. The rate of use of electronic commerce in business to business (B to B) transactions.
6. Competitiveness of enterprises that optimize corporate management by using IT.

Prosperous lifestyles throughout people's lifetimes —Creating a society in which all people can enjoy healthy and prosperous lifestyles—

Current Conditions and Issues

Japan's society is aging and its population of children is dropping at a pace unseen in other countries around the world, and it is expected that by FY 2015 one in four residents will be aged 65 years or older. In addition, a number of other societal problems are arising including increased numbers of persons who require nursing care, more unemployed youth, increasing child abuse, an increase in families receiving public assistance, and barriers to full participation in society by the disabled.

Under these circumstances, it is essential that we create environments in which all persons including senior citizens, the disabled, persons who require nursing care, parents with young children, and unemployed youth can obtain education whenever they want to learn and can work whenever they want, thereby promoting social participation, and to raise the quality of services that will support such persons to transform society into one where all persons can enjoy healthy, prosperous, and active lifestyles.

Targets

1. Increase teleworkers to 20% of the working population under an appropriate working environment by the year 2010.
2. Develop infrastructure for social welfare, nursing, and children supported by local communities.
3. Develop new technologies that will support an aging society with a low birth rate.
4. Double the number of persons participating in lifelong learning through the use of IT by FY 2010.

Policies

1. Enhance e-Learning and other skills using IT for active participation in society by senior citizens, the disabled, parents with young children, and unemployed youth. In addition, the necessary support will be provided such as developing activities to work for expanding job opportunities in IT and other industries, and

providing information for job seekers/employees wanted and SOHO business start-up/business expansion.
2. Promote substantial expansion of telework through collaboration between the public and private sectors and academia through the introduction of internal corporate systems and labor management relating to telework, improvement of security measure systems and operations, and review of the conventional labor regulations so that senior citizens, the disabled, persons who require nursing care, parents with young children, and so on can exercise their maximum capabilities according to their unique circumstances.
3. Promote the use of interactive video communications using the broadband environments and terrestrial digital broadcasting that are expected to develop further in the future to allow persons to engage in lifelong learning in their local communities from home, medical facilities, and social welfare facilities and participate in society without isolation.
4. Promote the introduction of computers in various public facilities such as libraries so that anyone can easily use IT to engage in educational activities and place personnel in those facilities to support educational activities using IT. As one aspect of these activities, make training in the use of information devices a requirement of librarian training and take other measures to train librarians in the use of IT.
5. By FY 2008, start, analyses of all accumulated online nursing care insurance claims data with necessary categories added to raise both the level and quality of nursing care services and to enhance the effectiveness of nursing prevention. To this end, verify and evaluate previous nursing care insurance claims data analysis measures by FY 2006 and perform any necessary reviews by FY 2007.
6. As the foundations for enhancing the quality of social welfare, nursing care, and childcare services, develop information networks and create infrastructure for the secure use of IC cards by both social workers and clients to enhance the quality of social welfare, nursing care, and childcare services by identifying personnel involved in the provision of services and service recipients and to verify their qualifications or eligibility and investigating the best methods of introduction including issues concerning the protection of personal information, and reach conclusions by the summer of 2007. Investigate the digitalization of various forms and records including issues concerning the protection of personal information by FY 2007 and promote nationwide implementation by FY 2010 to increase the efficiency of social welfare and nursing care services procedures

and operations and to promote information sharing among personnel involved in the provision of services.

7. Begin investigating in early FY 2006 the introduction of IT and information education within training programs related to national certifications and promote nationwide introduction by FY 2010 to raise awareness of IT among personnel involved in social welfare and nursing care and to promote the active use of IT. Also, by FY 2008, investigate structures and take the necessary measures nationwide by FY 2010 to support the introduction of IT in social welfare and nursing care fields including the use of specialized personnel who are familiar with both these fields and IT.

8. By FY 2010, develop practical robot technologies that can ease the burdens on nursing care personnel.

Key Evaluation Points

1. The percentage of teleworkers among all workers and the percentage of companies that implement teleworking.

2. The percentage of women with young children in the labor force.

3. The employment rate of disabled persons, the number of disabled persons who use PC volunteers, and the number of users of virtual studios.

4. Development of social welfare and nursing care IT infrastructure (rate of use of information network infrastructure, rate of use of electronic procedures).

5. Percentage of local governments with IT use support systems in social welfare fields and number of social welfare personnel that have undergone information training at the time of certification.

6. Number of participants in lifelong learning using IT.

2. Development of IT Infrastructure

(1) The Realization of an IT Society without Digital Divide

An IT society that adopts universal designs
—Promoting IT development that everyone can use safely and enjoy the benefits of—

Current Conditions and Issues

The Internet has already taken firm root in our society as a means for accessing information. However, while the Internet penetration ratio for people in the 50-59 age range is 63%, for people over 60, it remains only 22%. In addition, the Internet penetration ratio for people with disabilities is also quite low.

As new technologies, such as the Internet and terrestrial digital broadcasting become more and more common as we move toward the Ubiquitous Network Society, it is essential as Japan becomes an aging and more international society that we work to create a society that adopts universal designs by promoting reforms in order to enable all people to live and be active in society with peace of mind regardless of age, gender, physical disability, or nationality. We believe that IT is the most effective tool available to accomplish the realization of a society that adopts universal designs. At the same time, concerning the development of IT devices and services with universal designs, it is also essential that industry, academia and government work together to implement the necessary environment-related and technical development. In addition, due to the fact that certain mental and physical restraints, as well as a person's access to information changes according to age, it is important to promote supporting measures that are compatible with these individual needs, in line with the promotion of universal design.

