



DENSO
Crafting the Core

Integrated Report 2018

For the year ended March 31, 2018



Crafting the Core





Providing a better future for the next generation

Look at the world with a brighter vision for the future.

Cherish nature and learn to live together in harmony.

Welcome changes and meet challenges unafraid.

Embrace diversity and cooperate to enhance technologies.

More than ever before, we will value the DENSO tradition of *Monozukuri* as we pursue new value and create new “Cores” for years to come.

After all, everything we do is to provide a better future for the next generation.



社 是

一、信用を尊び責任を重んず

一、虚飾を排し和衷協力誠実事に當る

一、研究と創造に努め常に時流に先んず

一、最善の品質とサービスを以て社会に奉仕す

The DENSO Creed

"Be trustworthy and responsible."

"Cherish modesty, sincerity, and cooperation."

"Be pioneering, innovative, and creative."

"Provide quality products and services."

DENSO Philosophy

Contributing to a better world
by creating value together with
a vision for the future

DENSO Spirit

A spirit of foresight, credibility and collaboration

The DENSO Spirit 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.

Foresight

Providing surprises and impressions in a way that only DENSO can

Vision

Creativity

Challenge

Credibility

Providing quality and reliability beyond customer expectations

Quality First

On-site Verification

Kaizen,
Continuous Improvement

Collaboration

Achieving the highest results by working as a team

Communication

Teamwork

Human Development

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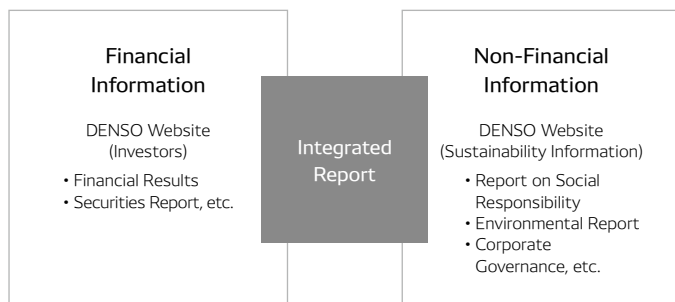


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Positioning of Integrated Report



Please see DENSO's corporate website for PDF format
https://www.denso.com/global/en/investors/library/annual_report/

Editorial Policy

In addition to providing financial information, such as results and sales overviews as well as management strategy, *DENSO Integrated Report 2018* is edited as an integrated report that reports, in an easily understood manner, on what value DENSO is providing society and on the process of improving that corporate value. This was achieved by introducing, in an integrated manner, information of a non-financial nature on intangible assets, including on the environment, society and governance (ESG) that are seen as the foundation underpinning growth.

DENSO creates long-term corporate value for all of its stakeholders, including shareholders and other investors, and would appreciate their understanding for the efforts the Company is making in aiming to realize a sustainable society.

In compiling this report, references have been made to the "international integrated reporting framework" that is proposed by the International Integrated Reporting Council (IIRC). In addition, with regard to social reporting and the environment, please refer to the Company's website as it contains detailed sustainability information.

Cautionary Note: Forward-Looking Statements

Of the content published in this report, what is not historical fact comprises future predictions based on expectations or on plans for the future. As they include contributory factors, such as risks and uncertain elements, the possibility exists that actual achievements and results may differ materially from this report.

DENSO Cover Story 1

HISTORY

DENSO's History of Innovation and Creation

Major Advancements as a Comprehensive Manufacturer of Automotive Parts

To keep pace with global companies, DENSO entered into a technical cooperation agreement with Robert Bosch GmbH, Europe's leading electrical equipment manufacturer. Through this alliance, DENSO made major advancements as a comprehensive manufacturer of automotive parts from both a technical and managerial perspective.

Establishment of In-House IC Development Structure in Anticipation of Trends in Car Electronics

With the aim of realizing the complete in-house production of ICs that correspond with automobiles, which did not exist at the time, DENSO established a comprehensive system that conducts everything from development to production in-house. As a result, DENSO was able to promptly realize the practical application of technologies that could respond to the strengthening of regulations on gas emissions.

Growth Achieved Amid the Nixon Shock, Oil Crisis, and Economic Recession

DENSO began promoting three major strategies: Cultivating a market for car air-conditioners, developing new electronic products, and improving domestic sales and services and implementing bolder, more aggressive sales initiatives. As a result, the Company was able to raise its net sales by 2.4 times in a five-year period. This rapid growth defied the conventional thought that the growth of automotive part manufacturers should be proportionate to growth in the number of cars produced.

1950s



1960s



1970s



¥0.5 billion

1949

¥11.0 billion

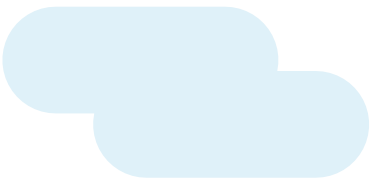
1960

¥93.0 billion

1970

¥536.5 billion

1980



Full-Scale Development Aimed at Becoming a Global Company

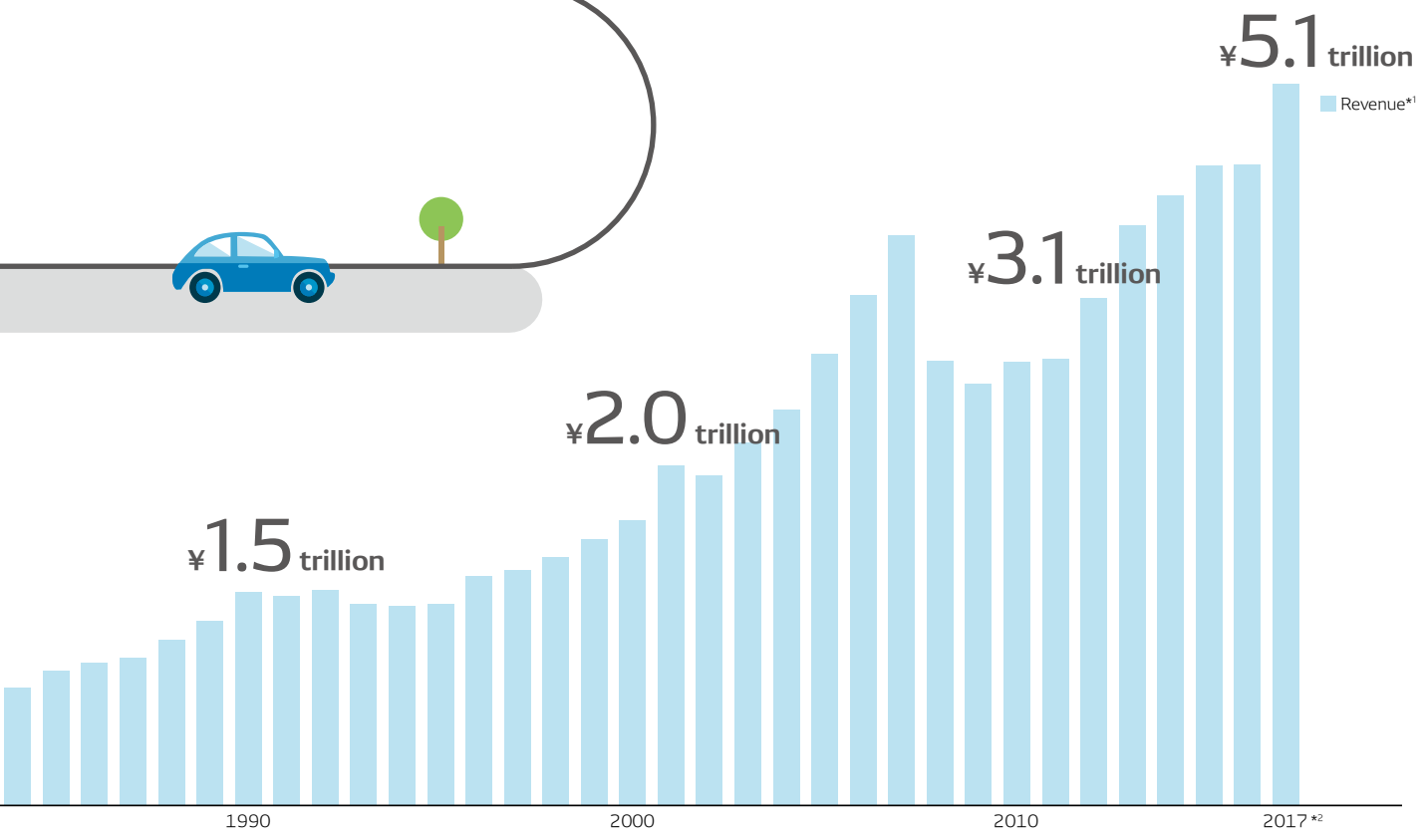
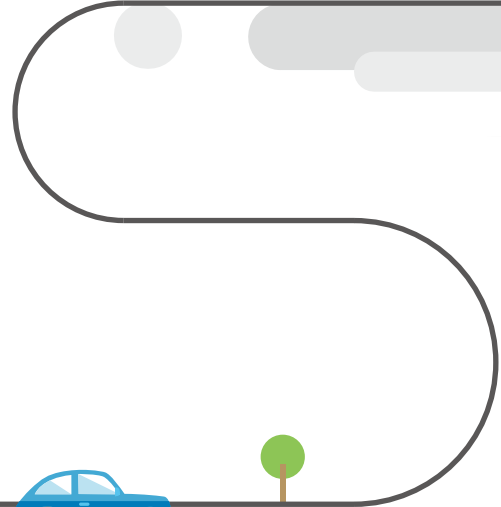
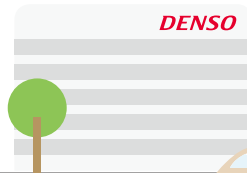
To respond to not only the trend toward localization in the automotive industry but also the rapid fluctuations in exchange rates, DENSO commenced local production overseas ahead of many Japanese automobile manufacturers. The Company commenced full-scale overseas production in 1986, starting with production in the United States. Guided by the strategy of securing a stable business foundation in a wide range of international markets, DENSO moved forward with its global development.

1980s

Further Creation of a Culture of Innovation and Self-Challenge

Amid a global economic recession caused by the financial crisis, DENSO recorded an operating loss for the first time since its founding. In response to this, the Company formulated a three-year policy for structural reforms, making efforts to streamline its business and establish a structure for future growth. Based on the idea "if we change as individuals, then we can change as a company," DENSO was successful in spurring various innovations, thereby returning to profitability in a short period of time.

2000s



*1 Fiscal 1951 to fiscal 1978 show non-consolidated revenue, while fiscal 1979 and after show consolidated revenue. In addition, from fiscal 2014, the financial statements have been prepared based on International Financial Reporting Standards (IFRS). (Japanese accounting standards were employed up to and including fiscal 2013.)
 *2 Due to the change in DENSO's fiscal year in 1995, fiscal 2000, 2010, and 2017 represent the fiscal years ended March 31, 2001, 2011, and 2018, respectively.

DENSO Cover Story 2

FOUNDATION

Major Points for Understanding DENSO



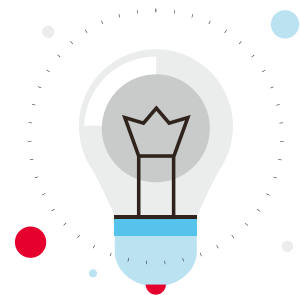
DENSO Spirit □ P.3

Boldly Taking on New Challenges No Matter What the Circumstances

The DENSO Spirit is one of foresight, credibility, and collaboration. It also embodies the values and beliefs that DENSO has cultivated since its founding in 1949. The DENSO Spirit permeates the actions of all DENSO employees around the world. Guided by this spirit, we are using the passion and ambition of all our employees as the driving force for accelerating innovation amid this period of dramatic change.

