

strengthening support for international coproduction. Overseas operations will be supported through the development of a market environment with stronger countermeasures against pirated contents.

Section 2 Boosting Regional Growth through Tourism

(1) Developing internationally competitive tourist attractions

Tourism is an industry closely related to regional resources. It is important to progress the development of unique and internationally competitive sightseeing areas. To this purpose, the local residents, NPOs and the government work together to discover and utilize regional resources such as traditional cultures, cultural heritage, history, nature, landscapes, industrial heritages/facilities, sports and new Japanese cultures, and actively transmit information concerning them to the rest of Japan and overseas. Moreover, it is important to systematically address the restoration of sightseeing areas from a long-term viewpoint utilizing government subsidy systems according to regional needs such as landscapes and facilities' locations. The government strengthens support for spontaneous efforts such as human resource boosting projects and the development of exchange facilities, and promotes the establishment of regional autonomous tourism utilizing regional and private initiatives and creativity.

Moreover, the government supports wide-area tourism linkage promoted by local governments and tourism-related organizations from the viewpoint of utilizing important tourism resources located not only within the region but also across the borders between prefectures, as well as the development of potential tourist attractions. Furthermore, it is necessary to promote the establishment of a wide-area tourist route across the regional blocks using regional resources including activities to promote the protection and understanding of world heritage as well as through linkage with neighboring areas in East Asia.

The development of transportation infrastructure, which supports access to sightseeing areas and exchange and linkage between regions, is also important. Therefore, the reinforcement of networks connecting hub airports – regional gateways -, and the improvement of road and railway access to airports should be promoted. Moreover, in order to attract foreign tourists, wide-area efforts are required in such areas as international charter flights.

(2) A new kind of tourism; human resource development

The Japanese have created various kinds of tourism such as visiting the Ise Jingu, worshipping Mt. Fuji, Shikoku pilgrimages and hot spring cures. However, in recent years, tourism needs are extending to nature study, experience and participation, fitness-oriented, extended-stay and industrial tourism. Taking into account this trend, it is important to utilize regional resources and warm hospitality, and to promote the creation of a new kind of regional tourism. This brings opportunities for people to come into contact with history and cultures as well as to relax.

Japan boasts some of the world's best hot springs and, as such, they are important tourism resources. They can be capitalized on by restoring old tourist attractions such as hot spring resorts to internationally competitive standards with world-class amenities. At the same time, although

hot spring tourism centered on group tours has been popular, the provision of services with high customer satisfaction levels should be promoted to respond to diverse needs such as by introducing systems that allow tourist to use hot springs in different hotels, to decide for themselves where to eat and to select restaurants in the whole region. Moreover, cultural tourism which satisfies an intellectual appetite will be promoted. This involves not only visiting places of interest but also deepening understanding of history and cultures for the Japanese themselves and helping foreign tourists to appropriately understand Japanese climate, culture and history in a deeper sense through contact and experiences according to their tastes. As for industrial tourism, regional tourism should be boosted by further utilizing traditional industries, historic facilities which demonstrate history of the development of modern industries and state-of-the-art factory equipments.

The government will strengthen support for those who have experience in regional development or the tourism industry with respect to efforts for planning and providing information about tourist attractions and the development of human resources. Also, the government promotes the expansion of Japan's tourism base through linkage with universities which address the development of human resources associated with tourism, the promotion of activities of organizations which develop human resources for regional development and volunteer guides. Moreover, in order to progress the decentralization of demand for tourism, arrangement of holidays in conjunction with regional events, and diversification and flexibility of school holidays through educational board initiatives should be progressed in regions.

(3) Improvement of cultural capacity through exchange

Demand for traveling to Japan should be created. This can be achieved through measures for attracting foreign tourists and strategic information transmission of our country's features with the annual goal of 10 million foreign tourists by the year 2010, and, eventually, the same number of foreign tourists coming to Japan as Japanese going overseas. International tourism exchange will be promoted through multilateral meetings such as bilateral dialogues and APEC (Asia-Pacific Economic Cooperation) as well as cooperation with international organizations such as the World Tourism Organization.

Attracting international conferences, international cultural/sports events and international exhibitions/trade fairs to Japan is expected to have a considerable effect on the number of foreign tourists. At the same time, this contributes to opportunities for contact with world-class knowledge/trends, international-standard arts/academia and different cultures, and boost regional growth. Therefore, it is necessary to build stronger overseas relationships with relevant organizations for marketing purposes, strengthen systems for attracting and welcoming tourists using the regional capacities centered on convention bureaus, and develop specialized human resources who support operation and management. As for international conferences, the goal that the number of major international conferences should be increased by more than 50 percent by the year 2011 will be achieved through those efforts.

Educational trips (school trips) from overseas which contribute to young people's mutual

understanding should also be promoted. Moreover, incentive tours such as study tours for company employees and invitation tours intended for dealers should also be promoted through actively promoting the invitation of key people.