Targets

In order for the elderly, people with disabilities, and foreign nationals to be able to live and participate with ease in our society regardless of physical, information, or linguistic barriers by FY 2010, the following objectives shall be realized:

1. Equal access to information (Realization of universal information access)
2. Smooth movement without any barriers (Realization of universal movement)

3. Smooth communication without any barriers (Realization of universal communication)

Policies

1. By 2010, in consideration of the ease of use by all users, including the elderly and disabled, progress is to be made in the creation of guidelines for the standardization of labeling and methods of operation of devices and terminals, and product labels are to be encouraged that enable users to easily select user-friendly products.
2. For important public facilities, the systematic introduction of universal design equipment and systems and development of universal design terminals to realize easy-information access, and people-friendly residential environments through popularization of universal design shall be promoted, including establishing an awards system
3. Concerning the fact the utilization of IT will become significantly more important for the elderly and people with disabilities in the future, support systems, such as the development of nationwide support centers and a large increase in the number of IT instructors shall be promoted, and both the development of technology and services to support these groups of people shall be promoted.
4. In order for all people, including the elderly and people with disabilities to be able to live comfortable lives accessing all necessary information available through IT, subtitled television broadcasting and user-friendly websites shall be promoted, and smooth copyright management and conversions of written information to voice, etc., shall be promoted.
5. Utilizing the latest technologies, such as ubiquitous technologies including RFID tags, a system supporting barrier-free movement for all people, including the elderly, disabled and foreign nationals shall be put in place for practical use throughout the country.
6. Technology is to be realized by which people of different languages, cultures, mental and physical abilities can realistically exchange information overcoming linguistic and/or physical constraints through translation systems that work at the everyday colloquial level for various linguistic combinations in consideration of nonverbal information, such as that from gestures and facial expressions to individual knowledge and tastes, etc. Utilizing this, an interface which can be

easily used by all people shall be developed in order to realize universal person-to-person and person-to-goods communication.

Key Evaluation Points

1. Ratio of mobile phones, PCs, etc., utilization for the elderly.
2. Ratio of the number of books using IT (audio books, etc.) available for the physically-disabled and number of television programs with subtitles, sign language, and audio commentary.
3. Number of accesses to information using the systems that support barrier-free movement.
4. Penetration rate of multilingual translation software.

Development of infrastructure that can easily connect to networks that anyone can use at anytime from anywhere for any purpose and that has no digital divide
—Promoting the Ubiquitous Network Society—

Current Conditions and Issues

Japan's broadband environment has largely developed as a result of the e-Japan policies. However, there still exist areas where broadband service remains unavailable (as of the end of FY 2004, the number of households to which broadband service was still unavailable numbered around 3.45 million). Situated in under-populated areas, there is the issue of the private industry being unable to recover the costs for the investment in facilities and operations, resulting in a situation whereby there is no incentive for development.

At the same time, however, during the process in which fixed and mobile communications are integrated, it is expected that broadband services for the mobile telecommunications environment will become as good as that of optical fibers.

Concerning television broadcasting, although approximately 60% of all households are able to subscribe to high-definition, high-quality sound and two-way terrestrial digital broadcasting, issues such as the development of relay stations to cover 100% of the analog broadcasting areas in line with full transition to digital broadcasting by 2011 still remain unresolved.

In order to realize the Ubiquitous Network Society that anyone can use at anytime from anywhere for any purpose, telecommunications networks are essential, not only person-to-person, but also person-to-goods and goods-to-goods to facilitate the growing importance of logistics and stock management. Therefore, further efforts must be made toward the technical development, cost reduction, and privacy protection issues concerning these types of telecommunications.

Targets

To promote by July 2011, the creation of a ubiquitous network that anyone can use at anytime from anywhere for any purpose by realizing an infrastructure that has truly overcome the digital divide, the following objectives shall be realized:

1. By FY 2010, infrastructure improvements such as for optical fibers, etc., are promoted in order to eliminate all areas where broadband service remains unavailable;
2. By FY 2010, a mobile telecommunications system with 100 times faster data transmission speeds than the current one shall be realized;
3. By July 2011, harmonization between telecommunications and broadcasting in order to realize full transition to terrestrial digital broadcasting;
4. By FY 2010, technologies that will enable fast safe and secure authentication for ubiquitous terminals etc., as well as privacy protection technology capable of providing only appropriate information according to users;
5. By FY 2010, a network in which around 10 billion ubiquitous terminals (including RFID tags) can be used simultaneously in order to realize their effective utilization in various areas for diverse business fields and nations.

Policies

1. In order to make broadband services available throughout Japan, private sector-incentives should be created while maintaining fair competition. Other support shall also be provided according to necessity, such as the provision of investment incentives for businesses, nation-wide development and sharing of regional public networks, and encouraging the creation of original ideas concerning the development of local infrastructure and networks, etc. Efforts to realize new radio systems, etc., such as broadband wireless access, Ultra-wideband (UWB), Power Line Communications (PLC) shall also be implemented.
2. In order to realize a mobile telecommunications system with 100 times faster data transmission speeds than the current one, Japan’s strong mobile technologies and markets shall be utilized and world leading technologies, R&D implemented for applications and verification tests shall be promoted in cooperation among government, industry and academia. The system shall be put to practical use while maintaining internationally compatibility through international standardization.