Number of DENSO Employees Practicing the DENSO Spirit

170,000



Research and Development, *Monozukuri*, and *Hitozukuri* □ P.34-41

Leveraging DENSO's Greatest Strengths That Remain Thoroughly Committed to Creating the Best Possible Product

DENSO's three greatest strengths are its R&D, *Monozukuri* (the art of making things), and *Hitozukuri* (human resource development). By having these strengths complement each other, DENSO is able to push forward with its business activities and provide new value to society.

Number of Patents Held Globally

38,000

Number of Medals Won at World Skills Competitions

63



Expansive Business Domains

□ P.10-11, 77-93

Clearing the Way for Future Automobiles through Business Domains That Create Green Value and Provide Peace of Mind

Since its founding, DENSO has promoted the development of advanced technologies related to automobiles. At the same time, the Company has expanded its business domains by applying these technologies in various fields. While leveraging the strengths it possesses in these business domains, DENSO will actively pursue external collaboration. By doing so, DENSO will strengthen its developmental capabilities and accelerate development speed with the aim of creating green value and offering peace of mind.

Consolidated Revenue

¥5.1 trillion



Global Business Foundation

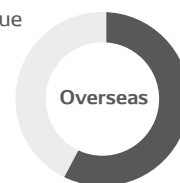
□ P.97

Leveraging Our Global Foundation to Bring Happiness to People Around the World and Create a Better Tomorrow

Aiming to be a company that can meet the needs of its various customers around the world and earn their trust, DENSO has expanded its business with 220 consolidated subsidiaries in 35 countries and regions across the globe. With a firm belief in that the world is waiting for more technological developments from DENSO, the Company will tackle the issues facing global society head on.

Ratio of Overseas Revenue to Total Revenue

58%



Ratio of Overseas Employees*

56%



* Ratio of employees at overseas subsidiaries to total employees



DENSO Cover Story 3

BUSINESS DOMAINS

DENSO's Six Core Businesses

1

THERMAL SYSTEMS P.80

Providing safe, comfortable systems that use the least amount of energy possible in consideration of the environment

Main Products

- Air-conditioning systems for cars and buses
- Truck refrigeration units
- Radiators and cooling systems

2

POWERTRAIN SYSTEMS P.82

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

Main Products

- Gasoline and diesel engine management systems
- Engine-related products
- Products for drive systems

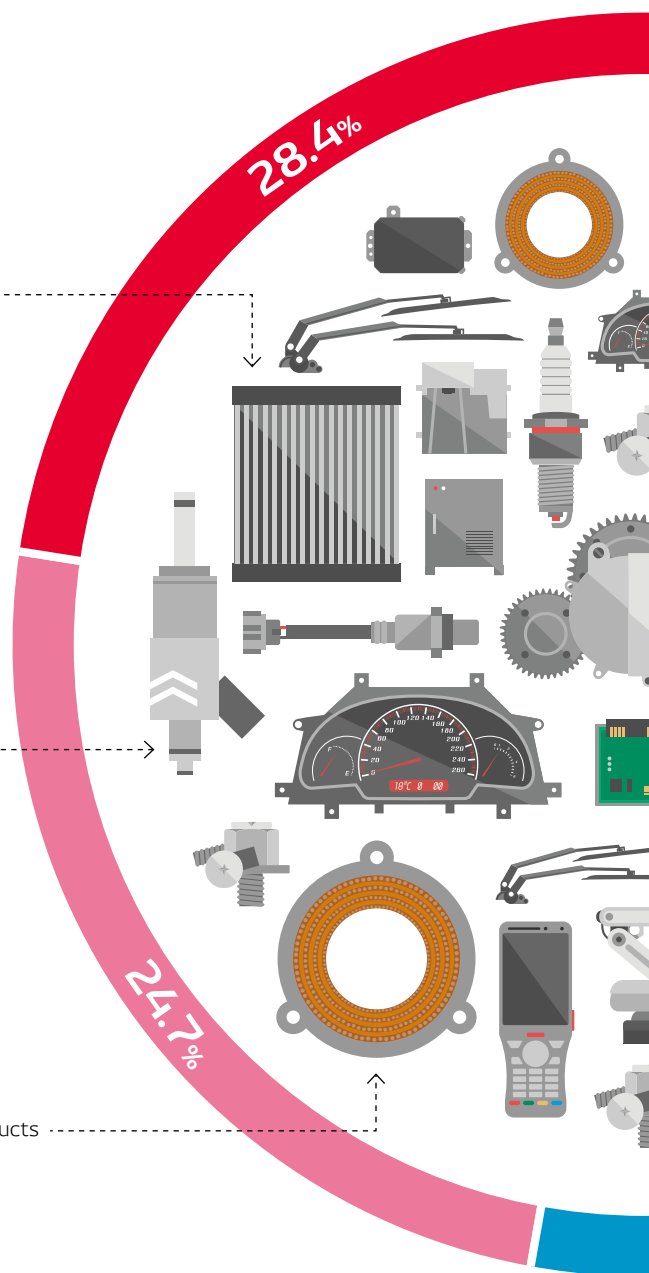
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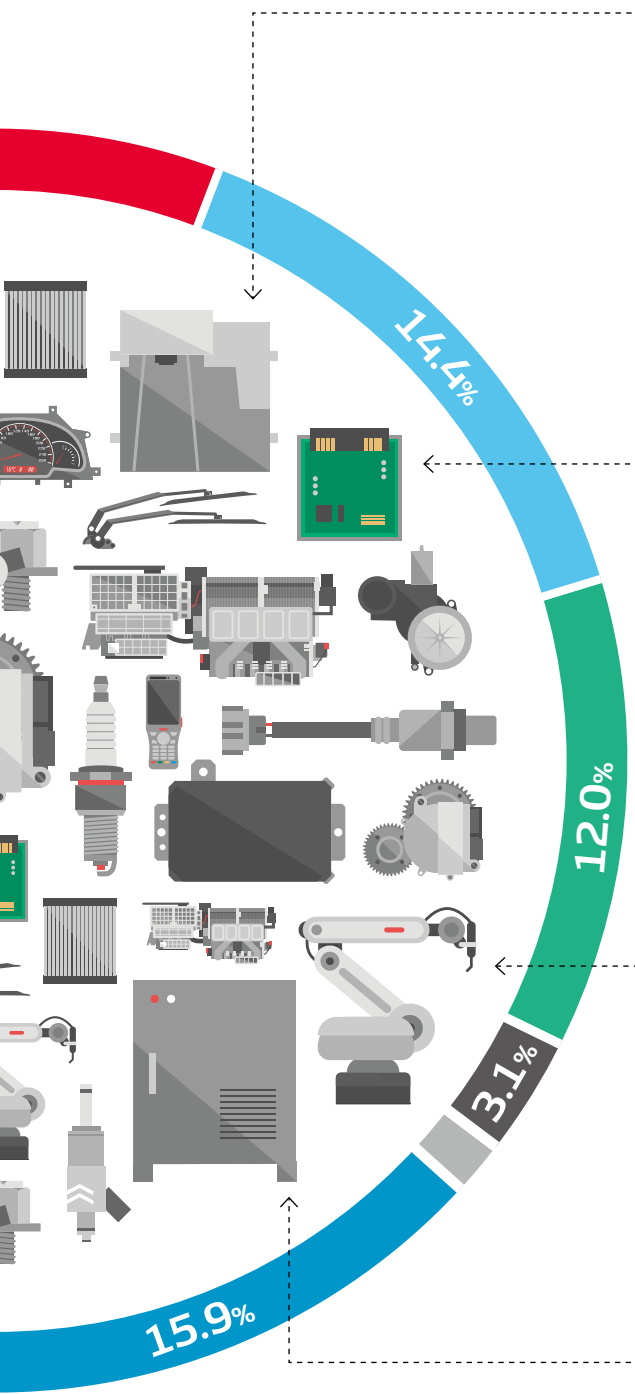
ELECTRIFICATION SYSTEMS P.84

Supporting electrification in all areas of mobility to realize an enriched environment and the joy of driving

Main Products

- Hybrid and electric car drive systems, power supply, and related products
- Power supply and starting system parts
- Small motor systems for automobiles





4 MOBILITY SYSTEMS P.86

Aiming to realize Quality of Mobility by achieving a three-way harmony between people, vehicles, and society as a whole

Main Products

- Electronic systems, services, and platforms that support all aspects of mobility
- Advanced safety and automated driving products
- Connected cockpit products

5 ELECTRONIC SYSTEMS P.88

Driving the industry with electronic technologies to promote the widespread use of electric vehicles and automated driving

Main Products

- Powertrain control computers, body control computers, and other electronic devices
- In-car semiconductor sensors and microelectronic devices such as ICs

6 NON-AUTOMOTIVE BUSINESSES P.90

Enhancing the productivity of the manufacturing industry and contributing to an improved quality of life with a commitment to our long-cultivated technologies

Main Products

- Industrial equipment best exemplified by our automated equipment, modules, and industrial-use robots
- Equipment for use by society, including handy terminals and QR solutions, and provision of services

AGRICULTURE P.92

Combining technologies and ideas to contribute to an enriched society where all people can live safely and with peace of mind

Main Products

- Agricultural production equipment and cloud services, in addition to the provision of after-sale services

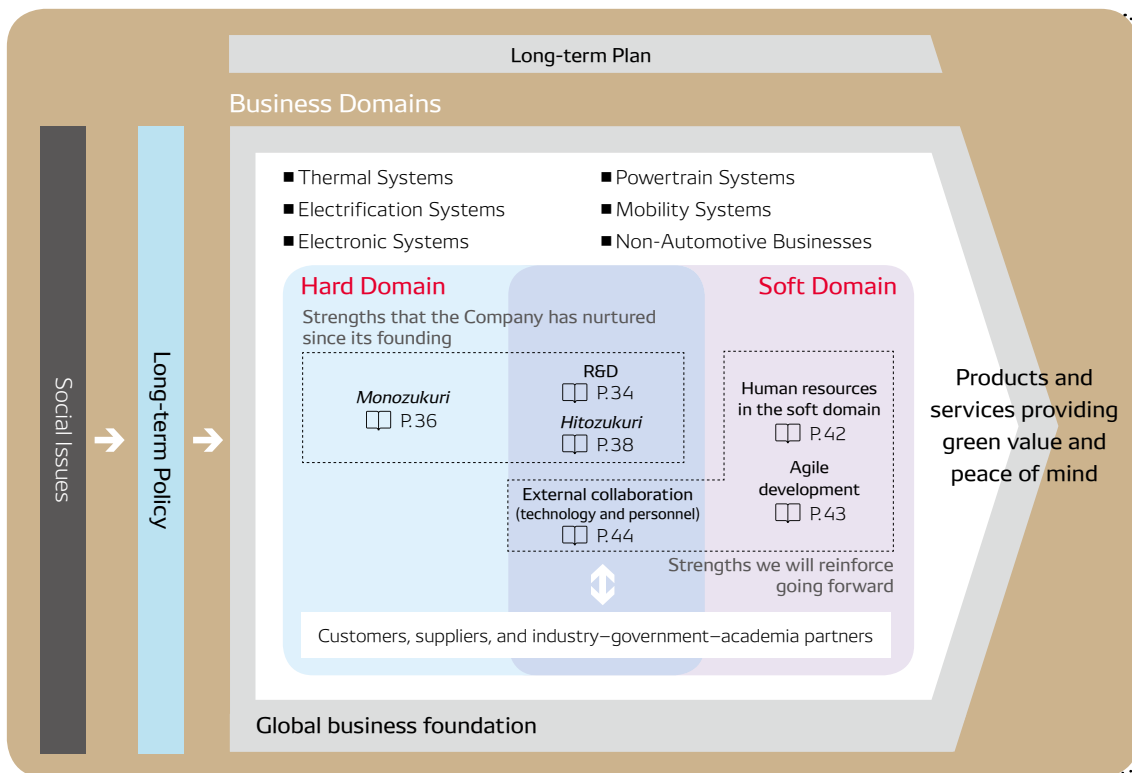
Note: This graph indicates ratio of revenue by business.