Furthermore, it is necessary to strengthen systems for welcoming foreign tourists. Thus, the unification of information signs, information in foreign languages and symbols and reinforcement of interpreter-guides in rural areas should be promoted.

Information on regional features will be transmitted to Japan and overseas through those efforts so that people can deepen their understanding of Japanese cultures, not just economic aspects.

Chapter 4 Basic Measures Concerning Transportation and Information and Communication Systems

Seamless movement as well as the creation of a seamless distribution environment of people, goods and information is required following globalization of the economy and rapid growth in Asia. In addition, global issues concerning the environment, resources and energy are becoming apparent. In the future, it will be necessary for Japan as a member of Asia to contribute to their resolution utilizing our vast range of technology and experience. Also, it is necessary to play an active role in linking Asia with the rest of the world not only in economic terms but also in social and cultural aspects.

Moreover, in realizing the national land structure described in this plan where a wide range of regional blocks develop autonomously, it is necessary for each block to engage in close linkage and competition. On the other hand, it is necessary to achieve vibrant, diverse and stable growth utilizing unique resources and existing regional amenities by absorbing the dynamism of growth of East Asia through direct exchange and linkage. Therefore, it is necessary for the comprehensive development of transportation/information and communication systems to be promoted from a cross-sectional viewpoint of land-sea-and-air so that the blocks can directly exchange with other areas in Japan as well as with neighboring areas in East Asia without going through Tokyo. In addition, it is necessary to secure arterial networks throughout the country.

On the other hand, in each area in Japan, it is essential to provide reliable, punctual and high-quality transportation to address the effects of the declining and aging population such as regional stagnation of industries. This can be achieved through regional support based on innovation such as transportation and information and communication technology, linkage between the public and private sectors, and the concept of the "new public."

Based on these trends, this plan specifically promotes the following for the purpose of creating vibrant national land where each block develops autonomously through mutual exchange/linkage and synergetic effects. It is also necessary to review the long-term plan.

1. Comprehensive international transportation/information and communication systems which link East Asia to the rest of the world through the realization of seamless connections between Japan and East Asia
2. Disaster-resilient and flexible national arterial transportation systems which promote exchange

and linkage between the regional blocks

3. Regional transportation/information and communication systems which support cities and rural communities as a base for living environments on a wide-area scale

In constructing these transportation/information and communication systems, further efforts should be promoted for addressing problems such as the reduction of greenhouse gas emissions in view of the fact that transportation sector currently accounts for approx 20 percent of domestic CO₂ emissions.

Section 1 Comprehensive Transportation and Information and Communication Systems

In order for Japan to play a role in the Asian gateway Strategy, whereby Japan becomes a bridge between Asia and the rest of the world to promote the growth throughout Asia, it is necessary to promote the flow of people, goods and information and the construction of comprehensive and multilayered international transport/information and communications systems. First of all, international ports and hub airports connected to different countries by multiple and frequent air as well as sea routes, and the development of the Asia Broadband Environment as an infrastructure of information transmission between Asia and the world should be promoted for the purpose of creating bases for the worldwide flow of people, goods and information. Moreover, international ports and airports, which are regional gateways aiming at the autonomous development of East Asia, will be effectively utilized for production, trade and exchange with East Asia. In addition, domestic road and railway networks will be developed. Smooth exchange and linkage with East Asia, a strategic goal in order to realize a new national land image, is aimed at through synergistically exercising the functions of such transportation bases.

(1) Measures to strengthen competitiveness of international transportation and information and communication bases

Steady increase in demand for international flights in East Asia and creation of networks has been progressed following the globalization of the economy, the economic growth of East Asia and rise of low cost carriers.⁹ On the other hand, international hub airports in Japan have played a major role as gateways to neighboring countries for long-distance international routes to Europe or the U.S. However, it is a concern that their relative positions will decline due to the strategic development of international hub airports in neighboring countries in East Asia.

Therefore, in order to maintain and enhance the position of our country as an Asian gateway linking East Asia to the world, open and strategic networks with Asia will be constructed. In addition, expanding demand for air transport between Japan and East Asia should be addressed through the development and promotion of round-the-clock operation of hub airports in metropolitan areas. Moreover, under appropriate role-sharing among multiple airports in the Tokyo metropolitan area, Kinki and Chubu, functions of internationally competitive international

⁹ Carriers which operate with low costs and low prices through services between specific two points and simplification of in-flight services.

hub airports should be reinforced by strengthening connections between international and domestic air transport, airport access, systems for customs, immigration and quarantine (CIQ), and security systems.

In particular, Narita International Airport, a major international airport, and Tokyo International Airport, which complements it, should be utilized strategically to meet active demand for international air transport in the Tokyo metropolitan area. Moreover, as for the Kansai International Airport and the CHUBU CENTRAIR International Airport, airport functions should be fully utilized. This can be achieved by taking into account demand trends through international air cargo services, opening of new routes and increasing services appropriate to international hub airports and by promoting a round-the-clock service.