3. In order to ensure the full transition to terrestrial digital broadcasting by July 2011, not only will the installation of relay stations and utilization of cable television be promoted, but development of an environment for the smooth utilization of infrastructure, such as telecommunications carriers' optical fiber networks and communication satellites, shall also be promoted.

4. The practical utilization of secure authentication technology, privacy protection technology, and technology that will enable a massive number of RFID tags to be able to be utilized simultaneously shall be implemented for ubiquitous terminals, etc. In addition, verification tests and standardization for traceability and effective logistics management, etc. for medical services, foods, etc. shall be implemented. The appropriate review and modification of "Guidelines for Privacy Protection with Regard to RFID Tags" also be implemented, and their penetration and raised-awareness with citizens promoted.

Key Evaluation Points

1. Number of areas (number of households) where broadband service is unavailable.
2. Data transmission speeds for mobile telecommunications systems.
3. Number of households with terrestrial digital broadcasting service available.
4. Price of RFID tags and penetration rate of traceability system for foods, medications, and etc., that utilize the tags.

(2) Measures Designated to Create a Society in Which People Can Live Safely and Securely

The world's most secure IT society
—Leap forward to become an "information security advanced nation" and eliminate the occurrence of cyber crimes—

Current Conditions and Issues

In this age of extremely rapid technical innovation, information technology has been developing as an essential foundation for industrial, government and social activities as well as for the way we live our lives. At the same time, various issues surrounding the use of IT are starting to have a great impact on people's lives, including our social and economic activities. These issues include information security issues, such as the frequent occurrence of information leakage at administration agencies and other critical information infrastructures; problems in our information systems, the rampancy of computer viruses, etc. Other problems are those involving the Internet, such as the unwanted emails (spam, etc.), Internet scams, the sale of illegal or harmful goods, inappropriate or harmful websites for juveniles, problems involving dating service Internet sites, and group suicides stemming from suicide websites.

For this reason, it is necessary for the government and public to cooperate to strengthen measures as nationwide effort to properly address issues such as cyber attacks on governmental bodies and critical information infrastructures and to minimize the leakage of important information and other damage caused by the inappropriate use of these networks. In addition, it is important to work on problem solving from a multilateral, comprehensive point of view, which ought to include such points as technologies, social system, operational environment, as well as take into consideration the fact that information security incidents and cases involving the misuse of the Internet have tended to be both diversified and complicated.

Targets

1. By FY 2008, measures compatible with the requirement of "The standards for information security measures for the central government computer systems

(Standards for Measures)" shall be implemented by all of the governmental bodies.

2. By FY 2008, the occurrence of IT malfunctions in critical information infrastructures shall be reduced to nearly zero.

3. By FY 2008, the information security measures in place in Japanese companies shall be at a world-class level.

4. By FY 2008, the number of individuals who feel "concern about the use of IT" shall be reduced to nearly zero.

5. Illegal information accessible on the Internet shall be reduced, and a safe and secure Internet environment, which shall serve as a good example for the world, shall be realized by establishing a society in which harmful information for juveniles is effectively blocked, etc.

6. A system capable of allowing people to properly deal with misuse of networks, including cases such as illegal, harmful information on the Internet, etc. shall be put into effect.

7. Work shall be made to eliminate cyber crimes through the thorough crackdown on these crimes.

Policies

1. In order to strengthen information security measures for governmental bodies, the "Standards for Measures" shall be improved and strengthened, and reviews and evaluations based on the "Standards for Measures" shall be implemented. The emergency response system for cyber attacks on governmental agencies is also to be reinforced.

2. In order to strengthen information security measures on critical information infrastructures that serve as the foundation for people's daily living and social economic activities, protection framework shall be reinforced under a cooperative effort between the public and private sectors, and this shall include the establishment of various cross-sectoral efforts.

3. In order to develop an environment in which the information security measures of companies are reflected in that company's market value, the establishment and implementation of corporate governance which has taken social responsibility into consideration shall be promoted. Moreover, internal control systems that support corporate information security from within the company are also to be promoted. Moreover, with regard to competition concerning government procurement of information systems, etc., bidding

conditions will be, where deemed necessary, contingent on evaluations on bidders' information security measures.

4. In order to be able to implement information security measures in which the elements of the latest R&D and technical developments have been incorporated, the implementation of R&D and technical development whose objective is to minimize the risk of information security to nearly zero are to be promoted.

5. In order to improve the information security literacy of citizens on an individual level, information security education that begins from elementary and secondary education shall be promoted. In addition, IT moral education targeted for children and their guardians shall be promoted and systems that implement IT moral education for children shall be implemented in cooperation with schools, households and local communities. Moreover, nation-wide penetration and awareness-raising activities about these systems and programs shall be implemented in cooperation with the public and private sector.

6. The proactive provision of IT related products and services through which individuals can effectively utilize information security functions easily, as well as the development of filtering software that is compatible with new IT related products shall be promoted. Moreover, efforts to support private sectors' independent measures concerning the misuse of networks (such as the uploading of illegal and harmful information on the Internet) shall be strengthened, including the formulating of guidelines for the deletion of illegal and harmful information on the Internet.