DENSO Cover Story 4

VALUE CREATION

DENSO's Value Creation Process

To continue to be a company that is inspiring to society amid a business environment that is undergoing dramatic changes, DENSO will resolve social issues through its business activities and realize the vision adopted under its Long-term Policy. To this end, DENSO will evolve the strengths it has long cultivated in the hard domain, which entails R&D, *Monozukuri*, and *Hitozukuri*. At the same time, DENSO will reinforce its efforts in the soft domain, where the potential to offer added value will increase going forward. By doing so, DENSO will promote swift business activities in all of its business domains.



↑ Intellectual Capital

- Core technologies in the automotive field with a commitment to creating world-first products
- R&D expenses ¥447.4 billion
- Acceleration of external collaboration. Approx. 20 M&A totaling ¥120.0 billion

↑ Manufactured Capital

- Expert manufacturing technologies and a global supply structure with a commitment to quality and safety
- Capital expenditures ¥347.2 billion

↑ Human Capital

- Global human resources well-versed in the fields of R&D, manufacturing, and sales
- Diversity of human resources
- Consolidated subsidiaries 220
- Number of employees 170,000

DENSO Spirit

The Value DENSO Offers Society

Green

- Reduce the amount of energy used by our products
- Reduce CO₂ emissions from our products
- Ratio of in-house power generation through cogeneration*¹ within energy consumed in our business activities: **46%** (non-consolidated)
- CO₂ emissions per unit*² related to our business activities (compared with fiscal 2013): **75%** (non-consolidated), **68%** (Group companies)
- MSCI ESG rating: **A**

Peace of Mind

- Prevention of traffic accidents through our products
- Realization of comfortable and open vehicle interiors through our products
- Guarantee of safety through our rigorous quality control activities
- Decrease in accidents related to our business activities (compared with target for 100% elimination): **48%** reduction on a global basis

Economic Value

Revenue: ¥5.1 trillion / Second-highest revenue in the global automotive component industry

Market capitalization: ¥4.6 trillion

Operating cash flow: ¥558.0 billion

Dividend payments / Dividend payout ratio: ¥101.4 billion / 31.7%

Bond rating: **AA+** (Rating & Investment Information, Inc.)

Becoming a company that contributes to an enriched and safe society and is inspiring to all of its stakeholders

Resolving social issues through our business



Strengthening input



Sustainability Management □ P.65
Corporate Governance

Financial Capital

- Capital **¥3.6 trillion**
- Interest-bearing debt **¥473.9 billion**
- Cash on hand **¥918.3 billion**

Social and Relationship Capital

- Trust from external organizations and a reliable brand
- Relationship with all global automobile manufacturers

Natural Capital

- Optimal energy utilization
- Energy input **36,251 TJ**

*¹ Energy-saving system that utilizes municipal gas, which produces only a small amount of CO₂ emissions, as fuel for power generation and makes use of waste heat
*² Per unit = CO₂ emissions / Revenue (indexed to fiscal 2013 as 100%)
(The figures for provided value and each capital are from fiscal 2018.)



Koji Oima

CEO MESSAGE

To Our Stakeholders

DENSO will transform
itself into a company that is
truly inspiring to society.

Koji Arima
President & CEO

I would like to sincerely thank our shareholders for their continued support.

Changes in the Business Environment

Amid global population increases, aging societies, and advancing urbanization, the progression of global warming due to CO₂ emissions and the increase in traffic accidents are becoming serious social issues. In addition, people's value systems and consumption behavior are diversifying due to the rapid digitization of society and advancements in robotics, which have also led to changes in business models. Furthermore, in the field of mobility the evolution of IoT and AI and the entry of companies from other industries have accelerated electrification, automated driving, connected cars, and car sharing, among other developments. In these ways, DENSO's business environment is approaching a paradigm shift. Under these circumstances, we maintain a sense of crisis based on an understanding that we cannot survive by simply emulating what we have done in the past.

DENSO has refined its technologies centered on the hard domain, which entails the basic automobile functions of running, turning, and stopping, thereby realizing substantial growth. However, as a result of the paradigm shift that is occurring in the automotive industry, the value that vehicles need to provide is changing significantly, and value offered through the soft domain, which utilizes IT, is becoming increasingly more important. Accordingly, a large number of IT companies, which excel in promptly adapting to the changes occurring around the world, have entered the automotive industry, which has further sped up the pace of change.

As we find ourselves in an extremely competitive environment, we need to take decisive action in implementing reforms that will allow us to realize sustainable growth well into the future. To this end, we believe our mission is to transform into a highly competitive organization by enhancing our strengths and capabilities.

The Intentions Behind Our Long-term Policy and Long-term Plan

To realize sustainable growth within this paradigm shift, we formulated our Long-term Policy, which focuses on 2030, in October 2017. We also established our Long-term Plan, which provides the path for us to realize our Long-term Policy.

Long-term Policy

The three key concepts underpinning our Long-term Policy are "green," "peace of mind," and "inspiring." In addition to maximizing value provided through "green" and "peace of mind," we will bring happiness to society by offering new value through efforts to make us "inspiring" to society.

To conduct our business activities at the pace required in these times of change, it is essential that we form alliances. To this end, we will hold repeated dialogues to communicate our dreams and aspirations to the outside world. In these ways, we will make allies who share our passion and move forward with the creation of a society in which all people can achieve happiness. Furthermore, we will transform into a company that can be truly inspiring to our customers, business partners, and society as a whole. To do so, we will always place the customer first, making concerted efforts to improve customer satisfaction and giving constant consideration

to what is truly needed by society. Going forward, we will place emphasis on this kind of approach.

Long-term Plan

Under our Long-term Plan, which aims to realize our Long-term Policy, we determined the Five Pillars of Management Reform. At the same time, we established electrification, advanced safety/automated driving, connected cars, and non-automotive businesses (factory automation and agriculture) as four fields on which we will focus. By accelerating initiatives within these fields, we will reach our targets for fiscal 2026 of ¥7.0 trillion in revenue and an operating margin of 10%.

To ensure that we are able to do so, we will enhance our organizational capabilities to a level higher than ever before in an effort to transform into a highly competitive organization even amid an environment of fierce and rapid change. With this aim in mind, we adopted “enhancement of vehicle perspective and streamlining of technological development,” “advanced R&D function to realize agile development globally,” “business unit evolution and smaller but stronger headquarters,” “global management with optimal use of Group and regional power,” and “way of working with tremendous speed and efficiency” as the Five Pillars of Management Reform. Through these pillars, we will push forward with reforms to our organization. Management reform essentially boils down to significantly enhancing the dynamism of our front-line operations and rapidly accelerating the speed of our business execution. Accordingly, it is essential that our 170,000 global employees go about their daily work with a strong devotion to the following ideas: working with pride and taking on challenges without fear of failure, immediately responding and adapting to change, and putting the utmost passion into their work. I believe we will be able to change the awareness of all our employees through these management reforms.

What We Value in Our Efforts to Overcome the Paradigm Shift and Realize Further Growth

Commitment to Earning Power

The growth targets adopted under our Long-term Plan of ¥7.0 trillion in revenue and an operating margin of 10% are not targets that can be achieved by simply adhering to the approach we have taken thus far. To reach these targets, we need to give thorough consideration to what aspects of our operations we need to change and where and how we can generate profits. In May 2018, we held a global conference in which approximately 250 managers from our offices around the world participated. At this conference, we engaged in discussion on how we can enhance our earning power, with a particular focus on the changes we should make in our operations.

Our manufacturing capabilities, which give birth to new technologies and products, represent the source of our competitiveness alongside our technological development capabilities. These highly sophisticated manufacturing capabilities, which we have cultivated since our establishment, are grounded in our front-line expertise and know-how. By further evolving these capabilities through factory IoT, we will boost our earning power to even higher levels.

Three Capabilities

To overcome this paradigm shift, which is bringing about unprecedented change, and realize further growth, all of our employees must be keen on anticipating change and taking on new challenges under the strong conviction of “delivering new value to the world.” We view this period of change as the era of our second founding, and I believe that each of our employees must take action by carrying out their duties in a highly energetic manner if we are to accomplish this second founding. Guided by this belief, I ask that all our employees place value on three capabilities: realization capability, motivational capability, and communication capability. By doing so, I feel that we can overcome this paradigm shift and realize growth.

Realization Capability

Realization capability refers to recognizing positive aspects and making wholehearted efforts to tie such aspects into your daily actions. Not constraining themselves to the framework of individual responsibilities, Company products, the working environment, and the Company itself, our employees need to think positively about what they can accomplish on their own initiative. This will allow them to make new realizations in their interactions with other people and in their surrounding environment. If each and every employee can make realizations on their own and pursue efforts that they alone can accomplish, then I believe that DENSO can realize a genuine transformation as an organization.

Motivational Capability

Motivation is energy, and motivational capability means engaging in your work with the highest levels of passion and dedication and with a sense of urgency. Our employees will look deep inside themselves to establish the dreams and goals they wish to accomplish. By doing so, they will devote themselves to their work and approach any task with their very best effort.

Communication Capability

Communication capability involves putting your dreams into words to inspire and motivate those around you. I believe that if our employees can work together with a shared sense of passion to overcome the challenges and difficulties in achieving their grandest of dreams, then we should certainly be able to overcome this period of major change. By bringing together an even larger group of people who share the same devotion and are able to communicate their individual dreams to each other, we will evolve into a highly energetic and invigorated organization.

Our 170,000 global employees will share a sense of urgency and combine their strengths under the same vision as they fully devote themselves to realizing unrivaled levels of success.

Becoming a Company That Is Inspiring to Society

* The Sustainable Development Goals: The United Nations Sustainable Development Summit 2015 was held in September 2015, with leaders from over 150 countries participating. "Transforming our world: the 2030 Agenda for Sustainable Development" was a document that was adopted as a result of this summit. Within this document, various declarations and goals were adopted as an action plan for realizing prosperity for people and the earth. Specifically, the document declared the Sustainable Development Goals (SDGs), which comprise 17 goals and 169 targets. The SDGs have been positioned as a mutual language around the world for considering issues related to sustainability.



