

Supplying advanced transportation systems and services for land, sea, and air applications

Commercial Aviation & Transportation Systems

Commercial Aviation & Transportation Systems delivers advanced land, sea, and air transportation systems, including commercial airplanes and ships, as well as land transportation systems. MHI moves society, supporting its transportation and logistics infrastructures with superior safety, guaranteed quality, and reliability backed by technology.



We are creating a new business model that reinforces strengths tailored to our target markets in various fields of operation and leverages synergies, enabling us to cultivate new business areas.

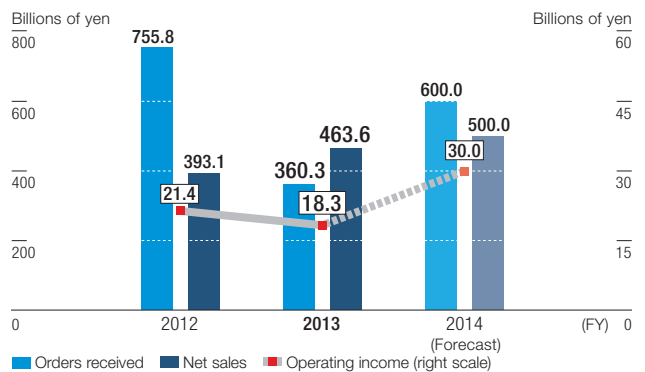
Yoichi Kujirai
Domain CEO,
Commercial Aviation & Transportation Systems

Fiscal 2013 in Review

On a consolidated basis, orders received in fiscal 2013 fell below the previous year's level, to ¥360.3 billion. Reasons for the decline included a lack of orders for the Mitsubishi Regional Jet (MRJ), compared with substantial orders in the previous year. Also, orders for commercial ships fell from 29 ships in fiscal 2012, to eight in fiscal 2013, due to delays in negotiations on liquefied natural gas (LNG) carriers that caused orders anticipated for fiscal 2013 to move into the following fiscal year.

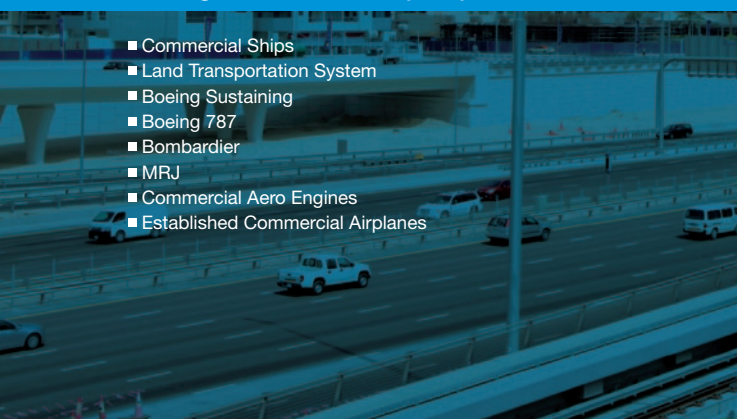
Consolidated net sales in this domain rose, to ¥463.6 billion. Although sales of commercial ships were down, deliveries related to commercial airplanes increased to 99 for Boeing 777 aircraft and 78 for Boeing 787s. These figures represent year-on-year increases of nine and 26 aircraft, respectively. Operating income decreased, to ¥18.3 billion, due to a decline in the profitability of commercial ships that outweighed the positive influences of improved production efficiency in commercial airplanes and yen depreciation.

Orders Received / Net Sales / Operating Income



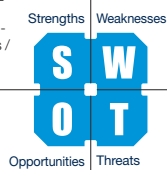
Strategic Business Unit (SBU)

- Commercial Ships
- Land Transportation System
- Boeing Sustaining
- Boeing 787
- Bombardier
- MRJ
- Commercial Aero Engines
- Established Commercial Airplanes