7. It is necessary to create an environment which prevents cyber crimes from occurring; have those persons having committed a cyber crime arrested; and ensure the protection of people from having their rights and privacy violated in cyber space. For this reason, crackdowns on cyber crimes shall be strengthened and infrastructural development for protecting and securing people's rights, including the basic human rights of privacy of communications, advanced. In addition, the development and penetration of technologies to improve the safety and reliability of cyber space are to be promoted. At the same time, the development of a system is to be promoted in which the misuse of networks, including that of illegal and harmful information on the Internet, can be detected as early as possible. Furthermore, prompt actions against such infractions are to be promoted and international cooperation is to be strengthened.

Key Evaluation Points

1. Assessment results based on “Standards for Measures”.
2. Number of occurrences of IT malfunctions in critical information infrastructures.
3. Ratio of companies that have formulated information security policies.
4. Ratio of people who remain anxious about the use of IT.
5. Ratio of households that introduce filtering software.
6. Number of cyber crime-related arrests.

(3) Human Resource Development and Education

Development of human resource bases with an eye towards the next generation
—Improving IT facilities for all teachers and raising the level of academic skills for all students through IT—

Current Conditions and Issues

In order for Japan to continuously maintain its international competitiveness in this age of rapidly advancing information technology, it is essential that we develop an environment in which the next generation–our children–can become familiar with IT at the elementary and secondary education level so as to improve their ability to effectively utilize information.

Although improvements of various IT related facilities in schools have been promoted, IT facilitated reforms in schools cannot be said to have made the same level of progress. This is due to issues, such as lack of computers for teachers, delays in computerization of school affairs, lack of human resources for maintenance checks of school IT related facilities, etc.

In the future, as we make further improvements to the IT environment in schools, we expect to be able to realize an environment in which those children with a willingness to learn can do so effectively using IT. This shall be accomplished through the implementation of more effective classes, etc. in order to achieve higher academic skills in all students through the utilization of IT. To realize these aims, it is first necessary to further improve the utilization ability of IT in teachers as well as promote the development of outstanding educational content.

Furthermore, it is recently becoming necessary for children to acquire the ability to be able to judge the content of various kinds of information. This is due to the fact that problems stemming from illegal and harmful information on the Internet have been occurring one after another; and it is therefore necessary to review our schools' information education, including moral education concerning information, in order to improve school children's information utilization ability from the elementary and secondary education level.

Targets

1. The level of computerization in schools shall be raised by making available one PC per teacher and by improving the network environment and putting in place a support system for the IT infrastructures in schools.
2. Teachers' IT utilization abilities shall be improved through a teacher IT abilities evaluation system.
3. Learning opportunities utilizing IT, which are capable of meeting students' desire to learn, shall be provided.
4. School children's information utilization ability, including information related morality, shall be improved through the utilization of IT for course instruction and through information technology morality education in elementary schools, etc.

Policies

1. By FY 2010, a computer shall be made available to every public elementary and lower and upper secondary school teacher, and the effective use of IT as means for schools authorities and staff, parents and school committees to exchange information as well as the computerization of various school affairs shall be actively promoted. In addition, the improvement of school IT environments, such as intra-school LANs, ordinary classroom computers, etc. shall be immediately planned and implemented, with ultra high speed Internet connections using optical fibers for schools realized.
2. Installation of external experts in charge of information systems for elementary, lower and upper secondary schools, etc. (School Chief Information Officer) shall be promoted, and the support for the greater computerization in schools shall be strengthened, including the creation of an IT environmental improvement plan by FY 2008.
3. By FY 2006, the evaluation criteria for teachers' IT proficiency shall be formulated and clarified; and based on this criteria, leading teachers shall be assigned, and through the awarding of teachers for evaluation results, the IT utilization ability of all teachers shall be raised.
4. By FY 2006, education which effectively utilizes IT for the improvement of students' academic skills shall be enhanced through easy-to-understand teaching methods that effectively utilize IT and development and utilization of effective self-study content designed according to the learning level of school children.

5. In order to cultivate ways of thinking and attitudes that will serve as a foundation for appropriate actions in an IT society, information moral education shall be actively promoted, and the concepts of this moral education from the elementary school level shall be reviewed.

Key Evaluation Points

1. Ratio of computers available per teacher.
2. Ratio of ultra-high speed Internet connection in schools; ratio of intra-school LANs provided; and the number of students per computer.
3. Status of School CIO and IT environmental improvement plan.
4. Number of local governments that award teachers according to their IT utilization abilities, such as implementing evaluations of teacher's IT utilization ability, and assigning leading teachers.
5. Number of teachers who are able to teach classes by utilizing IT.

Education and human resource development that will produce human resources that will be competent anywhere in the world —The establishment of a government-industry-academia partnership system—

Current Conditions and Issues

Currently, information technologies, which are being utilized in things from personal computers, mobile devices, automobiles, appliances, and industrial equipment to the mission-critical systems of industry, administration, and our society, are playing a supporting role as one of Japan's core technologies in the industrial competitiveness of our entire nation. And, since the development of these technologies largely depends on the quality of human resources, in order for Japan's industries to improve their global competitiveness, it is essential that we promote human resource development that will cultivate high-level IT human resources who will be capable of creating high added values using information technologies.

