We will provide high value-added products and services through unique motion control technology.

The Nabtesco Group continues to achieve profitable growth with a portfolio of multiple mutually complementary businesses in different industries.

Business Features by Segment

Business segment	Characteristics	Subsegment	Outline
Component Solutions (CMP)	Significant impact of changes in production/sales volume on profitability	 Precision reduction gears Hydraulic equipment 	In the Component Solutions Segment, which comprises the precision reduction gear business and the (OEM) production. These businesses provide social value by contributing to automation, labor saving Infrastructure." Compared with other businesses, the profitability of these two businesses can be easi generated in the segment through the joint procurement of materials and flexible use of core product
Transport Solutions (TRS)		 Railroad vehicle equipment Commercial vehicle equipment Others Marine vessel equipment 	The Transport Solutions Segment, which is composed of the railroad vehicle equipment business, aircr equipment business, contributes to higher safety and greater comfort in the domain of "Transportatio can share MRO bases and know-how to generate synergy effects among the businesses.
Accessibility Solutions (ACB)	After-sales services (MRO) that mitigate impacts from changes in OEM production volume	Automatic doors	The Accessibility Solutions Segment, in which we conduct the automatic door business including the p public spaces and to the creation of a barrier-free society in the domain of "Daily lives and Welfare." expand the sales and service network through M&A and enhance the value chain (manufacture, sales marketing processes to generate more profit.
Manufacturing Solutions (MFR)		 Packaging machines Others 	In the Manufacturing Solutions Segment, we mainly operate the packaging machine business, which daily necessities.

Financial highlights by segment

Business segment	Resu	Its and plans	Financial results for FY2022/12	
Component Solutions (CMP)	 Net sales (¥ Billion) Precision reduction gears Hydraulic equipment 138.1 140.6 154.8 156.5 77.5 89.7 106.3 60.6 51.0 48.5 2021/12 2022/12 2023/12 (Plan) 	 Operating income (¥ Billion) CMP → Operating income margin 16.6% 22.9 11.3% 12.7% 28.5 28.5 2021/12 2022/12 2023/12 2023/12 2024/12 (Reference value) 	 Net sales: Precision reduction gears Brisk demand continued for precision reduction gears to be used in industrial robots thanks to the promotion of EV-related capital investment in the automotive industry. Hydraulic equipment Demand continued to be favorable in Europe, the US and Southeast Asia but dropped sharply in the Chinese market. Operating income: For precision reduction gears, we worked to offset the rises in material and personnel costs by raising our prices, but the effect was limited. For hydraulic equipment, demand from Chinese construction machinery manufacturers dropped sharply, causing sales and profit to fall. As a result, we posted a year-on-year decrease in profit in the segment. 	
Transport Solutions (TRS)	 Net sales (¥ Billion) Railroad vehicle equipment Commercial vehicle equipment Others 67.7 71.0 25.5 13.2 12.1 12.6 13.1 5.4 2021/12 2022/12 2023/12 	 Operating income (¥ Billion) TRS Operating income margin 9.5% 9.8% 10.3% 5.6 6.7 7.6 9.5 2021/12 2022/12 2023/12 2023/12 2024/12 (Plan) 2024/12 (Reference value) 	Net sales: Railroad vehicle equipment Sales of MRO services were favorable, but demand for equipment to be used in new vehicles was stagnant both in Japan and abroad. Aircraft equipment The delayed delivery of goods procured from overseas affected our business with the Japanese Ministry of Defense, but demand recovered for our products used in civil aircraft. Commercial vehicle equipment Demand expanded in Southeast Asia, although the decreased production at customers had an adverse impact on the business in the domestic market. Marine vessel equipment Demand continued to be brisk in the shipbuilding and maritime shipping industries. Operating income: We posted a year-on-year increase in profit, driven by the growth of the MRO services in each of the businesses as well as due to the cost reduction effort made for higher profitability in the face of the COVID-19.	
Accessibility Solutions (ACB)	 Net sales (¥ Billion) Automatic doors 75.1 78.6 85.3 82.5 2021/12 2022/12 2023/12 2023/12 2024/12 (Reference value) 	 Operating income (¥ Billion) ACB → Operating income margin 10.2% 7.6 3.6% 7.5 2021/12 2022/12 2023/12 2024/12 (Reference value) 	 Net sales: Automatic doors Sales increased thanks to the effect of the weaker yen outside Japan (gain of ¥4.8 billion), although the domestic construction industry was in a lull period and a shortage of electronic components had an impact on the business. Operating income: We posted a decrease in profit due to constraints imposed on our ability to receive orders in Japan and abroad because of a shortage of electronic components, a decrease in demand for MRO services and the delayed offsetting of rising costs by increasing our own prices. As other factors causing the decrease, we faced an unexpected cost increase in an overseas platform door project and recalculated the profit following the changes made to the percent of completion method. 	
Manufacturing Solutions (MFR)	 Net sales (¥ Billion) Packaging machines Others 29.0 18.8 16.6 2021/12 2022/12 20	 Operating income (¥ Billion) MFR → Operating income margin 14.5% 2.7 2.8 2.4 2.4	Net sales: Packaging machines Continued impact of the shortage of electronic components on product and MRO sales Operating income: In the packaging machine business, profit did not increase as planned and instead decreased due to falling sales, rising component and material prices caused by a shortage of electronic components and a drop in the growth rate of MRO services.	

the hydraulic equipment business, we focus on Original Equipment Manufacturer ing and infrastructure improvement mainly in the domain of "Manufacturing and easily influenced by changes in market demand, while great synergy effects can be luction staff.

aircraft equipment business, commercial vehicle equipment business and marine vessel ation of people and goods." We provide the MRO services in all of the businesses and

he platform door business, contributes to higher safety and greater comfort in " In the automatic door business, we have adopted the following business model: ales, installation, maintenance and aftersales service) to integrate the production and

ich contributes to food safety and labor saving at production facilities for food and for

Outlook for FY2023/12

Net sales:

• For hydraulic equipment, sales will decrease due to continued stagnant demand in the Chinese market and the intensification of competition. For precision reduction gears, demand will continue to be brisk thanks to the promotion of EV-related capital investment and we will record an increase in sales.

