

# DENSO CORPORATION

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Integrated  
Report



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DENSO is making efforts  
for accomplishing the globally shared SDGs.



**DENSO**  
Crafting the Core

Corporate Profile





Our mission is to contribute to a better world. We want to help power society's shift to green, safe and worry-free mobility. Everything we do is to advance us toward our Two Great Causes – Green and Peace of Mind.

To achieve our vision for Green, we aim to achieve net-zero CO<sub>2</sub> emissions and a carbon-neutral society by capturing CO<sub>2</sub>, both in our production facilities and with our products. For Peace of Mind, we aim to realize zero traffic fatalities. In both domains, we will achieve our ultimate goal of zero.

With global issues, such as environmental problems and resource shortages, becoming more serious, we seek to deliver value by contributing to the mobility field and a recycling-oriented society. We will strive to increase the value of mobility and beyond.

In the future, as vehicles become more advanced and connected to drivers and infrastructure, we must create new products and services quickly by combining diverse technologies. We will strengthen our ability to adapt to change, continue to create new value with our partners, and increase recycling for mobility and society as a whole.

President & CEO

A handwritten signature in black ink.



# DENSO at a Glance

A Quick Guide to DENSO

## Past

History to the present

### Management Foundation & Policy

Since our founding in 1949, we have built our foundation on "DENSO Quality First." We operate our business based on our long-term policy.

### R&D, Manufacturing

We strive to develop technologies with a vision of the future. We continue to improve our manufacturing capabilities to make the impossible possible.

### Global Deployment

We were quick to launch in various countries to meet the needs of customers. We operate both manufacturing plants and R&D centers all over the world.

1949



NIPPONDENSO CO., LTD., split from Toyota Motor Co., Ltd., and was established as a separate entity

1953



Started technical cooperation with Robert Bosch GmbH of Germany  
This agreement allowed us to expand our technical expertise using knowledge from outside the company, to achieve world-class engineering.

1954



Established the Technical Training Center  
The principles of "Monozukuri is Hitozukuri (our performance relies on our people)" and "engineering and technique, hand in hand" are still being practiced today.

1968



Established the IC Research Center  
In-house R&D of integrated circuits (IC) was launched at an early stage, in anticipation of electronic control for automotive components. Today, electronic components are some of the main products that we sell.

1966



Established a sales office in Chicago and branch offices in Los Angeles, USA  
The first sales office outside of Japan was established in anticipation of global trends such as trade liberalization.

1972



Established NIPPONDENSO (AUSTRALIA) PTY. LTD., and NIPPONDENSO THAILAND CO., LTD., our first manufacturing companies located outside of Japan  
We decided to manufacture products near to our customers, in order to better meet their needs.

1956

Created the mission statement on which DENSO is founded  
It was established in order to maintain and further develop the spirit of our founding.

1961



Received the Deming Prize, one of the most prestigious awards for quality control  
The efforts made by all of our employees to win the prize laid the foundations for our culture based on the concept of "Quality First."

1984



Opened Nukata Proving Ground  
We opened a test course at a comparatively early stage for a parts manufacturer. We have evaluation facilities equivalent to those of automakers, to help us ensure product performance and quality that exceeds our customers' expectations.

1991

Opened DENSO Research Laboratories  
We carry out R&D on new technologies that may emerge in the next 5 to 20 years. Our research covers a range of topics, from semiconductor materials to microalgae that produce oil.

2004

DENSO Spirit  
The DENSO Spirit is one of foresight, credibility, and collaboration. It expresses values and beliefs shared by our employees around the world that have driven us to contribute to the automotive industry and society as a whole since our establishment in 1949.

1996

Adopted our new corporate name, DENSO CORPORATION  
The company name was changed from NIPPONDENSO to DENSO. Removing "Nippon," the Japanese word for Japan, reflects our aims of being a truly global company.

2017

Created the DENSO Group Long-term Policy 2030  
The slogan of this plan is "Bringing hope for the future for our planet, society and all people."

2015

Establishment of the global R&D system  
DENSO develops cutting-edge technologies and products in collaboration with internal and external partners, including automakers, research institutes, and universities, through its global technical centers (located in Japan, the U.S., Germany, China, Thailand, India, and Brazil).

2016

Introduced a global common personnel management system  
DENSO introduced a global common personnel management system targeting the members of senior management at its headquarters and at each group company. This system incorporates a "Global Individual Grade" that focuses on the individual capabilities of senior management members. By using a common grading tool to evaluate and promote its senior staff, DENSO allows its personnel around the world to develop their careers on a global scale.

## Present

DENSO in figures

Employees  
**160,000**

Consolidated Revenue  
**¥7.1 trillion**

World-First Products  
**over 180**

Patents Held  
**39,000**

Medals at the WorldSkills Competition  
**77**

Global Network  
**35 countries and regions**

Overseas Revenue Ratio  
**60%**

As of March 31, 2024

## Future

Future vision

We are in the pursuit of "zero" in the fields of "green" and "peace of mind."

CO<sub>2</sub> ±0

Zero traffic fatalities



# Green

## Aiming to become Carbon Neutral by fiscal 2035

We aim to realize carbon neutrality within our *Monozukuri* activities in the not-too-distant future of fiscal 2035 by further promoting the environmental efforts in which we have engaged thus far. To make this ambition a reality, we are pursuing efforts in the three fields of “*Monozukuri* (manufacturing),” “mobility products,” and “energy use,” while making use of the Green Innovation Fund\* and other frameworks.

\* Green Innovation Fund: An initiative offered by the New Energy and Industrial Technology Development Organization (NEDO) to provide ongoing support to companies committed to achieving ambitious goals related to achieving carbon neutrality through the research, development, demonstration, and practical application of their technologies over the long term within the priority areas for which action plans have been established under the Green Growth Strategy

### Monozukuri (Manufacturing)

#### Realize complete carbon neutrality in our *Monozukuri* activities

We will reduce CO<sub>2</sub> emissions by utilizing renewable energy such as solar power and enhancing the efficiency of our manufacturing process. In addition, we aim to realize complete carbon neutrality in our *Monozukuri* activities, without the use of carbon credits, by capturing the CO<sub>2</sub> emitted in the production process and reusing it as energy.