However, in Japan, there is a lack of such human resources in the industrial field, and it is said that the reason for this state is that there exists a mismatch between the requirements of universities, which cultivate IT human resources, and those of industrial, which makes use of these people. In order to eliminate this mismatch, it is necessary to create a human resource development system which will function in cooperation between government, industry and academia so that we will be able to continuously produce high-level IT human resources for the promotion of Japan's IT reform as well as to ensure our global competitiveness.

In addition, in order to expand the IT human resource base, it is necessary to provide various learning opportunities at universities, such as e-learning education programs using the Internet, etc., and to promote the improvement of the abilities of students, including those who are members of society.

Targets

1. Put in place human resource development that will cultivate IT human resources, such as project managers, IT architects, IT coordinators, experts in

the field of embedded software in order to eliminate the supply-demand mismatch of high-level IT human resources in industry.

2. With an aim to increase more than double the ratio of departments and graduate courses which implement e-learning education using the Internet, improve cooperation between domestic/international universities and companies as well as promote the further education of members of society through the promotion of e-learning education programs using the Internet at universities, etc.

Policies

1. In order to cultivate high-level IT human resources at universities and graduate schools that will serve as the source of the global competitiveness of Japanese industries in the next generation, human resource development programs and educational materials will be developed by FY 2007 through a cooperative effort between government, industry and academia. In addition, by FY 2010, through the establishing of high-level IT human resource development organizations etc. into which the results of the above efforts shall be incorporated, the gap between the supply and demand for these advanced IT human resources in industry shall be eliminated.

2. The ratio of departments and graduate courses which implement e-learning education programs using the Internet is to be doubled by FY 2010 through various efforts, such as the nurturing of a more competitive environment among universities by supporting unique programs utilizing e-learning education with the Internet, etc.

Key Evaluation Points

1. Level of mismatch that exists in human resources between the human resources who have been cultivated at high-level IT human resource development organizations and those demanded by industry.

2. Ratio of departments and graduate courses which implement e-learning education programs using the Internet

3. The number of universities utilizing e-learning education programs implemented by other domestic/international universities.

4. The number of students who are members of society

(4) Research and Development

Promotion of R&D that will form the foundations for the next generation IT society
—Strategic R&D—

Current Conditions and Issues

Concerning R&D in the IT area, various efforts covered under the e-Japan Strategy and the Science and Technology Basic Plan have been strengthened and certain results have been achieved so far. However, in spite of these results, global competition involving technical development continues to intensify, and this has resulted in a situation whereby not only are advanced nations joining in the competition, but Asian nations, such as China and Korea, has begun working on the strengthening their own technical competitiveness, and Japan finds itself being closed in from behind by those nations.

In the current situation, in order for Japan to maintain the competitiveness of its cutting-edge technologies as well as develop the foundation for its IT society, it is required to make further efforts toward implementing strategic R&D.

Targets

1. R&D levels for IT are raised.
2. The results of R&D are utilized for the creation of new technologies, products and services.
3. The scale of IT-related markets is expanded.

Policies

1. Under the cooperation of the Council for Science and Technology Policy, technical strategies for the next generation of information technologies shall be formulated from the mid and long term point of view and core technologies set and prioritized.
2. For the purpose of the maintenance and reinforcement of our global competitiveness, IT-related R&D for those areas that shall serve as the foundations for what will become Japan's leading IT, such as RFID tags, optical networks, robots, core devices, information appliances, mobile technology, etc., as well as for other areas shall be intensively promoted.

3. In order to ensure the security of our IT as well as of the society which is increasingly becoming a critical issue, R&D will be promoted for security issues, such as on computer viruses, cyber terrorism, etc.
4. In order to realize a ubiquitous networking environment that is capable of the smooth exchange of information and can be connected to “anytime, anywhere, for anything, and by anyone,” the R&D for ubiquitous terminals, etc., shall be promoted.
5. The R&D for the information devices making them easily operated utilizing sound or movement, etc. as well as for the audio and visual technology that can realize highly realistic interfaces shall be promoted so that an interface technology that is both people-friendly and highly exciting can be realized.
6. Through the promotion of research implementation systems and research evaluation systems as well as utilization policies for these systems, etc., an R&D environment that is competitive and is able to continuously produce new technical innovation is to be developed.

Key Evaluation Points

1. Number of patents (the number of submitted patent applications and newly registered patents).
2. Number of research papers.
3. Number of research results that have been put to practical use as a result of R&D.
4. The scale of our domestic IT-related markets.

3. Provision of Valued Information to the World

Enhancement of the presence of Japan in international competitive society
—Provision of valued information from Japan to the world—

Current Conditions and Issues

Although Japan has developed and makes use of one of the world's most advanced information and telecommunications networks, including the realization of a domestic broadband environment, Europe and the United States still dominate more than half of the overall volume of international information flows. Furthermore, when it comes to industrial competitiveness, the United States holds an overwhelming share of the world's software business; and even in areas where Japan excels, such as in information appliances and device development, China and Korea are catching up. For this reason, the expansion of global markets as well as the strengthening of our IT industry competitiveness is now required.

Further, as most of the international standards for the IT area industries have been formulated under the initiative of Europe and the United States; it is also now necessary for Asia to begin formulating international standards under the initiative of Japan.

Targets

1. Japan's information transmission ability is strengthened.
2. A constant amount of IT telecommunications circulating through Japan is maintained.
3. The competitiveness of Japanese products and services in global markets are strengthened.
4. International technical standards that originate from Japan are established.
5. Japanese travel information is offered using IT.