Operating income:

- Despite a decrease in sales in the hydraulic equipment business, we will be able to post an increase in profit in this segment thanks to the increased production of precision reduction gears and steady offsetting of cost increases by raising our own prices.
- Medium-term priority measures:
 Precision reduction gears: Start of operation at the Hamamatsu Plant and the advanced
- Hydraulic equipment: Sales promotion in Western and emerging markets and product development to meet the needs for electrification and automation

Net sales:

 For railroad vehicle equipment, we will post a decrease in sales as customers will continue to restrain their investment in new vehicles. However, following the recovery of passenger demand thanks to the mitigation of the impacts of the COVID-19, we will post increases in sales in other businesses.

Operating income:

- We will post an increase in profit thanks to increased sales of aircraft and marine vessel equipment and to the expanded sales of MRO services.
- Medium-term priority measures: Railroad vehicle equipment: Pioneering of the Southeast Asian market and development of technologies for electrification
- Aircraft equipment: Participation in an international joint development program and promotion
- of cooperation in a next-generation aircraft development project implemented in the civil sector Commercial vehicle equipment: Development of technologies for electrified products and search for new customers
- Marine vessel equipment: Development of automatic navigation and remote control systems and technologies to foster decarbonization

Net sales:

- Sales will increase due to increased demand for automatic doors for buildings driven by an increase in the number of domestic urban development projects as well as to the weaker yen, sales promotion for MRO services following the resolution of the electronic components shortage and an increase in demand in the domestic platform screen door market.
- Profit will increase driven by the increased domestic sales of automatic doors for buildings, higher operating income margin gained through the sales promotion of MRO services following the resolution of the electronic components shortage and by the steady offsetting of rising costs by raising our own prices. Medium-term priority measures:
- Automated production to meet expanding demand and the review of the pre-installation process for higher efficiency
- Creation of a DX-based business model in the automatic door business

Net sales:

 Sales will increase due to the expansion of demand driven by needs for automation and labor-saving measures, recovery of orders received thanks to the mitigation of the electronic components shortage and an increase in demand for MRO services.

- Operating income: Profit will also increase driven by the expansion of sales following the resolution of the electronic components shortage, steady offsetting of rising costs by raising our own prices and expanded sales of MRO services.
- Medium-term priority measures: Pioneering of overseas markets with a focus on Southeast Asia
- Development of packaging machines that support the use of new packaging materials needed for environmental conserv
- Sales promotion for high-value-added machines equipped with an inspection function



Precision Reduction Gear Business

Precision Equipment Company Contributing to the automation of manufacturing processes through the advancement of industrial robots

Outline of the Precision Reduction Gear Business

In 1986, Nabtesco launched the precision reduction gear business by applying the technology developed in its hydraulic equipment business. By developing innovative precision reduction gears that helped industrial robot manufacturers to solve their problems related to vibration and fragility, we built close relationships with the industrial robot manufacturers and other customers. In the global market for precision reduction gears used in the joints of medium- and large-sized industrial robots, we now boast a share of nearly 60%.

Product Features

- Nabtesco's precision reduction gears are highly rigid, precise and durable, and are therefore used mainly in medium- to large-sized robots with heavy load capacity.
- As our products are compact, they contribute to reducing the size and weight of robots.
- They help boost the controllability of robots based on our proprietary mechanism designed to reduce vibrations and increase behavioral precision.
- We mass-produce a medium-level variety of products that are customized to meet customers' needs.
- It takes us about four weeks on average from the receipt of an order to the delivery of the product.

Social Value Provided by Products

- Industrial robots contribute to reducing dangerous manual labor, solving the issue of labor shortages and stabilizing quality and increasing productivity at factories.
- Nabtesco's precision reduction gears help increase the safety and efficiency of industrial robots.

Precision Reduction Gear RV™-Z

Business Overview (Fiscal year ended December 31, 2022)	
Market share (Estimate by Nabtesco)	Precision reduction gears for the joints of medium- to large-sized industrial robots: Approx. 60% global market share
Production bases	Tsu City, Mie Prefecture, Japan/Jiangsu Prefecture, China/Hamamatsu City, Shizuoka Prefecture, Japan (To be constructed)
Major customers	Industrial robots: FANUC CORPORATION, YASKAWA Electric, Kawasaki Heavy Industries, KUKA Roboter (Germany), ABB Robotics (Sweden) Machine tools: YAMAZAKI MAZAK, Okuma, DMG Mori
Sales by geographic segment (Full-year results) ^{*1}	Sales to Japanese robot manufacturers: Approx. 65%; Sales to overseas robot manufacturers: Approx. 35% ^{*2} *1 Sales to industrial robot manufacturers *2 Including sales to the overseas plants of Japanese robot manufacturers



Providing our precision reduction gear, we will contribute to automation of manufacturing processes and to solving labor shortages due to the forthcoming aging society. Moreover, we will continue to provide our products that contribute to stabilizing customers' product quality and the automation of logistic operations.