### Mobility Products

#### Contribute to the electrification of vehicles to reduce CO<sub>2</sub> emissions to the greatest extent possible

We will help popularize HEVs, BEVs, FCEVs, and other electrified vehicles (xEVs) by advancing products powered by electricity. In addition, we will apply the electrification technologies cultivated in the automotive industry to the field of air mobility in an effort to significantly reduce CO<sub>2</sub> emissions in all facets of mobility.



### Energy Use

#### Realize an energy-recycling society through the development and popularization of technologies that make effective use of renewable energy

We will establish technologies that store and reuse energy in a highly efficient manner, regardless of location or time, and work to popularize them on a global basis. By doing so, we will help realize an energy-recycling society.



## TOPIC : Green

In the quest for carbon neutrality, as well as the reduction of CO<sub>2</sub> through decarbonization, the capture and reuse of CO<sub>2</sub> emissions, known as carbon recycling, is becoming a focus of attention. To efficiently realize CO<sub>2</sub> capture anywhere, DENSO is developing and introducing a compact, highly efficient CO<sub>2</sub> capture system.

#### Developing a system that can efficiently capture CO<sub>2</sub> anywhere

Our goal is to realize a compact and highly efficient CO<sub>2</sub> capture system by utilizing the technology we have developed in the mobility field. If we can realize a compact system that can efficiently capture low-concentration CO<sub>2</sub> and can be installed anywhere, it will be possible to capture CO<sub>2</sub> in more familiar places, such as building rooftops and homes.



#### Developing a system that leverages DENSO's strengths

DENSO is utilizing its mobility technologies to develop a CO<sub>2</sub> capture technology known as the electric-field method. This method captures CO<sub>2</sub> by switching voltages, rather than by raising and lowering the temperature. Our system only requires small amounts of energy to capture CO<sub>2</sub>. Moreover, it is more compact than conventional systems as the unit does not need heating and cooling equipment.

#### Utilizing CO<sub>2</sub> in the future

There are multiple ways to utilize CO<sub>2</sub>. As well as the direct use of CO<sub>2</sub> for such applications as food processing, we anticipate the recycling of captured CO<sub>2</sub> for other applications. The various potential uses of CO<sub>2</sub> are attracting attention, which include utilization for conversion to minerals, the production of chemicals such as plastics, and as an alternative to city gas and other fuels. At the Anjo Plant's CO<sub>2</sub> capture verification plant, we are conducting verification tests in which methane is synthesized from captured CO<sub>2</sub> and hydrogen that is produced through the use of solar power-derived electricity.





# Peace of Mind

## Aiming to become a leading company that provides “Peace of Mind” to society

For a company like DENSO, which aims to contribute to the happiness of people, part of our mission is to provide peace of mind to society by resolving social issues through our business activities. This section introduces the three pillars of DENSO’s contributions to the field of “Peace of Mind,” through which we aim to become a leading company that provides peace of mind to society.

### Elimination of Fatalities from Traffic Accidents

#### Popularize safety products through efforts focused on “depth” and “width,” thereby realizing free mobility without fatalities from traffic accidents

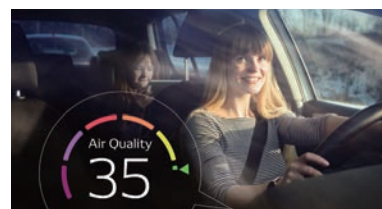
With the aim of eliminating traffic accident fatalities, we are promoting efforts under a two-pronged approach focused on “depth,” which involves reaching the cutting edge of technology, and “width,” which involves realizing the wide-spread adoption of safety products in a large number of vehicles. For “depth,” we are further evolving our safety products and working to have them adopted in a greater number of advanced mobility fields. For “width,” we are promoting the further popularization of our safety products by working to realize attractively priced safety products and enhance our lineup of retrofitted products.



### Creation of Comfortable Spaces

#### Enhance relevant technologies for creating peaceful, comfortable spaces

Following the progression of automated driving, there has been a growing need for providing vehicles not simply as a means of transportation but also as a “private space that enables mobility.” To that end, DENSO seeks to create comfortable spaces by evolving the environment within vehicles.



### Support for Working People

#### Draw on the technologies we have cultivated in the mobility domain to establish a society where people are supported and their potential is nurtured

One major social issue is the significant decline in the workforce in various industries. To address this issue, DENSO will draw on the technologies it has cultivated in the mobility domain, such as automation technologies and ICT, to realize a society where all people are supported and can take on new challenges with peace of mind.

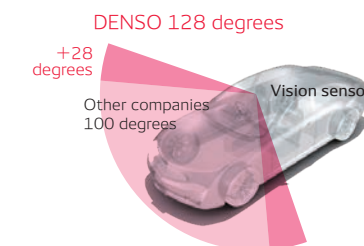


## TOPIC : Peace of Mind

We are striving to develop safety products, provide services that realize comfortable spaces, and utilize the technologies we have cultivated in the mobility domain.

### Wider-Angle Vision Sensors for improved accident scenario coverage

We have further widened the detection angle of our vision sensors, which support safe driving by recognizing pedestrians and bicycles in the vicinity of vehicles. In Japan, traffic accidents caused by pedestrians suddenly stepping out from roadsides are said to account for approximately 30% of all traffic accidents involving pedestrians. With this in mind, DENSO took on the challenge of further widening the angle of its vision sensors. As a result, we have realized vision sensors with a detection angle of 128 degrees—28 degrees wider than the products of other companies. The wider angle improves the detection of bicycles crossing roads when vehicles are moving at low speeds and helps prevent accidents caused by pedestrians suddenly stepping out from roadsides at intersections and in other areas.



### Newly Developed Radiant Heater that warms passengers’ legs

Radiation is energy from the infrared rays emitted by highly heated objects. Rather than using warm air, radiant heaters warm occupants’ legs directly by using far-infrared rays emitted from the heater surface, which reaches temperatures of up to 100°C. The radiant heat from the heater surface is efficient because it only warms the occupants. When used in combination with a heat pump system, our heaters reduce the air-conditioning energy required by the entire vehicle, thereby helping to extend the distance that can be driven with the heater on.