In following the Sustainable Development Goals (SDGs),* which were adopted by the United Nations in 2015, and in complying with the Paris Agreement, which went into effect in 2016, there has been a higher level of expectations and greater need for corporations to address the social issues facing global society. We need to understand the kind of impact that the value we offer as a company has on various social issues. We also need to take steps to contribute to the sustainable development of society at large.

Since our founding, we have constantly given consideration to the sustainability of society through the DENSO Creed, as well as our basic management philosophies and long-term policies. Under our Long-term Policy for 2030, we will contribute to a sustainable society by providing new value in the fields of "green" and "peace of mind." To this end, we determined issues toward which we must give the utmost priority in July 2018.

In the field of "green," we will develop and promote products that help reduce environmental burden, such as products for electric vehicles, thereby aiming to decrease CO₂ emissions. In the field of "peace of mind," we will accelerate the development and promotion of products related to advanced safety and automated driving technologies. In doing so, we will strive to reduce the number of traffic accidents. Also, we have determined a total of 15 material issues, including respecting human rights within our entire supply chain and strengthening governance, and will put these issues into practice to enhance the effectiveness of our business activities.

We currently find ourselves in an extremely challenging situation, similar to embarking on a world voyage without a map of the sea. We understand the many difficulties we will face going forward. However, based on a strong devotion to creating better products and realizing a better society, we will make constant efforts to pursue new challenges.

With passion and devotion, we will realize an enriched mobile society and contribute to sustainable social development. In these ways, we will deliver an even brighter future to the next generation.

I would like to ask our stakeholders for their continued support as we pursue these endeavors going forward.

/ DENSO at Work /



Welcoming new technologies and ideas to deliver new value to the mobile society



Technological innovation that ensures the sustainability of the human race





GROWTH STRATEGY

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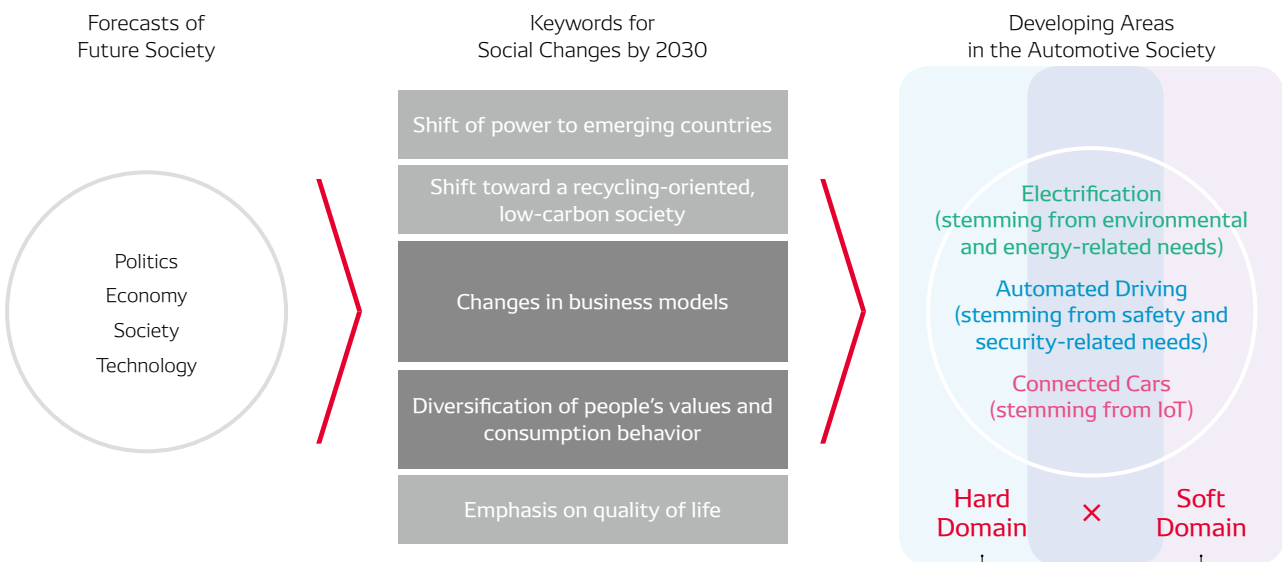


Awareness of Business Environment

Against the backdrop of global population increases, aging societies, and advancing urbanization, the progression of global warming due to CO₂ emissions and the increase in traffic accidents are becoming serious social issues. In addition, people's value systems and consumption behavior are undergoing changes due to the rapid digitization of society and advancements in AI. These phenomena have also led to changes in business models. In the field of mobility, the evolution of IoT and AI and the entry of companies from other industries have accelerated electrification, automated driving, connected cars, car sharing, and other trends.

Based on forecasts of future society, we have analyzed current trends in the automotive society with a particular focus on the kinds of social changes that will occur by 2030. In the table below, we have identified the following trends as potential growth opportunities for the Company. On the next page, we provide the results of our examinations regarding the keywords identified based on forecasts of future society and the relationship of those keywords to the automotive society.

Developing Areas in the Automotive Society Based on Analysis of the Business Environment



Growth Opportunities for DENSO

Traditionally, the automotive industry has focused on the hard domain, which comprises the basic vehicle functions of running, turning, and stopping. However, based on the kind of social changes described above, there has been a growing need for added value provided through the soft domain, which leverages IT technologies, as well as domains that combine the hard and soft domains. By leveraging the hard domain, where we have existing strengths, and enhancing our competitiveness in the soft domain, we will capitalize on the growth opportunities mentioned on the right.

Hard Domain: A domain in which DENSO will further evolve

1. **Integrated systems from the perspective of the vehicle**
 - Providing thermal, energy, and information management systems from the perspective of the vehicle
2. **High-speed, large-scale control systems that are highly reliable**
 - Strengthening the key devices of ECUs, semiconductors, sensors, and motors

Soft Domain: A domain in which DENSO can acquire new strengths

1. **IT, cloud, and communication technologies**
 - Upgrading software installed in automobiles that uses wireless signals
 - Increasing the efficiency of transportation through communication between vehicles and infrastructure
 - Enhancing security to protect automobiles from cyberattacks
2. **Connected services**

Leveraging data (vehicle location, driving conditions, etc.) to

 - Provide effective and safe vehicle operation management
 - Turn it into useful information and offer it as a product to companies that engage in mobility services (data business)

Analysis of Business Environment

Keywords for Social Changes by 2030

Forecasts of Future Society

Politics

		Shift of power to emerging countries	Shift toward a recycling-oriented, low-carbon society	Changes in business models	Diversification of people's values and consumption behavior	Emphasis on quality of life
Energy sources	Diversification of energy sources by region, expanding demand for natural gas in the Middle East and China					
	Tightening supply and demand of energy due to increased demand from emerging countries					
	Necessity of renewable energy and hydrogen storage in realizing a low-carbon society					
Global environmental regulations	Acceleration of international cooperation to respond to climate change in light of the urgent need to address global warming					
	Business opportunities presented by the shift to a low-carbon society but also risks to existing businesses due to this shift					
Social issues	Corporate strategies with an awareness of social and environmental burden throughout the entire supply chain					

Economy

Global economy	Rise of emerging countries and global multi-polarization					
	Deepening and expansion of economic collaboration, shift to borderless capital transactions					
	Obstructions to the borderless trend due to increasing disparity gaps and the rise of protectionism					

Society

Population trends	Threat to the sustainability of society due to the rapid increase in population, with the global population exceeding 8.0 billion					
Aging populations	Aging populations around the world, declining workforce, acceleration of growth in life expectancies					
Urbanization	Urbanization in emerging countries, acceleration of urban regeneration due to the shift to smart and compact devices					
Values	Consumption behavior becoming more ethical and experience-based with the shift to the sharing economy					
	Progression in the transition to labor offered by AI and robotics, changes in work ethic and available free time					

Technology

Technologies	Integration of digital and physical domains due to the progression of IoT and wearable devices					
	Productivity enhancement and value chain integration through the use of big data					
	Transition to the phase of AI utilization and the versatile implementation of AI in manufacturing, finance, and services					



Forecasts of Future Society and Developing Areas in the Automotive Society

		Shift of power to emerging countries	Shift toward a recycling-oriented, low-carbon society	Changes in business models	Diversification of people's values and consumption behavior	Emphasis on quality of life
Electrification	Progression of environmental regulations and electrification in accordance with conditions in each country and region □ P.24					
	Introduction of transportation systems that respond to urban conditions and issues					
Automated Driving	Realization of completely automated driving on specialized roads and effective use of traveling time					
	Continued rise in the number of deaths from traffic accidents in emerging countries □ P.24					
	Heightened expectations for the reduction of accidents through automated driving □ P.24					
	Increase in efforts and enhanced approach toward addressing accidents by elderly drivers					
Connected Cars	Widespread use of car and ride sharing primarily in urban areas, shift from owning an automobile to using one					
	Connections between people, transportation methods, and infrastructure, and transition of automobiles to a "transportation service" □ P.24					
	Increase in mobility limited to targeted groups, regions, and uses, including ultra-compact mobility					

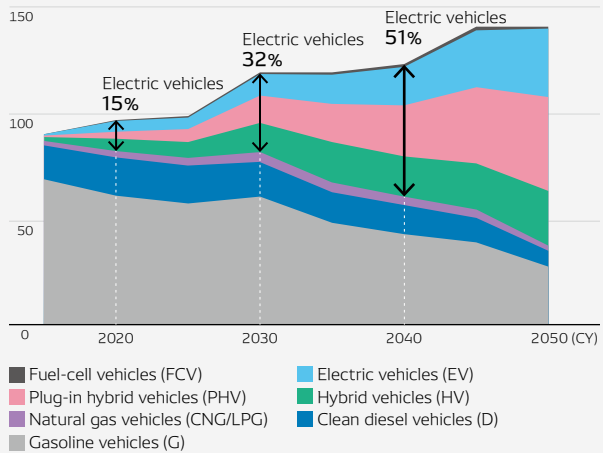
Forecasts for the Future Automotive Society

Electrification

Progression of Environmental Regulations and Electrification in Accordance with Conditions in Each Country and Region

Regulations on exhaust gas and fuel efficiency are becoming more robust in an effort to address global warming. Each country and region is establishing its own regulations regarding CO₂ emissions and fuel efficiency, and these regulations are expected to become more stringent going forward. Automobile manufacturers are stepping up their development of eco-friendly vehicles in accordance with trends in the introduction of regulations. As a result, the number of gasoline, diesel, and other vehicles with internal combustion engines, which are currently mainstream, will decline and the percentage of vehicles that utilize electrification, such as hybrid and electric vehicles, will increase. With that said, as engines are becoming more efficient, it is expected that a certain percentage of vehicles with engines will remain going forward.

Increasing Percentage of Vehicles That Utilize Electrification
Sales volume of passenger vehicles (millions of vehicles)



Source: Documents from the 1st Strategic Commission for the New Automotive Era, Ministry of Economy, Trade and Industry

Advanced Safety and Automated Driving

Continued Rise in the Number of Deaths from Traffic Accidents in Emerging Countries / Heightened Expectations for the Reduction of Accidents through Automated Driving

The number of deaths from traffic accidents continues to rise, primarily in emerging countries. Accordingly, there is a need to reduce deaths from traffic accidents through laws (such as those requiring the use of seat belts and helmets) and education and, after successfully achieving a reduction, promote the widespread use of vehicles with advanced driving technologies and accelerate the establishment of infrastructure. In developed countries, there have been advancements in technologies that sense surrounding environments and control vehicle operation. These countries are also incorporating information and communication technologies (cloud, V2X), maps with advanced functions, and information security technologies. Accordingly, automated driving is expected to become more sophisticated by around 2025.