President, Precision Equipment Company Toshiya Fujiwara

Strengths	
Close relationships with major customers	

- Capability to build a highly efficient automated production line • High-performance and high-quality
- products Capability to develop technologies to
- meet customers' needs Wide product lineup for general
- industry

Opportunities

- Growth in demand from industrial robot manufacturers and from
- general industry due to the needs for labor saving and automation
- Structural increase in demand for industrial robots in China

Weaknesses

High level of dependence on demand for industrial robots

Threats

Large fluctuations in demand due to changes made by end users to their equipment investment policies Inability to maintain technological lead over existing competitors as well as manufacturers in emerging markets

Competitive Advantage Products and Technology

- Precision Reduction Gear RV[™] products are light and compact but provide high durability and high positioning accuracy.
- We are selling precision reduction gears and servomotors in a package for use by general industry. We are thus expanding our product lineup to meet various customer needs.

Production

• We will foster leading-edge automation by building a highly efficient automated production line that cannot be imitated by competitors.

Business Environment

According to the International Federation of Robotics (IFR), global demand for industrial robots will continue to expand on a medium- to long-term basis because the needs for digital and automated production equipment will continue to increase and the effective use of industrial robots is expected to contribute to carbon neutrality despite the adverse short-term global economic impacts of sharply rising energy and material costs combined with shortages of electronic components. Accordingly, we expect the market to grow at an annual compound average growth rate (CAGR) of around 10% to 15%.

Opportunities and Risks

- Driven by expanded demand for EVs and HVs, production lines will be modified and newly installed by the automotive industry, which is a major customer of industrial robots.
- Also, in other industries, labor-saving and automation needs are expected to dramatically increase, leading to the introduction of more robots and automation equipment.
- We regard the intensification of competition with existing competitors and the potential for equalizing gains by manufacturers in emerging markets as a potential risk.

For the Achievement of the Medium-Term Management Plan

- By advancing the existing technologies to reduce the weight and size of precision reduction gears and fostering R&D for the use of optimal materials, we will expand our lineup of highly competitive products.
- Going forward, we will also focus on expanding the product lineup for general industry, for which there is sufficient room for further expansion.
- In order to meet automation needs, which will further expand, we will build a new plant in Hamamatsu City in addition to our existing plants in Tsu City in Japan and Changzhou in China, with a view to nearly doubling our production capacity to two million units per year by 2026.

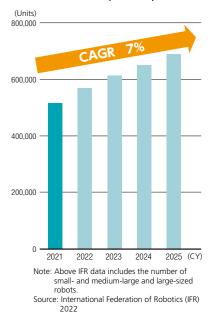
Innovation in Action



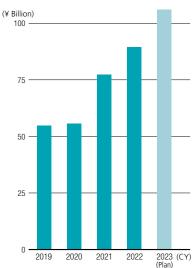
We aim to make the new plant in Hamamatsu City, which will start operation in October 2023, a smart facility with an automation rate as high as 90%. We will do this by introducing industrial robots for processing and assembly tasks as well as a state-of-the-art logistics system. Through such automation, we will increase the plant's productivity and ability to respond to changes in demand, which will in turn increase its profitability.



Worldwide Annual Shipment of Industrial Robots (Forecast)



• Net Sales in the Precision Reduction Gear Business



Hydraulic Equipment Business

Power Control Company

Providing equipment that is essential for the establishment of infrastructure

Outline of the Hydraulic Equipment Business

Both Teijin Seiki and NABCO, which were integrated into Nabtesco, had already been conducting the hydraulic equipment business before the integration. In our long history of the business, which dates back to 1930, we have built up the capacity to develop high-quality, high-value-added products. In addition to expanding our product lineup, we will work on the further systematization of our products and foster research into electric control technologies to pursue innovation and meet the needs of our customers even before they identify them.

Product Features

- Our traveling units are compact but highly efficient and produce large amounts of power. They provide energy-saving performance and have the durability and reliability required for use in harsh environments.
- We have a product lineup that includes traveling units, swing units, control valves, pumps and other control units for construction machines.
- We produce our products in regions where there is demand for them.
- It takes us about a week on average from the receipt of an order to the delivery of the product.

Social Value Provided by Products

- We are building the foundation for further industrial development and supporting daily life by providing products to be used in construction machinery that plays an essential role in the creation of physical infrastructure.
- We are also contributing to the development of local industries by manufacturing our products in regions where there is demand for them.

Contr	ol Valve
Swing Unit	Traveling Unit

Business Overview (Fiscal year ended December 31, 2022)	
Market share (Estimate by Nabtesco)	Traveling units for hydraulic excavators: Approx. 25% global market share
Production bases	Tarui-cho, Fuwa-gun, Gifu Prefecture, Japan/Kobe City, Hyogo Prefecture, Japan/ Shanghai, China/Chonburi, Thailand
Major customers	KOMATSU, Sumitomo Construction Machinery, Kobelco Construction Machinery, Sany Heavy Industry (China), XCMG Construction Machinery (China), LiuGong (China)
Sales by geographic segment (Full-year results)	Japan: Approx. 40%, China: Approx. 40%, Others: Approx. 20% * In terms of the final destinations of excavators



We will continue to supply highly efficient equipment for construction machinery used for infrastructure development, while enhancing the lineup of our system products. We will also promote R&D for ICT and electrification in the construction machinery market and innovate to meet our customers' needs, thereby contributing to social and industrial developments.

President, Power Control Company Kivoshi Ando

Strengths

- Highly efficient and durable products Wide product lineup
- Global production system to respond flexibly to changes in demand

Opportunities

- Expanded use of ICT and promotion of electrification by the construction machinery industry
- Demand for infrastructure driven by the boost of economic stimulus packages

Weaknesses

Lineup of systematized products

- Change in demand for construction machinerv
- Rise of local competitors in emerging markets

Competitive Advantage Products and Technology

• We are capable of developing high-quality and high-value-added products that meet our customers' needs.

Production

- The Tarui Plant, which is the mother plant for our hydraulic equipment, has a range of advanced machining technologies and boasts high productivity through the automation of its processing and assembly work and logistics reforms.
- Based on the principle of local production for local consumption, we can further increase our production efficiency.