### Utilization of ICT during disasters

Aiming to create ICT-enabled systems and capabilities for efficient emergency countermeasures as well as for recovery and reconstruction in the event of a disaster, we have concluded an agreement on cooperation and collaboration with the city of Kirishima in Kagoshima Prefecture. The initiative will entail mutual cooperation through systems development and the utilization of Kirishima municipal authority’s disaster prevention app, which is supported by DENSO’s Life Vision local information distribution system.

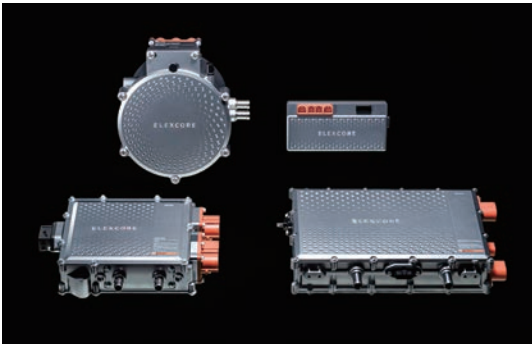


Business Overview

DENSO operates seven core businesses in a broad range of domains, with particular emphasis on the mobility domain. The company has built its business portfolio with a view to creating new value for the future and maximizing the value created by each business. Moreover, at present re-weighting the business portfolio is a priority strategy. Even in a volatile operating environment, a reweighted business portfolio will allow us to market products and services that reflect demand and to continue to grow.

Segment		Contribution to Long-term Policy (value of Green and Peace of Mind)	Revenue by Product (Ratio)
Automotive Businesses	Electrification Systems	<div>Green</div> <div>Peace of Mind</div>	¥1.2 trillion (17.4%)
	Powertrain Systems	<div>Green</div>	¥1.5 trillion (21.3%)
	Thermal Systems	<div>Green</div> <div>Peace of Mind</div>	¥1.7 trillion (24.2%)
	Mobility Electronics	<div>Green</div> <div>Peace of Mind</div>	¥1.9 trillion (27.2%)
	Advanced Devices	<div>Green</div> <div>Peace of Mind</div>	¥400 billion (5.9%)
Non- automotive Businesses	Factory Automation & Social Solutions	<div>Green</div> <div>Peace of Mind</div>	¥100 billion (2.0%)
	Food Value Chain		

# Electrification Systems



Making electric vehicle components widely available and contributing to carbon neutrality  
We provide products suitable for the energy optimization and market penetration of all types of vehicles

To market electric systems that contribute to carbon neutrality, we have enhanced the performance, compactness, and fuel savings of key components that are essential for vehicles. Going forward, DENSO will leverage its broad business domain to connect all manner of vehicle systems and products and manage energy efficiently, thereby further improving fuel efficiency and extending driving distance. Moreover, by offering products suitable for market penetration, we will help reduce CO<sub>2</sub> emissions.

# Powertrain Systems



Balancing the joy of life with vehicles with superior environmental performance—  
Providing solutions that help overcome this seemingly contradictory task

We will reduce the environmental burden of vehicles to the greatest extent possible and respond to the diversification of fuel and various environmental regulations, which are becoming stricter by the year. We will also work to supply high-quality systems and components. By doing so, we will strive to create and deliver new value in order to contribute to society as a whole.

Features

System development capabilities

It has become increasingly important to improve the environmental performance of vehicles as electrification intensifies. To meet the needs of markets and customers, we provide systems that optimally integrate vehicle functions for driving, turning, stopping, and comfort. The DENSO group offers the full range of components used in electric drive systems, the heart of electric vehicles. Based on a thorough understanding of how hardware is used, our system development capabilities heighten the overall performance and reliability of systems, thereby satisfying diversifying market demand.

Fundamental technological capabilities

After the development of electric vehicles roughly 70 years ago, we took on the challenge of developing winding technology— which became the core of our founding electrical equipment business—and achieving semiconductor production in-house. The electronics technologies established through these initiatives enabled us to realize power conversion capabilities, while we accumulated heat management capabilities by developing car air conditioners and radiators. In this way, we have evolved fundamental technologies for electric vehicles. We will expand and improve our product lineup by continuing to enhance the compactness and efficiency of fundamental technologies for components that are supported by worldleading technology relevance.

Monozukuri capabilities

At the Anjo Plant, the Electrification Innovation Center is rapidly and efficiently developing and introducing next-generation manufacturing technologies. For example, on the mass production lines of the adjoining electric vehicle component plant, the center is conducting verification tests of a CO<sub>2</sub> recycling plant and an energy-saving environmental production line that curbs CO<sub>2</sub> emissions. The Anjo and Hirose plants—which serve as mother plants in the electric vehicle component field—together with approximately 50 bases in Japan and 18 other countries will deliver high-quality components to customers worldwide.

Features

R&D capabilities that have led development of world-first products and advanced powertrains

DENSO has mass-produced a number of world-first products, such as common rail systems and a product that directly injects fuel in diesel internal combustion engines, while pursuing greater environmental performance in vehicles. Our core technologies and development capabilities are also compatible with the expansion of options for carbon-neutral powertrains, such as hydrogen and biofuel engines.

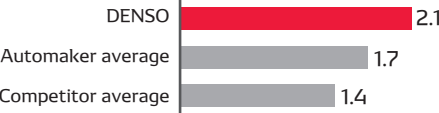
Highly reliable manufacturing technologies that facilitate safe driving of vehicles

To enable the high-performance driving of vehicles, DENSO has refined its highly reliable manufacturing technologies that are integrated from materials preparation to molding and sintering, as well as its technologies for high-speed assembly and highly complex and precise processing at the micron-unit level. DENSO aims to sharpen its technological edge further by fusing together cutting-edge AI and digital technologies with robots and its accumulated skills and manufacturing knowledge.

Personnel, masters of powertrains, form organically coordinating organizational capabilities

In working with automakers on the creation of vehicles that can satisfy tough environmental regulations and withstand harsh operating environments, we have developed a varied range of professionals, each of whom has expertise in particular elemental technologies or technical skills and works in a team of professionals focused on vehicle specifications. In other words, we have advanced organizational capabilities that allow us to leverage specializations in all areas, from components through to systems.