SWOT Matrix

- **Commercial airplanes** Price competitiveness, thanks to global supply chain management / Design and manufacturing technologies for large composites to main wings and other structural components / Complete aircraft (MRJ) offering high levels of efficiency and reliability and outstanding economy
- **Transportation systems** Strong system integration and project management capabilities
- **Commercial ships** Concentration on sophisticated technologies and high-value added ships / Proprietary environmental and energy-saving technologies unrivaled by other companies
- **Commercial airplanes** New demand for around 22,000 aircraft over next 20 years
- **Transportation systems** Numerous new infrastructure projects planned in emerging markets
- **Commercial ships** Increased demand for energy-efficient vessels due to the surging price of crude oil and the introduction of the Energy Efficiency Design Index (EEDI) / Higher demand for LNG carriers



- **Commercial airplanes** Fierce competition in regional market
- **Transportation systems** Deficiencies in lineup among core products
- **Commercial ships** Cost competitiveness relative to South Korean and Chinese manufacturers
- **Commercial ships** Decline in ship prices due to gap between global supply and demand / Soaring prices on steel materials / South Korean and Chinese manufacturers augmenting shipbuilding capacity

Basic Strategies

- **Growth strategy deployment**
Create new business model, new markets
- **Structural reforms**
Reinforce and promote strengths in program management and system integration
- **Business structure reforms**
Thoroughly transform structures for problematic businesses

Operating Environment

With the global volume of air passenger traffic growing every year, demand for commercial airplanes remains robust. Low-cost carriers (LCCs) are advancing rapidly, and major airlines are placing replacement orders for airplanes offering improved fuel efficiency. Consequently, orders remain strong, and aircraft manufacturers are faced with long order backlogs.

Particularly in Asian countries, measures to improve urban transport moved forward, prompting new investment in rail infrastructure as a mode of transport having relatively low environmental impact.

Although the overall market for new ships is contracting, increased use of natural gas is boosting orders for LNG carriers. Demand is also rising for ships offering enhanced environmental performance, reflecting the need for ships with lower fuel consumption and reduced emissions, as well as an overarching interest in preserving marine ecosystems and decreasing environmental impact.

Initiatives for Growth over the Medium to Long Term

In the commercial airplanes business, we are developing production systems in preparation for increased production. We are also building a global supply chain and working to improve profitability by transforming our production systems. At the same time, we are gearing up for expanded MRJ orders and putting in place a mass-production system. We are making steady progress on the development of this next-generation regional jet, which offers superb fuel economy, environmental performance, and cabin comfort. The jet's maiden flight is scheduled for 2015, and we plan to commence deliveries in 2017.

In the transportation systems business, we are conducting broad-based sales efforts in the Middle East, Southeast Asia, Brazil, and North America that are designed to bolster our global market competitiveness.

We are seeking to differentiate ourselves in the commercial ships business by concentrating on sophisticated and high-value-added ships such as the *Sayaendo*, our next-generation LNG carrier that employs proprietary MHI technologies. We are also undertaking efforts to reinforce our engineering business and commercialize our overseas shipbuilding business.

Key Projects

Announcement	Delivery	Project
July 2014	2018	MHI Receives Order for 18 New Train Cars for Three Automated Guideway Transit (AGT) Systems at Orlando International Airport
July 2014	2018	Air Mandalay of the Republic of Myanmar Places Order for 10 MRJ90 Aircraft (Firm Orders for Six, Purchase Rights on Four)
July 2014	2019	Eastern Airlines of the United States Signs MOU for 40 MRJ90 Aircraft (Firm Orders for 20, Purchase Rights on 20)

Announcement	Delivery	Project
June 2014	2017	Engines Mounted on MRJ's First Flight Test Aircraft
January 2014	2017	MHI Receives Follow-up Order for 48 More Cars for the Macau Light Rapid Transit System
October 2013	—	Consortium of Five Japanese Companies to Acquire Stake in ECOVIX Engevix Construções Oceânicas S.A., a Major Brazilian Shipbuilder
June 2013	2016	MHI Receives Order from Taiwan High Speed Rail Corporation for Nangang Extension Project



FOCUS

Commercial Aviation & Transportation Systems

Providing Transportation Systems That Deliver Safety and Peace of Mind in Locations around the World

The growing number of automobiles in urban areas is giving rise to such social issues as traffic congestion and environmental degradation. MHI is contributing to improvements in urban transportation through transportation systems that include high-speed railways, urban rail systems, and new rubber-tire-based urban transportation systems, which the Company delivers to customers in Japan and overseas.