(Efforts to create global logistics bases)

Following the internationalization of production activity, the improvement of distribution efficiency such as a reduction in transportation costs and attempts to avoid inventory loss affects companies' competitiveness. Therefore, as for Japanese counties operating within Asian production networks, supply chain management (SCM), which comprehensively manages and optimizes distribution associated with procurement, production and sales, is becoming indispensable. Foreign logistics companies¹⁰ which operate the global terminal business to support SCM are competing to strengthen advanced logistics functions such as through distribution/inventory management and distribution processing utilizing state-of-the-art information and communication technology, and increasing market share of cargo handled by promoting networking orientation among major ports and major international airports.

Therefore, in international super-hub ports, which aim at advanced logistics functions and competitiveness by directly linking to major international sea routes, large-scale international container terminals will be promoted, and operators of these mega terminals will be developed. In addition, international competitiveness should be further strengthened through the cost reduction of ports and the reduction of time required from when an imported container cargo enters a port until it leaves the container yard (lead time). This can be achieved using merit of scale by intensively handling container cargo whose demand is expected to continue to stably grow. Also, the creation of advanced and large-scale logistics bases (logistics centers) should be promoted. Moreover, as for international ports which support industrial competitiveness and the stability of people's lives, cost reduction of industrial distribution at seaside areas and the improvement of service standards should be promoted, leading to the boosting of regional growth and the promotion of company locations. This can be achieved by extending leading efforts at super-hub ports to the whole nation and developing multi-purpose international terminals. In doing so, wide-area linkage between ports will be promoted to provide services with high mutual

¹⁰ For example, this refers to global terminal operators (private companies who operate container terminal business at ports in the world in the form of public terminals or exclusive use. They are advancing network orientation of terminals on a global scale in order to secure competitiveness of terminal operation and to strengthen services to cargo owners.

complementarity.¹¹ In addition, seamless coordination between international and domestic transportation will be promoted through the reinforcement of domestic feeder¹² networks, integrated operation of piers for foreign and domestic trade and strengthening of access to ports and railway cargo stations. Moreover, further unification, simplification and informatization of import/export procedures and procedures related to ports will be promoted. In addition, visualization of logistics in the transportation process and improvement of container safety will be addressed using information and communication technology.

Moreover, as for international air cargo, the development and concentration of cargo facilities, which contribute to international logistics environment of Japanese air logistics companies,¹³ as well as countermeasures against traffic jams will be promoted. This is because international air cargo is expected to continue to increase in the future following the globalization of the economy, economic growth in East Asia and the expansion of international air cargo transportation networks.

Meanwhile, in order for rapid, smooth and reasonable logistics systems to fully exercise their functions, the efficient utilization and strengthening of the functions of existing high-speed networks will be promoted not only by strengthening individual ports and airports but also by developing road networks such as expressways to meet international logistics demands and reducing expressway tolls.

(Strengthening international information transmission functions)

Trade values among the three poles of Asia, North America and Europe are almost equivalent. However, the amount of information flowing between Asia and North America as well as Asia and Europe is much lower than between North America and Europe. This gap needs to be readdressed in order to strengthen information distribution from and to Asia including Japan so that everyone in Asia can receive the benefits of information and communication technology and people around the world can freely obtain a wide range of information on Asia. Asia must therefore become a global information hub. Japan can achieve this by developing applications, contents and common infrastructure information and communication technology which can be transmitted to the world from Asia under cooperation between the public and private sectors.

Based on these trends, R&D on next-generation networks such as ubiquitous networks,¹⁴ information appliances, next-generation IP¹⁵ networks and Web2.0¹⁶ will be intensively

¹¹ Reciprocity between communities

¹² Container ships utilized on principle routes such as transpacific routes only stop at major ports for the purpose of improving transportation efficiency. Some cargo for ports other than major ports are carried to major ports and then transshipped. This word refers to this marginal transportation means between major ports and other ports.

¹³ This refers, for example, to airlines, air forwarders (companies which undertake transportation of cargos using other transportation companies' aircrafts for profit upon receiving requests from cargo owners) and integrators (companies which provide integrated transportation services on their own from air transport on principal routes to marginal transportation by delivery trucks).

¹⁴ "Anytime, anywhere, anything, anyone" networks

¹⁵ Internet Protocol. A communication protocol for carrying out data communication via the

promoted in cooperation with Western countries utilizing our technological development capabilities which have lead the world.

Moreover, Japan possesses various soft power capabilities such as animation and traditional cultures. Therefore, international broadcasting such as satellite broadcasting should be strengthened in order for Japanese soft capabilities to utilize them and to increase information transmission capabilities to the world. At the same time, the strengthening of capabilities to produce and distribute contents should be promoted. In particular, international broadcasting of images for non-Japanese should be started as soon as possible.

Furthermore, it is necessary to promote the development of skilled human resources for constructing an environment where individuals can safely create and use/utilize realistic and high-quality contents. At the same time, an environment should be developed for allowing intellectual property rights to be properly protected and contents to be securely distributed.

