

Chapter 6

Building a Competitive Economic Society

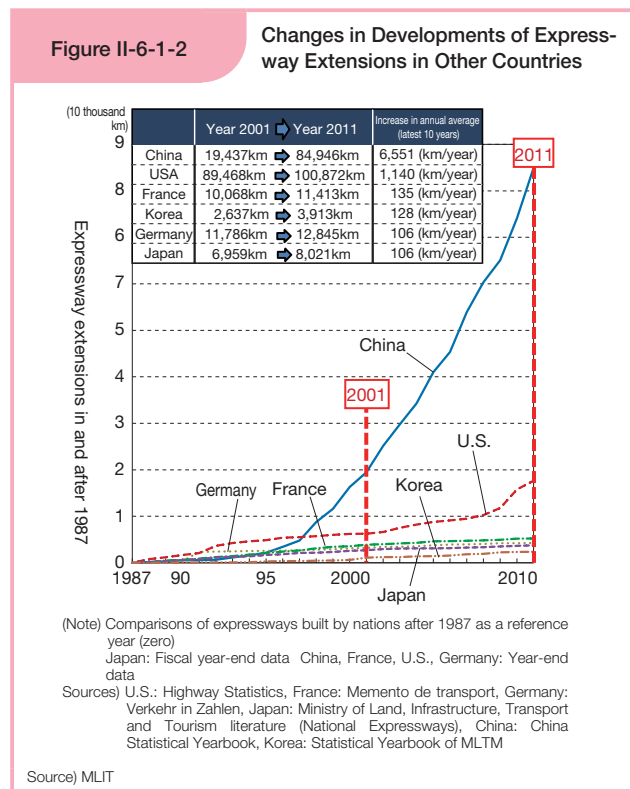
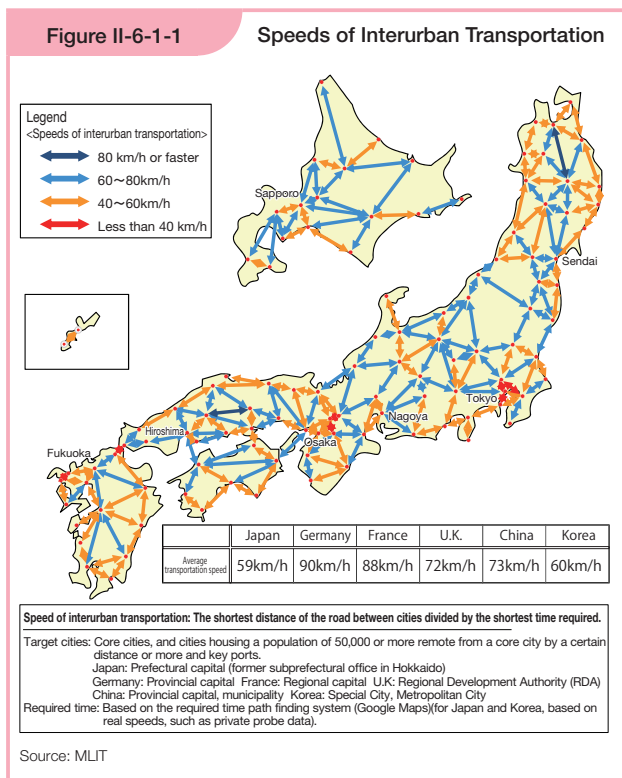
Section 1 Constructing Traffic Networks

1 Constructing Highways

Since the First Five-Year Road Construction Plan formulated in 1954, Japanese highways have been constructed steadily to date. For example, the construction of national networks of highways, including expressways, has not only provided a major impetus in the rejuvenation of regional economies, as by encouraging plant location in the vicinity of expressway interchanges, but helped enhance the quality and safety of national life by making broad-area medical services accessible to rural areas, and allowing broad rerouting to avert highways disrupted by natural disasters.

In the meantime, the speed of interurban transportation, an indicator of the speediness of interurban travel, tends to lag in the areas in which expressways are underdeveloped. The speediness of interurban travel remains lower as a whole than in foreign nations. Since China opened its first expressway back in 1988, 26 years later than Japan, the nation has already laid 84,946 km of expressways, at a pace 62 times higher than Japan. While European and U.S. freeways have at least four lanes each on the average, freeways having only one lane in either direction account for 30% or more of all freeways in Japan.

Fatal and injury accident ratio on expressways is one-tenth of those on general roads. CO₂ emission from travel on expressways are two-thirds of that on general roads, while there are 7 times more traffic per lane on expressways than on general roads. Expressways are not only “safe and clean” but serve as “lifelines” in times of disasters. The MLIT is committed to completing expressway networks and promoting “Smart Use of Roads”.



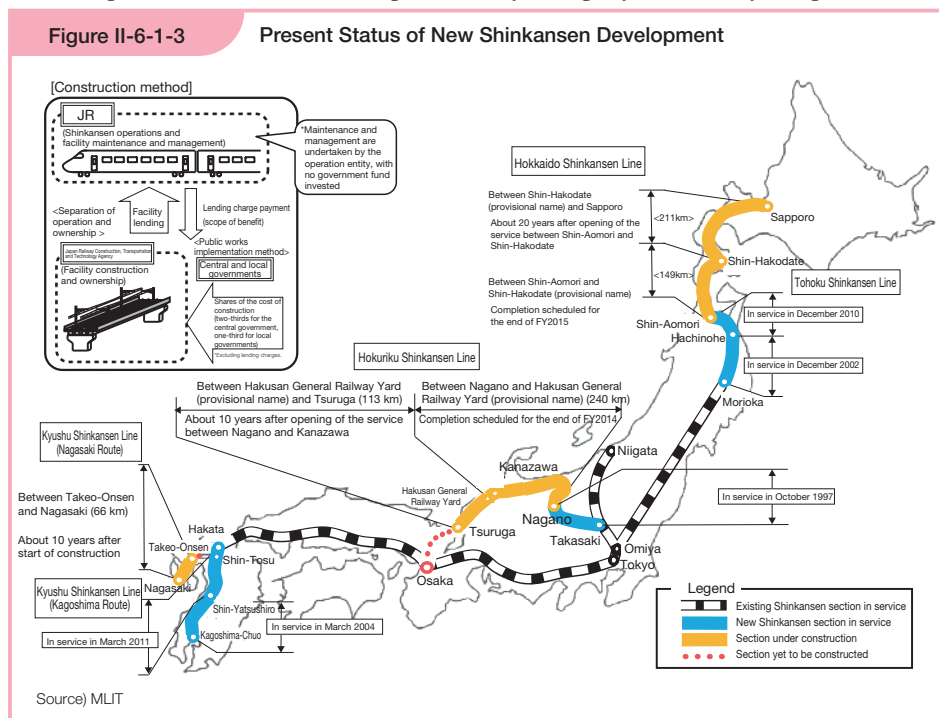
2 Constructing Arterial Railway Networks

(1) Constructing Shinkansen railways

A rapid transit system of vital value to Japan, Shinkansen [bullet train] Lines significantly cut the time spent moving from region to region and help greatly boost regional activities and rejuvenate local economies. Shinkansen Lines feature safety (no record of passenger death accidents since opening of the Tokaido Shinkansen Line in 1964) and eco-friendliness (the railway CO₂ emissions per unit of energy (g-CO₂/passenger-kilometer being one fifth of aircraft and one eighth of automobiles). As New Shinkansen Lines ^{Note}, the Tohoku Shinkansen Line (between Hachinohe and Shin-Aomori) opened in December 2010 and the Kagoshima Route (between Hakata and Shin-Yatsushiro) of Kyushu Shinkansen opened in March 2011. The construction of the Hokkaido Shinkansen Line (between Shin-Aomori and Shin-Hakodate (provisional name)) and the Hokuriku Shinkansen Line (between Nagano and Kanazawa) is in steady progress to near completion and inauguration as scheduled.

Pending plans to launch the construction of the Hokkaido Shinkansen Line (between Shin-Hakodate (provisional name) and Sapporo), the Hokuriku Shinkansen Line (between Kanazawa and Tsuruga) and the Nagasaki Route (between Takeo-Onsen and Nagasaki) of Kyushu Shinkansen were authorized on June 29, 2012 after due procedures in accordance with “Handling of New Shinkansen” (a matter confirmed between the government and ruling parties on December 26, 2011) since all the requirements for the commencement of the works were fulfilled.

The Transport Policy Council, which had debated Chuo Shinkansen since March 2010, came up with recommendations in May 2011 to affirm the appropriateness of Central Japan Railway Company as an entity of its operation and construction, the superconducting maglev method of train operation and the Southern Alps of Japan route. The Minister of Land, Infrastructure, Transport and Tourism responded to name Central Japan Railway Company as an entity of operation and construction for Chuo Shinkansen in accordance with the National Shinkansen Railway Development Act, and decided on the Development Plan and directed Central Japan Railway Company to embark on construction. Central Japan Railway Company expects to open its Shinkansen railways between Tokyo and Nagoya in 2027 and between Nagoya and Osaka in 2045. Procedural actions pursuant to the Environmental Effect Assessment Act are underway with regard to the railway between Tokyo and Nagoya.



(2) Driving technical development

a. Superconducting maglev trains

Running tests for superconducting maglev trains which had been carried out on the Yamanashi Test Line since 1997. The Superconducting Magnetic Levitation Technological Practicality Evaluation Committee that met in July 2009 concluded that the “development of the technologies prerequisite to driving superconducting maglev trains to the stage of practical usefulness, including their operation as super-fast mass transit system, are in sight. Since August 2013, a running test has been in progress on the entire Yamanashi Test Line to make a final verification of the practical specifications of

Note Five routes that are stipulated in the Development Plan approved in 1973 pursuant to the National Shinkansen Railway Development Act.

the cars, propulsion coils and more.

b. Gauge changeable trains (Freegauge trains)

Technological construction of gauge changeable trains capable of through operation from Shinkansen railways to convention railways and vice versa is underway for completion scheduled for service on Kyushu Shinkansen and Hokuriku Shinkansen. In FY2013, testing facilities, including a Shin-Yatsushiro connecting line, were developed. Three-mode traveling durability testing is scheduled for FY2014, which will subject newly built test vehicles to iterative cycles of traveling on Shinkansen railways, gauge conversion equipment and traveling on conventional railways to verify their durability.

3 Constructing Aviation Networks

(1) Expanding aviation networks

a. Enhancing metropolitan airports functionalities

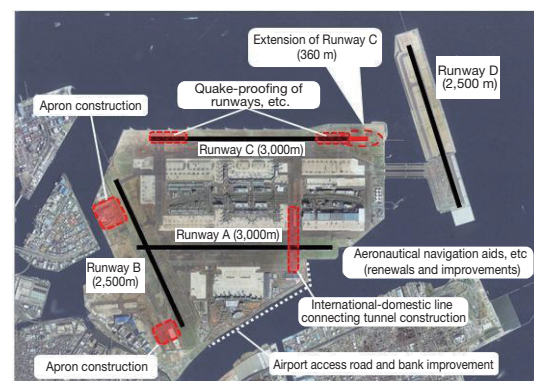
To beef up Japan's competitiveness in the global arenas of business and tourism, enhancements to the functions of the metropolitan airports, a prime impetus to propel Japan's growth, are contemplated. Raising the number of arrival and departure slots at Tokyo International Airport and Narita International Airport to 750,000 during FY2014 is being pursued as a top-priority task.

Tokyo International Airport (Haneda) had the number of annual arrival and departure slots expanded to 447,000 at the end of FY2013 by making additions to its international passenger terminal and building aprons and the like, making for around-the-clock availability of high-demand business routes, including long-haul Asian and European and U.S. routes. Efforts will also be carried on to stretch Runway C to boost the transport capacity for long-haul international flights and augment the international and domestic transfer capability by constructing a new international-domestic line connection tunnel.

Narita International Airport, on the other hand, is slated to raise the number of annual arrival and departure slots to 300,000 during FY2014 as a main international airport responsive to buoyant metropolitan demand for international aviation. Keeping in pace with the launch of the Open Skies Initiative in March 2013, the flexible application of restrictions on takeoff and landing (curfew) has been initiated to allow airlines to take off and land until 24 when they cannot reasonably hold down their takeoff and landing within the current operating period of 6 to 23. Efforts continue further to get Narita consolidated as an Aisan hub airport by reinforcing the network of international flights, expanding domestic feeder flights, enhancing responses to needs as for LCCs and business jets.