Development Status of Automated Driving Technologies

Current (practical application completed)	Until 2020	Outlook for 2025	Period not determined
Level 1			
Level 2			
Level 3			
		Level 4	
			Level 5

Source: Reference materials from the "Action Plan for Realizing Automated Driving," Ministry of Land, Infrastructure, Transport and Tourism

Connected Cars

Connections between People, Transportation Methods, and Infrastructure, and Transition of Automobiles to a "Transportation Service"

The rapid utilization of data has brought about changes to the framework for existing goods and services and to the way transactions are carried out. In the automotive field, data platforms are being offered through the disclosure and linkage of registered vehicle information as well as the transmission and collection of information by individual vehicles. By around 2030, transportation is expected to become a social system that links people, movement methods, and facilities with cyber systems to enable comfortable and optimized travel.



Outline of Management Policies

In light of the aforementioned changes in the business environment, DENSO has formulated its Long-term Policy, which focuses on 2030. The Company also established its Long-term Plan, which provides the path for realizing the Long-term Policy. Under this policy and plan, the Company has adopted growth targets for fiscal 2026 of reaching ¥7.0 trillion in revenue and an operating margin of 10%. To this end, DENSO will strive to achieve growth in new mobility fields in accordance with the realization of electrification, automated driving, and other technologies, and promote reforms to its management.

Please see the relevant pages for details on the Long-term Policy and Long-term Plan.

DENSO Philosophy

Contributing to a better world by creating value together
with a vision for the future

Long-term Policy

□ P.26

Bringing hope for the future for our planet, society and all people

Long-term Plan

Basic Strategies

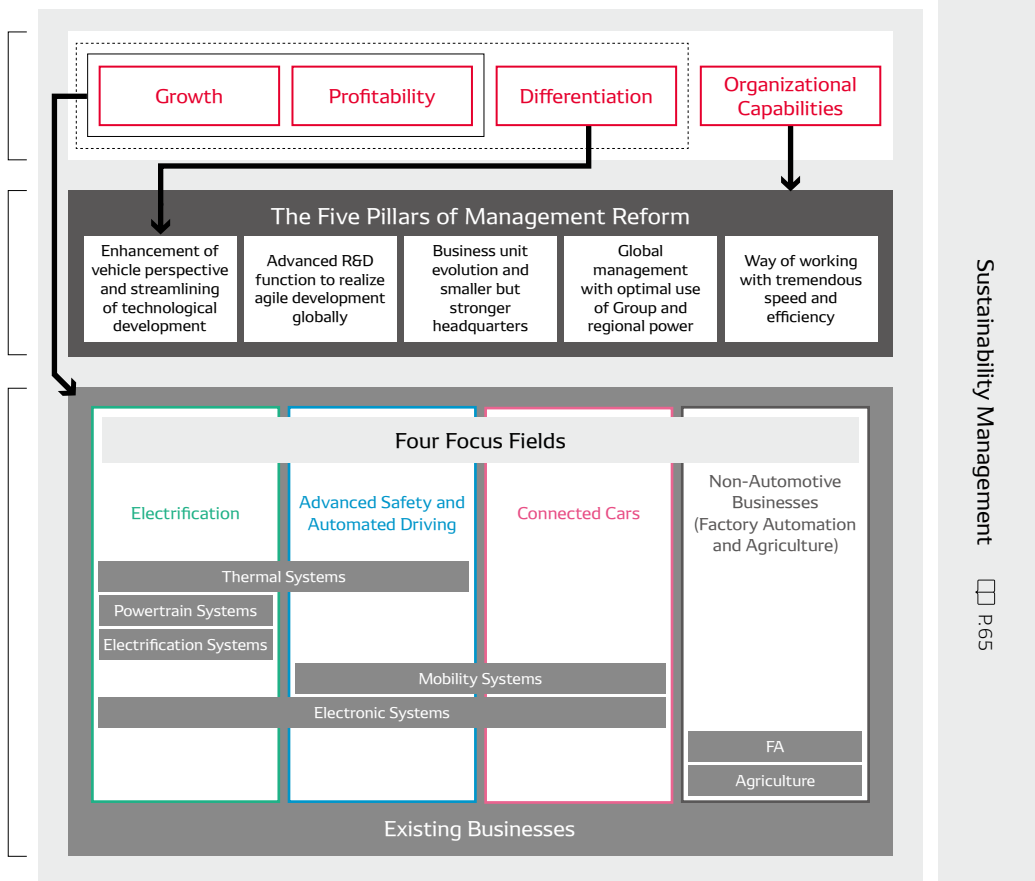
□ P.27

Specific Measures (Organizations that underpin our businesses)

□ P.28 The Five Pillars of Management Reform

Specific Measures (Business)

□ P.30 Four Focus Fields



Numerical Targets

2026 (FY)

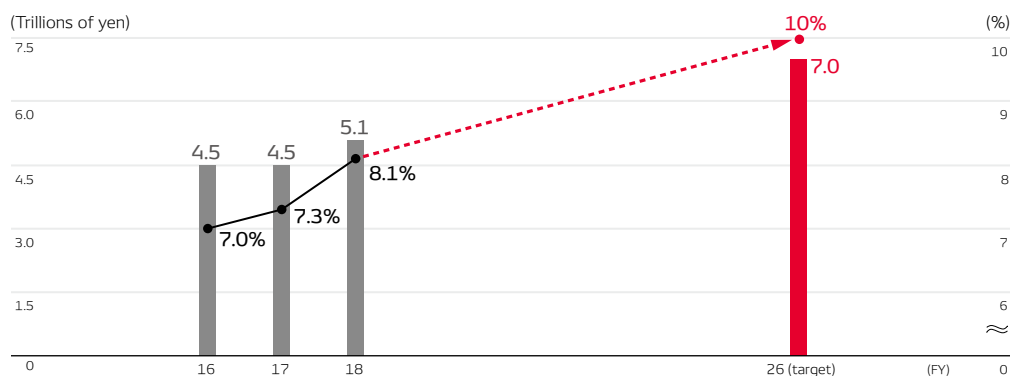
Revenue

¥7.0 trillion

Operating Margin

10%

■ Revenue
◆ Operating margin



Long-term Policy

DENSO has formulated the Long-term Policy, which serves as a vision for what the Company aims to be by 2030. In addition to maximizing the value we provide through “green” and “peace of mind,” two of our conventional areas of focus, we have adopted the new theme of “inspiring.” Guided by these three themes, we will strive to gain the understanding of our shareholders regarding the various efforts we pursue. By combining the strengths we possess under each theme, we will generate new value for society.

Slogan

Bringing hope for the future for our planet,
society and all people

Our Goal for 2030

A company that continuously generates value to enrich mobility that achieves sustainability, happiness and peace of mind for everyone

Green

Lasting vitality for the environment

Contribute to sustainability by increasing efficiency and reducing environmental impact

Peace of mind

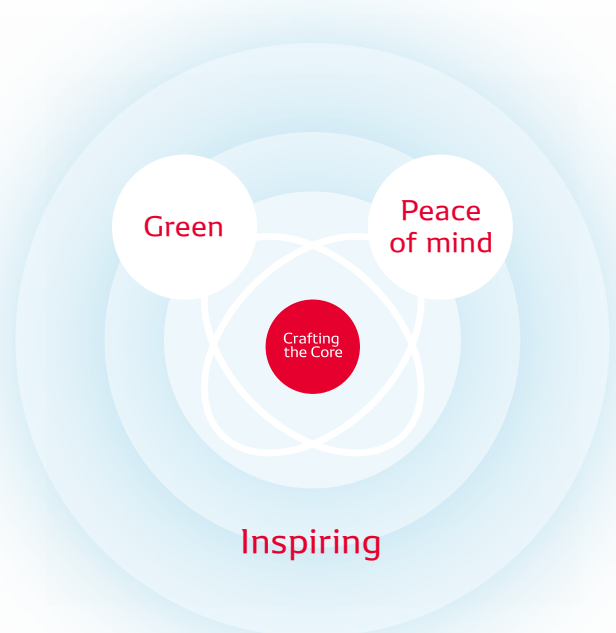
Providing a sense of well-being

Contribute to future mobility that is safer, more comfortable and convenient for everyone

Inspiring

Making a difference

Contribute to happiness for everyone through inspiring value-added offerings



Principles

Approach and attitude for achievement of goals

Open

Work hand in hand with diverse partners to enrich society

- Contribute to an enriched mobile society
- Cultivate relationships to address shared goals
- Explore new business fields

Fair

Deliver value for all people worldwide

- Take the initiative in environmental stewardship
- Provide mobility for all people
- Make smart functionality the standard

Reliable

Earn people's confidence by offering value that transcends expectations

- Generate value that addresses latent needs
- Mobilize comprehensive technological capabilities
- Assert a commanding edge in manufacturing

Passion & Initiative

A proactive sense of commitment to challenge for a bright future

Long-term Plan

DENSO has established its Long-term Plan for 2025, which acts as a pathway for realizing its Long-term Policy. Under this plan, DENSO has established four focus fields based on social changes. In addition to these fields, DENSO has adopted the Five Pillars of Management Reform to enhance organizational capabilities and reflect its ambition to transition to an organization that can compete even under a challenging business environment. By promoting these reforms, DENSO will realize its growth targets of revenue totaling ¥7.0 trillion and an operating margin of 10%.

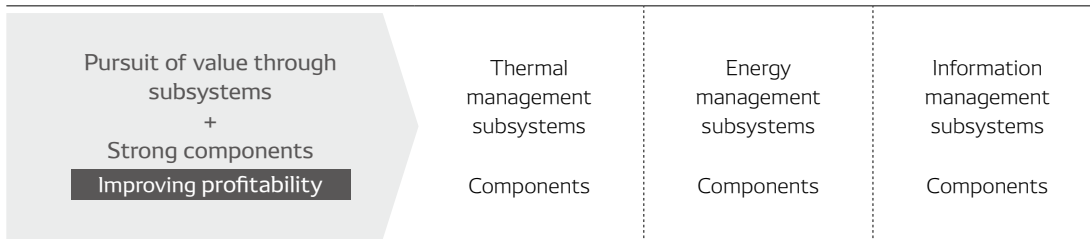
Basic Strategies



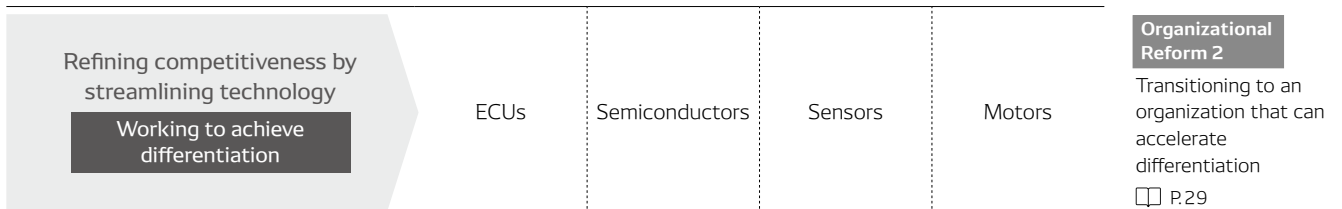
Growth By pursuing value from the perspective of the vehicle, we will accelerate the commercialization of new mobility fields, thereby driving growth.