(2) Measures for promoting direct exchange with East Asia

(Creation of rapid exchange zones in East Asia)

International air networks are growing between airports in the regional blocks and cities mainly in East Asia coupled with an increase in tourism and business exchange following growth in East Asia and its proximity to Japan in terms of time and distance. Therefore, functions of airports as regional block gateways are increasing.

Therefore, each regional block should contribute to expanding the day business trip zone. This can be achieved by effectively and strategically utilizing existing airport facilities and consensus creation including linkage between the blocks and networks with neighboring cities in Asia, improving airport capabilities and convenience of access to background cities, promoting universal design to build airports which are easy to access from anywhere by any person, accelerating CIQ procedures, and efficiently improving the tourism environment in terms of both service and soft powers through the development of systems to provide tourism information and broadband environment.

Moreover, as for regional airports, new international charter flight services are to be actively promoted in order to boost tourism.

(Construction of integrated Asian logistics transportation networks)

Effective utilization of international ports and airports, and creation of regional block gateways through the reinforcement of access networks such as roads and trains should be promoted to guarantee the same level punctuality, speed and frequency in international logistics as in domestic logistics. As a result, almost every block can receive the benefit of multimodal transportation

Internet.

¹⁶ A conception of services which have characteristics such as "user participation" with which individuals' knowledge and skills are combined, and utilized in such ways as blogs and free encyclopedias as well as "open source" which allows anyone to freely use by disclosing an access method to database.

services making full use of high speed international ferries and RORO ships¹⁷ and air cargo transportation. In addition, a next-day-delivery-zone between Japan and East Asia should be established. This can be achieved by constructing comprehensive rapid and smooth land-sea-and-air international cargo transportation networks and arterial highway networks (international logistics principal networks) which link these ports and airports to logistics bases as well as strengthening railway cargo transportation capabilities.

In particular, terminals for international ferries and RORO ships as well as connecting functions with regional arterial transportation networks and the reinforcement of logistics functions will be strategically and intensively improved at international ports. This is to support the creation of high-speed sea transportation networks connecting with partner ports in East Asia with a high demand for cargo transportation via the Sea of Japan. In doing so, the service standard of international ports should be improved by promoting the unification, simplification and efficiency of export/import procedures, and the creation of networks. As demand for logistics of recycling resources is growing with increased trade with Asia in recent years, the rationalization of management should be promoted by improving the hub function of ports dealing with international recycling and of recycling resources' traceability.

(Creation of Asia broadband environment)

Broadband brings revolutionary economic and social developments and can improve quality of life. However, while there are some counties where broadband has already become popular, there are others where the penetration rates of TV and the Internet are still under 1 percent. There exists a huge digital divide.

Therefore, it is necessary to promote the further development of Asian society, economy and culture using the benefits of information and communication technologies. This can be achieved by creating an environment where anyone in Asia can connect to broadband and use applications and contents making full use of its features (Asia broadband environment).

In doing so, it is also important to utilize developments in information and communication networks appropriately together with optical fiber and wireless technologies and state-of-the-art information and communication technologies such as Internet phone services (IP phone) and Ipv6 (Internet Protocol version 6)¹⁸ taking into account individual information and communication environments and needs in terms of networks infrastructure with enough bands (transmission speed of digital data) to connect within and between areas in Asia.

Therefore, the standardization of state-of-the-art information and communication technologies within Asia (intraregional standardization) should be promoted in linkage with Asian countries. In addition, international standardization in international organizations such as the ITU (International Telecommunication Union) will be promoted with standardization across Asia as

¹⁷ Ships which have gates on sterns or alongside for loading and unloading cargoes by truck or forklifts.

¹⁸ A next specification of an Internet Protocol. It can give a number up to 2^{128} to equipments connected to the Internet. This Protocol was improved in strengthening of security and simplification of settings.

the driving force. At the same time, linkage with activities for the purpose of standardization should be promoted through forum activities by private companies. Moreover, the development of systems for securing a safe and secure information-logistics environment using cryptography and electronic signature and certification services as well as countermeasures against cyber crimes, illegal and harmful information on the Internet and junk emails should be advanced.

Also, the improvement of information and communication technology for the smooth distribution of ultra high-definition images and realistic large-capacity contents, R&D of techniques and methods of machine translation to respond to a wide range of Asian languages; digital archive orientation of a wide range of Asian cultural heritages and the development of an environment for protecting intellectual property rights should be promoted for the purpose of creating attractive applications and contents utilizing broadband.

(Sharing of policies with neighboring countries in East Asia)

In order to construct transportation/information and communication systems on a trans-Asian scale that support a day business trip zone, a next-day-delivery-zone of cargo and Asia broadband environment, the effective construction of the trans-Asia transportation networks such as Asian highways should be promoted through the development of domestic transportation networks in East Asian countries. At the same time, it is necessary to resolve cross border issues. They include transportation infrastructure breaking down at the border area, public regulations and intervention for marine transport, imbalance of structural and safety criteria of transportation/information and communication equipment, facilities and systems, and differences in damage insurance systems associated.