Backdrop

- Growing need to move within urban areas, in line with economic development in emerging countries
- Increasingly serious urban traffic congestion and environmental problems
- Escalating demand for urban transportation systems that have little environmental impact

The global market for rail transit systems is brisk and is said to have an annual value of more than ¥20 trillion. The number of urban projects is increasing, particularly in emerging countries. In tandem with economic development, emerging countries' populations are concentrating in urban centers, stimulating demand for intracity transportation. Growing numbers of automobiles are causing more traffic congestion, and exhaust gases are reducing environmental quality. The need to address social problems such as these is pressing.

Against this backdrop, demand is intensifying to set up urban transportation systems to serve as a means of public transportation with relatively low environmental impact. MHI is drawing on its experience in high-speed rail projects such as Taiwan High Speed Rail; rail transit systems, including the Dubai Metro; and new Automated Guideway Transit (AGT) systems using rubber tires, such as the Yurikamome Line, in Tokyo. By combining its expertise in these areas, MHI provides transportation systems that are optimal for the cities in which they are used.

Key Capital

- Extensive experience in delivering systems in Japan and overseas
- Sophisticated system integration and project management capabilities

In rail transit systems, MHI oversaw track, communications, and electrical system integration for Taiwan High Speed Rail, earning high praise for its project management capabilities. We have also received an order for a project to extend the Taiwan High Speed Rail, and construction currently is under way. In urban rail systems, MHI handled the overall transport system engineering, procurement, construction, test operation and adjustment, and safety verification for the Dubai Metro, the world's longest fully automated metro network. The high marks we received on these projects led to an order for São Paulo Metro Line 6, in Brazil. Since 1973, MHI has delivered numerous new urban transportation systems, including one to the Miami International Airport, in the United States, as well as others in Singapore, South Korea, and Dubai. Recent projects include the construction of the Macau Light Rapid Transit system, which is scheduled to commence commercial operations in 2015. In 2014, MHI received an order for AGT systems from the Orlando International Airport, in the United States. Its mastery of engineering and expertise in the design and production of rolling stock for new transportation systems makes MHI one of the few system integrators in the world capable of undertaking such projects, and the Company has earned a solid reputation for its systems.

Macau Light Rapid Transit



Major Urban Transportation Projects Planned in Key Markets

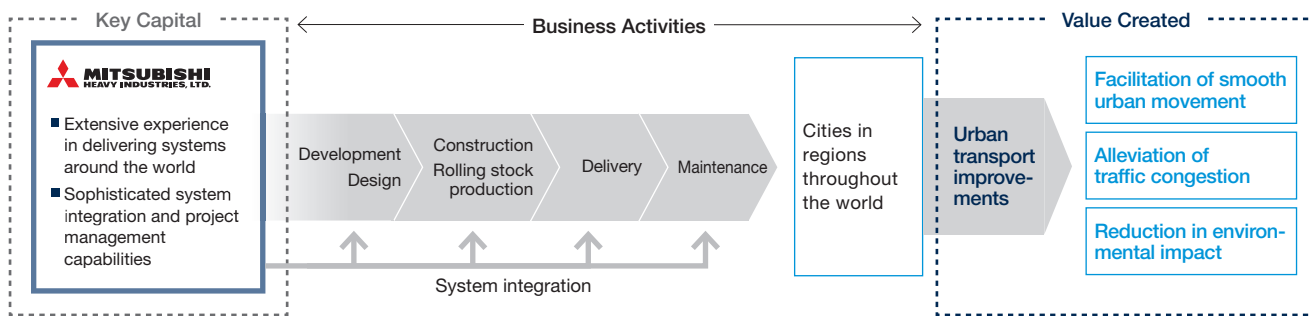
Middle East

Qatar: Doha
Saudi Arabia: Jeddah, Medina, Dammam
Kuwait
Abu Dhabi
Egypt: Cairo

United States

Orlando International Airport AGT
Tampa International Airport AGT





Strategy

- Benefit from the synergies of transitioning to the Business Domain Structure, and take advantage of comprehensive capabilities
- Accelerate global development by establishing business bases at four locations throughout the world
- Expand business that utilizes the MIHARA Test Center