Business Environment

In Southeast Asia, business has remained favorable, driven by demand for construction machinery in the mining industry. The Chinese market, however, experienced a reactionary decline in demand following the application of exhaust gas regulations to the construction machinery industry alongside a stagnating real estate market. Moreover, the emergence of local hydraulic equipment manufacturers and in-house production by construction machinery manufacturers have caused the competition to intensify.

From a medium- to long-term viewpoint, we can begin to see new trends that will help value creation in the construction machinery industry, such as the spread of ICT, progress of electrification and the need to comply with exhaust gas regulations.

Opportunities and Risks

- Helping the construction machinery industry to meet the needs for the greater use of ICT and electrification will provide us with tremendous business opportunities
- A rapid change in demand might cause an excessive inventory of construction machinery, which will in turn cause stagnant demand.
- We regard the market entry of highly cost-competitive manufacturers from emerging market countries to be a risk.

For the Achievement of the Medium-Term Management Plan

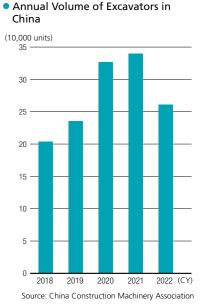
- We will develop products that contribute to fostering ICT and electrification for construction machinery.
- We will implement measures to promote sales of our products for new applications other than excavator use and further boost our market share by strategically releasing new products.
- We will enhance our ability to make proposals to customers by focusing more on system products.
- By making investments to transform the Tarui Plant into a smart plant, we will further increase its productivity and reduce its environmental impacts.
- We will enter Western markets on a full scale to find new customers among local construction machinery manufacturers and to provide Japanese construction machinery manufacturers operating in the respective countries with appropriate services and support. Through these measures we will promote sales and enhance our relationships with local customers in regions other than China.



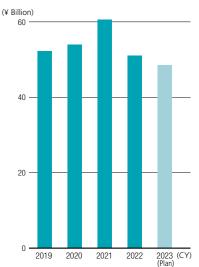
We are refurbishing the aged Tarui Plant to transform it into a nextgeneration facility equipped with highly efficient systems. We will increase the mother plant's productivity 1.5-fold through automation and will adopt highly energy-efficient building design and introduce energy-saving airconditioning and power generation equipment for even more environmentfriendly manufacturing. We aim to make the plant carbon-free in the future.

SDGs related to our business





Net Sales in the Hydraulic Equipment Business



Innovation in Action

Railroad Vehicle Equipment Business

Railroad Products Company

Contributing to the safe and punctual operation of railroad transportation systems

Outline of the Railroad Vehicle Equipment Business

Since receiving our first order for air brake equipment from the former Japanese Ministry of Railways in 1925, we have long nurtured the ability to develop technologies to provide customers with products that meet their individual needs as well as the high reliability and durability requirements set for railroad vehicle equipment, which supports transportation infrastructure. By capitalizing on this ability, we are contributing to railroad transportation within and outside Japan.

Product Features

- Our brake control systems, door operators and others are adopted for railroad vehicles both in Japan and abroad.
- Our products contribute to the weight reduction and higher energy efficiency of railroad vehicles in addition to increasing their safety.
- The user tends to place an order for MRO services about four years after we deliver a product.
- It takes us about four to six months on average from the receipt of an order to the delivery of the product.

Social Value Provided by Products

- By providing highly safe and reliable products, we are contributing to the safe and punctual operation of railroad transportation systems.
- Optimization of railroad transportation helps reduce traffic congestion as well as CO₂ emissions from automobiles.

	Door Operating System for Railroad Vehicles
F	PIR
Brake Operating Units for Railroad Vehicles	

Business Overview (Fiscal year ended December 31, 2022)	
Market share (Estimate by Nabtesco)	Brake systems: Approx. 50% domestic market share Door opening systems: Approx. 60% domestic market share
Production bases	Kobe City, Hyogo Prefecture, Japan/Jiangsu Prefecture, China/Piedmont, Italy
Major customers	Japan Railways (JR) companies, private railway companies, bullet train and subway projects in China
Sales by geographic segment (Full-year results)	Japan: Approx. 65%, Overseas: Approx. 35%



We will supply important and safety components for railroad vehicles to contribute to the safety, security and comfort of railroad transportation and help the railroad industry become more environment-friendly to deliver solutions for social issues.

President, Railroad Products Company Michihito Suzuki

Strengths Ability to customize products to meet the needs of customers

- Organizational approach to promote sales of MRO services
- Three production footprints for "local
- Europe
- Expansion of an urban traffic network (including subways) in China
- Stable growth of the European railroad vehicle market
- Increase in the number of new
- railway projects in emerging markets

Weaknesses

- Customer foundation in Europe and
- Asia

Competition with local manufacturers in China

Competitive Advantage

Products and Technology

 We have nurtured the ability to develop highly reliable and durable products to meet the needs of our customers.

Services

• By using our system to check the maintenance cycle of the products that we have delivered, we will provide MRO services in an appropriate manner.

Production

• We are working to conduct optimal development, procurement, production and sales activities under the product system built across three regions, namely, Japan, China and Europe.

Business Environment

Demand for new railroad vehicles, which comprise part of the country's social infrastructure, will remain stable in the Japanese market on a medium- to long-term basis, despite a tendency among customers to cut investment. For Chinese subways, demand will continue to expand for the improvement of urban transportation and solving the issue of environmental pollution.

In Europe, the railroad vehicle market will continue to grow steadily and in emerging markets, including those in Southeast Asia, demand is likewise expected to expand.

Opportunities and Risks

- We can find more business opportunities in overseas markets by completing the acquisition of certification for European standards, which are globally adopted.
- On a short-term basis, we might face stagnant sales due to restrictions on investments caused by the delayed recovery of passenger demand.
- We also regard competition with local manufacturers in China as a risk factor.