Policies

1. Digitizing information about Japan's cultural heritage, such as about our national treasures and important cultural assets, so as to make accessible online and the creation of attractive content shall be strategically promoted in

consideration of global markets in order to provide information via the Internet, etc. that promotes Japan's cultural and historical attractions.

2. Taking on a major role in helping to improve the global network environment, the development of a network to maintain stable communications channels in Asia shall be promoted with Japan serving as one of the world's information hubs.

3. Utilizing what is one of the world's most advanced IT environments, including our broadband and mobile Internet environments, etc., as well as one of the world's most advanced markets, Japan shall promote international joint research projects for the creation of new technology and services in consideration of global markets.

4. In order to improve the reliability and productivity of software, the promotion of R&D and quality assessment systems' functions enhancement are to be implemented under the cooperation of government, industry, and academia. In addition, technology concerning the accessing of next generation intellectual information, such that for image searching, information analysis, etc. shall be strengthened.

5. Concerning those technical areas in which Japan has developed ahead of other nations, in order to lead in the effort toward international standardization, activities in international standardization organizations, such as IEC, ISO, ITU, etc., are implemented and cooperation and interaction in the industrial areas are to be promoted in the Asia region under the cooperative efforts of government, industry and academia.

6. Tourist information systems, such as the Visit Japan Concierge Website (tentative name), which include information research and reservation functions that are suitable for planning independent tours and are accessible in foreign languages are to be developed and promoted so that foreign visitors can easily and conveniently use them. In addition, an information system utilizing information technology is to be developed and promoted which introduces the various tours and cultural sites, etc., of sites throughout the country. In this way local tourism and the tourist economy shall be revitalized, and Japan's various attractions, including Japan's rich cultural heritage, are to be conveyed to the world. This will, at the same time, thereby actively promote the enhancement of mutual international understanding.

Key Evaluation Points

1. The market scale of digital content.
2. Ratio of the world's volume of information flows generated by Japan.
3. The market scale for new products and services using networks that are being put to practical use for the first time in the world.
4. The export value of IT related products.
5. The number of suggestions/adoptions concerning international standards.
6. The number of foreign tourists visiting Japan.

International contribution by providing problem-solving models —Contributions to other Asian countries using IT—

Current Conditions and Issues

As one of the world's most advanced IT nation, Japan is required to take an appropriate role in international society, and its responsibility within the Asian region to which Japan belongs is significant. For this reason, Japan must strive to utilize IT to realize solutions to the important social issues facing all nations, including Asian nations, in the 21st century.

At present, efforts towards economic partnership agreements among Asian countries have been vigorously implemented, and the strengthening of cooperation and partnerships has been advanced. As people, goods, money, services, and information begin to move more and more within the area, Japan is required to proactively contribute to the development of Asian economies through IT, such as the realization of effective and secure circulation of people, goods, money, services, and information using IT, etc.

Targets

1. IT utilization models (such as for the smooth circulation of people, goods, money, services and information utilizing IT) in Asia is established.
2. Issues facing Asian nations are solved with cooperation of Japan's IT technologies.
3. The digital divide, which is created by the diversity of languages and cultures in the Asian region, is eliminated.

Policies

1. Japan, which is going to face the issue of an aging society ahead of any other country, shall develop universally designed people-friendly social infrastructure models and provide these results with the rest of the world.
2. In order to establish an international resources recycling network, efforts in cooperation with Asian nations are to be implemented concerning traceability systems for waste, etc.
3. Concerning international issues related to the food industry, such as BSE, etc., Japanese people's insistence for high quality is to be harnessed and

comprehensive production and logistics management models using RFID tags, etc. are to be developed and the results provided with the rest of the world.

4. Utilizing our terrestrial digital broadcasting and telecommunication systems for disaster prevention, detailed disaster information shall be promptly provided upon disasters for afflicted regions. In addition, service models for citizens which are capable of interactive functioning according to the situation of the individual resident are to be developed and the results provided with the rest of the world.

5. In order to put into effect airport procedures that are secure and quick, the optimization of all airport procedures are to be realized through the automating identification, verification and other necessary procedures by FY 2008. In addition, mutual interoperable models concerning airport procedures such as immigration control within Asia through the utilization of IC cards, etc. shall be developed, and international mutual interoperability shall be aimed at for the East Asia region by FY 2010.

6. In order to freely access, share, and transmit various types of information or knowledge through the world using mother languages, joint research concerning multi-linguistic processing is to be implemented in the Asia region. To achieve this, a system in which researchers from various Asian countries can participate and contribute, such as the utilization of open source software, shall be established and utilized as shared software assets.

Key Evaluation Points

1. Level of Japan's contribution to international society and the utilization of our problem-solving technology and know-how.

2. Number of passengers passing through Japanese airports; average time for necessary procedures at the airport; the number of the arrests for illegal immigrants.

3. Number of countries participating in multi-linguistic processing projects; the number of languages able to be processed.