Search for more clues to augmenting the functionalities of the metropolitan airports further, after their attainment of

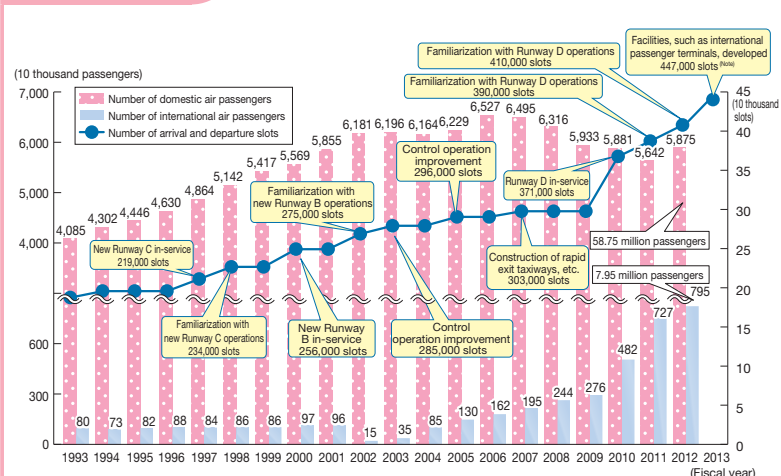
Figure II-6-1-4 Major Development Projects at Tokyo International Airport (Haneda)



Source) MLIT

Figure II-6-1-5

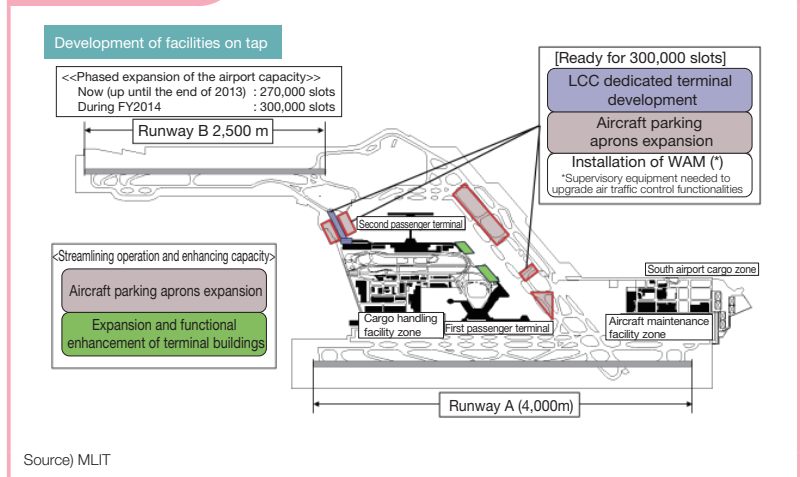
Trends in Number of Passengers and Number of Arrival and Departure Slots at Tokyo International Airport (Haneda)



(Note) At the end of FY2013
Source) MLIT

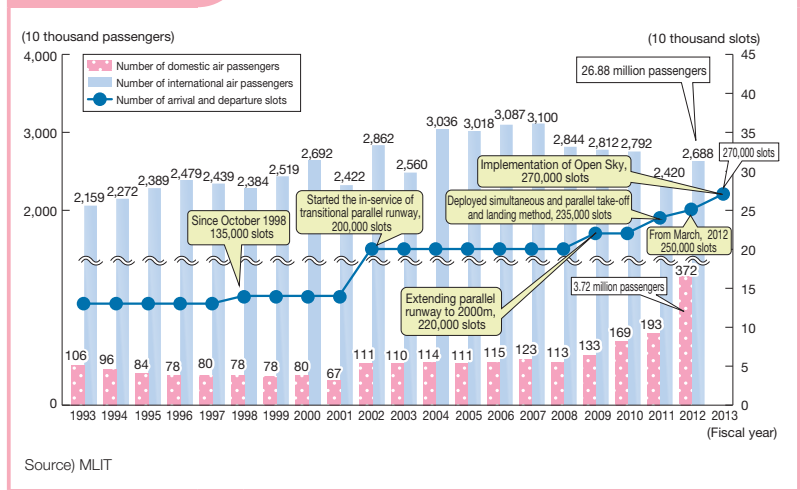
750,000 arrivals and departures a year, continues to target the 2020 Tokyo Olympic and Paralympic Games and the days beyond. As an example, the Subcommittee for Review of Metropolitan Airport Facility Enhancement Technologies organized under the Basic Policy Workshop, Aviation Workgroup, Transport Policy Council is slated to start compiling technical alternatives in November 2013 before a new forum is formed for exploring and reviewing specific approaches to enhancing the facilities of the metropolitan airports with the participation of the local governments concerned, airlines and so on.

Figure II-6-1-6 Overview of Narita International Airport Facilities



Source) MLIT

Figure II-6-1-7 Trend in Number of Passengers and Number of Arrival and Departure Slots at Narita International Airport



Source) MLIT

b. Driving the Open Sky Initiative strategically

The Ministry has strategically pursued the Open Sky Initiative ^{Note 1}, including metropolitan airports, to respond to changes in the competitive climate resulting from global trends towards aircraft deregulation while accommodating vigorous economic leaps in Asian and other overseas nations. During fiscal 2013, agreements were newly reached with Switzerland, the Phillipines, Myanmar and Austria, envisioning the realization of Open Sky with a total of 27 nations and regions ^{Note 2} by March 2014.

c. Realizing concessions related to Kansai International Airport and Osaka International Airport

On July, 2012, Kansai International Airport and Osaka International Airport merged into a New Kansai International Airport Co., Ltd. with a view to rejuvenating and reinforcing Kansai International Airport as an international core airport and expanding the demand for air transportation in the Kansai district through appropriate and effective utilization of the two airports. The New Kansai International Airport Co., Ltd. is now operating in an integrated manner.

The newborn company has moved ahead with positive measures, such as expanding its passenger networks, turning into a cargo hub airport and acquiring all shares of Osaka International Airport Terminal Co., Ltd. on December 27, 2013 to place terminal buildings under consolidated management, in its bid to augment the corporate value of these two airports and set rights of administration for public facilities, etc. (concession-based PFI project) at the earliest possible opportunity.

Note 1 An agreement on mutually removing bilateral constraints on the number of operators, that of routes and that of flights in international air transportation to enhance the quality of services, such as cutting airfares by encouraging the entry of new airlines, increasing the number of flights and stimulating competition between airlines. In recent years, many countries in the world pursue its implementation.

Note 2 The number of passengers flying to and from the 27 nations and regions accounts for about 94% of the total number of passengers departing from and arriving at Japan.

d. Present status of airport development

Emphasis has been shifted to achieving qualitative enhancement to the construction of general airports, etc. mainly by implementing mixes of hardware and software measures and leveraging existing airports. New projects relating to the construction of new runway and extension of existing runways will be conducted only if they are truly needed.

In FY2013, an extension to the runway at Naha Airport then nearing its handling capacity limit was started. At Fukuoka Airport, an environmental assessment relevant to an extension to its runway for the sake of a dramatically enhanced airport capacity was conducted. Facilities in an advance stage of aging have also been renewed or renovated to ensure aircraft flight safety. The airport facilities have been progressively made quake-resistant at a steady pace to keep the Airport functions unaffected in times of earthquakes or other disasters simultaneously. Further, functional upgrades, such as restructuring of the terminal areas, have been promoted by leveraging existing stocks to boost Japan's international competitiveness and the regional competitiveness of the airport hinterlands.

(2) Enhancement and optimization of airport operations

a. Driving airport management reforms

Specific studies are presently underway towards outsourcing of the management of Sendai Airport and others to private sectors, subject to coordination with the stakeholders, in accordance with the Act on Operation of National Airports Utilizing Skills of the Private Sector that came into effect in June 2013.

Future efforts will be directed at driving airport management reforms through integrated management of aviation business and non-aviation business, utilization of private knowledge and funds, etc. regarding actual circumstances of its neighboring region under the Act on Operation of National Airports Utilizing Skills of the Private Sector. Regional revitalization will be conducted through expanding numbers of population engaging in domestic and foreign interaction by way of airports in close association and collaboration with locals.

b. Encouraging LCC entry

Since Japan's first LCC came into service in March 2012, Peach Aviation now covers a network of 10 domestic and six international flights at the end of FY2013, when compared with a network of 14 domestic flights by Jetstar Japan and two domestic and two international flights by Vanilla Air.

On December 17, 2013, Spring Airlines Japan Co., Ltd. was granted a license to provide air services. The Narita-based airline expects to start operating at the end of May 2014.

The accelerating entry of LCCs could create new demand for aviation by attracting more tourists visiting Japan, expanding domestic tourism and so on.

The government is geared at stimulating new demand to for aviation to allow "LCCs to command a U.S. or European equivalent share (20 to 30%) of the total volume of domestic and international passenger traffic" by 2020. The nation and its airports have staged various measures to this end.

Two principal governmental measures being implemented or explored are summarized below.

The first measure is the lowering of the landing fees during FY2013 with regard to mainly used equipment (up to 100 tons) aimed at revitalizing local communities by maintaining local routes and supporting LCCs.

Figure II-6-1-8

Summary of Japan's LCCs

Company name	Peach Aviation, Ltd.	Vanilla Air Inc.	Jetstar Japan Co., Ltd.	Spring Airlines Japan Co., Ltd.
Major shareholders	<ul style="list-style-type: none"> ANA Holdings Inc. 38.7% First Eastern Aviation Holding Limited 33.3% Innovation Network Corporation of Japan 28.0% 	<ul style="list-style-type: none"> ANA Holdings Inc. 100% 	<ul style="list-style-type: none"> Qantas Group 33.3% JAL 33.3% Mitsubishi Corp. 16.7% Century Tokyo Leasing Corp. 16.7% *Ratios based on the voting rights. 	<ul style="list-style-type: none"> Spring Airlines Company Limited 33.0%, and others
Core airport	Kansai International Airport, Naha Airport	Narita International Airport	Narita International Airport	Narita International Airport
Equipment used	Airbus Model A320-200	Airbus Model A320-200	Airbus Model A320-200	Boeing 737-800 airliners
Service route	(Domestic flight) Kansai = Sapporo, Fukuoka, Nagasaki, Kagoshima, Naha, Sendai, New Ishigaki, Narita Naha = New Ishigaki Kansai = Matsuyama (February 1, 2014) Naha = Fukuoka (July 19, 2014)	Flight to leisure and resort routes at home and abroad started on December 20 (Domestic flight) Narita = Naha Narita = Sapporo (January 29, 2014)	(Domestic flight) Narita = Sapporo, Fukuoka, Naha, Kansai, Oita, Kagoshima, Matsuyama, Takamatsu Kansai = Sapporo, Fukuoka, Naha Chubu = Sapporo, Fukuoka, Kagoshima	Start flight service in May 2014 Narita = Takamatsu, Hiroshima, Saga
Characteristics of corporate structure	Business operations independent of ANA	A consolidated subsidiary of ANA, whose business operations are coordinated with ANA.	Business operations independent of JAL	Business operations leveraging the Spring Airlines' networks

Source) MLIT

The second is the promotion of airport management reforms. Many of Japan's airports are managed by the central and local governments, contemplating the keep their runways and airport buildings under integrated management and launching strategic airfare plans and sales campaigns in conjunction with private businesses in a bid to attract LCCs. The Act on Management of Privatized Airports enforced in July 2013 is expected to stimulate aviation demand by leveraging the resources of private sectors.

In addition to these measures, each individual airport has also taken two key steps to create an environment for hosting LCCs.

One is the construction of LCC terminals. Year 2012 witnessed the launch of an interim LCC receiving facility at Narita International Airport, Japan's first LCC terminal at Kansai International Airport and an interim LCC terminal leveraging existing facilities at Naha Airport. In addition, the construction of LCC terminals is being contemplated for Narita International Airport for completion by the end of FY2014 and for Kansai International Airport for completion by the end of FY2016. The feasibility of constructing a low-cost terminal is being explored at Chubu International Airport as well.

The second is the reduction of the airport facility fees, including landing fees. Efforts that began in FY2012 continued into FY2013 to mark down or review the airport facility fees, including landing fees at Narita International Airport and Kansai International Airport.

c. Accelerating the reception of business aviations

A business jet is a small aircraft with the capacity to hold a few to more than a dozen passengers at the most. Business aviations are typically used by businesspersons valuing time because they are able to adjust times according to their schedules or utilize the plane as a secure space to carry on business meetings and such on board.

Business aviations have become a means of global corporate activity in the U.S. and Europe. As Japan's economy goes on global, the need to attract investment from overseas is beginning to win wider recognition than before, instead of conducting a one-sided exchanges, such as building a plant overseas. Hence, the importance and potentials of business aviations in Japan will grow from a viewpoint of consolidating economic growths in the Asian regions from now on.

Comparisons of the status of business jet ownership by country, however, show that only 55 business aviations are registered in Japan (in 2013), against the largest owner U.S. with about 19,000 business aviations registered in the same year. Business aviations are, thus, yet to be popular in Japan.

Hardware has been developed and regulations eased to get better prepared for hosting business aviations flying into Japan as explained below.

Ongoing efforts made at the metropolitan airports in pursuit of better user convenience include constructing new routes to trim the time and distance business jet passengers take to complete arrival/departure procedures and to gain access to the terminal buildings.

In October 2013, a step was taken to hasten the entry of business aviations into Japan by authorizing foreign-registered business chartered planes flying into Japan to conduct air services between the domestic flight sectors that connect to their routes if they meet a certain set of conditions. Further, a comprehensive review standard relating to flight operations was enforced in December 2013.

The Ministry will consider phasing in measures designed to accelerate the reception of business aviations at the airports nationwide, as they are practicable, with reference to the measures taken in overseas while exploring measures to consolidate the usage of business aviations, such as disseminating information proactively and easing regulations relevant to business aviations.