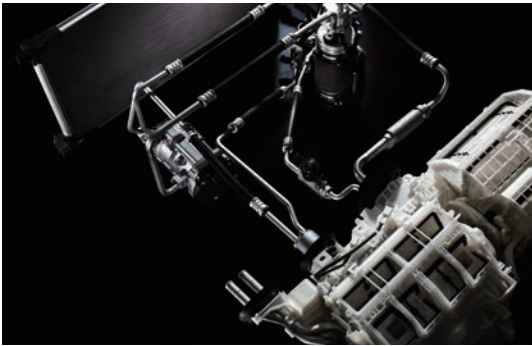
Technology Relevance (based on research by DENSO)



\* Technology relevance (TR) is calculated by using LexisNexis® PatentSight®. TR is an indicator calculated based on the number of citations of a patent compared with those of patents in the same technical field filed in the same year. The average TR of all patents is close to 1 as TR is relative to three factors: the number of citations, the filing year, and the technical field. With respect to calculation conditions, the search range was determined by referring to the search formula of the “high-efficiency motor inverters” middle category gxBO2, which is based on the Green Transformation Technologies Inventory categories provided by the Japan Patent Office. The leading 10 companies in the automotive industry in terms of the number of patent families were compared.



# Thermal Systems



## Contributing to a more pleasant world by solving heat-related issues faced in a mobility society

With the arrival of a carbon-neutral society and the era of CASE vehicles,\* the automotive industry is undergoing a paradigm shift. Amid this shift, DENSO is helping create the society of the future by taking maximum advantage of strengths as the leading global supplier of thermal systems to provide thermal management systems that increase the value of BEVs and realize comfortable, reassuring vehicle interiors.

\* CASE vehicles: Connected, Autonomous, Shared & service, and Electric vehicles

# Mobility Electronics



## Realizing a society in which all people can access mobility conveniently and with peace of mind (enhancing the quality of mobility)

DENSO helps realize zero traffic fatalities and carbon neutrality by continuing to introduce products in tune with the times, using its software and electronics technologies (sensors, semiconductors, ECUs), while precisely understanding the needs of users and advances and developments in society brought about by the CASE revolution.

### Features

Thermal management technology

A differentiating strength of DENSO is its thermal management technologies, which are backed by world-first products and approximately 2,400 patents—approximately 1.5 times more than those of competitors. We have built up these technologies through the development of cooling and air-conditioning products since our establishment. Due to the transition from internal combustion engines, which utilize engine heat, to BEVs, which have no heat source, demand for thermal management that efficiently controls heat in vehicles and utilizes it without waste is set to increase even further.

Relationships of trust with diverse customers

Through our mainstay heating, ventilation, and air-conditioning units and compressors, which firmly maintain the No. 1 shares of their respective markets, we have built relationships of trust with a wide range of customers, including not only Toyota Motor Corporation and other Japanese automakers but also European, American, and Chinese automakers, as well as manufacturers of commercial, agricultural, and construction equipment. DENSO will continue using its diverse customer network and nine technical centers located around the world to identify technological trends and needs worldwide and provide solutions based on thermal management technologies.

Global Supply Chain

To enable the delivery of products to many different customers, the Thermal Systems Business group operates more than 50 production bases in 26 countries around the world. We achieve optimal costs in each region through manufacturing that is rooted in regions. For example, we encourage local procurement and the rationalization of facilities on a regional basis. On the other hand, global supply networks and standardized product lineups enable the provision of inter-region production backup in emergencies. We will maintain and strengthen our global supply network through production reorganization in line with business portfolio transformation.

### Features

Ability to create large-scale integrated systems from an all-vehicle perspective

Needs for electronic systems in the CASE era are evolving into large-scale systems that integrate and coordinate powertrains, bodies, chassis, cockpits, advanced driver assistance systems (ADAS), and other single-domain control systems. DENSO has experience in all of these systems. We create compelling products from an all-vehicle perspective with a broad range of technological capabilities.

Product development capabilities with reliability and sophistication accumulated in automotive products

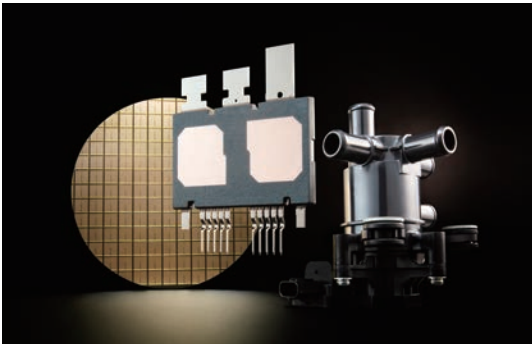
Automotive products must realize high quality and performance in harsh environments and under operational restrictions. We have been engaged in the automotive electronic product business for many years, ever since vehicles began to become more electronic, and we have accumulated extensive knowledge of vehicles as a result. DENSO develops competitive products through a combination of this knowledge with the latest electronics and software technologies.

Global Network

DENSO has honed its human capital, intellectual assets, and a global production structure by overcoming numerous obstacles with automakers around the world. Using these strengths, we will refine our CASE-related technologies while providing various solutions to customers, thereby moving the world one step closer to safe mobility that provides peace of mind and is environmentally friendly.



# Advanced Devices



## Creating and growing businesses that solve issues faced by society and customers beyond the mobility domain

As a company reorganized to go beyond technologies and focus more on helping society and our customers, we are collaborating on the sensing and actuation fronts, and enhancing the value of systems through semiconductors that leverage our strengths derived from vertical integration. While creating new devices and systems, we aim to win the trust of our customers with an all-points approach to quality, cost, and delivery (QCD) in the expanding electrification market.

# Factory Automation & Social Solutions



## Enhancing the productivity of the *Monozukuri* industry and improving quality of life

Our mission in the Industrial Solutions Business Unit is to realize carbon-neutral *Monozukuri* (manufacturing) from the perspective of “green,” and to build a society that expands human potential from the perspective of “peace of mind.” Guided by this mission, we will work to earnestly address the issues facing our customers, providing them with solutions that resolve such issues in a manner that best suits their needs. By doing so, we will make significant contributions to industrial and social progress.