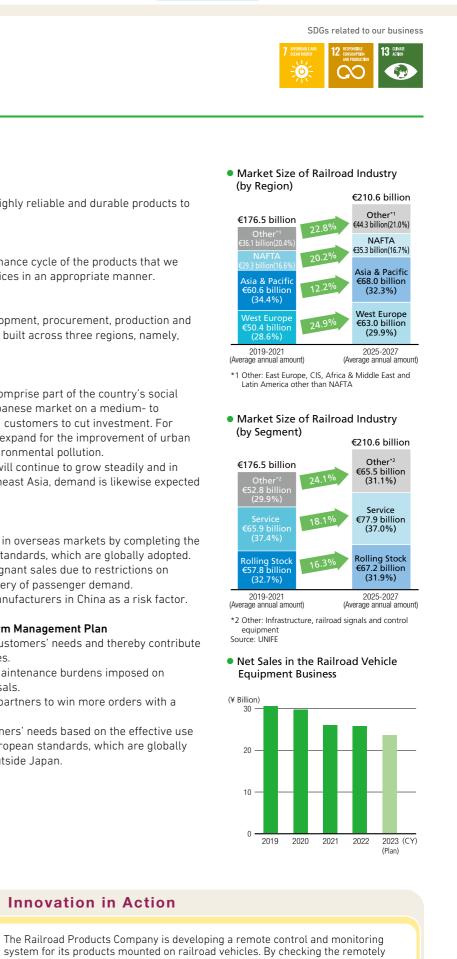
For the Achievement of the Medium-Term Management Plan

- We will develop products that meet our customers' needs and thereby contribute to the next generation of standard vehicles.
- We will make proposals to help reduce maintenance burdens imposed on customers, including MRO-related proposals.
- For subways in China, we will work with partners to win more orders with a strategic focus on certain cities.
- We will make proposals that meet customers' needs based on the effective use of our products developed in line with European standards, which are globally adopted, thereby winning more orders outside Japan.



Innovation in Action





Dialogues with

Society

Business Market

Data Section

obtained product information against accumulated and pre-existing data, the system will detect any product abnormalities to prevent failures, reducing the need for daily inspections. With this system, we will contribute to higher

maintenance efficiency for railroad vehicles and to stable railroad transportation.



Aircraft Equipment Business

Aerospace Company

Contributing to the safe operation of aircraft

Outline of the Aircraft Equipment Business

Having launched the aircraft equipment business during the war, we have long been developing technologies and know-how to expand our product lineup.

We are offering highly reliable aircraft components and attentive after-sale service to major aircraft manufacturers and airlines within and outside Japan, thereby contributing to the safe operation of aircraft.

Product Features

- Flight control actuation systems, which represent our core product, control the movements of aircraft in three dimensions. Receiving electric signals from the cockpit, the system tilts the aircraft up and down and left and right and also activates the brake system through hydraulic control.
- The user tends to place an order for our MRO services about five years after we deliver a product.
- It takes us about one year on average from the receipt of an order to the delivery of the product for civil aircraft and up to around two years for defense aircraft.

Social Value Provided by Products

- Nabtesco contributes to the safe operation of aircraft and the safe and comfortable travel by large numbers of people by supplying highly safe and reliable aircraft equipment
- We provide highly reliable products for use by the Japanese Ministry of Defense and thereby contribute to the safe and prompt operation of their aircraft for purposes such as emergency rescues.

Business Overview (Fiscal year ended December 31, 2022)		
Market share (Estimate by Nabtesco)	Flight control actuation system: Approx.100% market share for domestically- produced aircrafts	
Production bases	Tarui-cho, Fuwa-gun, Gifu Prefecture, Japan/State of Washington, the United States	
Major customers	The Boeing Company (U.S.), Kawasaki Heavy Industries, Mitsubishi Heavy Industries, IHI, SUBARU, the Japanese Ministry of Defense, airline companies and others	
Sales by geographic segment (Full-year results)	Japan: Approx. 45%, Overseas: Approx. 55%	



We will contribute to society by expanding the production of high-reliability products that support the safety of aircraft in the long-term growth market of civil aviation, while working to reduce our own environmental impacts.

President, Aerospace Company Norimasa Takagi

(m)
Flight Control Actuation System

v (Fiscal year ended December 31, 2022)	Strengths	
light control actuation system: Approx.100% market share for domestically- roduced aircrafts	 Know-how and technologies accumulated over 40 years for aircraft equipment business 	
arui-cho, Fuwa-gun, Gifu Prefecture, Japan/State of Washington, the United tates	 Close relationships with major customers and support systems Highly environmentally friendly and 	
he Boeing Company (U.S.), Kawasaki Heavy Industries, Mitsubishi Heavy Industries, IHI, SUBARU, the Japanese Ministry of Defense, airline companies and	efficient production system	
thers	Opportunities	

- Recovery of passenger demand following the lifting of restrictions on people's movement
- Increase in demand due to increased budget for national defense

Weaknesses

Less experience for the electrification of aircraft

Restrictions on people's movement due to a pandemic

Competitive Advantage Products and Technology

defense and civil sectors.

• We have long built up the capacity to develop aircraft technologies in both the

Services

• We have our production and MRO bases near the sites of our major customers so that we can offer sufficient support whenever they need it.

Production

• At the Gifu Plant, which is our mother plant for aircraft equipment, we have established a highly environmentally friendly and efficient production system that allows us to excel in QCDS.

Business Environment

Demand for civil aircraft is recovering as passenger demand increases following the easing of regulations imposed due to COVID-19. From 2023 to 2024, RPK* is also expected to recover to exceed the 2019 level.