(3) Constructing air traffic system

a. Developing new air traffic systems

A long-term vision for the future air traffic systems for 2025 was formulated as CARATS (Collaborative Actions for Renovation of Air Traffic Systems) to correspond to increasing demand for air traffic capacity and responses to diversified needs. At the same time, long-term plans for an interoperable global air traffic management (ATM) system has been developed by the International Civil Aviation Organization (ICAO), the U.S, and EU. CARATS is built to mainly achieve a highly integrated ATM system that manages the flight paths of aircraft from departure to arrival. A roadmap for measures to realize CARATS has been established to monitor implementation status continuously. In FY2013, issues such as implementation plans for individual measures defined in the roadmap and indicators that represent the status of achievement of CARATS were discussed among industrial-government-academia joint members.

Specifically, the possible installation and deployment of high-standard area navigation (RNAV) and RNAV for small aircraft have been debated in order to cut flight duration and fuel consumption by shortening flight path and to reduce the number of cancelled flight through improving airport's operation level. In addition, studies have been launched with a view to creating high-altitude airspace sectors mainly occupied by cruising aircrafts to increase the air traffic control capacity, introducing routine and non-urgent Air/Ground communications utilized by data link technologies over the domestic airspace, providing electronic terrain and obstacle data to prevent collisions and so on.

b. Pursuing enhancing metropolitan airport capacities

Operation of parallel-crossed four runways was installed at Tokyo International Airport (Haneda) in October 2010 to expand the capacities of airports and airspaces in the metropolitan area for providing of better air transportation services. After a period of familiarization with a new method of operation using these runways, an annual capacity of 447,000 arrivals/departures was achieved in March 2014. Examination will be continued to probe into specific measures to consolidate the airport facilities.

At Narita International Airport, simultaneous parallel departure procedure has been introduced since October 2011 to realize a yearly capacity of 300,000 arrivals/departures within FY2014 without expanding noise-impacted zone, and familiarization with this operation has been steadily proceeded with.

(4) Strategic promotion of international aviation measures

International aviation measures are many and diverse, ranging from air talks, through safety and security, such that they need to be put into practice from strategic, comprehensive perspectives.

According to estimates by the International Civil Aviation Organization (ICAO), the volume of air transportation in the Asia-Pacific region is projected to rise at 6.2% per annum on the average over the 20-year period from 2010, suggesting that the region will grow into the world's largest aviation market in the near future. In the circumstances, what is of strategic importance to Japan is not only to contribute to strengthening of the aviation networks in the region but also to actively capture the impetus of the region in which numerous aviation projects are in progress.

As part of the strategic impetus for driving international aviation measures, the Council on the International Deployment of Aviation Infrastructures was inaugurated in April 2013 to broaden the scope of approaches to the global deployment of aviation infrastructures in a public-private partnership. The Council has since hosted sales and other campaigns with public and private sectors working in accord.

4 Facilitating Traffic Access to Airports

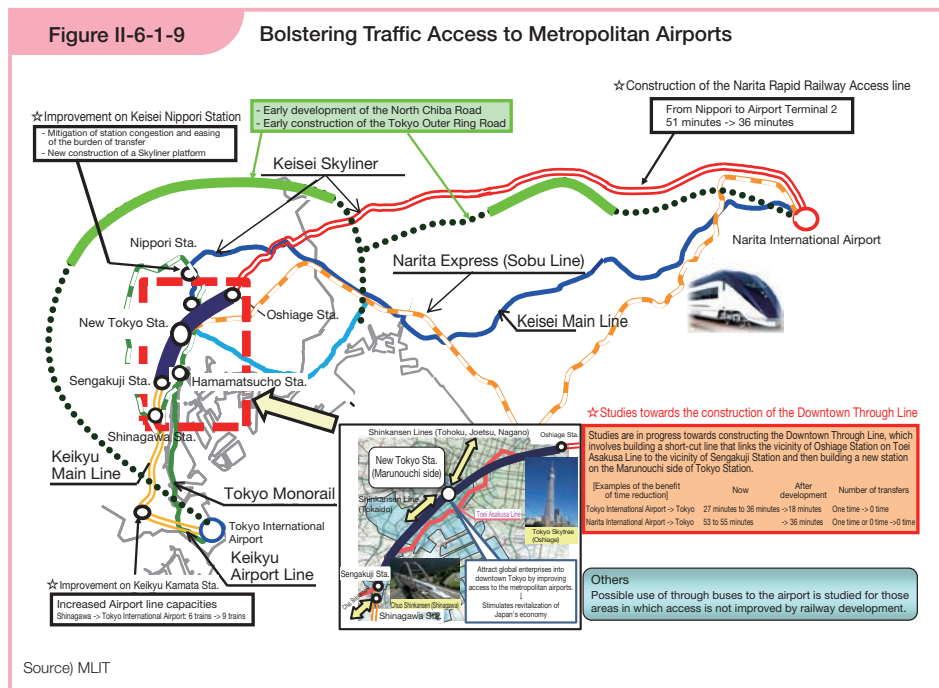
The world's major airports (London, Paris, Hong Kong and else) are located within a railway reach of about 30 minutes from downtown. In contrast, Japan's Narita International Airport used to take about a 50-minute train ride to reach from downtown Tokyo. With the opening of the Narita Rapid Railway Access Line in July 2010, which connects Hokusai Railway trains to Narita International Airport, the time required to travel from downtown Tokyo was reduced to around 30 minutes. In parallel with this, Keisei Electric Railway Nippori Station was improved to augment the convenience of transferring passengers. To reinforce car access to the airport, the development of an expressway network has been driven, including the development of the area on the eastern side of the Tokyo Outer Ring Road.

An improvement to Keiyou Kamata Station completed in October 2012 boosted the capacity of the Keiyou Airport Line, reinforcing railway access to Tokyo International Airport, coupled with the addition of extra through trains from Shinagawa and Yokohama.

Plans are presently being pursued to construct the Downtown Through Line to directly connect the center of Tokyo to the metropolitan airports to allow transfer-free swift travel, which will make Tokyo International Airport (Haneda) and Narita International Airport more

readily accessible to downtown Tokyo and consolidate the location competitiveness of the center of Tokyo, thereby facilitating the attraction of global businesses into Tokyo and revitalizing Japan's economy.

In addition, ways to improve access to Kansai International Airport have been surveyed and explored.



Section 2 Implementing Comprehensive and Integrated Logistics Policies

In June 2013, the Framework for General Measures for Logistics (2013-2017) was approved at a Cabinet meeting to offer a quick, precise solution to the prevailing conditions of logistics, such as deepening global supply chains, growing urges to combat global warming and assuring safety and security. Pursuant to this framework, the implementation of logistics Measures has been driven in a comprehensive, integrated manner in a public-private partnership. In addition, the Logistics Council and the International Logistics Division were inaugurated in July 2013 to build efficient logistics systems both at home and abroad that help boost the international competitiveness of Japan's industries and also to fortify an inter-ministry framework for driving implementation of the logistics measures.

1 Implementing Logistic Policies to Correspond with Deepening Global Supply Chains

To keep up with deepening global supply chains, efforts directed at reinforcing Japan's international logistic facilities are under way, including driving overseas deployment of the nation's logistic systems.

(1) Promoting overseas deployment of Japan's logistics systems

As supply chains continue to get globalized at a deeper level than ever, grabbing the evolving Asian markets would be essential to sustaining and enhancing the international competitiveness of Japan's industries. The formation of a sophisticated international logistics system should be of prerequisite importance to meet this urge. Capturing the Asian markets has become an urgent task for Japanese logistics companies that support the business expansion of the nation's industries in Asia.

While the urge for Japanese logistics companies to expand into global markets mounts, certain problems need to be resolved, including institutional constraints placed in the partner countries, before high-quality logistics systems, in which Japanese logistics companies have strengths, can be deployed in the Asian nations. The development of an environment for overseas deployment of Japan's logistics systems has been pursued through the implementation of demonstrations of the schemes of fully integrated land-sea transportation on RORO ships, policy dialogs at the government level and so on.

(2) Consolidating capabilities of the international maritime transportation network

As the globalization of economy progresses, the volume of international marine transportation continues to grow year to year. From the perspective of optimizing maritime transportation through large bundle shipments, container and bulk freight liners continue to grow in size. In the meantime, key Asian ports have successfully increased their volumes of freight handling, resulting in concentrated ports of call, international key sea routes making fewer calls at Japan. Further, slow responses to larger vessels to carry bulk cargo ^{Note} raise concerns over diminishing competitiveness in domestic industries forced into a mutually disadvantageous business environment.

In light of such conditions, Japan carries on its effort to streamline the flow of logistics that supports economic activity in Japan and life of citizens, improving the shipping entities at their location at home, which would in turn augment Japan's industrial competitiveness and realize economic reconstruction by maintaining and expanding the calls of international key routes at Japanese ports and simplifying and stabilizing imports of lifeblood materials, such as resources and energies.

In parallel with these approaches, efforts to shape an efficient network of marine transportation in which international and domestic transport services are integrated will be carried on, and relevant measures will be enhanced and developed at a deeper level of refinement.

a. Enhancing the facilities of International Container Hub

To support Japan's industrial activities and the people's lives in terms of logistics, the key international routes of marine container transportation that link Japan to North America, Europe and else need to be consistently maintained and even expanded.

To address this need, Hanshin Port and Keihin Port were selected to be International Container Hub each in August 2010 to implement a fully package of hardware and software measures, including the construction of deepwater quays and efficient port management taking advantage of "private" viewpoints. As for port management, Special Port Operation Companies have been appointed at Tokyo Port, Kawasaki Port, Yokohama Port, Osaka Port and Kobe Port.

In the meantime, the conditions surrounding Japan's shipping and ports and harbors have been changing rapidly and with increasing toughness, keeping pace with a restructuring of the European line alliances (G6 Alliance), formation of a new alliance of mega-carriers (P3 network) and the commissioning of supergiant container ships represented by Triple E (18,000TEU class).

Under the circumstances, the International Container Hub Policy Promotion Committee has met since July 2013, publicizing its final conclusions in January 2014 focusing on the three key principles of "concentration," as by picking up cargoes at International Container Hub from sources over a broad area, "creation," as by integrating industries in the hinterlands of strategic ports, and "increased competitiveness," as by reinforcing the functionalities of deepwater container terminals or creating a government system of investment into port management companies.

Reflecting discussions at the committee, the Law for Making Partial Amendments to the Port and Harbor Law was enforced in April 2014, allowing governmental investment into the port management companies at international container strategic ports, adding warehouses that involve distribution and processing in the vicinity of piers at international container strategic ports to a list of facilities eligible for the interest-free loan program and so on.

From now on, these measures will be set into full motion to deepen the evolution of the international container strategic port and harbor policies and also to accelerate the pace of approach to their implementation.

Note A generic term covering cargoes that ship in bulk, such as grains, iron ores, coal, oils and timber.

b. Forming a marine transportation network for moving resources, energy sources and so on with stability and efficiency

In a globally tight supply and demand climate for resources, energies and so on, importing these materials with stability and at low cost has become an pressing issue for Japan, because the nation depends on imports for virtually all of her requirements for these materials.

Japan is, therefore, committed to forging a marine transportation network to move resources, energy sources, etc. with stability and efficiency by building large vessel-ready port and harbor facilities of core importance, by encouraging inter-business collaboration and so on. To expedite this move, Specified Cargo Import Hub Ports have been specified by the Minister of Land, Infrastructure and Transport as import hubs for bulk cargoes, such as coal. At the same time, the Amended Port and Harbor Law, which stipulates measures, etc. for supporting such ports and harbors and associated ministerial ordinances came into effect on December 1, 2013. Responsive to this move, Onahama Port, which had been chosen as one of the International Bulk Hub on December 19, 2013, has been designated Japan's first Specified Cargo Import Hub Port (Coal). The goal is to realize a stable, low-cost supply of imports and thus build up Japan's industrial competitiveness, create more employment and prevent outflow of earnings abroad.

c. Building functionally Major Japan-Sea Coast Ports

Among the ports located along the shore of the Japan Sea that are geographically close to the fast economically growing nations across the sea, Major Japan-Sea Coast Ports were selected in November 2011 in an effort to capture the economic booms in these nations into Japan's growth through selection of functions and concentration of measures and through port-to-port linkage and to build a disaster-resistant logistics network following the Great East Japan Earthquake. The progress and other aspects of the plans formulated by port management bodies will be followed up from now on.

d. Fabricating an integrated logistics information platform

Efforts are underway to fabricate an integrated logistics information platform that combines the functions of Nippon Automated Cargo Consolidated System (NACCS) with Container Logistics Information Service (Colins) to augment the efficiency of system administration and user convenience.

e. Enhancing functionalities of international ports

To address increasingly sophisticated and diversified needs for East Asian logistics, which is not much different from domestic logistics in both terms of time and distance and build a low-cost logistics system, the Ministry pushes ahead with functional enhancements to unit loading terminals ^{Note} and with the construction of facilities designed to smooth the flow of cargo transshipment. To catch up with rising volumes of container and bulk freights, the Ministry also promotes the construction of international marine container terminals and international logistics terminals in an international marine transportation network or at regional core ports, and the approaches designed to enhance user convenience such as the implementation of ICTs.