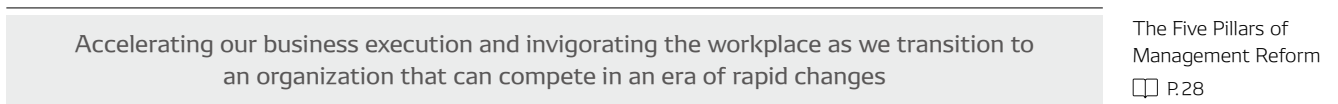
Profitability We will enhance the profitability of our existing in-vehicle technology business and further solidify our earnings base to support future growth.



Differentiation As part of our strategy to realize overwhelming high levels of differentiation for our components and systems, we are strengthening technological development related to ECUs, semiconductors, sensors, and motors. We are also working to improve the profitability of our existing in-vehicle technology business and enhance our competitive edge in new mobility fields.

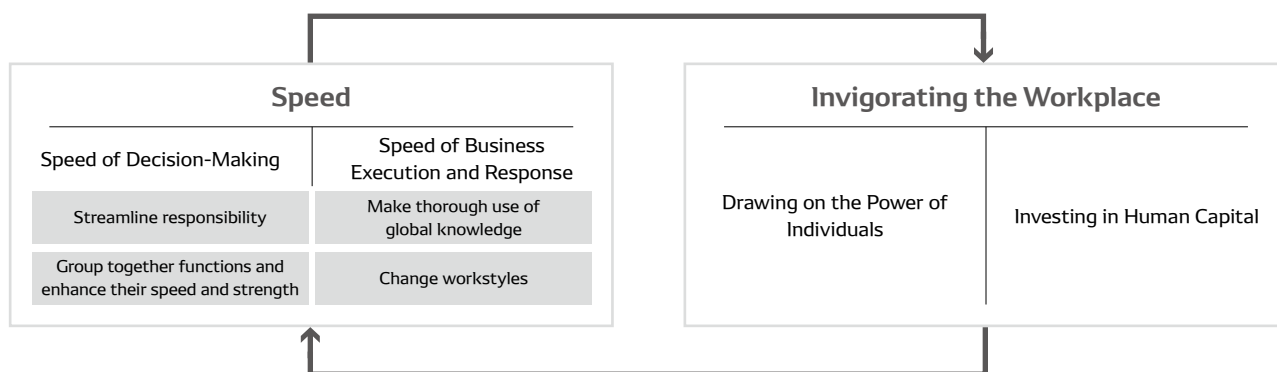


Organizational Capabilities To realize the above initiatives, we will draw on our management reforms to accelerate the speed of business execution, invigorate the workplace, and strengthen our organizational capabilities.



The Five Pillars of Management Reform

To reach the growth targets adopted in its Long-term Plan, DENSO must transition to an organization that acts with unprecedented levels of speed and can invigorate the workplace. To that end, DENSO has adopted the Five Pillars of Management Reform and is working to realize significant change in its management structure to enhance its organizational capabilities and compete in a challenging business environment.



1. Enhancement of Vehicle Perspective and Streamlining of Technological Development □ P.29

To effectively develop complex systems for automated driving and other technologies, we need to optimize our development from the perspective of vehicle-based systems. We are therefore reorganizing our businesses to accomplish just that. Also, as part of our strategy to achieve overwhelmingly high levels of differentiation in terms of components and systems, we are streamlining the technological development of our four key devices: ECUs, semiconductors, sensors, and motors, so that we can realize growth in new business domains and enhance the profitability of existing in-vehicle technology business.



2. Advanced R&D Function to Realize Agile Development Globally

We have established satellite R&D teams in Finland, Israel, and other epicenters of innovation in order to promote the development of highly competitive products that meet the needs of customers. Through these teams, we will collaborate with various local partners, such as universities, research institutions, and start-up companies, as we form alliances under shared goals. We will also promote new technological development that leverages the unique characteristics of local regions.



3. Business Unit Evolution and Smaller but Stronger Headquarters

We will increase the responsibility and authority of each business unit in an effort to increase the speed of our management and bolster our competitiveness. We will also streamline our head office by revising our personnel allocation from a "zero-based" perspective. At the same time, we will aim to transition to an organization that can create new value at unprecedented speeds.



4. Global Management with Optimal Use of Group and Regional Power

Our regional supervisors, who are responsible for achieving regional business targets, make proactive efforts through regionally independent management at a speed that best fits their individual region. Their efforts will help us transform into an organization that can realize faster decision-making and business execution on a global scale.



5. Way of Working with Tremendous Speed and Efficiency

We will establish an environment in which employees can work without being bound by the constraints of location and time while working to reform our various business processes, thereby ensuring productivity and realizing a work-life balance for our employees. In these ways, we aim to become a company with incomparable front-line capabilities and where employees can work with passion and a smile.

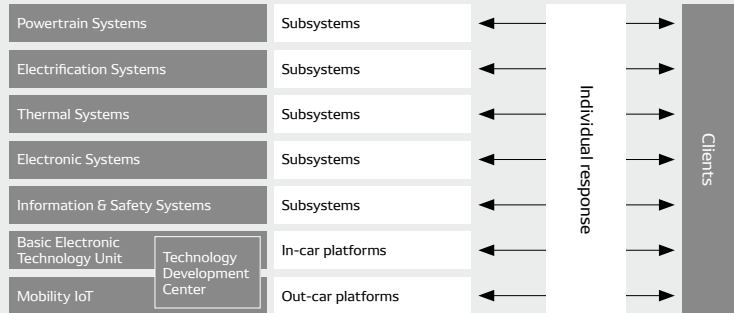


Organizational Reform 1

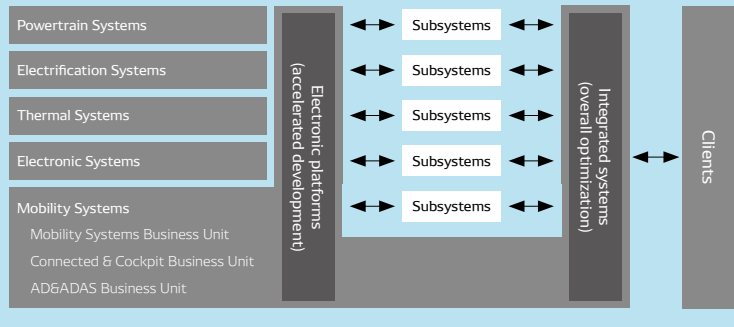
Enhancing a Vehicle-Based Perspective

In the past, DENSO has provided subsystems in a manner that was optimized for each of its individual businesses. However, going forward, the Company needs to pursue development that is optimized from the perspective of vehicle-based systems. Under the management reforms it is currently pursuing, DENSO established the new Mobility Systems Business Unit. Through this business unit, the Company will develop integrated systems that achieve overall optimization, accelerate development of in-car and out-car electronic platforms, and offer proposals that best fit its customers.

Conventional Organization



New Organization

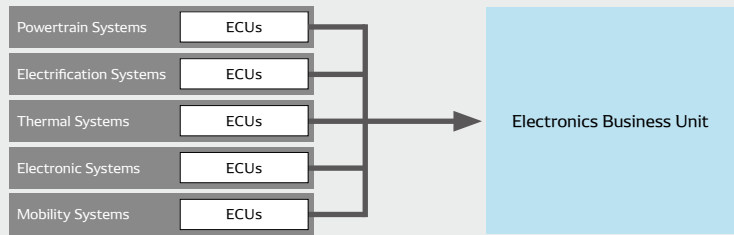


Organizational Reform 2

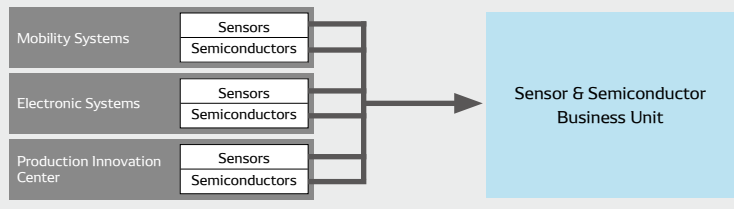
Strengthening Competitiveness by Streamlining the Technological Development of Our Four Key Devices

To further enhance the competitiveness of the key devices of ECUs, sensors, semiconductors, and motors, and realize overwhelming levels of differentiation for our systems, we streamlined the technological development of ECUs into the Electronics Business Unit and the technological development of sensors and semiconductors into the Sensor & Semiconductor Business Unit. In the past, such development was conducted by each individual business unit. In addition, with the aim of becoming a world leader in terms of motors, we integrated our small motor business with the large high-power motor business of ASMO Co., Ltd., a consolidated subsidiary, and reorganized relevant internal divisions to create the Motor Business Unit.

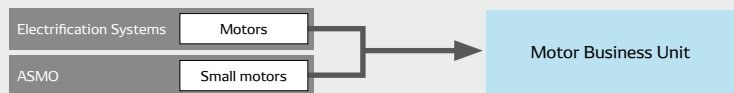
Streamlining the ECU Functions in Each Business



Streamlining the Sensor and Semiconductor Functions in Each Business



Integrating ASMO with DENSO



Four Focus Fields

To realize the growth targets adopted in our Long-term Plan, we are focusing on the fields of electrification, advanced safety and automated driving, and connected cars. In addition, we are working to provide new mobility value and establish factory automation and new technology for agriculture as our non-automotive businesses. In these ways, we are contributing to the improvement of industrial and social productivity.

Electrification

Provided Value Reducing Environmental Burden and Realizing Highly Efficient Mobility

DENSO has been engaged in the development of electric vehicle systems that are eco-friendly and enable even more comfortable travel. As a result, DENSO has realized high-functioning, compact, and fuel-efficient products that are essential for hybrid vehicles and is producing these products around the world. Going forward, we will leverage our expansive business domains to form linkages between various in-vehicle systems and products in an effort to efficiently manage energy within vehicles. In this manner, we will further improve fuel efficiency and contribute to the conservation of energy.



Advanced Safety and Automated Driving

Provided Value Realizing a Safe Society without Accidents, and Free and Comfortable Mobility

DENSO aims to create a mobile society without accidents and in which all people can move safely and with peace of mind. Guided by this aim, DENSO has developed reliable, high-quality safety technologies. By enhancing our long-cultivated sensing technologies as well as our AI and information technologies, we will further contribute to the development of automated driving. Maintaining our firm commitment to quality, which we have adopted since our founding, we will deliver genuine peace of mind for the future of the mobile society.



Connected Cars

Provided Value Realizing a New Mobile Society That Connects Vehicles, People, and Goods

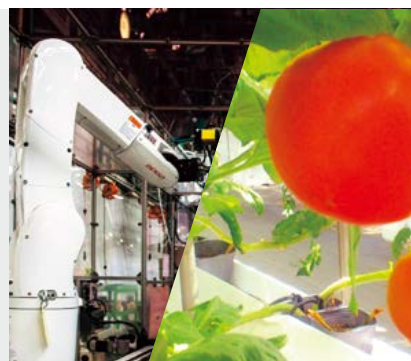
Amid the major transition from the trend of owning a vehicle to the trend of using a vehicle as a service, DENSO is pursuing efforts in the Mobility-as-a-Service (MaaS) business, which involves providing mobility services that move people and goods. Going forward, we aim to provide convenient, safe, and secure transportation methods for people with vehicles and for those without, thereby contributing to the realization of a new mobile society.