### Features

Creation of new value with sensing and actuation

Within this business group, our core technologies in actuation (i.e., hands and legs) are combined with semiconductors (i.e., brains) and sensing (i.e., eyes) to create new devices and systems based on nimble concepts, enabling the development of “great-if-possible” solutions for issues faced by our customers.

Leadership that drives collaboration with partners and external production contractors, in addition to internal production of semiconductors

In preparation for expansion in the electrification market, DENSO will internally produce silicon (Si) and silicon carbide (SiC) power semiconductors, which are key devices that incorporate world-first technologies. Moreover, we will build the supply chain needed to increase cost competitiveness and supply capabilities.

On-site capabilities that support production technologies highly resilient to changes in specifications and volumes in new product domains

DENSO is broadening the scope of applications for new product domains where it is competitive, thanks to human resource development and handpicked young employees. DENSO leverages digital-twin technology and collaborative robots to build a production system that can be optimally organized and configured by changing production line shapes and locations in accordance with fluctuations in volumes for new products.

### Features

Production assets that have been rigorously honed in the frontline manufacturing operations of approximately 130 plants worldwide

Using our high-quality, highly durable facilities that have been refined on auto part production lines, as well as our core factory automation equipment, such as robots and sensors, we are playing a role in improving productivity throughout the manufacturing industry and society at large while spreading our reach from stand-alone equipment to processes and modules.

*Monozukuri* know-how that has supported DENSO's products for more than 70 years

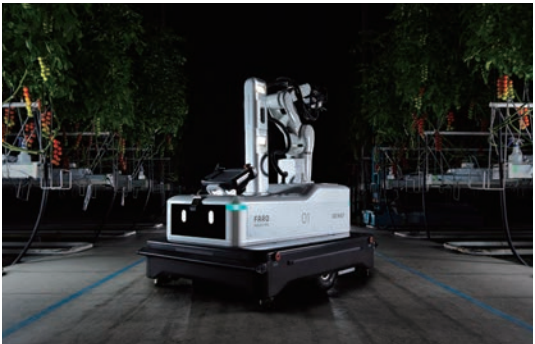
DENSO solves serious issues directly affecting the manufacturing industry, such as labor shortages, carbon neutrality and DX, with its know-how in flexible and lean manufacturing and lean automation technologies.

Safe and secure solutions for society using QR Codes® developed by DENSO

DENSO creates value for new domains and applications by incorporating outside ideas for using QR Codes® and QR Codes® reader technologies that have been evolving since 2000 and which have become an international standard (ISO/IEC 18004).



# Food Value Chain



Combining technologies and ideas to provide new value and contribute to a society where all people can live safely and with peace of mind

Food is essential to human life. Together with our business partners, while observing the entire food value chain, we will provide solutions that deliver food safety and security to each region of the world, anytime, anywhere, and to anyone, forever.

## Features

Greenhouses that ensure reliable harvests while dealing with labor shortages and climate change

By applying our *Monozukuri* technologies gained with automobiles to agricultural production, we are supporting technologies that condition environments for reliably harvesting agricultural products. We introduce automation technologies to create environments where people can move around easily, and globally supply solutions for greenhouses in a highly productive way that sustains growth.

Portable compact freezer/ refrigerators that help deal with driver shortages and delivery diversification

We provide portable freezer/refrigerators by utilizing heat control technologies developed for automobiles and by creating compact, light versions of conventional automotive freezers. Our battery-powered products allow non-specialized drivers with passenger vehicles to flexibly deliver a range of small-lot items without using engines or dry ice for freezing or refrigeration, which reduces CO<sub>2</sub> emissions.

New distribution DX solutions that reflect changing needs in food distribution

Utilizing the QR Code® and RFID technologies, which we developed in frontline manufacturing operations, we are digitizing diverse information related to food in order to visualize food distribution information from production to sale, in response to consumer needs for safe and secure food. We also offer a straight-through food distribution platform that facilitates supply-demand optimization in distribution operations and rightsizes inventories.

Foundation for Creating New Value



## Robust business foundations

DENSO's business activities are supported by robust foundations built over many years, giving the company an advantage that cannot be easily replicated. The driving force behind all our business activities is our relationships with diverse stakeholders, including customers, suppliers, and business partners, as well as the expertise of our approximately 160,000 employees and 200 group companies worldwide. By evolving and increasing such relationships and expertise, we will realize further growth.



### Personnel who create new value

Based on the belief that excellent personnel make the best products, we view human resources as our most important management resource. DENSO is developing the leaders and highly skilled engineers and technicians who will drive the company forward.



### Mutual advancement with business partners

As our business domain extends beyond automobiles, we are strengthening our alliances even further based on trust cultivated over many years. These alliances will enable us to combine our strengths with those of partners and thereby realize entirely new types of value.

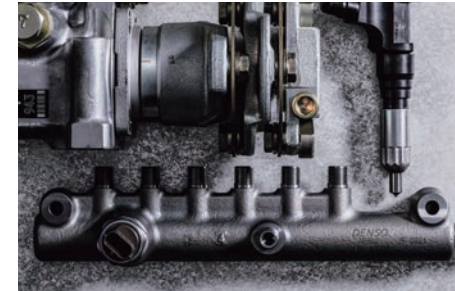


### Delivery of value to people worldwide

To grasp the needs and trends of each region in a timely, accurate manner and reflect them in R&D and manufacturing, we have established production, R&D, and sales bases around the world. At the same time, all of our employees make concerted efforts to develop our businesses and deliver value.

## Advanced R&D

With a commitment to world-first and world-best offerings, DENSO has contributed to mobility by creating an array of competitive products that accurately cater to social needs. Amid increasingly complex social issues and diversifying values, we aim to extend the scope of our contribution beyond mobility to encompass society as a whole. To this end, we have defined priority fields in accordance with our Green and Peace of Mind principles. Moreover, we are planning technologies and strengthening R&D capabilities with an eye on the future. We will continue creating new value through our technical centers and laboratories around the world as well as through collaborative initiatives that transcend group boundaries and include external research institutions and universities.



### Creating over 180 world-first products

We have established “contributing to a better world by creating value together with a vision for the future” as the DENSO Philosophy. By keenly ascertaining social changes, we have been engaging in product development with a commitment to world-firsts since our establishment. We have created over 180 worldfirst products, including gas injection heat pump systems, common rail systems, millimeter-wave radar sensors, and ejectors, which have provided us with a driving force for growth.