Therefore, the domestic transportation/information and communication infrastructure in each country will be systematically developed through two-way relationships with East Asian areas. In addition, the sharing of transportation/information and communication policies among Asian countries will be advanced. This includes international standardization of different transportation technologies such as ITS (Intelligent Transportation System), improvement of interoperability of transportation equipments, production of safe and efficient integrated international logistics environment using electric tugs, standardization of information and communication equipment such as mobile phone networks and liberalization of marine transportation. In doing so, providing intellectual platforms shared throughout East Asia is effective as a specific leading effort of our country, utilizing excellent research results such as intra-Asia transportation simulations and statistics related to transportation.

Section 2 A National Land Arterial Transportation System Promoting Interregional Exchange and Linkage

In order to create a vibrant national land using synergetic effects of interregional exchange and linkage, domestic transportation infrastructure such as roads, railways, ports and airports should be comprehensively developed and utilized for the purpose of further reinforcement of a "national one-day transportation area" and functions of arterial networks and bases should be

secured. To this end, regional blocks with a diverse range of characteristics need to mutually exchange and link utilizing their resources to the maximum extent by responding to anticipated future long-distance transportation demands.

Meanwhile, stable and safe access between regional blocks should be secured. This can be achieved by improving the seismic capacities of the land-sea-and-air transportation infrastructure and by strengthening networking by organically linking them.

(1) Comprehensive land transportation networks

In the Fourth Comprehensive National Development Plan and ground design for national land, expressway networks of 14,000 kilometers were envisaged. They run the length and breadth of Japan and connect major cities nationwide. High-quality automobile transport networks integrated with regional high-quality highways which play a role in promoting interregional exchange are expected to play the same role as high-speed railway networks connecting metropolitan areas and cities with high capabilities as bases and as an arterial high-speed land transport network for the purpose of autonomous regional development.

Specifically, truly necessary road developments should be systematically progressed in line with past reforms concerning roads and latest demand-estimate. The efficient development with effort of reducing costs of roads should be promoted in meeting with a mid-term plan which shows a specific image of future road developments. In doing so, priority should be placed on high-standard roads which connect major cities such as prefectural capitals, beltways in big cities, access roads to major airports and ports and roads for securing international competitiveness among arterial networks such as expressways. As for projects to connect bay entrances and straits, measures should be carried out from a long-term viewpoint.

Speeding up of arterial railways facilitating interregional exchange and linkage will be further promoted. As for new Shinkansen lines - "Handling of new Shinkansen Lines" a government agreement of December 2004 - their steady development should be pushed forward where works have already begun. As for other sections, necessary works will be pushed forward. As for existing railways, high-speed railway networks integrated with Shinkansen lines should be developed taking into account new railway technologies such as gauge changeable trains. This can be achieved by accelerating direct operation with Shinkansen lines, improvement of tracks and the introduction of new vehicles.

Inspections of the Chuo Shinkansen line will be pushed forward. In addition, as a nation based on science and technological progress, the early realization of innovative high-speed railway systems for the new era should be aimed at in order to establish superconducting magnetically levitated trains by further promoting technological developments such as test runs.

(2) Efficient maritime transportation networks

In order to promote further utilization of energy-efficient inland vessels with low CO2 emissions capable of bulk shipping, concentrated areas of population and industries along coastal areas of the Pacific Ocean, the Seto Inland Sea and the Sea of Japan should be linked utilizing

three major bays, northern Kyushu and base ports in other areas as terminals. At the same time, the safety and punctuality of national sea transport networks which link channels and small islands should be further improved. In particular, as for ports which function as integrated complex transportation network bases where smooth connections with land transportation networks are secured using high-speed container ships, ferries and RORO ships, functions of logistics bases should be reinforced. The technological development and support for the energy-efficient and earth-conscious super eco-ship should be promoted.

Moreover, as for regional industrial energy ports which support heavy and chemical industries such as the steel, chemical and paper industries as well as energy-related industries such as the electricity and gas industries, the strengthening of port facilities should be pushed forward in response to the increase in the size of bulk cargo ships over recent years.

(3) Domestic air transportation networks

As for domestic air transportation, the securing of the capacity of the bottleneck that is Tokyo International Airport should be promptly promoted. This will allow for the reinforcement of air networks between the Tokyo metropolitan area and each region and a downsizing and an increase in frequency of aircrafts; a drastic expansion of networks is expected.

Therefore, as for Tokyo International Airport, early completion of the further expansion project and upgrading of air traffic control should be promoted, and reinforcement of access between the airport and the Tokyo metropolitan area should be promoted. Moreover, as for other airports, measures for improving air services should be promoted through the improvement of the in-service rate of aircrafts for securing punctuality and stability of air transportation, improvement of access functions to neighboring cities and promotion of airports' universal design. In addition, the seismic resistance of airport facilities should be improved in order to maintain emergency transportation of cargo/men at the time of disaster and air networks. At the same time, security systems and maintenance of functions by appropriate maintenance and renewal should be improved.