In the defense sector, demand will remain almost flat on a medium- to longterm basis, the defense equipment budget has been increased and demand is on a recovery trend.

* RPK stands for revenue passenger kilometers.

Opportunities and Risks

- Demand for aircraft might be affected by the slowdown in global economic growth as well as by geopolitical risks including shifting political landscapes.
- Demand for aircraft is expected to expand on a long-term basis, which will help us win new orders for our products and increase our business opportunities.

For the Achievement of the Medium-Term Management Plan

- In the market recovery phase, we will identify changes in our customers' needs to offer them products and services that meet such needs.
- As a unique OEM manufacturer, we will pursue value-added services and expand the MRO business.
- We will proactively promote technological development for future aircraft and solidify our growth foundation.
- We will continue to improve our productivity and rebuild our supply chain to raise our QCDS level in anticipation of the recovery and expansion of the production rate.

Innovation in Action



Like other industries, the aviation industry deems it essential to implement measures for carbon neutrality by 2050. In response, the Aerospace Company proactively engages in technological exchange with The Boeing Company, one of its major customers, to foster research into the elemental technologies required for the next generation of environment-friendly aircraft, to be introduced in the 2030s. We are also focusing on promoting innovation. Specifically, we are striving to have our proprietary technologies adopted for advanced air mobility, which is anticipated to be a future mode of transportation, and for rockets developed by the private sector. We will thereby contribute to providing new lifestyle options for the enrichment of people's lives.

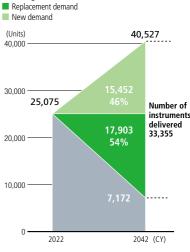
trengths



Existing instruments

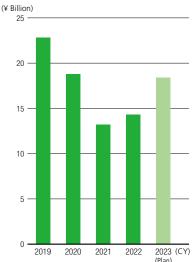


Forecast for Jetliner Demand



* Based on the pre-COVID-19 business environment Source: Japan Aircraft Development Corporation

• Net Sales in the Aircraft Equipment Business





Commercial Vehicle Equipment Business

Nabtesco Automotive Corporation Reducing environmental impacts through electrification

Outline of the Commercial Vehicle Equipment Business

In 1937, we became the first company in Japan to commercialize air brake products, which were adopted for most of the heavy-duty commercial vehicles manufactured in Japan. In the commercial vehicle market in which electrification is currently becoming mainstream, we will continue to develop and offer products that meet our customers' requirements, thereby providing them with sustainable value going forward.

Product Features

- Our air brake products have excellent operability and are designed to be light enough to contribute to the fuel efficiency of vehicles.
- We have also succeeded in developing an electric compressor mainly for electric buses.
- The user tends to place an order for our MRO services about two years after we deliver a product.
- It takes us about a week on average from the receipt of an order to the delivery of the product.

Social Value Provided by Products

- Our wedge brake chamber system helps increase the fuel efficiency of vehicles, which in turn contributes to reducing environmental impacts.
- We also contribute to the safety of passengers and drivers of commercial vehicles, for example, by helping increase the safety and reliability of the air control systems of the vehicles by supplying air dryers and also by the release of an EDSS* into the market.

* EDSS stands for emergency driving stop system, which is used when the driver suddenly becomes unable to drive the car due to illness and for other reasons. After being switched on by the driver or others in the vehicle, the system will function to safely reduce the speed of the vehicle and bring it to a gradual halt.

Business Overview (Fiscal year ended December 31, 2022)

Wedge brake chambers for commercial vehicles: Approx. 75% domestic market share Air dryers for commercial vehicles: Approx. 70% domestic market share
Murayama City, Yamagata Prefecture, Japan/Samutprakarn, Thailand/Haryana, India
Isuzu Motors, Hino Motors, Mitsubishi Fuso Truck and Bus, UD Trucks
Japan: Approx. 95%, Overseas: Approx. 5%



For the decarbonization of society, we will press forward with the development of products that contribute to the electrification of commercial vehicles, thereby contributing to the solutions of social challenges.

President, Nabtesco Automotive Corporation Ataru Inoue



Strengths

- Know-how and technologies accumulated over 80 years for air brake systems
- Cost reduction at our production bases in Thailand and India Highly precise and efficient
- production system established by introducing fully automated

equipment

Opportunities

- Expansion of market opportunities driven by the electrification trend
- Increasing demand for advanced safety technologies for great changes, as represented by CASE*
- * CASE: Connected, Autonomous, Shared/Service,

Weaknesses

Ability to propose systematized products

Competition in the market with leading European manufacturers

Competitive Advantage Products and Technology

• The technology to separate the oil contained in compressed air gives us an advantage

Production

- With a view to quickly responding to the needs of automakers, who engage in small lot production for a range of products, all of our equipment is designed and made in-house by specialists engaged in the various manufacturing processes.
- Moreover, we have built a quality assurance system in line with global standards and introduced fully automated equipment for highly precise and efficient production, thereby making "high quality" and "cost reduction" compatible. • We are also strengthening our cost competitiveness while meeting the local quality standards in each region under our global production system.

Business Environment

The impact of production cuts by customers will be mitigated as semiconductors become more available. Also, demand will continue to be brisk in Southeast Asia. On the other hand, the automotive industry is reaching a turning point with the trends for CASE and electrification. Moreover, there are a range of issues to be addressed, including the need to reduce CO₂ emissions and to create a safer automobile society. In Japan it is also necessary to deal with the shortage of drivers and other logistics problems. In response, we are expected to offer more value-added products and services.

Opportunities and Risks

- By responding to the trend for electrification promptly, we will be able to capture more growth opportunities in line with the expansion of the market. • If we fall behind our European competitors in meeting the challenges, including fostering decarbonization in transportation by truck, our market share may be
- negatively impacted.