Non-Automotive Businesses (FA and Agriculture)

Provided Value Contributing to Improved Social and Industrial Productivity

DENSO has a solid track record of introducing factory automation (FA) systems in 130 factories. Leveraging this record, we will propose and provide FA systems that can meet the diverse needs of our customers, thereby making extensive contributions to the development of the manufacturing industry. Also, with the aim of delivering happiness to all people through agriculture, we will draw on the expertise and know-how we have cultivated in the automotive field to offer new value in agricultural fields.



Mid-term Plan

Under its Long-term Plan, DENSO has adopted growth targets for fiscal 2026 of reaching revenue of ¥7.0 trillion and an operating margin of 10%. As a checkpoint within that process, we have set a target for fiscal 2022 of achieving revenue of ¥5.6 trillion and an operating margin of over 8%. To steadily accomplish these targets, we have formulated specific action plans from the following perspectives: “taking on the challenge of creating new value,” “strengthening profitability to support future growth,” and “reforming our management foundation.”

1 Taking on the Challenge of Creating New Value

- Establish de facto standards in integrated vehicle systems and lead the way in electrification and automated driving
- Create new value and business models for mobility services
- Position FA and agriculture as new business pillars
- Flexibly create new products in epicenters of innovation around the world

2 Strengthening Profitability to Support Future Growth

- Implement speedy business management through a smaller head office and headquarters and enhance Group companies in Japan and overseas
- Establish a source for competitiveness by creating innovative technologies using our key devices and establishing industry standards
- Realize unrivaled front-line capabilities through *DANTOTSU* plants and factory IoT
- Significantly accelerate development and bolster profitability through co-creation with business partners and business process innovation

3 Reforming Our Management Foundation

- Inherit the DENSO Creed and establish a solid foundation for quality and safety in new domains, such as robotics and digitization
- Draw on the power of individuals and maximize speed and front-line vitality by developing motivated human resources and utilizing cutting-edge IT
- Establish lean production systems throughout the supply chain and enhance the competitiveness of our manufacturing
- Develop businesses with an awareness of the SDGs and ESG in order to create a sustainable society

Looking Back on the Previous Mid-term Plan

Mid-term Plan 2018 (fiscal 2016 to fiscal 2018)			
Vision	<ul style="list-style-type: none"> • Develop products that maximize vehicle value and promote them in global markets • Remain committed to reducing environmental burden and traffic accidents • Realize an enriched society in which everyone can live safely and securely 		
	⇒ Strengthen the foundation for taking on new challenges and realize steady growth		
Policy Outline	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;"> Business Fields to Focus on <ul style="list-style-type: none"> • Contribute to society focusing on the environment, security, and safety • Expand aftermarket and new businesses • Strengthen global markets by forming trust-based relationships with customers and enhancing our local presence </td> <td style="vertical-align: top;"> Functions to Reinforce <ul style="list-style-type: none"> • Develop world-first and regional innovation products • Improve manufacturing potential and expand <i>DANTOTSU</i> on a global basis • Accelerate management speed through global collaboration </td> </tr> </table>	Business Fields to Focus on <ul style="list-style-type: none"> • Contribute to society focusing on the environment, security, and safety • Expand aftermarket and new businesses • Strengthen global markets by forming trust-based relationships with customers and enhancing our local presence 	Functions to Reinforce <ul style="list-style-type: none"> • Develop world-first and regional innovation products • Improve manufacturing potential and expand <i>DANTOTSU</i> on a global basis • Accelerate management speed through global collaboration
Business Fields to Focus on <ul style="list-style-type: none"> • Contribute to society focusing on the environment, security, and safety • Expand aftermarket and new businesses • Strengthen global markets by forming trust-based relationships with customers and enhancing our local presence 	Functions to Reinforce <ul style="list-style-type: none"> • Develop world-first and regional innovation products • Improve manufacturing potential and expand <i>DANTOTSU</i> on a global basis • Accelerate management speed through global collaboration 		
Overview	<p>Through activities to expand sales in overseas markets and sales of new products to customers, we continued to achieve record-high revenue in each fiscal year. Meanwhile, we carried out investments geared toward future growth and worked to launch new products. As a result, operating profit remained relatively unchanged in fiscal 2016 and fiscal 2017.</p> <p>However, we continued to enhance our product lineup in the environment, safety, and security fields and expand our <i>DANTOTSU</i> plants. We also promoted a shift toward local overseas production to establish a foundation resilient to fluctuations in foreign exchange rates, thereby further streamlining our operations. Through these efforts, we were able to realize significant growth, as highlighted by the recording of record-high revenue and operating profit in fiscal 2018. At the same time, we were able to establish concrete goals for achieving growth over the medium to long term going forward.</p>		
Results	<ul style="list-style-type: none"> • Introduced products that support highly sophisticated driving and developed and promoted compact products • Strengthened development structure for SiC and exhaust subsystems • Accelerated development through the extensive utilization of open innovation • Formulated and promoted growth scenarios with a focus on establishing FA and agriculture as new business pillars • Worked toward meeting targets for rolling out <i>DANTOTSU</i> plants in Japan and overseas • Introduced shared global personnel system and reinforced global management education 		
Issues	<ul style="list-style-type: none"> • Strengthening of system proposal capabilities, including for electrification, automated driving, and MaaS, to respond to the rapidly changing mobile society • Establishing a business model for mobility services • Expanding current and establishing new <i>DANTOTSU</i> plants and factory IoT overseas 		

/ DENSO at Work /



Bringing together our knowledge and skills under a shared belief and remaining committed to the highest level of quality



The strength of skills that are enhanced through discipline and tradition



2

REINFORCING THE STRENGTHS AND FOUNDATION THAT SUPPORT GROWTH

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Strengths That the Company Has Nurtured Since Its Founding

Research and Development

In research and development—the starting point for new value creation—we are taking steps to further strengthen planning and R&D in order to accurately perceive society's needs and produce competitive products. DENSO is promoting roadmaps that show the path for advancing relative to each successive period: short term (five years), medium term (10 years), and long term (11 years or more). The roadmaps will incorporate changes in regulations and the needs of the global community. Using these roadmaps, divisions responsible for product commercialization will take the lead in deciding the R&D themes to be started and terminated after they are shared with each division, the Engineering Research & Development Center, and the Production Innovation Center.

In addition, to strengthen the global development network, we maintain technical centers in seven regions throughout the world and incorporate technical proposals tailored to local needs.

DENSO considers R&D expenditure at around 9% of revenue to be an appropriate level, and in fiscal 2018, the year ended March 31, 2018, R&D expenditure came to ¥447.4 billion and is expected to be ¥495.0 billion in fiscal 2019.

The Key to Our Strength

Advanced Research Focused on the Future → **TOPIC**

The Advanced Technology Research Laboratories were established in 1991. These laboratories are responsible for long-term R&D and are equipped with state-of-the-art facilities. At these laboratories, we conduct research and development of future technologies looking five to 20 years ahead. We perform advanced technology research in a wide range of fields, from power semiconductors such as silicon carbide (SiC) to key AI technologies for automated driving, which has led to commercialization over the near term.



Commitment to World-Firsts

Based on its mission of “contributing to people’s well-being through new value creation,” DENSO is committed to creating world-first products that take into account the environment, security, and safety. DENSO has created various world-first products including stereo cameras, millimeter-wave radars, and control ECUs that help detect pedestrians and support pedestrian-avoidance steer assist systems as well as WLP-type* pressure sensors with world-leading accuracy and built-in temperature sensors.

* WLP: Wafer level package



Global R&D Structure

With technical centers based throughout the world (Japan, the United States, Germany, China, Thailand, India, and Brazil), DENSO transcends the internal and external boundaries of the Company and collaborates with automakers, research institutions, universities, and other organizations to develop advanced technologies and products that meet the needs of each region.



Partnerships That Support Advanced Automaking

DENSO provides technologies and products to the world’s automakers. As the best partner with the best solutions, DENSO collaborates with automakers to meet a wide range of end-user needs with technologies and know-how accumulated through the development of new technologies in every field.



TOPIC Advanced Research Focused on the Future

Pursuing Technological Innovation to Nurture Dreams and Ensure the Sustainability of the Human Race

In March 1991, we established the Fundamental Research Center to carry out long-term research and development with a focus on the future. At this center, we pursue R&D activities centered on the semiconductor, materials, human machine interface (HMI), AI, and biotechnology domains.

The aim of our research at this center is to comprehensively establish and promote technologies that will be useful in the future. To realize an even safer, more sustainable society while protecting the limited resources available on our planet, and to deliver new value to the mobile society, we are repeatedly carrying out trial-and-error experiments on a daily basis to discover new technologies and ideas.

In July 2017, we changed the name of the Fundamental Research Center to the Advanced Technology Research Laboratories with the goal of further accelerating our research on advanced technologies.

Promoting the Development of SiC Wafers under the Theme of Applying Incomparable Quality to In-Vehicle Technologies

SiC semiconductors are an essential component for improving the performance of electric and hybrid vehicles. Since more than 20 years ago, we have been engaged in R&D activities pertaining to SiC wafers, which function as the circuit board of semiconductor devices, and have been working to commercialize these wafers. If SiC wafers have even the slightest crystal deficiency, they can cause severe damage within the inner workings of a vehicle. Accordingly, it is absolutely necessary to eliminate these deficiencies to the greatest extent possible. To this end, we make meticulous efforts to control temperature and pressure within the sublimation and recrystallization process for SiC, which is conducted in a growth furnace at temperatures of over 2,300 degrees Celsius. In addition, we use unique RAF technology* that involves isolating the small areas on the developed crystal that are relatively unexposed to crystal deficiencies and subsequently growing these areas. Through the repeated implementation of this process, we create high-quality wafers.

Furthermore, we conduct SiC wafer processing in our rigorously managed cleanrooms, where even the slightest impurity is unacceptable. With the aim of commercializing these wafers, we are promoting research to enhance the efficiency of these processes and further develop relevant technologies.

* RAF technology: Repeated A-Face growth technology

Observing, Understanding, and Changing People to Realize a New Generation of Safety

The era in which people and vehicles communicate has begun, reflected by automated driving and connected vehicle technologies. In our research on human nature, we make full use of the latest driving simulators to sense the physical and mental conditions of drivers (observation and understanding) and research driver actions (change) that occur in accordance with those conditions. For example, for sensing physical and mental conditions, we observe various physical information on drivers, including not only sweating and eye movement but also muscle movement and blood flow in the brain. This physical information is then used to observe the level of drivers' nervousness, sleepiness, and relaxation as well as changes in their emotional behavior. We ascertain the data we collect through these activities as driver behavior and leverage this data to develop technologies that deeply connect to people and support safe and comfortable movement by such means as providing warnings to drivers and offering them peace of mind.

Also, in recent years we have been focusing our efforts on the research and development of AI. Drawing on our algorithms, calculations, and data, as well as the commitment to quality and semiconductor technologies that we have developed in the in-vehicle technology domain, we are pursuing research aimed at realizing the practical application of AI technologies within in-vehicle equipment. AI is also an essential element in the environmental recognition required in automated driving. Based on information acquired through cameras and sensors, we are taking steps to develop technologies that accurately assess the position and conditions of physical objects in the surrounding area. Also, we use such information in our research on AI technologies that can select optimal actions after estimating various risks. In these ways, we are pursuing the development of AI that can observe people's behavior, analyze the surrounding environment, and take appropriate action on its own, thereby benefiting and supporting the safety of people.