Moreover, regional hub airports play an important role in promoting direct exchange with foreign countries including East Asian countries and in creating domestic air networks. Thus, it is expected that they will continue to function as central exchange bases inside and outside each area. As for airports whose supply and demand risk becoming tight, a specific strategy should be shown through regional relationships so that their networks' capacity as bases will continue to be exercised.

Section 3 Regional Transportation/Information and Communication Systems

It is necessary to correct interregional gaps concerning industry locations, market access, medical/education services, which are basic conditions for autonomous regional development even in the depopulating and aging society of today. It is also necessary to effectively and efficiently develop regional transportation/information and communication systems in order to promote safety and security, sharing of resources and amenities, fostering of regional pride, and

the maintenance and improvement of vitality by boosting activities through the exchange of people, goods and information.

In doing so, efforts for managing high-quality public transport are required through linkage between a wide range of entities taking into account each area's issues and the actual conditions. These efforts include responses to traffic demand necessary for securing wide-area urban residential services under the declining population, the securing of mobility for those with restricted mobility such as elderly people and of emergency health care transportation, and the restoration and boosting of public transport, which is expected to be difficult to maintain in the future.

(1) Information and communication systems supporting regional dynamism

In order to revitalize regional blocks', it is important to construct an environment where a wide range of entities such as local governments, region-based communities, NPOs and companies can freely utilize ubiquitous networks and address issues such as health care, education and disaster prevention in autonomous and sustainable ways.

Therefore, it is necessary to provide broadband services as the base of regional ubiquitous networks and to promote universal communication in information and communication as specific strategic measures for creating sustainability stipulated in this plan.

(Development of an ubiquitous network infrastructure)

Under the principle of private initiatives, the nationwide development of broadband is actively promoted by granting private investment incentives and securing fair competitive conditions. The aim is to eliminate broadband zero areas by the year 2010, as well as to provide ultra-high-speed broadband services with an information transmission rate greater than 30Mbps (30 megabits per second) both directions of upload and download to more than 90 percent of households.

In particular, in areas where investment efficiency for the development of information and communication infrastructure is so low that it is difficult to facilitate investments only through the private sector, efficient infrastructure development should be promoted utilizing appropriate technologies depending on regional characteristic such as optical fiber networks, wireless access systems, cable television networks for the purpose of correcting the geographic digital divide. This can be achieved by taking into account investment efficiency, and the area's needs and actual conditions and building relationships between concerned parties such as businesses, the government, prefectures, municipalities and the local residents. In doing so, the government promotes public optical fiber networks to the private sector without interrupting facility management. Moreover, local governments will promote the effective expansion of optical fiber networks, opening to the private sector and the introduction of wireless broadband technologies with support from the government.

On the other hand, in areas where investment efficiency is relatively high and development of information and communication infrastructure utilizing optical fibers and wireless technologies has already progressed, a reduction in prices, a diversification of services and the introduction of

innovative technologies should be promoted. This can be achieved by promoting new business structures such as carriers (mobile virtual network operator) which provide mobile communication services such as mobile phones without owning facilities such as their own base stations by utilizing existing network infrastructure, and developing a fair competition environment for existing businesses. Meanwhile, reviews for the purpose of developing new institutional frameworks should be carried out. This is because the maintenance of cost frameworks for ensuring fair and equal provision of nationwide telephone line (universal service) is expected to become difficult due to the expansion of IP phone networks.

Meanwhile, as for terrestrial digital broadcasting, the systematic and independent development of relay stations and digitalization of community reception facilities should be promoted by cooperation with the government and other concerned parties. Moreover, since the supplementary use of IP simultaneous retransmission is expected, retransmission through satellites will be addressed as a temporary measure. As for satellite broadcasting, digitalization should be completed as soon as possible and the competition environment among carriers should be developed for demand of viewers to be rapidly and correctly reflected.

(Promotion of the use/utilization for the purpose of realizing a safe and secure ubiquitous network society)

With the depopulating and aging society, it is expected that ubiquitous networks will be utilized to provide administrative services such as one-stop service of residence certificates and pensions and to improve, for example, health care, welfare services, safety, and disaster prevention. Based on these trends, the development of regional public networks linking schools, libraries, community halls and town halls, and the development of standard applications of regional public networks should be promoted with the aim of creating ubiquitous communities nationwide. Moreover, model example solutions to regional issues utilizing information and communication technology should be collated and dispersed on a nationwide scale.

In addition, as a preceding social system reform utilizing information and communication technology, the construction of e-government/e-municipality, the utilization of driving safety support systems and GIS, and the development of environmental sensing networks should be promoted considering user understanding. Moreover, as for telework which allows people to work at home or other locations outside the office, the comprehensive development of an environment fostering this working style should be promoted as it increases employment opportunities in the local areas and for women, elderly people and the disabled.