Appendix

Glossary of Terms

Term	Definition
Basic Principles	
Broadband	Communications lines such as FTTH,* DSL,** and cable internet that make possible high-speed and ultra-high-speed communications. Contrast with narrow band. * FTTH: Abbreviation of Fiber To The Home. By installing optic fiber to each home, ultra-high-speed communications in the tens of Mbps to several Gbps are possible. ** DSL: Abbreviation of Digital Subscriber Line. A general term for methods that enable high-speed digital data transmissions by installing a modem or other equipment with metallic cables for telephone lines.
Ubiquitous Network	A ubiquitous network refers to a network environment in which anyone can access networks at any time from anywhere for any purpose. The phrase is derived from “ubique,” the Latin term for ubiquitous, which means “present everywhere.”
PDCA Cycle	Repeated implementation of Plan, Do, Check, and Act.
Structural Reform of Healthcare Through IT	
Medical Insurance Claims	A general term referring to statements of diagnosis and treatment used when medical institutions under the medical insurance system seek payment of insurance benefits for medical care expenses.
Electronic Medical Records	Diagnosis and treatment information recorded and stored in diagnosis and treatment records (information concerning the patient’s condition obtained during diagnosis and treatment and concerning the course of treatment) in digital format and healthcare information systems for

	creating and maintaining such records.
Ordering System	An information system for handling online procedures performed by doctors (including dentists) such as tests and issuing prescriptions that in the past were handled on paper forms and that interact accounting systems to issue instructions online as well as search for and refer to test results.
An Environmentally-Friendly Society That Utilizes IT	
BEMS	Abbreviation of Building Energy Management System. An energy consumption management system that indicates in real time the status of energy use within a building and optimizes lighting and heating/cooling according to current use.
HEMS	Abbreviation of Home Energy Management System. An energy consumption management system that indicates in real time the status of energy use within a home and optimizes lighting and heating/cooling according to current use.
Manifest	Industrial waste management documents. The manifest indicates the types and volume of industrial waste, the name of the shipper and the contractor that will dispose of the waste, and so on. When contractors collecting, shipping, and disposing of waste complete their responsibilities, they write necessary information to the manifest and send a copy to the consignor to show that the waste has been disposed of properly. * Manifest System: A system, made obligatory under the Waste Disposal Law, under which manifests are issued to consignors when waste producers contract out the collection, transport, interim processing (such as detoxification and volume reduction) and final disposal (disposal in land fills) of industrial waste.
Electronic Manifest	In place of a paper manifest, the information

	processing center (a single body designated by the Minister of the Environment that manages electronic manifests), waste generators, collection and transportation companies, and disposal companies use communications networks to manage the flow of industrial waste contracted out by the waste generator.
Traceability	Being able to trace the history and product information of a product through each stage of the process it takes from production to processing to distribution.
The World's Leading Safe and Secure Society	
GIS	Abbreviation of Geographic Information System. Tools and technology enabling us to manage, produce, and visually display (as maps and charts) spatial data information related to positioning. This information can be used for advanced analysis and rapid interpretation.
The World's Safest Road Traffic Environment	
ITS	Abbreviation of Intelligent Transport Systems. Using information and communications technology, this system integrates people, automobiles, and the road. The technology can be used to overcome traffic-related problems such as traffic jams, accidents, and the impact which traffic has on the environment.
FAST	Abbreviation of Fast Emergency Vehicle Preemption Systems. Systems that regulate traffic signals to give priority to emergency vehicles so emergency vehicles can arrive at their destinations more quickly and traffic accidents involving emergency vehicles can be prevented.
The World's Most Convenient and Efficient Electronic Government	
Three Online Administrative Procedure Laws	The following laws, which were adopted to specify matters necessary for making possible online processing of administrative procedures in addition

	to paper processing. • Law Concerning the Use of Information and Communications Technology for Administrative Procedures • Law Concerning Coordination with Other Laws in Conjunction with the Coming into Effect of the Law Concerning the Use of Information and Communications Technology for Administrative Procedures • Law Concerning Certification Services for Electronic Signatures by Local Authorities
Legacy Systems	Information systems that cost central government ministries and agencies more than 1 billion yen annually and meet one of the following conditions. (1) Information systems that use mainframe and office computers (medium-sized computer with operating systems developed independently by a developer) and systems used to connect to such computers. (2) Systems concerning which contracts have been continued since 1994.
Electronic Signature	An electronic symbol that is attached to an electronic document and functions in the same manner as a seal or signature on a paper document. Electronic signatures are used to prevent disclaimer, forgery, and alteration.
Local Government Wide Area Network (LGWAN)	An exclusive administrative network that connects local governments. The network linked prefectural government and cities designated by ministerial ordinance by fiscal 2001 and all cities, towns, and villages by fiscal 2003. The network is also linked to the Kasumigaseki WAN, the national government network.
Public Personal Identification System	A service to provide users electronic certificates and other electronic documents through collaboration among prefectural governors and municipal mayors. This service can confirm the identity of users and detect the presence of tampering.
CIO	Abbreviation of Chief Information Officer. The

	person in an organization responsible for considering and carrying out information strategies. In the CIO liaison committee, CIOs coordinate among agencies overall administrative information policies including organizations, budgets, and systems and promote the adoption of information technologies within government ministries and agencies.
IPv6	Abbreviation of Internet Protocol version 6. A next-generation standard that will follow the IPv4 currently in widespread use. Compared to IPv4, IPv6 substantially increases the number of addresses, reinforces security, and simplifies various settings. * IP: A communications protocol used to transmit data over the internet. The IP defines methods of addressing devices connected to networks and routing communications routes among multiple interconnected networks.
Portal Site	A Web page that is initially accessed when connecting to the internet. Portal sites display links organized by field.
Enhanced Business Competitiveness through Establishment of Management by Utilizing IT	
EDI	Abbreviation of Electronic Data Interchange. This technology enables business transaction data, such as orders and payments, to be electronically exchanged between different companies via computer networks using an agreed-upon format.
Platform	A common foundation for software or middleware that allows for the provision and use of services using IT.
Skill Standards	Systematic indicators of work abilities necessary for the use and application of various types of IT
Prosperous Lifestyles throughout People's Lifetimes	
Telework	A method of using IT that allows for flexible