Note A unit loading terminal is a terminal ready for the scheme of transportation in which freights are loaded and unloaded, unitized, in chasses, containers or the like, to make their physical distribution faster and more efficient.

f. Developing a marine transportation environment

Among all international trunk routes, those that could interfere with bay navigation because of shallow waters, etc. have been improved and Aids to Navigation have been renovated to develop a marine transportation environment that combines the safety of ship traffic with the efficiency of marine transportation.

(3) Developing advanced aviation logistics facilities to pursue increased international competitiveness

In recognition of the sluggish growth of Japan's international airfreight transport business under the influence of domestic businesses seeking relocation overseas, the recent European sovereign debt crisis, etc., the Ministry has been driving efforts to turn Japan's core airports, such as Kansai International Airport and Chubu International Airport, into freight hubs and streamlining the transport process, as well as upgrade the capacities and facilities of metropolitan airports, to take freight arriving at and departing from Asian nations, which promises further leaps.

(4) Strategic development and utilization of a logistically important road network

Building an efficient logistics network is of crucial importance to motor truck transportation that accounts for about 80% of domestic transportation. From this point of view, the construction of ring roads in the three major metropolitan areas, access roads to airports and ports, etc. is underway. Pursuant to the Law for Making Partial Amendments to the Road Act, etc. promulgated in June 2013, roads of vital importance were designated "road network for vehicles exceeding the weight and size limits" to speed up the procedures for the traffic of large-sized vehicles on such roads and to improve the sections which have difficulty with large-sized vehicle traffic on a planned basis. Efforts are also underway to utilize and upgrade existing road networks, including the construction of smart ICs.

(5) Other measures that help consolidate the facilities of international logistics

While the urgent formation of a logistics in which international logistics is efficiently combined with the domestic transport modes of land, sea and air is sought, the realization of the interoperation of chasses (trailers which have no power drive) to and from Korea and China and the use of a sea & rail scheme under which marine transportation is coupled with railway transportation are propelled.

The development or redevelopment of international container-ready logistics centers in and around the international ports or the like, or nodal points of global logistics, in the metropolitan areas will be driven to reinforce international competitiveness, as well as enhance disaster preparedness in times of large-scale disasters and improve the urban environment.

2 Measures Aimed at Building an Efficient Logistics System at Home

Additional approaches are underway to build an efficient logistics system at home to toughen Japan's industrial competitiveness while easing environmental loads.

(1) Streamlining the flow of interregional logistics

The Ministry proceeds to develop nodal points of logistics, such as ports and freight stations, to drive combined multimodal transportation. The new construction of the Suita Freight Terminal Station in March 2013, coupled with the completion of modifications to Kudara Station and a railway freight transport capacity enhancement project at Sumidagawa Station, is expected to streamline the work flow of freight railway transportation further. The construction of combined multimodal transport terminals is also underway at Tokyo Port and elsewhere to consolidate coordination between marine transportation and other modes of transport.

Key road networks will also be refurbished to streamline the flow of truck transportation.

(2) Streamlining the flow of inner-city physical distribution

Suburban areas designed for physical distribution ^{Note 1} had been developed in 20 cities and 29 locations (27 of which are already in service) by the end of March, 2014 in accordance with the Act on the Improvement of Urban Distribution Centers to enhance the urban functions of logistics and streamline road traffic through intensive location of distribution facilities.

To prevent roadside parking for cargo handling, the Ministry has encouraged local governments to include the installation of parking spaces for cargo handling in their municipal parking ordinances. As of the end of March 2013, municipal ordinances were amended in 90 cities to dictate the installation of parking spaces for cargo handling at commercial installations having a certain scale or larger.

Measures that have been taken to streamline traffic flow include intensive actions directed at congestion bottlenecks, multi-layerization of traffic intersection and resolution of railway crossings nearly closed at all times. In parallel, software measures, such as those aimed at driving joint transportation and delivery pursuant to the Low Carbon City Promotion Act and encouraging migration the use of private trucks to the use of commercial trucks ^{Note 2} to boost load efficiency, have been driven.

(3) Further efforts to implement logistic services that are more sophisticated and that deliver better total efficiency

To accelerate the implementation of the 3PL business ^{Note 3} further, the Ministry not only arranges for the environment in which logistic companies find it easier to make inroads into the 3PL business easier, by hosting human resources development and training sessions, publicizing regional business models and so on, but also seeks to generalize and simplify the logistic flow through a system of accreditation for total efficiency plans ^{Note 4} in accordance with the Act on the Improvement of Urban Distribution Centers. As of the end of March 2014, 221 total efficiency plans were accredited in accordance with the Act.

Section 3 Reactivating Industries

1 Trends in Railway Industries and Measures

(1) Railway business

a. Trends and measures in the railway business

The number of railway passengers carried in FY2012 increased from its year earlier level. At Japan Railway, transportation on Shinkansen increased while transportation on conventional railway lines transitioned sideways, with transportation on private railways on the increase.

The volume of railway freight transportation during FY2012 rose slightly from its year earlier level in both the number of tons and that of kilograms carried a year for reasons, such as rehabilitating the production sites that had been damaged by the Great East Japan Earthquake.

Railway operators, particularly urban operators, aim to keep comfortable and secure railway spaces, as by adding alphanumeric sequences along with route or station names. The introduction of transport e-money IC cards has progressed in the wake of Suica launched by JR East in 2001. Starting from March 2013, 10 kinds of such IC cards that had previously been used in the areas covered by JR and key private railways and the like have been made interoperable. Subsequently, IC cards have penetrated a growing number of railway operators and areas, promising added user convenience and regional revitalization.

Note 1 A large-scale urban distribution center intensively equipped with distribution facilities, such as truck terminals and warehouses, which is conveniently located for ready access to an expressway interchange, for example.

Note 2 A scheme of converting private motor trucks (used to their owners to carry private cargoes on their own) to commercial motor trucks (used to carry cargoes for fee on request from others) to enhance transport efficiency, as by moving mixed cargoes from multiple cargo owners, and thus curtail the shipping costs.

Note 3 Third-party logistics: An outsourcing service that undertakes a fully ingrained flow of physical distribution of cargoes from the cargo owners.

Note 4 A plan that is committed to integrating and expediting physical distribution mainly at a physical facility located in the vicinity of a social infrastructure, such as an expressway interchange or port, as by installing automated warehouses, information systems and the like while seeking concentrate transportation networks and share shipping and delivery operations.

b. Initiatives towards the complete privatization of Japan Railways

The individual companies of Japan Railways incorporated upon breakup and privatization of Japan National Railways in April 1987 have carried on their respective management efforts to meet their own regional conditions and management climates over the following more than 25 years. In the meantime, East Japan Railway Company, Central Japan Railway Company and West Japan Railway Company were completely privatized when the sale of the capital holdings of Japan Railway Construction, Transport and Technology Agency (JRJT) completed, but measures have been taken for the time being to keep the Japan Railways companies in mutual partnership and collaboration, assure user convenience, care for smaller enterprises and so on in consideration of the background of the Japan Railways reform.

Hokkaido Railway Company, Shikoku Railway Company, Kyushu Railway Company and Japan Freight Railway Company, on the other hand, carry on their respective efforts to increase revenues and cut costs. In the light of the social significance of the roles these companies play, such as securing means of local transportation and driving railway freight transportation having low environmental loads, necessary aids have been extended to them to reinforce their management structure and thus make them economically viable by leveraging funds from the JRJT Special Services Account since FY2011 in accordance with the Act on Treatment of Debt, etc. of JNR Settlement Corporation, in addition to the fixed property tax breaks already in effect.

(2) Railway vehicle industry

The volume of newly built railway vehicles by value moved flatwise for domestic shipment and varied depending on the status of orders for overseas shipment. Production by value in FY2012 stood at 168.4 billion yen (1,589 vehicles), with domestic shipments accounting for 89.0% (149.9 billion yen) and exports 11.0% (18.5 billion yen), down 12.5% and up 281.2% from a year earlier, respectively.

Production of railway vehicle parts (such as power generators and boggies) was 235.1 billion yen by value, that of signalling systems (such as automatic train control devices and electrical interlocking systems) was 130.5 billion yen.

Rolling stock builders and others are working to develop rolling stocks that fill diverse social needs, such as speed, safety, passenger comfort, low noise and being barrier-free, by partnering with railway operators and also to set up and even expand local production and service sites in the U.S., U.K. and elsewhere with the recent order taking for overseas projects as an impetus.

2 Trends in Motor Truck Transport Business and Measures

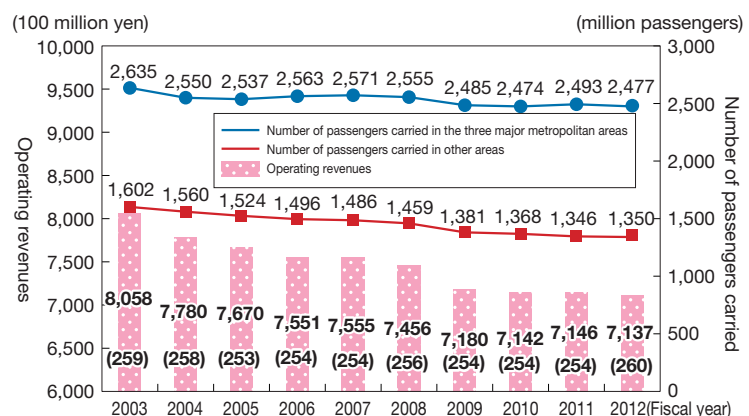
(1) Passenger vehicle transport business

a. Motor bus business

Demand for motor bus transportation, which is represented by the number of passengers carried and operating revenues, remained on the decline in pace with changes in the urban structure, such as a hollowing of the central area of a city, and increased ownership of private cars with the progress of motorization. While business activity remains sluggish, the climate surrounding the motor bus business remains extremely harsh.

Figure II-6-3-1

Changes in the Number of Passengers Carried by Motor Buses and Operating Revenues



(Notes) 1 Numeric data above has been collected from the bus operators who own a fleet of at least 30 motor buses. The parenthesized value for each fiscal year denotes the total number of bus operators who own a fleet of at least 30 buses for that fiscal year.

2 The number of passengers carried in the three major metropolitan areas is an aggregate total for Saitama, Chiba, Tokyo, Kanagawa, Aichi, Mie, Gifu, Osaka, Kyoto and Hyogo.

Source) MLIT

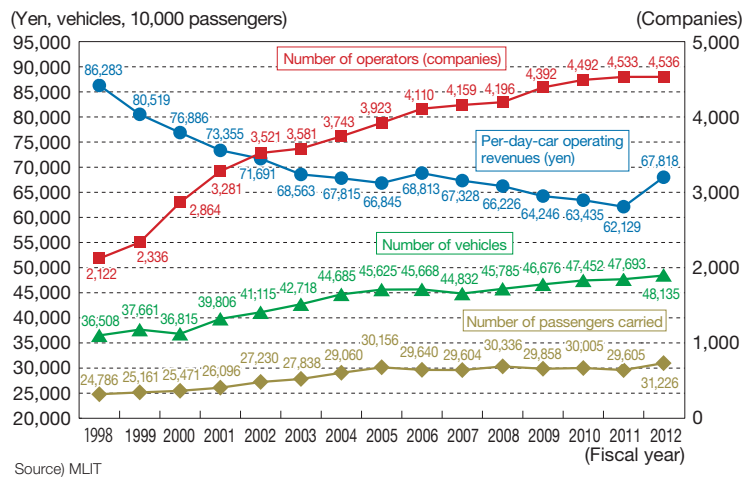
b. Chartered bus business

Since deregulations in February 2000, the chartered bus business has sponsored low-cost, diversified bus tours in its effort to deliver better user services, but competition is stiffening with increase in the population of operators in play. Further, as group tours continue to get downsized and travel goods are lower-priced, transportation revenues have been declining. In addition, upsurges in the fuel charges continue to toughen the business climate surrounding the chartered bus business.

On the basis of the discussions at the Review Panel on the Future of the Bus Service that met in the wake of the April 2012 Kanetsu Expressway rapid tour bus accident, the Rapid and Chartered Bus Safety and Confidence Recovery Plan was worked out to carry on two-year efforts intended to add to the safety of rapid and chartered buses in FY2013 and FY2014.

Figure II-6-3-2

Changes in the Number of Chartered Bus Operators, Number of Passengers Carried, Number of Vehicles and Operating Revenues

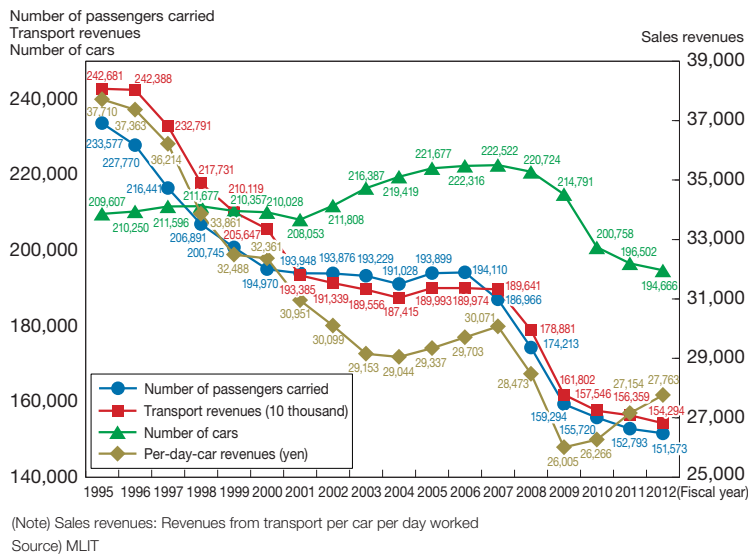


c. Taxi business

The taxi business is faced with a deteriorating revenue base, worsening driver working conditions and along with other problems in some areas due to increases in the fleet of taxi vehicles while the demand follows a long-term path of reduction, making it difficult for the taxi business to fully demonstrate its utilities of regional public transportation. The Act on Special Measures Concerning the Normalization and Reactivation of the General Passenger Transport Business in Special Regions was enacted in October 2009. A little more than four years on, the legislation offered certain effects, such as drivers' wages turning for the better, but the problems of oversupplies of taxes in many regions remain yet to be resolved.