### Technical centers in seven regions throughout the world and laboratories in epicenters of innovation

We have established technical centers in seven regions across the globe, in addition to laboratories in Canada, Israel, Silicon Valley, and other epicenters of innovation. We also promptly incorporate diversified regional needs into our development process to create competitive products, which are subsequently delivered to our customers.



### Advanced research that anticipates future mobility

Since its establishment in 1991, our Advanced Research and Innovation Center's mission has been to contribute to an advanced automotive society through the creation of innovative technologies. Guided by this mission, the center has pioneered advanced technologies in such fields as semiconductors, electronic materials, AI, and ergonomics. By integrating in-house technologies and skills as well as by creating industry-government-academia partnerships and collaborations with business partners, the Advanced Research and Innovation Center creates innovative technologies that help resolve social issues.



# Three-pronged Solutions for Systems

DENSO has always optimized its business portfolio ahead of the times to provide society with valuable products and services that meet customer needs. For example, we expanded from our founding business in the mechanical parts field to foray into the electronics and software fields. While expanding, we enhanced our capabilities in each field and, as a result, we are now able to go beyond the manufacture of stand-alone components to offer optimal whole-system solutions that combine mechanical parts, electronics, and software. These system solution capabilities set us apart from competitors.



## Provision of value that exceeds expectations

We are able not only to provide highperformance, highly reliable products and services but also to use relationships of trust with customers worldwide to gain a timely, accurate understanding of their vision and needs as well as the needs of end-users. Based on this competence and insight, we will propose solutions and participate in the early stages of vehicle development and, on occasion, participate in vehicle development in close collaboration with customers. Even as the concept of vehicles evolves in the CASE vehicle era, we will continue to realize unchanging DENSO-style value.



## Realization capabilities unique to a comprehensive systems manufacturer

In addition to the mechanical parts field, in which we have been engaged since our earliest days, we have been involved in the electronics and software fields for more than half a century. DENSO has contributed to the development of mobility by combining its technologies in the fields of mechanical parts, electronics, and software to create next-generation inverters and advanced safety systems. An extensive product lineup and a long track record of utilizing and verifying technologies in the real world provide foundations for our efforts to improve each technology and realize world-beating systems.



## Implementation of technology integration

Around the world, DENSO professionals specializing in the fields of mechanical parts, electronics, and software absorb the leading-edge technologies in each region and benefit the world by conducting rigorous evaluation and testing of products under actual operating conditions, including temperatures and usage methods. At each base, our engineers collaborate globally with customers and companies in other industries to move technologies forward and bring society the most advanced technologies and products.

# Highly efficient, high-quality Monozukuri

Since its inception, DENSO has consistently emphasized the creation and utilization of in-house technologies. We design and manufacture equipment, production lines, materials, and processing methods. This emphasis on in-house *Monozukuri* (manufacturing) has enabled us to provide society with products that give concrete form to the leading-edge technologies conceived by our R&D team. Having our own production technologies has also allowed us to develop high-speed, efficient production lines and compact facilities as well as streamline distribution and inspection. Moreover, in recent years we have been digitalizing know-how accumulated over many years of manufacturing and utilizing it as explicit knowledge. Such initiatives are enabling us to realize highly efficient, high-quality *Monozukuri* that adds even more competitiveness and value to our products.



## Mass production of world-first and world-best products

DENSO boasts world-class micro-processing accurate to 1/1000mm and assembly lines that increase both production efficiency and quality. Our research on leading-edge production, elemental, processing, and measurement technologies as well as our development of production lines and systems that incorporate these technologies underpin products with world-leading performance and quality.



## Working to improve productivity that connects people and factories globally

We analyze the abundance of data we have on people, products, and facilities and convert it into valuable information, such as information on signs of equipment flaws and information on the know-how of experts. We offer such information to people that desire it at the times they need it and in a format that they prefer. By doing so, we are accelerating activities aimed at making improvements and contributing to the growth of people. The linking of approximately 130 plants globally is improving productivity group-wide.



## Eliminating product defects and lost operational time

All plant personnel participate in Excellent Factory,EF activities led by plant managers. By seeking overall plant optimization and conducting careful verification before production line start-ups, EF activities create plants in which issues are readily identifiable. When issues occur, all plant personnel address them by continuously making improvements. In this way, EF activities foster personnel who are particularly skilled in realizing improvements and enable DENSO to achieve world-class competitiveness.

# Sustainability Management

In advancing sustainability management, DENSO has incorporated future social issues into its Long-term Policy for 2030 and as an integral part of its material issues (Materiality), and the Company is addressing these social issues through business activities. As well as maximizing our provision of Green and Peace of Mind—two long-standing areas of focus—we have established “inspiring” as a watchword. Accordingly, we will provide society with new value that inspires diverse stakeholders.



## Tradition of sustainability management

Since its founding, DENSO has taken on ambitious initiatives to address social issues through its businesses. In other words, we practice sustainability management and continuously provide society with new Green and Peace of Mind. Our consistent approach to business reflects the DENSO Creed, which calls on us to “provide quality products and services.” To continue in the spirit of our creed and keep practicing sustainability management even as times change, we have established the DENSO group Sustainability Policy and incorporated social issues into the Long-term Policy for 2030 and as an integral part of our material issues . We are currently tackling these social issues through our business activities.

## Promotion structure for sustainability management

At DENSO, the Corporate Strategy Division is responsible for the company-wide sustainability management promotion function, with the director in charge of the Corporate Strategy Division as the head of operation. The Corporate Strategy Division formulates policies and activity plans, supports and follows up on the activities of each department, and communicates internally and externally. The direction of sustainability management and follow-up on the status of company-wide activities are discussed and reported at company’s formal committees such as the Management Deliberation Meeting and overseen by the Board of Directors. For individual sustainability themes, the lead division promotes activities in cooperation with related divisions after deliberation by each expert committee.