Moreover, as for the use/utilization of information and communication to address social issues, it is necessary to promote high capacity backbone technology (next generation backbone technology) to address the rapid increase in communication costs due to spread of ubiquitous networks, highly-reliable and high-quality voice-transmission infrastructure technology (All-IP Next Generation Network infrastructure technology) replacing existing telephone networks through the Internet and technological development for the effective use of frequencies to upgrade wireless broadband. Networks for their R&D should also be developed.

In addition, R&D should be pushed forward in areas such as the utilization of electrical tugs

for securing traceability in fields of food, etc., child tracking systems utilizing sensor network technologies, remote monitoring systems of situations on the ground at the time of disaster, and high-precision positioning service systems for providing position information. Also, efforts should be promoted for the actual use of autonomous mobile support systems which create an environment where anyone can acquire information concerning mobility anytime and anywhere.

(Safety and security in today's information and communication society)

In the ubiquitous network society where everything is connected by networks, the government and financial institutions are vulnerable to cyber attacks. Also there are further risks such as the leaking of inside and personal information of a variety of organizations through viruses acquired through file-swapping software and of information security such as large-scale leaking of personal credit card information. They have serious effects on people's life and socioeconomic activities. Based on these trends, R&D of infrastructure technologies and international linkage will be promoted for the purpose of protecting such central functions of society and important information and communication infrastructure and strengthening of emergency response systems and network security.

Moreover, national land environment where radio waves can be used safely and securely will be constructed. This can be achieved through pushing forward research and surveys concerning the safety of radio waves from medical and engineering viewpoints and strengthening of facilities and systems for monitoring radio waves.

(Universal communication through information and communication technology)

In order to eliminate the digital divide, it is important to develop a network infrastructure and to provide information and communication devices and services can be used by anyone including elderly people and the disabled anywhere they are without feeling stress completing complicated operations. Therefore, the development of network robots which integrate ubiquitous network technologies and robot technologies, universal communication technologies between humans and information and communication such as voice translation, and of technologies which allow people to experience information and communication networks such as ultra-real communication technologies including ultra high-definition, three-dimensional images and realistic acoustic field will be promoted.

Meanwhile, under the progress of advanced use/utilization of information and communication technology in socioeconomic activities, there is shortage of human resources who can create high added value by making full use of those technologies, and find values of the areas, polish and edit them, and then transmit to Japan and the world. Therefore, development and exchange of human resources having advanced information and communication technology will be strategically promoted in order for the local communities to settle issues utilizing information and communication technology. In addition, broad development of human resources will be promoted in such ways as utilization of information and communication technology at educational institutions, reinforcement of educational contents, opening of courses concerning safety and

security of the Internet intended for parents and teachers who are in positions of protecting children.

(2) Transportation systems for sustainability and comfort

In order to realize sustainable and attractive areas even under the depopulating and aging society, it is necessary to strengthen efforts of comprehensive traffic policies for the purpose of securing safe and smooth mobility. In doing so, it is important to promote the utilization of public transport from the viewpoint of reducing the burden on the environment related to transportation.

In cities in particular, boosting of central built-up areas by developing cities where people can get around on foot should be promoted. This can be achieved by developing roads and built-up areas. In addition, convenience of access in cities should be improved for the purpose of development of cities with an intensified urban structure (compact city). This can be achieved through strategic promotion of comprehensive traffic policies and utilization of public transport.

On the other hand, functions of public transport should be maintained and improved for those who without private cars such as the elderly people and students in suburban areas in order to secure passenger transportation in meeting with regional demands. This can be achieved through spread and promotion of community buses and taxi sharing. Furthermore, creation of safe, secure and convenient transportation systems will be aimed through smooth public transport connections. Moreover, in order to apply benefits of private cars, information provision utilizing ITS (Intelligent Transportation System) as well as utilization of information concerning drivability according to road structure will be pushed forward based on the reality that some need to depend on private cars as well as the declining and aging population.

(Transportation systems supporting revitalization of regional societies and industries)

Autonomous and sustainable regional development needs to be supported. This can be achieved through regional resources and amenities, exchange and linkage with other regional blocks, and by wide-area implementation of regional economic activities such as production, logistics and tourism. Therefore, in addition to private sector activities – leaders in these fields -, the strengthening of networks should be comprehensively promoted. This can be achieved by improving the functions of international ports, airports and regional industry concentration including regional block gateways, expressways and regional high-standard highways which link regional tourism resources and public transport such as high-speed railways and others, as well as by facilitating connections. In doing so, existing road networks should be improved for the purpose of developing comfortable roads such as Scenic Byway Japan and securing convenient tourist transportation and the smooth transportation of international-standard container cars. At the same time, the implementation of a wide range of flexible highway tolls and the development of Smart IC exclusive for ETC (Electronic Toll Collection) which contributes to community life and the regional economy for the purpose of the efficient utilization and strengthening of the functions of existing expressway networks will be promoted. Moreover, the effective utilization of existing stock using ITS such as the provision of instant road traffic information by VICS

(Vehicle Information and Communication System) will be promoted. Furthermore, in order to secure infrastructure for more stable and efficient transportation and for regional industrial development, base functions of ports and airports should be strengthened. As for logistics in cities, the improvement of efficiency through the introduction of cooperative delivery as well as the improvement of logistics systems by developing parking lots for loading and unloading will be promoted. It is possible to efficiently connect production bases and logistics bases in the areas by means of the above-mentioned measures so that a wide range of existing resources can be utilized to the full.