Figure II-6-3-3

Developments in Per Day-Vehicle Reviews of Hires and Taxes



On November 2, 2013, the Act for Making Partial Amendments to the Act on Special Measures Concerning the Normalization and Reactivation of the General Passenger Transport Business in Special Regions was approved in the 185th extraordinary Diet session as a lawmaker-initiated legislation focusing on a scheme of elevating the levels of taxi service quality by effectively resolving the problems of oversupplies of taxes in certain regions, toughening driver qualifications and so on.

The Act came into effect at the end of January 2014. The Ministry of Land, Infrastructure and Transport contemplates to come up with an early solution to the problems of oversupplies of taxes and to enhance the quality of service and safety by applying the Act properly in accordance with the purport of the lawmaker-initiated legislation pursuant to various standards that have been established on the basis of additional resolutions passed at both Houses, as well as the provisions of the Act.

(2) Replacement driver service

The replacement driver service is expected as a workaround means of transport for drinkers. The Ministry of Land, Infrastructure, Transport and Tourism is driving the implementation of measures aimed at normalizing the replacement driver service and add to users convenience and ease of mind. As of the end of December 2012, a total of 8,848 replacement service driver service operators are accredited and in service.

(3) Motor truck transport business

The number of motor truck carriers had been on the rise for long, but the number of newcomers and that of retirees have equaled since 2008, with the number of carriers moving crabwise at about 63,000.

While the management climate in which the carriers are placed continues increasingly hostile under the influence of the light oil price and others, various countermeasures are in progress, including encouraging the introduction of fuel surcharges to pass on light oil price hikes to the freight charges and saving energy requirements in motor truck transportation to back up the carriers in their effort to improve fuel efficiency.

On the basis of discussions made at the Workgroup on Measures Relating to the Trucking Industry, various measures have just been taken, including reviews of the entry authorization criteria, updates to the Motor Truck Transport business Transportation Safety Regulations, formulation of documentation promotion guidelines, toughened enforcement of the freight owner recommendation program and tightened partnership with normalized business implementation bodies, to ensure market integrity and legitimate fare and fee collection while driving measures to keep transportation safe.

3 Trends of Maritime Industries and Measures

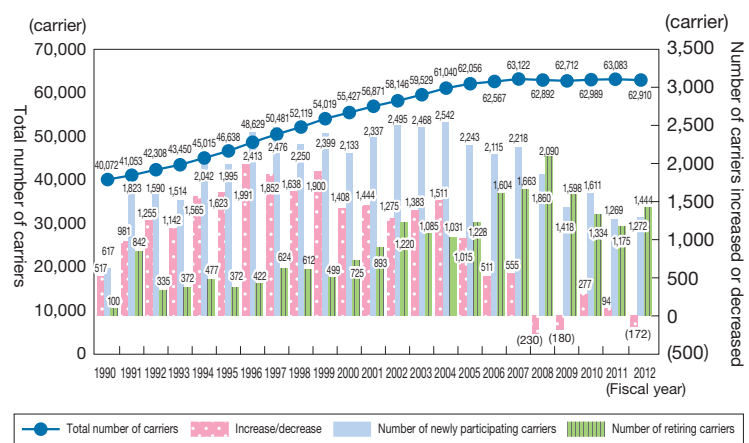
(1) Achieving stable marine transportation

a. Achieving Japanese-flagged vessels and Japanese seafarers

As Japan is a nation with no sufficient natural resources, being surrounded by seas on all its sides, international shipping plays an extremely significant role in an industrial infrastructure or lifeline of vital importance to Japanese economy and national life. It accounts for 99.7% of the nation's trade volume. The Government of Japan has regal jurisdiction over and is responsible for securing Japanese-flagged vessels and seafarers in support of international shipping. Keeping up with a certain number of Japanese-flagged vessels and seafarers at ordinary times is required from a viewpoint of economic security, but both Japanese-flagged vessels and seafarers are on a considerable decline due to losing of its competitiveness.

Figure II-6-3-4

Developments in the Number of Motor Truck Carriers



(Note) The number of retiring carriers includes that of carriers that have terminated as a result of a merger or transfer.
Source) MLIT

In 2008, a tonnage tax system ^{Note} was introduced to increase the number of Japanese-flagged vessels and Japanese seafarers, the core of Japanese merchant fleet, on a planned basis. Ten firms whose Japanese-flagged vessels and Japanese seafarers Securing Plan had been approved by the MLIT in accordance with the Maritime Transport Low have been applied to this tonnage tax and are now working to increase Japanese-flagged vessels and Japanese seafarers on a planned basis.

As a result of these efforts, Japanese-flagged vessels and Japanese seafarers have been increased steadily, but since Foreign-flagged vessels have opted to avoid calling at Japanese ports in the wake of the Great East Japan Earthquake and the nuclear power plant accident, the significance of economic security assurance by Japanese merchant fleet has been more pronounced.

In the circumstances, the amended Maritime Transport Low came into force in September 2012, establishing a “deemed-Japanese-flagged vessel” system. The deemed-Japanese-flagged vessel means a Foreign-flagged vessel operated by Japanese shipping firm and owned by their overseas subsidiaries which can change its flag to Japan immediately in case of issuing order of navigation in accordance with Maritime Transport Low. Furthermore, the FY2013 Tax System Reform Plan has expanded the target of the tonnage tax system to deemed-Japanese-flagged vessels as applicable vessels, to support the increased Japanese-flagged vessels and promote to secure the deemed Japanese-flagged vessels to perform a complementary role of Japanese-flagged vessels.

Japan will pursue to consolidate stable maritime transport that is functional in times of emergencies, as well as at ordinary times, by measures and other approaches as mentioned below.

b. Acquiring and fostering seafarers

Acquiring and fostering Japanese ship seafarer, human resources of maritime transportation, is of essential importance to boosting Japan’s economy and maintaining and upgrading national life. Yet, the number of Japanese international ship seafarers has fallen to about 2,400 after peaking at about 57,000. In the, concerns over stable marine transportation loom as coastal ship seafarers continues to get aged at a rapid pace (about 50% of the entire crew are 50 years old or more), with the result of a resultant dominant shortage of successors to them.

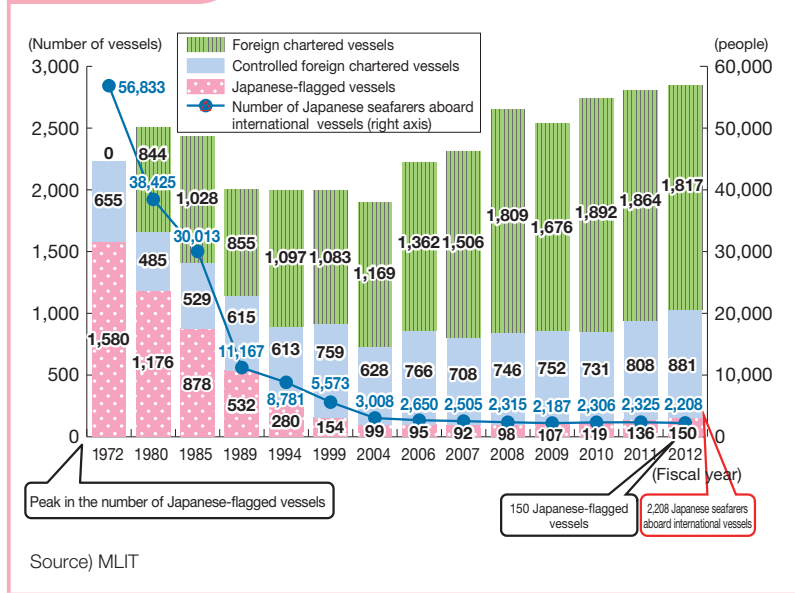
Those operators who have their Japanese-flagged vessels and Japanese seafarers Securing Plans accredited and who pursue to acquire and foster ship seafarers in accordance with these plans are supported, therefore, through the tonnage tax system for Japanese international ship seafarers and through the implementation of a planned seafarers employment project for coastal ship seafarers.

For the purpose of fostering new seafarers who possess the power of immediate and practical value to fill the needs of the shipping industry,

Note A tax system that calculates the amount of tax payment on the basis of a predetermined deemed profit according to vessel tonnage, rather than yearly profits. Similar tax systems are already introduced in the world’s major nautical nations.

Figure II-6-3-5

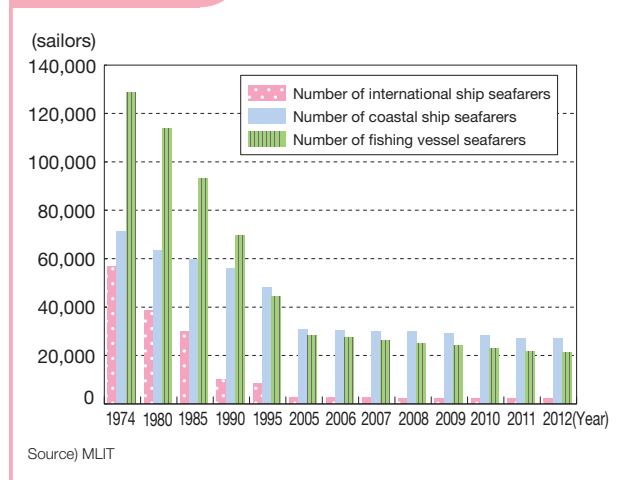
Number of Japanese seafarers aboard international vessels, Japanese merchant fleet



Source) MLIT

Figure II-6-3-6

Changes in the Number of Japanese Seafarers



Source) MLIT

specific measures have been implemented in the successive stages of education, recruitment and career development, including expanding the scope of onboard practice (company ship training) using the ships owned by international shipping operators, introducing company ship training for coastal shipping operators, sponsoring job fairs for new graduates and technical training sessions for retired seafarers and providing vocational education at the Marine Technical College.

In addition to these efforts to secure and foster seafarers, continued efforts will be directed at conducting job applicant support training sessions for would-be seafarers, broadening the population of candidates for mariners by staging maritime publicity campaigns, such as awarding those who have rendered distinguished service to the promotion of an oceanic state (Prime Minister's Award) and promoting On-board Occupational Health and Safety Management System and Work Improvement on Board (WIB), a continual approach to reducing mariner accidents to add to the vocational charms of the job of being a seafarer.

The I.A.I. Marine Technical Education Agency and the National Institute for Sea Training are the seafarer training institutions over which the Ministry of Land, Infrastructure, Transport and Tourism hold jurisdiction. The I.A.I. Marine Technical Education Agency not only provides new seafarers' education but also implements reeducation to meet shipping firms' needs or to catch up with technological innovations. The National Institute for Sea Training provides unified on-board practical training on students at the I.A.I. Marine Technical Education Agency and mercantile marine colleges and technical colleges using five training ships. The National Institute for Sea Training has built a small coastal training ship to replace its aged turbine training ship to provide on-board training tailored to the actual needs of coastal vessel operation in an effort to develop young seafarers who are capable of service off hand both effectively and efficiently.

(2) Marine transportation industry

a. International shipping

The volume of cargo movement on ocean in the world for 2012 stood 9,468,000,000 tons (up 4.0% from its year earlier level), with Japan's volume of seaborne trade for the same year at 960,110,000 tons (up 6.4% from its year earlier level).

In FY2012, the business climate for international shipping remained generally harsh as the market trended sluggish, bunker oil prices settled at higher levels and so on while concerns over global economic slowdowns elevated with European financial and banking problems spread to emerging nations.

b. Domestic passenger shipping industries

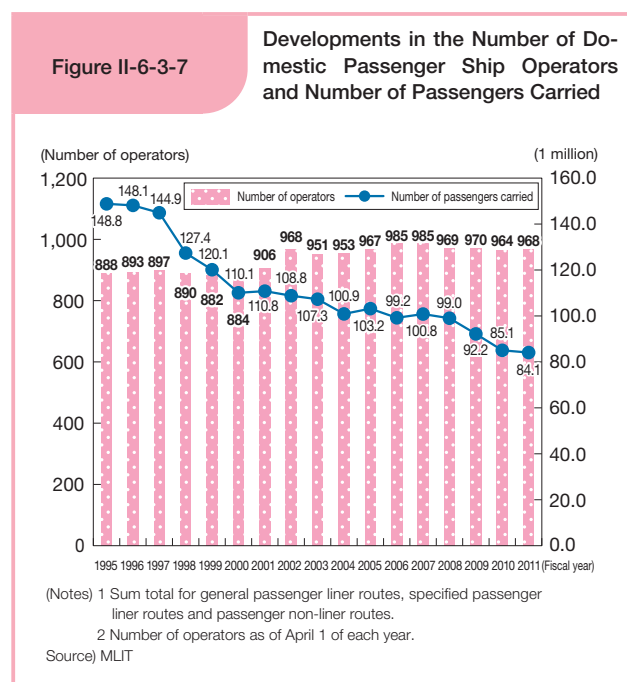
The domestic passenger shipping industries has been continuously caught in a tough management climate due to divers factors such as drastic declines in the volume of transportation after protracted economic recessions. The ferry services, which plays an important role as a means of regional transport and as a modal shift receiver, has reduced the number of service and has even pulled out, threatening continued availability of sea routes.