Provide new transportation systems that are safe and offer peace of mind, contributing to improvements in urban transportation in locations around the world

In Commercial Aviation & Transportation Systems, we strive to generate and expand business by combining and taking advantage of synergies among the domain's technologies, products, human resources and other areas. Our strengths in the transportation systems business lie in our expertise as a system integrator. Moving ahead, we will combine and strengthen the system integration expertise, methodologies, and personnel we have cultivated through various products in this domain involving large-scale, complex systems to serve the rapidly expanding transportation systems business. As one example of product synergies, we are proposing total package solutions for certain cities in Southeast Asia using MRJ to expand air routes and that include airport infrastructure and transportation systems.

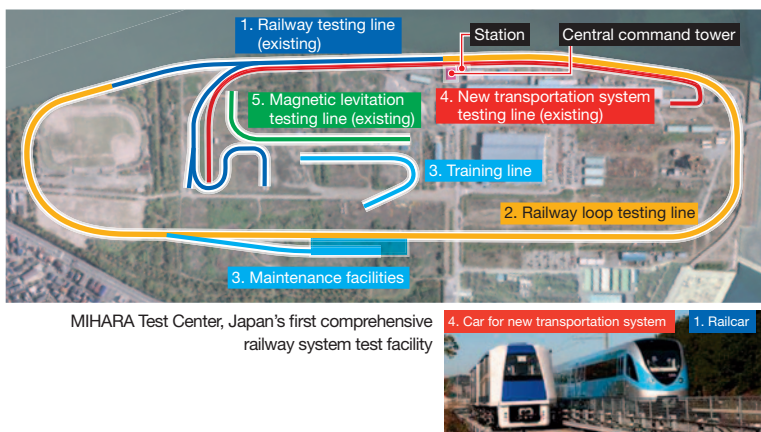
To strengthen our global development in the transportation systems business, by 2016 we plan to establish operating bases in the United States, Dubai, Brazil, and Singapore. We will station expert internal and outside personnel in each region and strive to develop close and ongoing communications and alliances with local government bodies, customers, and regional partners. These bases will also handle maintenance services, serving as a bridgehead for reinforcing our service business.

Another key to expanding the transportation systems business is the testing and verification of rolling stock, components, and communications. The MIHARA Test Center,* located at the Wadaoki Plant of our Mihara Machinery Works, will open in autumn of 2014, making

it possible to test rolling stock during actual operation. This capability will enable us to augment safety, shorten verification periods, and accelerate development. The facility will also allow us to provide hands-on training and education for overseas personnel involved in rail operations. We expect the center to serve as a powerful tool for generating export orders.

Going forward, in addition to new routes MHI will strive to expand orders for construction work to renovate and increase transportation capacity on existing routes. By providing new transportation systems that are safe and offer peace of mind, we will contribute to improvements in urban transportation in locations throughout the world and endeavor to expand our operations.

* MIHARA is an acronym for Multipurpose Integrated Highly Advanced Railway Applications. The center has a 3.2-kilometer-long loop track and is the first facility in Japan capable of testing integrated transportation systems.



VOICE

Yasuhiro Nakata
Chief Executive Officer,
Japan Transportation
Planning Association



High Expectations for Overseas Development Leveraging Sophisticated System Integration Capabilities

New transportation systems are being developed as modes of transport that make cities more convenient. Such systems already play an important role as a core means of public transportation in Japan. Our association is working to promote the export of new transportation systems developed in Japan to serve in intraurban transport in other countries. We believe these systems will be particularly effective in

alleviating the traffic congestion and increasingly serious environmental degradation that major Asian and African countries are experiencing. We have high hopes for joint overseas development with MHI, which is a member of our association, based on its highly rated system integration capabilities for the rolling stock technology and overseas projects it has delivered to date.