	working styles at different places and times. Telework is generally divided into employment telework whereby an employee of a company works from home, at various places or a satellite office and self-employment telework by sole proprietors or small business owners (such as SOHO and work at home). * Teleworker: A person who works more than eight hours a week using IT to flexibly utilize different places and times.
SOHO	Abbreviation of Small Office Home Office. Self-employment work-style that sole proprietors or small business owners work at home or small office using IT.
e-Learning	Methods of learning that use electronic formats such as the internet. Under a broad definition, a type of correspondence education. e-Learning is characterized by the ability to take courses on only the necessary materials, the ability for educators and students to interact in real time, and use of educational materials that employ video and voice data.
An IT Society That Adopts Universal Designs	
Universal Design	The concept of barrier free design seeks to eliminate barriers that are caused by disabilities, while universal design seeks to create cities and living environments that various people can use with ease regardless of the presence or absence of disability, age, sex, or race. Universal design was proposed by Ronald Mace of the North Carolina State University in the United States.
Development of Infrastructure That Can Easily Connect to Networks That Anyone Can Use at Anytime from Anywhere for Any Purpose and That Has No Digital Divide	
Digital Divide	The disparity between persons who can use information and communications technologies such as the internet and PCs and those who cannot.

Broadband Zero Regions	Regions where there are households that cannot use any type of broadband.
Terrestrial Digital Television Broadcasts	Terrestrial television broadcasts using a digital format. Compared to current analog broadcasts, higher quality image and sound data can be transmitted, connections with computers are easy, and the radio spectrum can be effectively used.
RFID Tags	Abbreviation of Radio Frequency Identification tags. These tags are equipped with internal IC chips and antennas which can store identification data. Utilizing radio waves, stored data can be accessed (read/write) within close distance without actual physical contact.
UWB	Abbreviation of Ultra-Wideband. System which emits ultra-low power radio signals with very short electrical pulses in the frequency band of more than several GHz. The system can enable high speed data transmission in the range of 100 Mbps within a 10-meter radius, and can also be used to high precision positioning.
PLC	Abbreviation of Power Line Communications. A method of transmitting data using the power lines for supplying electric power. PLC makes possible the creation of household networks using electric outlets.
The World's Most Secure IT Society	
Dating Service Internet Sites	Electronic bulleting boards that provide a forum for people to meet on the Internet.
Cyber Attacks	Electronic attacks using information and communications networks and information systems.
Cyber Crime	Crime that uses information technology such as crime that uses advanced information and communications networks such as the internet as well as crime that targets computers and electromagnetic media.

Filtering Software	Software that evaluates and identifies internet Web site using certain standards to selectively exclude unlawful or harmful sites.
Education and Human Resources Development That Will Produce Human Resources That Will Be Competent Anywhere in the World	
IT Coordinator	A specialist who bridges management and IT from the perspective of managers to promote investment in IT that is truly useful to management.
IT Architect	A specialist who designs information systems and is responsible for the outputs and effects. Information system structures are becoming more complex, making it difficult to maintain integration and coordination throughout systems as a whole, and consequently, highly-qualified IT architects are needed.
Promotion of R&D That Will Form the Foundations for the Next Generation IT Society	
Optical Network	A network of communications lines that comprehensively use optical technologies. Lines in most areas use optical technologies.
Core Device	One of the fundamental devices that make up an electronic circuit. Of the devices that perform specific functions within information and communications systems, core devices are crucial in terms of function and technology.
Information Appliances	Electrical appliances for the average consumer which have a basic interface for connecting up to the Internet or are capable of interoperability and inter-connection to other devices.
Ubiquitous Terminals	The terminals used by the users to connect to ubiquitous networks. Such terminals allows for easy connections without complex settings.
Computer Virus	A program created to infect computers via networks and intentionally cause harm. Malicious viruses can destroy programs and data.
Cyber Terrorism	Electronic attacks on key systems of crucial infrastructure and incidents resulting in

	substantial damage to key systems of crucial infrastructure that are believed to have likely been caused by electronic attacks.
Enhancement of the Presence of Japan in International Competitive Society	
ISO	Abbreviation of International Organization for Standardization. An international organization that adopts international standards for industrial products. Established in 1947. Headquartered in Geneva, Switzerland.
IEC	Abbreviation of International Electrotechnical Commission. An international standardization organization that creates international standards in the electrical and electronic technology fields that is made up of representative standardization organizations from various countries. Established in 1906.
ITU	Abbreviation of International Telecommunication Union. A specialized body of the United Nations concerning telecommunications with 189 member countries and territories. Allocates frequencies internationally, standardizes telecommunications, and supports developing countries.
International Contribution by Providing Problem-Solving Models	
Open Source Software	Software whose source code—the equivalent of design diagrams for software—is available on the internet free of charge for improvement and redistribution by anyone.