For the Achievement of the Medium-Term Management Plan

- We will develop various products for electric vehicles, thereby providing customers with a broader product lineup to meet the market requirement.
- We will work to acquire next-generation technologies through open innovation and enhance our development ability.
- We will enhance our position in the Chinese market, which we have newly entered.
- We will strive for further automation and higher productivity at our plants to raise our QCDS level.



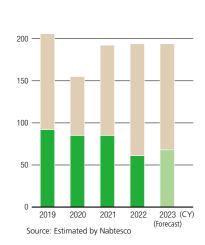
In response to the trend for electrification of automobiles and commercial vehicles, we pressed forward with our own R&D and succeeded in developing an electric compressor for electric buses. We are making particular efforts to promote sales of the compressor in the Chinese market, which has a high EV penetration rate. We will contribute to the decarbonization of society through the development and provision of electrified products, which will help boost the fuel efficiency of commercial vehicles.

SDGs related to our business

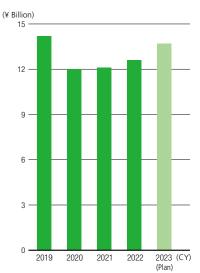


Production of Large Trucks and Buses

For use in Japan For export (1,000 units) 250



Net Sales in the Commercial Vehicle Equipment Business



Innovation in Action

Marine Vessel Equipment Business

Marine Control Systems Company Contributing to the safe operation of marine vessels and stable maritime transportation

Outline of the Marine Vessel Equipment Business

In 1963, we became the first company in Japan to develop a pneumatic remote control system for marine vessel engines to meet the standards set by the Classification Society of each country. Since then, we have developed products that meet the needs of customers in line with market trends, thereby broadening our product lineup. With MRO service bases stationed across the globe, we are contributing to safe and stable maritime transportation.

Product Features

- Our marine vessel engine remote control systems are equipped with an advanced, high-security networking function and a liquid crystal touch panel to provide excellent operability and scalability.
- Electronically controlled hydraulic valves used in electronically controlled engines contribute to higher fuel efficiency, higher operational efficiency, reduction of NOx emissions and others, thereby helping ensure compliance with environmental laws.
- We tend to receive an order for MRO services for a new ship about five years after its first navigation.
- It takes us about four months on average from the receipt of an order to the delivery of the product.

Social Value Provided by Products

• We supply highly safe, reliable and environment-friendly marine vessel equipment for use in marine vessels, which provide a means of transportation with low environmental impact per unit moved. Through such equipment, we contribute to reducing the environmental impact of ships and to their safe navigation as well as to safe and stable maritime transportation.

Main Engine Remote Control System (M-800- VII)
Electronically Controlled Hydraulic Valves

Business Overview (Fiscal year ended December 31, 2022)		
Market share (Estimate by Nabtesco)	2-stroke main engine control systems: Approx. 50% domestic market share, Approx. 40% global market share	
Production bases	Kobe City, Hyogo Prefecture, Japan/Shanghai, China/Busan, South Korea	
Major customers	Kawasaki Heavy Industries, Japan Engine Corporation, Makita, Hitachi Zosen, Mitsui E&S Holdings, Hyundai Heavy Industries (Korea), HSD Engine (Korea), HuDong Heavy Industry Machinery Manufacturing (China), MAN Energy Solutions (Denmark)	
Sales by geographic segment (Full-year results)	Japan: Approx. 55%, Overseas: Approx. 45%	



Piling up the technologies and expertise that we have already cultivated, we will work on technological reforms to contribute to the manufacturing of smart ships and decarbonization as well as to the sound development of the shipbuilding and marine vessel equipment industries.

President, Marine Control Systems Company Yukihiro Mizutani

Strengths

- Broad lineup of environment-friendly products
- Ability to make proposals on entire control systems
- Global production and service system Proposals on preventive maintenance

Opportunities

- Diversification of marine vessel equipment to meet environmental regulations'
- * Environmental regulations: There exist a range of regulations on the shipping industry for the identification and minimization of its environmental impact. When the existing regulations are enhanced or new regulations are issued, marine vessel equipment is updated to meet them.

Weaknesses

Cost competitiveness

Change in demand for new shipbuilding due to global economic fluctuations

Competitive Advantage Products and Technology

 We have the product development capability and product lineup to meet customer needs and keep up with market trends.

Services

- We have MRO service bases across the globe in order to be ready to provide MRO services 24 hours a day, 365 days a year.
- We can help customers diagnose the status of equipment we have supplied in a real-time manner, predict and detect failures, and reduce their maintenance lead time.

Production

• We have achieved local production for local consumption at our three bases in Japan, China and South Korea, thereby providing high QCDS performance.

Business Environment

In the global maritime industry, efforts to reduce GHG emissions and save labor are being pursued as a mega trend, which in turn is driving demand for technologies that help customers comply with environmental regulations as well as technologies for DX-based autonomous operation and status monitoring.

Opportunities and Risks

- We can grasp opportunities for growth by developing and releasing new products that help reduce GHG emissions and save labor.
- Our MRO business will get a boost if more customers undertake retrofitting or replace their equipment to ensure compliance with environmental regulations. • Both for our existing businesses and growth businesses, demand might
- decrease depending upon the global economic situation.

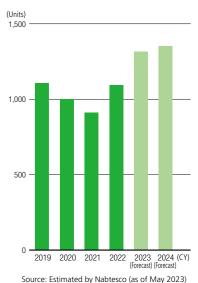
For the Achievement of the Medium-Term Management Plan

- We will expand our product and service lineups to secure revenues in the existing businesses.
- We will speed up open innovation and develop technologies for autonomous operation and status monitoring in cooperation with other companies.
- We will foster the development of hydrogen gas valves and other products that support the use of new types of fuel for decarbonization.
- We will expand the scope of our MRO services to include remote support, status monitoring and other DX-based services.