Accordingly, a variety of support measures have been advanced in collaboration with local governments and operators, including making ships more energy-efficient through the introduction of energy-saving equipment, enhancing the charms of voyage by sea and improving user convenience in with the tourism industry.

On April 1, 2011, there were 968 operators, who carried 84,070,000 passengers during FY2010 (down 1.2% from a year earlier).

c. Coastal shipping

Coastal shipping offers high economic efficiency and excellent shipping characteristics in terms of environmental preservation. Coastal shipping is a key means of transportation supporting Japan's economic activity and national life, as



it accounts for about 40% of domestic distribution and about 80% of industrial basic material transport.

Under the influence of accelerating globalization of the world's economy and changes in the domestic industrial structure from relocation of production bases to overseas, the volume of transportation demand remains stagnant for long, lasting to severity of the management environment. As ships continue to get aged rapidly, promotion of substitutional shipbuilding while steadily further improving transport efficiency would be essential in order to keep up with stable transportation while responding precisely to demand changes.

To address this task, the Ministry supports with the reduction in the usage fee for substitutional shipbuilding that makes for better environmental performance through joint ownership scheme and promotes the enhancement of competitiveness by making ships more energy-efficient. In addition, the study Council on Substitutional Shipbuilding Measures for Coastal Shipping compiles guidelines for the measures designed to promote substitutional shipbuilding for coastal shipping, such as reinforcing competitiveness, expanding into environmentally adaptive industries and responding to an evolving demand structure. In July 2012, approaches to activating coastal shipping through leveraging ship management companies were compiled and published as "Guidelines Relating to Ship Management Activities in Coastal Shipping." In April 2013, a technique for assessing conformance with ship management companies' Guidelines in coastal shipping was introduced to visualize the quality of the ship management companies' management service offerings. Further, the smooth and steady implementation of Transitional Business for coastal shipping^{Note} is also supported.

d. Port and harbor transportation business

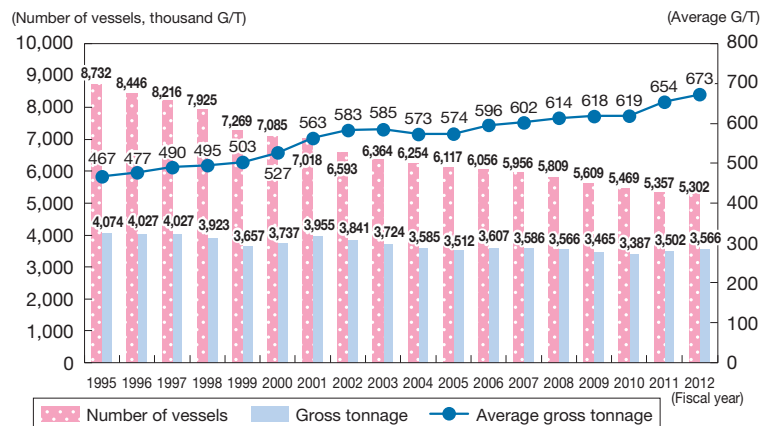
The port and harbor transportation business plays a vital role as a nodal point between marine transportation and land transportation. From viewpoints of streamlining business workflow and offering diverse services, the port and harbor transportation business has been deregulated by converting the entry procedures from a licensing system to a permit system and by converting the freightage and charges from an approval system to a prior notification system since November 2000 for nine major ports and May 2006 for other ports. (As of April 1, 2013, 42 new permits had been granted, with 269 revisions of the scope of business and 1,309 freightage and charge notifications submitted).

(3) Shipbuilding industry

a. Present status of the shipbuilding industry

Japan's shipbuilding industry is an extremely important industry that contributes to regional economy and employment by providing a stable supply of quality vessels tailored to ship owner's varied needs. Japan possesses a clustered integration of maritime industries in which the marine transport business, shipbuilding business and ship machinery business are closely linked to one another.

Figure II-6-3-8 Developments in Coastal shipping



(Note) As of the end of each fiscal year
Source) MLIT

Note A system that grants a certain amount of subsidy to those who have dismantled and removed their ships and that demands the shipbuilders to pay fees after having resolved the owned tonnage adjustment program based on a scrap and build principle.

In the shipbuilding industry, China and Korea have rapidly built up their building capacities on the support of increases in marine transportation, etc. resulting from a booming global economy, boosting the world's volume of new shipbuilding for 2013 to 70.48 million gross tons (when compared with 14.59 gross tons for Japan, commanding 21% of the world's market). While the volume of orders taken by Japan has turned upward, a tough international competition goes on, dampening the ship prices.

The production of ship machinery products (except for outboard motors) for 2012 was valued at 79.91 billion yen (down about 15.3% from its year earlier level), with an export amount of 19.31 billion yen (down about 18.1% from its year earlier level). The climate surrounding the ship machinery business is predicted to become harsher than ever, with stiffening global competition and increasingly aged employees.

Figure II-6-3-9

Japan's Maritime Industry Cluster

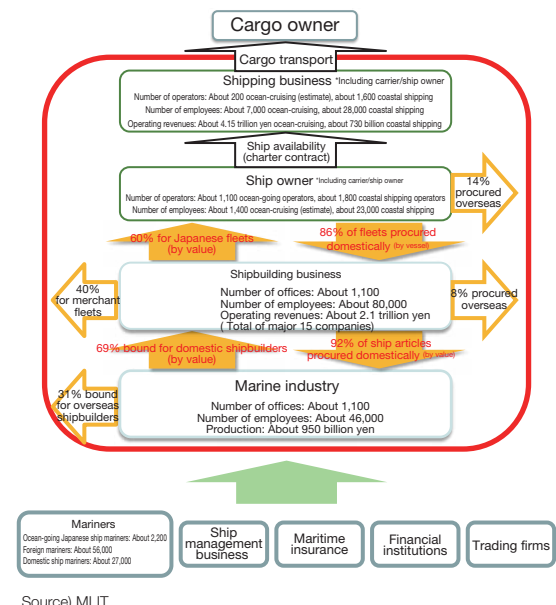


Figure II-6-3-10

Developments in the Volume of Newly Built Ships in the World

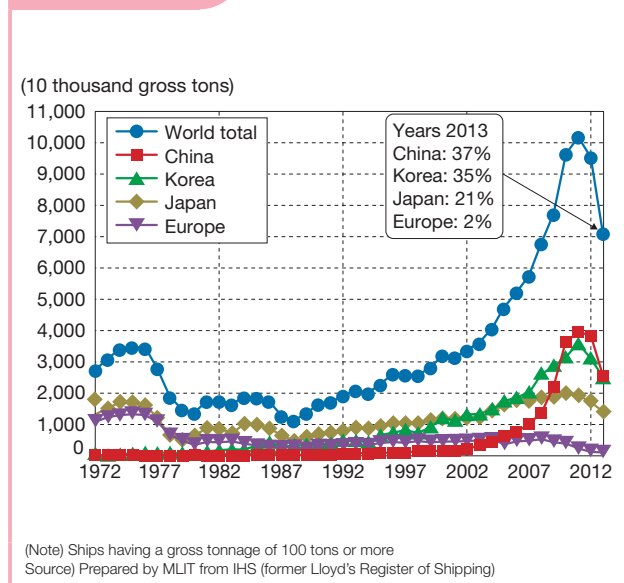
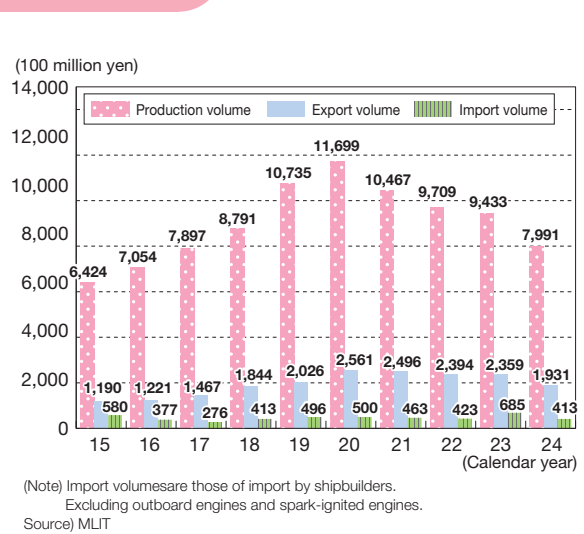


Figure II-6-3-11

Developments in Japan's Production, Export and Import of Marine Industrial Products



b. Approaches to consolidating the international competitiveness of the shipbuilding industry

To consolidate the international competitiveness of Japan's shipbuilding industry and allow Japan to stay a first-class shipbuilding nation, the implementation of a policy package focusing on boosting Japan's order-taking capacities and deployment into new markets and new segments of business, need to be propelled.

Starting from FY2013, support has been extended to shipbuilders, shipping operators and the like in their efforts to develop next-generation marine environment technologies that help enhance fuel efficiencies for their vessels with a view to reinforce Japan's order-taking capacities. An environmental improvement project aimed at speeding the practical usefulness and installation of low-environmental-impact, natural gas-fueled ships has also been launched since FY2013. The Ministry is committed to realizing a desirable framework of international collaboration under cooperation between the public and private sectors and exploring, and promoting the diffusion of, energy-saving technologies for ships, natural gas-fueled ships and so on.

Approaches to the promising growth fields of marine resources development, renewable marine energy sources

deployment and so on and to establishing a system of marine transportation on new routes of energy transportation will also be impelled. Specifically, the Ministry plots to broaden the sphere of business activity in the fields of marine development by supporting the launches of marine resources development projects that may take advantage of Japan's strengths, such as offshore logistics hubs ^{Note 1}, and the development of marine resources development technologies and encouraging research studies for the formulatino of safety requirements for floating liquefied natural gas facilities (FLNG) and also to maintain technologies for proceeding with marine development activity within Japan's EEZ in the future. For floating offshore wind power generation facilities, safety guidelines have been compiled.

The Ministry has also embarked on deals to combat fake ship machinery products and works to consolidate the engineering capabilities of smaller shipbuilders through the promotion of Super Eco-Ships (SES ^{Note 2}) by Japan Railway Construction, Transport and Technology Agency (JRJT), the commercialization support of evolving technologies and so on.

4 Trends in Air Transport business and Measures

The climate in which the airline industry is placed stays hard on airlines for FY2012 as the demand for aviation has weakened temporarily under the influence of disputes over the Senkaku Islands that broke out in September and others, soaring fuel costs and more. After peaking in FY2006, the volume of passenger transportation in Japan's aviation industry sloped downward because of global business recessions, the aftermath of the Great East Japan Earthquake and so on until it turned for the first time in six years for the better to reach 85.99 million (up about 8.1% from a year earlier), with prime impetus coming from the reconstruction demand sparked by the Great East Japan Earthquake and rising demand fueled by the entry of LCCs. The number of international passengers also turned for the first increase in five years, reaching 14.2 million (up 12.8 from a year earlier level).

Since Peach Aviation, Japan's first full-scale LCC, came into service in March 2012, Jetstar Japan and AirAsia Japan followed suit in July and August, respectively.

AirAsia Japan became a 100% wholly owned subsidiary of ANA on June 25, 2013 when AirAsia (Malaysia) and ANA Holdings Inc. broke up their business ties. On November 1 of the same year, the company was renamed "Vanilla Air," coming into operation as a new airline on December 20. On December 17 of the same year, Spring Japan was granted a license to provide air services, expecting to start operating at the end of May 2014 as Japan's fourth LCC.

5 Trends in the Consigned Freight Forwarding Business and Measures

The consigned freight forwarding business ^{Note 3} is combined with multiple means of transport to provide services

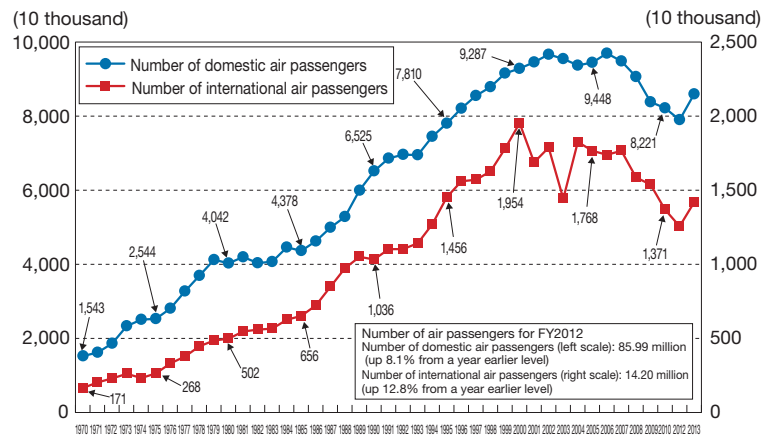
Note 1 Large-sized floating structures that transport personnel and equipment to and from many offshore facilities on a hub and spoke basis.