# Corporate Data



Company Profile

As of March 31, 2024

Company name	DENSO CORPORATION
Established	December 16, 1949
Head Office	1-1, Showa-cho, Kariya, Aichi 448-8661, Japan
Capital	¥187.5 billion
Revenue	Consolidated basis ¥7,144.7 billion (US\$47.2 billion)* <sup>1</sup>
Operating Profit	Consolidated basis ¥380.6 billion (US\$2.5billion)* <sup>1</sup>
Profit* <sup>2</sup>	Consolidated basis ¥312.8billion (US\$2.1billion)* <sup>1</sup>
Employees	Consolidated basis: 162,029 Non-consolidated basis: 43,980
Consolidated Subsidiaries	193 (Japan 57, North America 23, Europe 36, Asia 72, Others 5)
Affiliates under the Equity Method	70 (Japan 22, North America 8, Europe 7, Asia 29, Others 4)
Fiscal Year	From April 1 to March 31

\*1: U.S. dollar amounts have been translated, for convenience only, at the rate of 151.41 yen = US\$1, the approximate exchange rate prevailing in the Tokyo Foreign Exchange Market on March 29, 2024. Billion is used in the American sense of one thousand million.  
\*2: Profit attributable to owners of the parent company.

Main Facilities in Japan

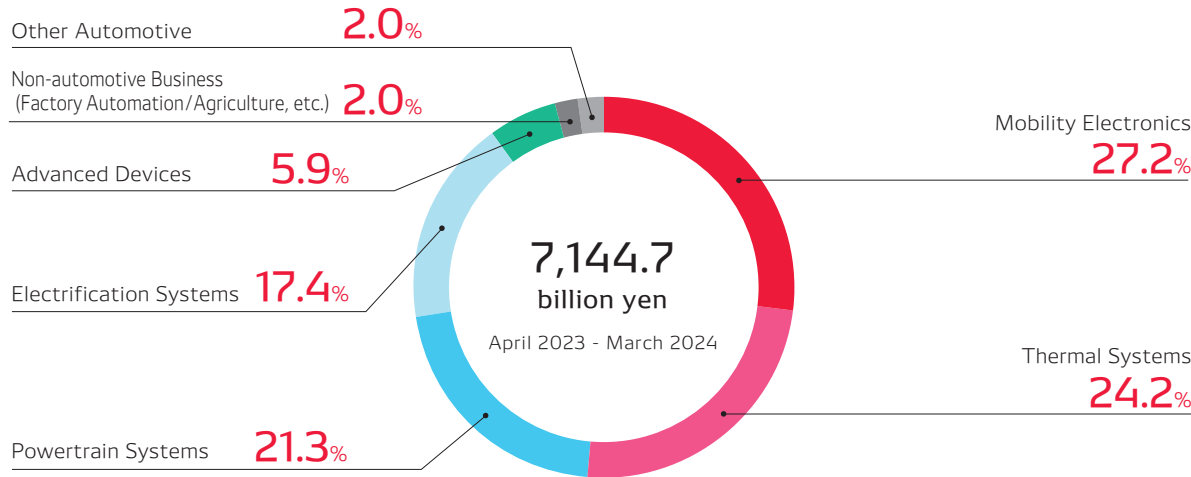
As of March 31, 2024

Headquarters / Plants / Laboratories	Employees	Main Business
Headquarters	12,228	-
Anjo Plant	4,984	Manufacture starters, alternators, inverters, motor generators, electric power steering motors
Nishio Plant	6,341	Manufacture car air-conditioners, radiators, electronic diesel/gasoline fuel injection components
Takatana Plant	2,767	Manufacture of instrument clusters, head-up displays, millimeter-wave radar sensors, vision sensors, power modules, various sensors components
Kosai Plant	3,385	Manufacture of compact motors for wiper systems, power windows, etc.
Daian Plant	4,296	Manufacture of ignition components, advanced safety products, valve train components, exhaust emission control components
Kota Plant	3,375	Manufacture semiconductor wafers, integrated circuits and electronic control components
Toyohashi Plant	961	Functional parts for car air-conditioners and heat pump module and servo motor module and CO <sub>2</sub> heat pump hot water supply systems
Hirose Plant	1,107	Manufacture of inverters, ECUs and power semiconductors
Agui Plant	804	Manufacture of machinery and tools
Toyohashi East Plant	684	Manufacture of compact motors for blowers, cooling fans, etc.
Zenmyo Plant	1,309	Manufacture electronic diesel/gasoline fuel injection systems
Advanced Research and Innovation Center	257	Research in functional materials, AI and ergonomics
Global R&D Tokyo	125	R&D in advanced driver assistance systems, connected fields, and automotive electronic systems fields
Global R&D Tokyo, Haneda	194	Advanced mobility development
Nukata Proving Ground	29	Test driving for automotive components

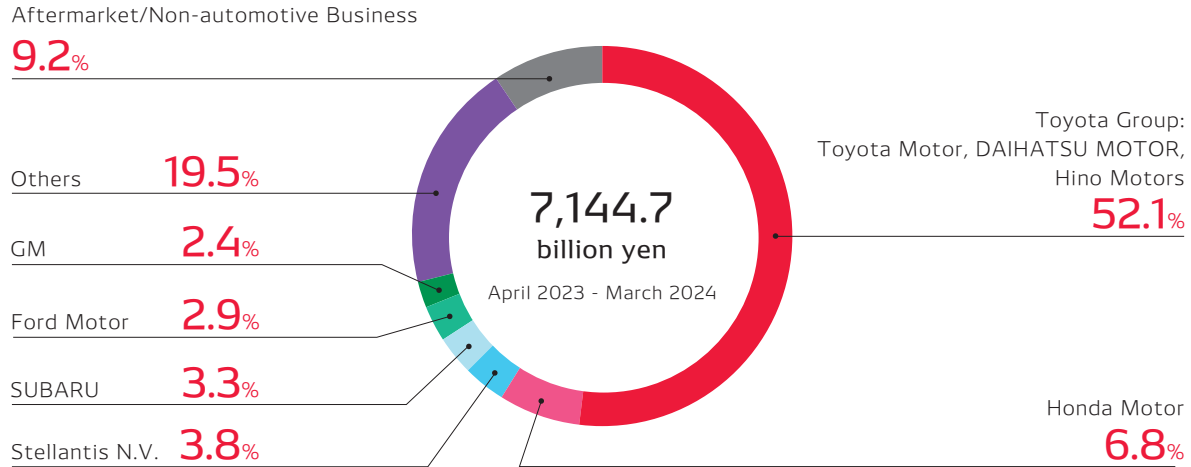
Offices / Divisions / Branches				
Tokyo Office	Osaka Division	Iwate Branch	Muromachi Branch	D-Square Branch
Tokyo Division	Hiroshima Division	Kobe Branch	Takamatsu Branch	
Tokyo Division Utsunomiya Office	Nagoya Office	Nagoya Minami Branch	Kohoku Branch	