Moreover, in order to promote the further utilization of transportation infrastructure directly affecting corporate activities and the daily life of the local residents, efforts for changing the rural public's mindset should be promoted to provide the option of environment-friendly transportation. At the same time, it is important to create new added value through regional transportation infrastructure. This can be achieved through cooperation between a wide range of entities such as region-based communities, NPOs and regional beneficiary companies, as well as various efforts as seen in Regional Railway (My Rail).

(Urban transportation systems led by the people)

In order to push forward the development of a compact city where wide-area urban functions such as administrative agencies, educational and research institutions, medical facilities and commercial facilities are effectively concentrated, the convenience of movement in cities needs to be secured through efficient role-sharing between public transport and private cars. Therefore, it is necessary to strategically promote comprehensive transportation measures in order to transform central built-up areas into attractive and orderly urban spaces. This is because central built-up areas have until now excessively depended on automobile transportation as it has been difficult to build consensus between residents and companies. Also, it is necessary to restrict the automobile traffic in central built-up areas. This can be achieved by promoting TDM (Transport Demand Management), which encourages changes in transportation behavior, coupled with countermeasures by developing bypasses and ring roads promoting the dispersion of traffic, and by improving intersections at major congested points.

Moreover, the implementation of universal design, the creation of safe and comfortable networks of pedestrian routes through roadside afforestation and the development of dedicated bicycles lanes separate from other transportation means will be promoted. At the same time, in central built-up areas, the environmental development of "city-center transportation" should be pushed forward for pedestrians by improving streets and by creating a city buzz with a view to introducing a zone where pedestrians and public transport coexist (transit mall). In doing so, the universal design of public transport will be promoted through low-floor buses. Also, it is important to push forward the development of good quality roads as "faces of the areas" taking pedestrians into consideration. This can be achieved through the development of wide and spacious sidewalks and of compact cable boxes for underground electric cables, the use of road signs that are easy to understand and reconsidering the location of parking lots. Moreover,

people-centered traffic safety measures will be implemented by actively developing sidewalks on school routes, residential roads and arterial roads in built-up areas in cooperation with the areas. At the same time, it is also important to implement comprehensive traffic accident preventive measures in both residential and commercial areas with a high rate of fatal and injury accidents.

Furthermore, new values and functions of cities will be created through the improvement of urban functions, the urban environment and landscapes. This can be achieved by utilizing free spaces such as little-used/unused land resulting from the conversion to an intensive urban structure, by promoting the elimination of "negative legacies of the era of urban expansion" such as landscape destruction through urban development, dual function roads for pedestrians and automobiles that are unsafe for pedestrians and permanently closed railway crossings.

(Maintenance and improvement of public transport)

Efforts are required to improve public transport services and to ensure safety and security. This will contribute to creation of sustainable and comfortable living spheres.

As for urban railways in metropolitan areas, the aim is to alleviate congestion during peak times by 150 percent across the whole network and by 180 percent for the time being in the Tokyo area. This can be achieved by constructing new and four-track lines and by encouraging off-peak commuting. At the same time, specific consideration will be given to the alleviation of congestion before and after peak times and in the evenings. Moreover, improvements in terms of speed through effective connections utilizing existing networks and upgrading traffic juncture functions through the integrated development of stations and their peripheries should be promoted. In addition, it is necessary to improve the convenience of traffic access to arterial transportation bases such as airports, and develop systems which provide instant and easy-to-understand information concerning operations.

Moreover, in order to appropriately respond to the expansion of urban areas and their structures and to secure public transport means which are capable of sustainable management even in today's depopulating age, a variety of transportation means such as subways, LRT, monorails, new transportation systems and buses are appropriately selected and developed by strategically promoting comprehensive traffic policies. At the same time, transferring between various means of transport such as walking, bicycles, private cars and public transport will be made easier. In doing so, it is important to improve services by building relationships between multiple public transport companies and promoting the introduction of park-and-ride as well as bus-and-ride schemes.

Furthermore, in order to establish safe and stable transportation, accident prevention measures and efforts for minimizing the impact of traffic accidents or system down periods should be further promoted.

(Arterial roads in cities)

The development of expressways and regional high-standard highways which link ring roads of the three metropolitan areas and cities will be promoted for the purpose of alleviating