Note 2 Next-generation domestic vessels, driven by an electric propulsion system, which combines excellent environmental performance to cut CO₂ and NO_x emissions and boost fuel efficiency with economics.

Note 3 A business that transports cargoes by the means of transport (motor trucks, railways, aircrafts, ships) owned by real carriers (who undertake transportation by themselves) in a fully integrated, complex flow of door-to-door transportation, from picking up cargoes to delivering them.

Figure II-6-3-12

Developments in the Number of Air Passengers (Japan-Based Airlines)



(Source) Prepared from the "Air Transportation Statistical Yearbook" by the MLIT.

specific to varied user needs. Recent years have witnessed growing entry into the aircraft- and ship-based segments of international shipment to reflect the cargo owners' needs for globalization.

Further, as internal trade takes on an increasingly important tone, global shipment gets more streamlined than before, urging safety assurance during transportation. The Ministry of Land, Infrastructure, Transport and Tourism works to ensure the availability of safe and secure logistics services, as by conducting audits, etc. to consolidate thorough operator code compliance.

6 Trends in the Warehousing Business and Measures

Commercial warehouses play a vital role as nodes of physical distribution. After the requirements for entry into the warehousing business were eased to a registration system, the number of newcomers has steadily increased, with the number of warehouse operators reaching 6,059 as of the end of FY2012 (up 1,004 over the end of FY2001).

In recent years, the construction of large, intelligent physical distribution facilities by foreign or domestic real estate entities or funds has been activated, giving birth to warehouse operators who rent such facilities to develop their businesses. To fulfill sophisticated and diversified needs for physical distribution, warehouse operators tend to combine other multiple physical distribution businesses, such as a consigned freight forwarding business.

The introduction of equipment that makes for a lower-carbon implementation of logistics facilities is underway, as well as the introduction of emergency power supplies and telecommunications equipment that help build a disaster-tolerant truck warehouse.

7 Trends in the Truck Terminal Business and Measures

The truck terminal business plays a significant role in streamlining the flow of transport, mitigating congestion and so on as a nodal point of trucking between a trunk line and a terminal. In recent years, the construction of facilities that provide the functionality of a distribution center (sorting, processing for distribution and so on), as well as loading and unloading, is in progress to meet the sophisticated and diversified needs for logistics.

The introduction of equipment that makes for a lower-carbon implementation of physical distribution facilities is underway, as well as the introduction of emergency power supplies and telecommunications equipment that help build a disaster-tolerant truck terminal.

8 Trends in the Real Estate Business and Measures

(1) Conditions surrounding the real estate business

The real estate business is one of the key industries that command 2.4% of the total sales of all industries and 11.1% of the total number of corporations (FY2012).

Land prices had followed a declining trend nationwide until 2013, when they started to turn upward in urban areas, particular, in the three major metropolitan areas, with signs of recovery being noticeable in the rural areas as well. The number of new housing starts, after plumbing to 780,000 in FY2009, soared to top 890,000 in FY2012 and still could to top 950,000 in FY2013 at the presence rate of growth.

In the existing housing circulation market, the number of successful deals has followed a steady trend with 151,000 in FY2012 according to the Real Estate Information Network System (REINS) ^{Note}.

Since December 2011, a voluntary "system of rental housing management entity registration" that places a certain set of rules on the fulfillment of rental housing management services has been put into effect since December 2011 to foster and develop a good-quality rental housing business. As of the end of March 2013, 2,767 rental housing management entities were registered.

Note Registered building lots and buildings dealers have property information loaded on REINS for them to exchange. As property deals are concluded successfully, the relevant information, including the transaction prices, is stacked on REINS.

(2) Precise application of the Building Lots and Buildings Transaction Business Act

The Ministry endeavors to ensure precise administration of the Building Lots and Buildings Transaction Business Act to protect consumer interest involved in housing land and building deals and to expedite distribution. There were 122,510 registered building lots and buildings dealers (as of the end of 2013). This number is on a slight decline in recent years.

The Ministry of Land, Infrastructure, Transport and Tourism, along with prefectural and municipal governments, endeavor to prevent complaints and disputes by working in conjunction with the bodies concerned while imposing severe supervisory dispositions on those entities that have breached the law. In FY2012, 258 supervisory dispositions were imposed (including 129 revocations of licenses, 51 suspensions of business and 78 order).

To combat the problems of malicious soliciting at the time of condominium sale, the Act was amended in August 2011 to define the acts that are prohibited in soliciting in connection with building lots and buildings transactions. The Ministry will continue to alert consumers through its Website or other means and work together with the agencies concerned to provide relevant supervision and guidance.

(3) Securing proper management by condominium management service firms

To ensure proper management of growing stocks of condominium, a system of registration for condominium management services entities and service regulations have been enforced to ensure their proper management in accordance with the Act on Advancement of Proper Condominium Management. As of the end of 2012, 2,252 condominium management services entities were registered, with no significant changes in their number of the last couple of years.

From a viewpoint of promoting the code compliance of condominium management services entities, on-the-spot inspections have been conducted on condominium management services entities.

(4) Revitalizing the real estate market

a. Status quo of the real estate market

Japan's real estate had a total asset value of about 2,400 trillion yen as of the end of FY2012 ^{Note}.

The asset amount of the real estate or the beneficial interest in trust on the real estate that were acquired by J-REIT (real estate Investment Corporations), real estate specified joint enterprise operators, Specific Purpose Companies and so on as objects of securitization during FY2012 stood at about 3.3 trillion yen.

While J-REITs play a central role in the real-estate investment market, five new brands were listed for one year in FY2013. As of the end of March 2014, 44 brands were listed on the Tokyo Stock Exchange, with the target real estate having a total value of about 11.6 trillion yen and the real-estate investment securities carrying an aggregate market price of about 7.6 trillion yen.

The Tokyo Stock Exchange REIT Index, an indicator of the price movement of the whole J-REIT market, soared to record 1700.91 on March 27 as the long-term interest rate fell sharply from 0.8% to 0.4% mainly amid hopes for the so-called Abenomics aimed at exiting deflation and expectations for the Bank of Japan taking additional steps to ease money, but plunged down to 1246.28 on June 13 under the influence of a hike in the long-term interest rate from 0.4% to 0.9% and others. Subsequently, the index seasawed until September when Tokyo was nominated to host the 2020 Olympic Games. It regained strength to reach 1500 towards the end of September and transitioned from 1400 to 1500 from October to the end of year amid hopes for further pickups in domestic business confidence and rising real-estate prices, moving at a relatively stable pace.

The amount of J-REIT assets acquisition in 2013 topped the approximately 2 trillion level for 2006, reaching a record high of approximately 2.2 trillion yen.

Note A sum total of the values of the buildings, structures and land calculated on the basis of National Accounts.

b. Conditioning the real estate market

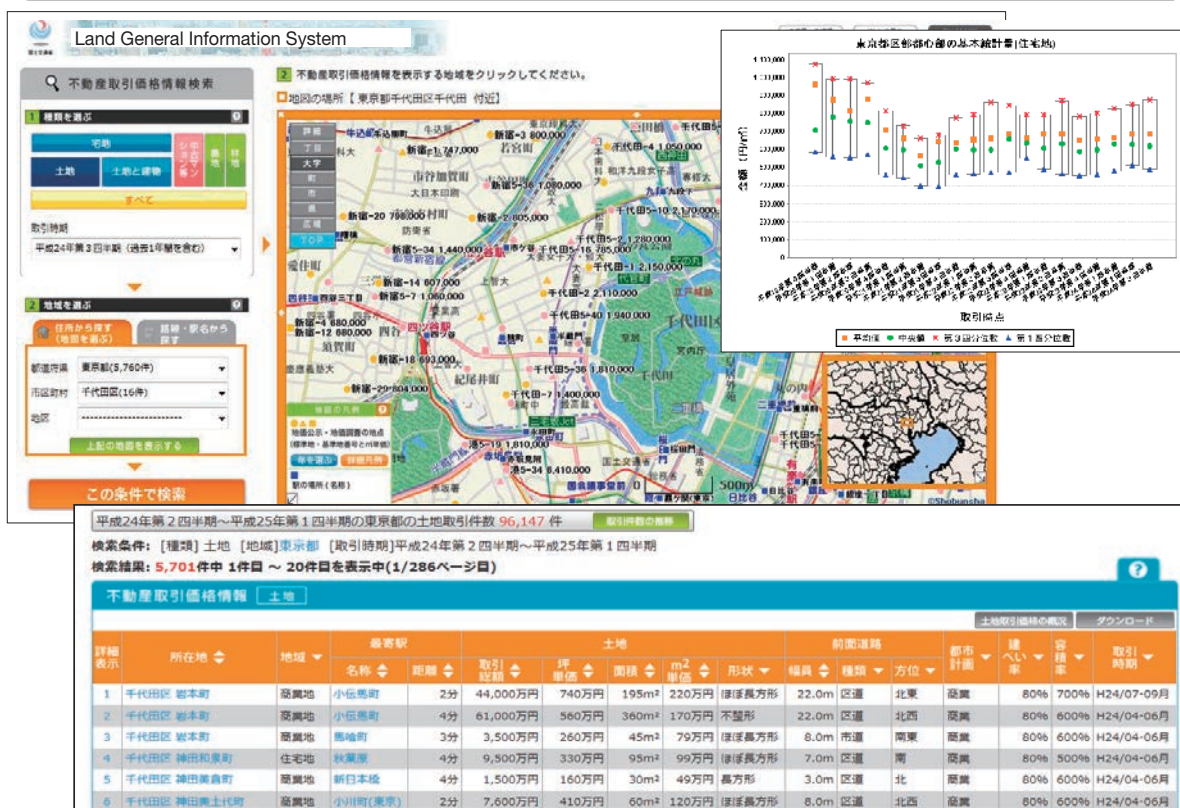
The Ministry of Land, Infrastructure, Transport and Tourism surveys real estate trade prices, etc. nationwide in a bid to make the real estate market more transparent and streamline and reactivate deals. Information thus collected from such surveys, including locations, areas and prices of real properties traded, is uploaded at a Website on the Internet (Land General Information System ^{Note}) with due care taken to prevent identification of the individual properties (as of March 2014, information on 1,935,344 properties was posted, attracting a total of about 430 million accesses).

International agencies have worked together to draft Handbook on Residential Property Price Indices (RPPI Handbook) to build an Early Warning Signal System by taking lessons from the subprime and other crises. The Ministry of Land, Infrastructure, Transport and Tourism responded to RPPI Handbook to prepare Japan Residential Property Price Index and put them into trial service in August 2012. It now debates their full-scale implementation. These indices have also been specified as the IMF's Financial Soundness Indicators (FSIs).

In addition, efforts to refurbish the secondhand house trading environment are underway to promote the circulation of secondhand housing that commands a smaller share of the entire volume of housing in circulation than in Europe and the U.S. Those made during FY2013 include exploring a scheme of concentrating records of housing transactions completed in the past and information relevant to real-estate dealing, such as urban planning information, and making them accessible to Registered Building Lots and Buildings Dealers and the like, supporting the development of one-stop services in collaboration with specialized contractors in the fields of real-estate dealing, such as house remodeling and formulating guidelines aimed at improving the assessment of buildings relevant to secondhand detached houses.

Figure II-6-3-13 Land General Information System

- Since April 2006, trade price information based on questionnaires conducted among parties to real-estate deals has been posted every quarter at a Ministry of Land, Infrastructure and Transport Website with care to protect the properties in question from being identified easily.
- A total of 1,935,344 records are available, which attracted about 430 million Web accesses (averaging 7.25 million a month [FY2013 results]).



Source) MLIT

Note <http://www.land.mlit.go.jp/webland/>

c. Tax system utilization

The FY2014 Tax Reform has implemented extensions, etc. of the applicable periods of the preferential measure for taxing the long-term transfer income from the transfer of land, etc. for reclamation, etc. of superior housing lots (income taxes, etc.) and the measure for terminating the scheme of additional taxation for the gains on the transfer of land, etc. (corporate taxes, etc.).

d. Pursuing the emergence of a new real estate market tailored to the needs of a new era

Real-estate appraisal standards, etc. have been updated after discussions at the Real-Estate Appraisal Work Shop, Land Policy Workgroup, National Land Development Council in the light of the needs for real-estate appraisal, such as a globalized real-estate market, an advancing stop-type society and an evolving real-estate securitization market.

On-site inspections of real-estate appraisers and appraisal monitoring surveys concerned mainly with facts about securitized real-estate appraisals have been conducted to enhance appraisal reliability.