# Financial Data

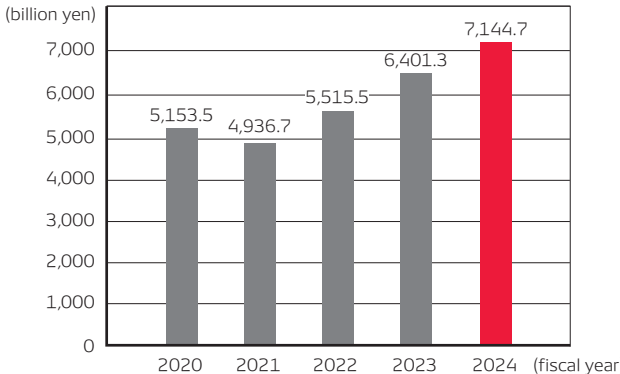
## Consolidated Revenue by Business Group



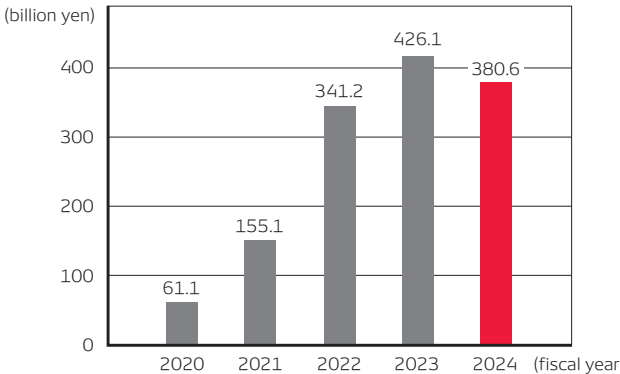
## Sales by Customers



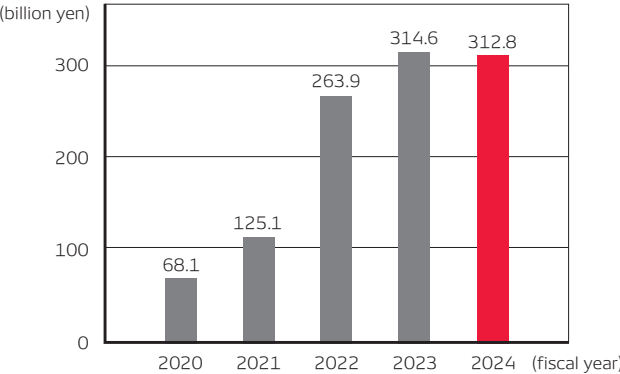
## Revenue



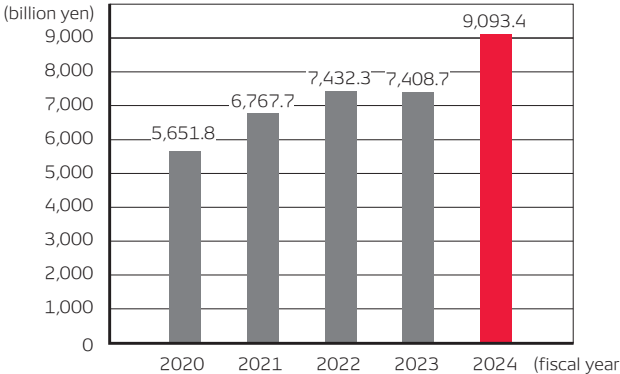
## Operating Profit



## Profit



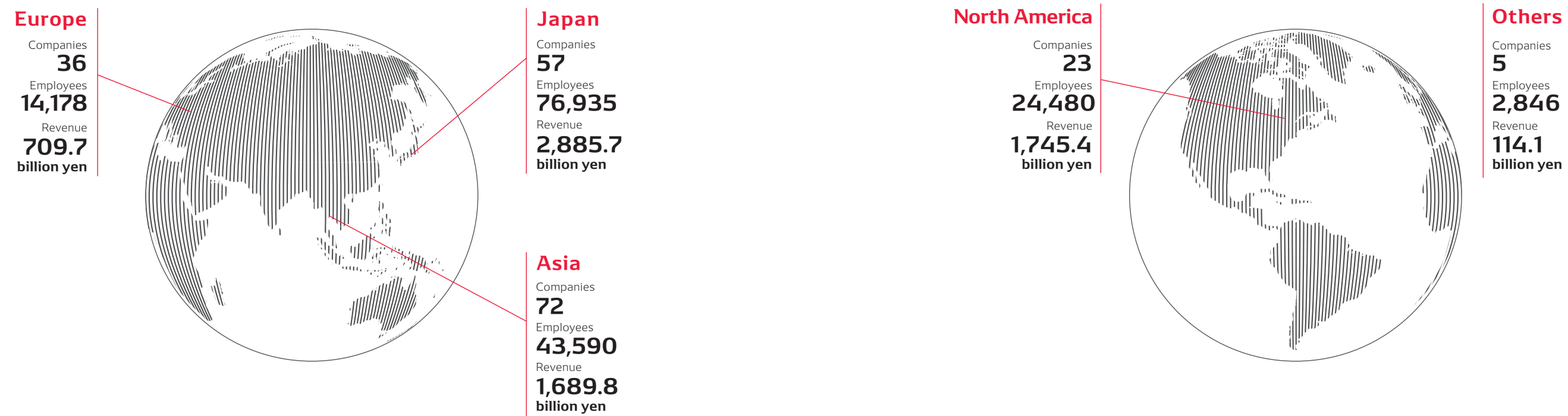
## Total Assets





Global Network

As of March 31, 2024



Revenue by Segment



The figures for revenues are for external customers and include adjustments between segments.