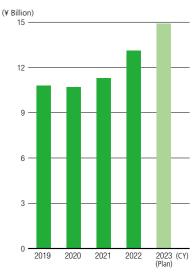




Global Production of 2–stroke Diesel **Engines for Marine Vessels**



• Net Sales in the Marine Vessel Equipment Business



Innovation in Action

Based on our technology for main engine remote control systems, we are participating in pilot programs for the practical use of autonomous navigation ships as part of our R&D efforts toward the integrated control of propulsion systems, which are becoming more complex and advanced. Moreover, we have used CVC to form a partnership with Greek company Deep Sea Technologies to jointly develop for sale its AI technology-based optimal navigation route selection and status monitoring solutions. We are thus pushing ahead with technological development to promote decarbonization and DX for ship navigation.



Automatic Door Business

Accessibility Innovations Company

Contributing to the solution of ESG issues through the provision of safety, comfort and a sense of security in daily lives

Outline of the Automatic Door Business

We provide a range of automatic doors, including automatic doors for buildings, barrier-free doors, super-large automatic doors for industrial use and platform doors. We have established our position as a top-level automatic door manufacturer serving customers in the world's major four markets (Japan, the US, Europe and China).

Product Features

- We have developed high-performance and highly energy-efficient automatic doors for buildings by adopting state-of-the art sensors and advanced door control technologies.
- We have a broad lineup of platform doors, including full height-type doors and movable doors. Our newly developed full-height flexible platform doors are compatible with various railroad vehicles regardless of their door positions, making it possible for the doors to be used at stations serviced by multiple train car models.

Social Value Provided by Products

- We contribute to the reduction of environmental impacts by providing energy efficient automatic doors that discern differences in the movements of pedestrians to avoid unnecessary opening or closing as well as barrier-free and contactless automatic doors.
- Our platform doors are adopted for railway lines in major cities around the world so as to provide safety, comfort and a sense of security to passengers while also contributing to the punctual operation of railroad transportation systems.



Business Overview (Fiscal year ended December 31, 2022)		
Market share (Estimate by Nabtesco)	Automatic doors for buildings: Approx. 55% domestic market share Platform screen doors: Approx. 95% domestic market share	
Production bases	Kobe City, Hyogo Prefecture, Japan/State of Wisconsin, the United States/Bern, Switzerland/Beijing, China	
Major customers	Automatic doors for buildings: Major general contractors, sash manufacturers, hospitals, banks, public institutions, etc. Platform doors: Japan Railways (JR) companies, subways in Japan, major railways, subways in major overseas cities, others	
Sales by geographic segment (Full-year results)	Japan: Approx. 55%, Overseas: Approx. 45%	



We are contributing to the resolution of social issues by offering energy-saving automatic doors that do not open unnecessarily as well as platform doors that incorporate principles of universal design. Going forward, we will develop sensors with a view to providing the users of our doors with an even greater sense of safety, comfort and security.

President, Accessibility Innovations Company Seiii Takahashi

Sales network that covers the world's four major automatic door markets

Strengths

- Wide lineup of high-quality automatic doors
- Sales installation and service networks in the major markets

Opportunities

- Stable growth of the automatic door market mainly in developed countries
- Installation of more platform screen doors in Japan driven by the railway station barrier-free fare system

Weaknesses

Branding in emerging market countries

Long-term tendency for the domestic market to shrink due to maturity Chronic shortage of human resources in the construction industry

Competitive Advantage Products and Technology

• We developed an automatic door ahead of other companies in Japan in 1956 and have continued to differentiate ourselves since with our high-level technological capabilities and abundant experience.

Services

 In Japan we have built up a network of more than 100 service bases to ensure that we can meet the needs of customers at all times, including needs for our products, installation work and MRO services.

Production

• We have built a system to supply our products in the following four major automatic door markets: Japan, North America, China and Europe (North America: NABCO Entrances, Inc.; China: NABCO AUTO DOOR (BEIJING) CO., LTD.; Europe: Gilgen Door Systems AG)

Business Environment

Demand for automatic doors for buildings will continue to be stable worldwide. In Japan, demand will increase due to urban redevelopment projects and in Western countries demand will remain stable. Meanwhile, in Southeast Asia the establishment of infrastructure will be further promoted. For platform doors, demand will expand across the world in line with an increase in the need to provide passengers with greater safety and more barrier-free facilities at stations.

Opportunities and Risks

- The value of contactless automatic doors has recently been getting a lot of attention due to the COVID-19, providing us with more sales opportunities.
- On a long-term basis, the Japanese market might shrink due to demographic aging and the declining birth rate. However, the global market will remain brisk.

For the Achievement of the Medium-Term Management Plan

- Receiving more orders with a focus on urban development projects in Japan In the domestic market, demand for automatic doors is expected to expand thanks to the implementation of urban development projects. We will boost our sales by seizing the opportunities provided by these projects.
- Enhancing our value chain outside Japan We will establish branches and support our distributors in overseas markets to enhance our local value chain, thereby expanding our share in each market.
- Developing new products and launching automatic door-related businesses By making effective use of IoT technology and enhancing our ties with various networks, we will establish new product systems and services to launch next generation businesses in the automatic door and peripheral markets.

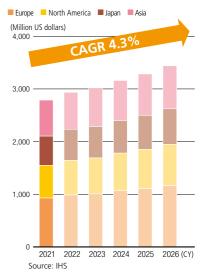


Innovation in Action

In 2024, we will undertake a full-scale launch of a new business in which we will make effective use of the glass part of our automatic doors as a space for digital signage to obtain ad revenues. (In a pilot program, automatic doors with space for digital signage are installed on the first floor of Building 17 at Waseda University.)



Automatic Door Markets (Forecast)



Net Sales in the Automatic Door Business