The presence of many seismically inadequate buildings and concerns over tight power supplies, such as those triggered by the Great East Japan Earthquake, dictate the formation of good-quality aseismic and eco-friendly real estate. To accelerate the introduction of private funds to finance the quake-proofing of buildings and the renewal of urban facilities, a Bill on Partial Amendments to the Real Estate Specified Joint Enterprise Act was just submitted to the 183rd session of the Diet, which authorizes special-purpose companies (SPC) fulfilling a certain set of requirements to conduct real estate specified joint enterprises.

The Japan Is Back initiative (decided at a Cabinet meeting on June 14, 2013) calls for “Development, Promotion and Dissemination of Guidelines Relating to Acquisition and Operation of Housing, etc. for the Elderly to Utilize Healthcare REITs (during FY2014)” to take advantage of private funds. “Economic Measures for Virtuous Cycling” (decided at a Cabinet meeting on December 5, 2013) also recommends “Promotion of Financing for Healthcare Facilities through Promoted Listing of Healthcare REITs on the First Section of the Tokyo Stock Exchange, etc. <other than budgetary steps> (Financial Services Agency, Ministry of Land, Infrastructure and Transport, Ministry of Health, Labour and Welfare).”

Moreover, the Green Building Promotion Review Committee and its working group were established in order to expand and popularize “Green Building” in Japan. The MLIT publicized information about their discussions of the measures and approaches that had been recommended in the past proposals, through Green Building Online Portal ^{Note}.

9 Building a Sustainable Construction Industry

(1) Conditions surrounding the real estate business

The construction industry not only takes charge of the development, maintenance, management, etc. of local infrastructures but underpins local economies and employment, keeping local communities safe and secure on the front line in support of the national life and social economy.

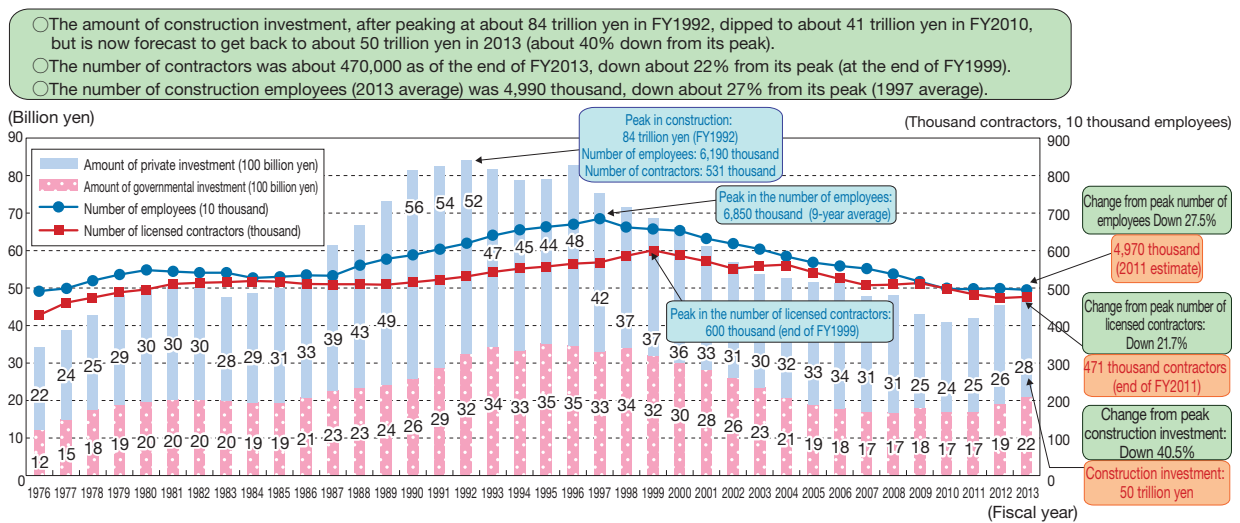
In the meantime, various problems, such as the diminishing population of skilled labor in the field, the declining number of young workers employed and aging workforces, have emerged as a consequence of dumped order taking and resultant constraints on the subcontractors amid rapidly shrinking construction investment. Building a sustainable construction industry from a mid- and long-term viewpoint should be essential to fully addressing the urges to get prepared for disasters, mitigate their effects when they occur, combat aging facilities, maintain infrastructures, keep buildings quake-resistant and so on.

Figure II-6-3-14 shows the trends in construction investment and the number of licensed contractors and employees.

Note <http://tochi.mlit.go.jp/kankyo/index.html>

Figure II-6-3-14

Trends in Construction Investment (Nominal), Number of Licensed Contractors and Number of Employees



(2) Securing and fostering human resources to work for the construction industry

Because the construction industry is underpinned by human resources in the sense that success or failure in its production depends on the capabilities of technicians and skilled labor at work, encouraging young workers to join in the industry and creating an environment in which these young workers can proudly concentrate on their assignments while acquiring expertise and skills should be necessary for the industry to fulfill its vital obligations, as for forging a safe and secure national land over an extended period of time to come.

To this end, the government and the construction industry are working in accord to upgrade the work environment, as by keeping appropriate wage levels for skilled labor and enforcing thorough subscription to social insurance programs, and also to drive enhancement and consolidation of the functions of the Fuji Education Training Center, the stronghold of human resources development for the construction industry, to foster technicians and skilled labor.

Qualifications for taking technical certification tests have been reviewed to give incentives for acquiring qualifications at an early stage of one's career and to foster a population of competent young technicians.

Strategic publicity campaigns have also been promoted to improve the image of the construction industry cherished by the general public and also to appeal to younger people who might choose to join in the industry.

In addition, the acquisition, development and utilization of registered technicians who are furnished with work management, modulatory and other relevant capacities to qualify themselves to work in key operations have been promoted. As of 31.03.14, 41,951 technicians (in 32 different kinds of jobs) were registered. The availability of registered key technicians is taken into account at point addition scoring during the Ministry's management reviews or contractor bidding assessment for public works projects (trial works).

(3) Establishing a framework of fair competition

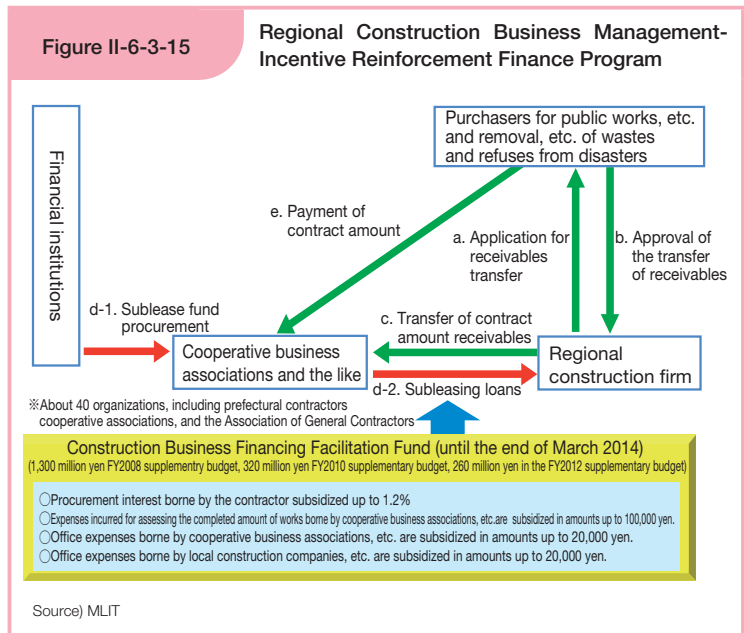
As the construction industry takes charge of the jobs of keeping local communities safe and secure, as through the development, maintenance, management, etc. of local infrastructures, it needs to establish a framework of fair competition among contractors, including thorough legal compliance, to enable those of them who are superior in their technical strength, construction capability and management power to keep up with their growth. To this end, the Ministry has been working to normalize the practice of deals between prime contractors and subcontractors in the construction business by conducting subcontracting transaction status surveys, on-the-spot surveys, etc., opening a desk for consultation services on troubles, complaints and other problems encountered in concluding construction work contracts as "Construction Business Transaction Normalization Center" and collaborating with prefectural and municipal governments during the Construction Business Normalization Promotion Month (November).

(4) Measures aimed at supporting construction companies

a. Regional construction business management-incentive finance program

The regional construction business management-incentive finance program allows prime contractors to acquire loans from a cooperative association or a certain private entity on security of the public works contract price credit obligations, according to the completed amount of works. Its purpose is to smooth their cash flow and ease their burden of interest payment.

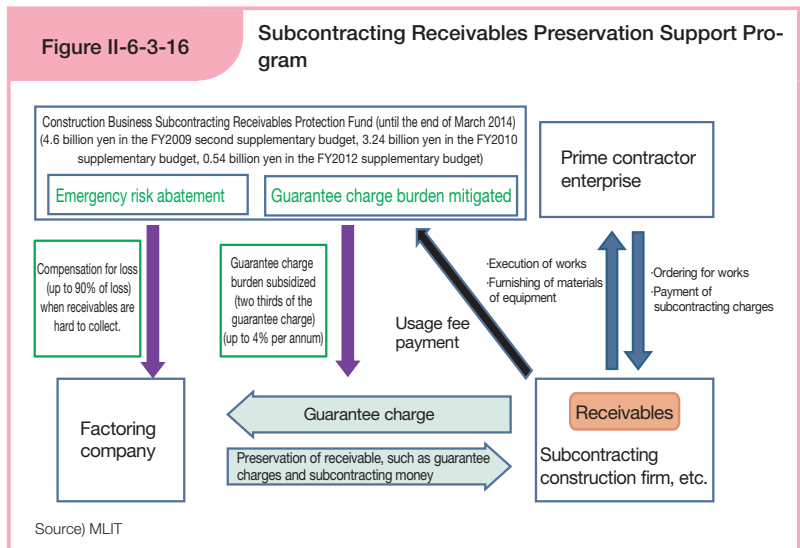
Effective since November 2008, this program will be carried forward through FY2014.



b. Subcontracting receivables preservation support program

The subcontracting receivables preservation project proactively promotes the guaranteed payment of the account-receivables for contract prices subcontractors, etc. have for their primary contractors when the payment of such receivables is guaranteed by a factoring company ^{Note} by easing the guarantee charge burden of the subcontractors, etc. and indemnifying the factoring company for the loss it may suffer upon fulfillment of the guaranteed obligations.

This program has been implemented since March 2010 and will be carried on through FY2014.



c. Disaster-responsive construction business financial support program

The Disaster-Responsive Construction Business Financial Support Program extends financial support to smaller and medium-size construction companies for purchasing typical construction machinery to use to respond to disasters as they occur or to smaller and medium-size construction companies that have been struck by the Great East Japan Earthquake for bearing interests accrued on their loans relating to the purchasing of construction machinery.

This program has been implemented since March 2013 and will be carried on through FY2014, with the number of models eligible for financial support being increased from three to 41.

d. Construction company management strategy advisory program

The Construction Company Management Strategy Advisory Program supports the resolution of management tasks, such as launching a new project, or technical tasks, such as construction management, facing smaller and medium-sized

Note A financial enterprise that collects receivables owned by others by guaranteeing or purchasing them. At present, 10 factoring companies, including bank subsidiaries, prepayment guarantee companies and leasing companies, run this service.

construction companies by offering them advice from Certified Small and Medium Enterprise Management Consultants or other experts. For issues of common concern to other enterprises as well, the program provides continual support (team advice support) until the attainment of defined goals, such as formulation of a management improvement plan by a support expert team or subsidizes in part the expenditures incurred to implement those projects that could help resolve local problems by leveraging construction companies' know-how (step-up support). During FY2013, 23 instances of team advice support and 20 instances of step-up support were selected.

This program has been implemented since April 2011 and will be carried on through FY2014, with construction-related businesses (surveying, construction consulting and geological surveying) being added to the scope of this program.

(5) Promoting construction-related businesses

Information about registered contractors across the construction-related businesses (surveying, construction consulting and geological surveying) for each month is publicized at the end of the next month, analyses of industry-classified management status based on that information at the end of the next fiscal year and findings of a survey into the status of utilization of the contractor registration system by local governments in November 2013, each at a website.

(6) Present status of construction machinery and growth of construction production technologies

In FY2011, about 810,000 units of construction machinery ^{Note} were owned in Japan. By industry, about 54% of the construction machinery was purchased by the leasing and rental business and about 18% by the construction business.

Since, of all death accidents occurring in the construction industry, those caused by construction machinery, etc. account for about 15%, safety assurance in mechanized construction has been promoted by taking such measures as disseminating Technical Guide to Construction Mechanization and Construction Mechanization Safety Manual.

Widespread practice of computer-aided construction, or an ICT-based innovative technology, has also been sought. During FY2013, the use of work progress management technologies on total stations was enforced in part pursuant to the second-phase Computer-Aided construction Promotion Strategy (formulated in March 2013). At the same time, the positive use of machine control/machine guidance technologies has been pursued by positioning them as generalization promotion technologies..

(7) Settling disputes arising from the execution of construction works

To promptly resolve disputes arising from the execution of construction work contracts, the Construction Works Dispute Review Panel implements dispute settlement procedures. In FY2012, the Panel received 50 applications (seven of arbitration, 40 for conciliation and three for mediation) at the central level and 105 applications (31 for arbitration, 67 for conciliation and 7 for mediation) at the prefectural level.

Note Major models: about 582,000 hydraulic shovels, about 132,000 wheel type tractor shovels, about 34,000 bulldozers