Monozukuri

Since its inception, DENSO's *Monozukuri* has thoroughly integrated in-house technologies. Through *Monozukuri* positive steps are taken to design and manufacture equipment, production lines, materials, and processing methods. This enables us to provide society with the world's most advanced groundbreaking technologies and products conceived by our R&D.

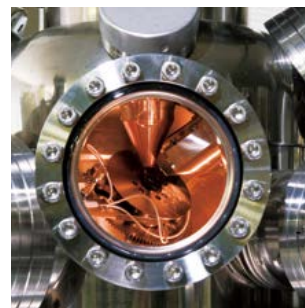
We have striven to develop speedy and efficient production lines and compact unique facilities, as well as streamline distribution and inspection with our own production technology, and we have built a *DANTOTSU** plant that performs *Monozukuri* at a *DANTOTSU* price. This has enabled us to also ensure high efficiency and high quality and offer competitiveness and added value to our products.

* *DANTOTSU*: A *DANTOTSU* plant is one that undertakes *Monozukuri* at a *DANTOTSU* (outstanding) cost. A *DANTOTSU* plant is at such a high level that it cannot be compared to other plants.

The Key to Our Strength

Materials Technology That Creates Things That Don't Exist

To pursue product performance and quality, if we don't have suitable general purpose materials, we create them. This is part of our commitment to DENSO's *Monozukuri*. DENSO's materials engineers are active on a global scale and collaborate with materials manufacturers to develop materials that help us achieve world-first products and world-best performance.



Production Technology That Gives Shape to World-First Ideas

DENSO leverages world-class micro-processing and an assembly line that improves production efficiency and quality. DENSO also supports world-first products and the world's highest level of product performance and quality from a *Monozukuri* perspective by designing and manufacturing its own equipment and production lines.



DENSO's First-Class Factory IoT That Leverages the Knowledge of People

We take our abundance of data on people, products, and facilities and convert it into valuable information, such as information on signs of equipment flaws and information that contributes to expert know-how. 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. By 2020, we aim to form global linkages between our 130 plants in an effort to improve productivity on a Groupwide basis.



Quality Assurance That Helps Protect Precious Lives

→ TOPIC

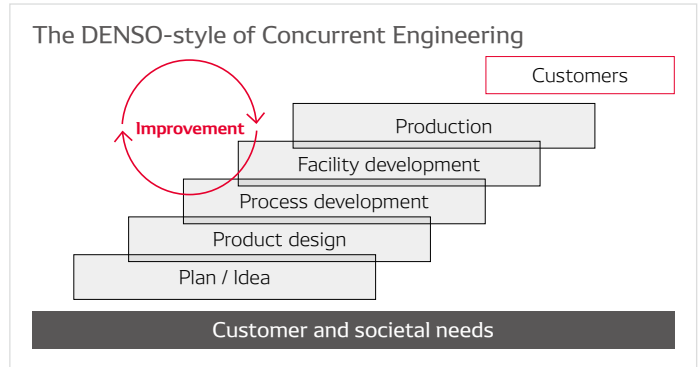
In order to make automobiles that can be driven with peace of mind, DENSO, as a parts manufacturer, has owned a test course from early on. Having evaluation equipment comparable to that of automakers, such as a high- and low-temperature wind tunnel testing room, an electromagnetic wave darkroom, and equipment for conducting rain tests, DENSO repeatedly runs tests that simulate the driving environments of any part of the world and strives to maintain high quality and trust in its products.



R&D × Monozukuri

Concurrent Engineering

At DENSO, we believe that new product development comprises both R&D and *Monozukuri*. As with any new technology, if it cannot be turned into reality it cannot be developed into a product. Because R&D and *Monozukuri* jointly contribute knowledge and provide a positive influence, we can produce new products of a higher dimension.



The Key to Our Strength

The Two Prongs of R&D and Monozukuri

We have been working on concurrent engineering to closely coordinate between the product development department, which is engaged in everything from development to mass production, and the manufacturing technology department. Thus, by thinking about the technology and process that achieves new products, we can develop products with a higher degree of perfection in a shorter period of time. To turn this into reality, engineers and technicians will work together to achieve commercialization. Concurrent engineering is now becoming mainstream in the world of *Monozukuri*, but at DENSO, since the 1970s we have engaged in concurrent engineering as next-generation product research. This is a method that DENSO has continued with great commitment.

TOPIC Quality Assurance That Protects Lives

Pursuing Value for the New Age of Automobiles from the Lands of the North

To protect product quality and ensure people’s safety, DENSO has been conducting cold-climate testing in various locations in Hokkaido. In 1998, we began tests for brake-related products on Lake Abashiri in the winter, when it freezes over. Since the rise in expectations regarding safety performance in the 1990s, we have been working to anticipate the needs of changing generations. To this end, we established the Abashiri Testing Center, which enables in-vehicle tests on the completely different road conditions that exist during winter (January to February) and summer (May to November). With the aim of offering the world safe products that can handle any environment, we have established testing courses that anticipate the various road

conditions in locations around the world, such as northern countries with heavy snow, European cities with stone paving, urban areas with high traffic, and highways. Leveraging these courses, we conduct in-vehicle evaluations.

The Abashiri Testing Center has helped us strictly maintain the high levels of quality—represented by the slogan “Quality DENSO”—that we have offered since our founding. No matter what kind of changes occurred in terms of technologies and vehicles, the guarantee of reliability has always provided us with our foundation. While continuing to adhere to the idea of offering products to the world that can truly be used with peace of mind, we will actively contribute to the development of technologies related to electrification and automated driving as well as new technologies that will lead us into the future.



Hitozukuri

“The best products are made by the best human resources.”

DENSO has positioned human resources as its most important management resource. Accordingly, the Company has focused on the training and skill development of employees based on the idea that human resource development supports R&D and *Monozukuri*.

The Key to Our Strength

Introducing a Global Common Personnel Management System to Promote the Active Role of a Diverse Group of Employees

In January 2016, DENSO introduced a global common personnel management system targeting the nearly 2,300 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. Through this system, DENSO aims to further develop its global business by recruiting employees with a diverse range of values and abilities.



Developing Young Employees Who Will Play Global Roles

DENSO implements an overseas training program with the purpose of having employees in their 20s to early 30s experience different value systems, cultures, and business practices and acquire the necessary experience and knowledge to be active on a global scale. Every year, nearly 100 employees enter this program and are dispatched to an overseas location to work for a maximum of two years.

Additionally, we are actively increasing the number of opportunities for overseas employees to work at our headquarters in Japan. In doing so, we are encouraging our young employees to develop themselves from a global perspective through friendly competition.



Nurturing Young Technicians

Believing that the development of advanced engineers and technicians who enable innovative product development and production is the key to corporate growth, DENSO operates the DENSO Industrial School (offering industrial high school and specialized vocational high school courses), which carries on the tradition of the technical training schools established in 1954. In addition to domestic Group companies, this school supports the development of technicians from certain suppliers. Also, we are providing support to develop technicians at our overseas locations in such ways as establishing training facilities, introducing educational tools, dispatching lecturers from Japan, and accepting overseas employees as trainees at the DENSO Industrial School.

Many young technicians who have participated in our educational systems have gone on to become World Skills Competition medalists who compete at the world’s highest level. At the 44th World Skills Competition, held in Abu Dhabi, United Arab Emirates, in October 2017, 17 of our technicians from Japan, Thailand, Indonesia, Vietnam, and Mexico competed in eight categories, winning gold and bronze medals.

Accumulated Medals Won at All World Skills Competitions

Total number of acquisitions

63


GOLD
32


SILVER
16


BRONZE
15

TOPIC Employees That Support DENSO's Product Development and *Monozukuri*

Winning a Total of Four Gold Medals at the 55th National Skills Competition and the 37th National Abilympics

At the 55th National Skills Competition held in November 2017 in Tochigi Prefecture, 34 DENSO participants competed in 10 categories. Of these categories, our participants won gold medals in "mechanism assembly," "punching dies," and "ambulatory robots." In addition, two DENSO participants competed in the 37th National Abilympics, winning a gold and silver medal in the "electronic device assembly" category.

In addition to achieving an outstanding performance, our goal for participating in the Skills Competition and Abilympics is to refine the mentality, techniques, and constitution of our young technicians, who will become experts in the future through training, and to pass the necessary skills on to them.

Going forward, we will continue to cultivate and pass on skills to our young technicians through efforts in the Skills Competition and Abilympics.



Establishing the "Master Meeting" That Brings Together Plant Managers

In May 2018, we established the "Master Meeting (*Kiwami no Kai*)," an event that brings together DENSO plant managers, who oversee employees on the front lines of our *Monozukuri* efforts, to encourage self-improvement. The name "Master Meeting" reflects President Koji Arima's strong desire to have our plant managers "master their skills and teamwork capabilities." The meeting works to establish trust-based relationships that extend horizontally beyond the existing organization to create a culture in which people help each other. At the same time, the meeting aims to help plant managers improve themselves by making new realizations and pursuing new studies. It also aims to develop successors and supports the passing down of essential skills.

Moving forward, we will continue efforts such as these to strengthen mutual trust and enhance our execution speed and front-line dynamism under a shared sense of unity. In this way, we will overcome the significant changes we face during the paradigm shift.

極の会

2018.5.29 東京 豊洲



Special Feature

Always Ahead of the Times, Always Evolving

The Origin of DENSO's Technology and Craftsmanship—The Winding

Dynamometers, Alternators, and Motor Generators

The winding is an essential element for generating power and supplying it to electrical components; it is the key to power generation performance. Amid its long history, DENSO has continuously created, evolved, and improved winding technologies. These technologies are currently being used to make advancements in electrification, one of DENSO's key areas of focus. This section provides an overview of the evolution of DENSO's winding technologies and introduces the efforts the Company has continued to pursue to meet the needs of the times while leveraging its unique strengths.



What Are Dynamometers, Alternators, and Motor Generators?

Dynamometers, alternators, and motor generators (MGs) are electrical generators that convert a certain amount of mechanical energy from the engine to electrical energy. In addition to providing the necessary energy for starters to initiate the engine's operation and charging the vehicle's battery, these devices supply energy to the electrical components located throughout the vehicle. Specifically, dynamometers are commutator generators that generate direct currents, while alternators are commutators that generate alternating currents. Meanwhile, MGs are power generators used in hybrid vehicles.

History of DENSO's Technological Evolution

- 1949 **Dynamometer** 1
Commenced the manufacture of dynamometers at the time of the Company's founding. Realized high levels of productivity and improved quality by promoting automated winding component development.
- 1962 **Type-I Alternator** 2
Commenced development and realized mass production of Japan's first alternator. Remarkably improved reliability of alternators.
- 1982 **Type-III Alternator**
Developed compact alternator with overwhelmingly high output (30% higher output and 20% reduced weight), thereby realizing a No. 1 global share.
- 2000 **SC Alternator**
Achieved significant improvement in power generation efficiency and weight reduction. Produced a cumulative total of 100 million units in 2012.
- 2011 **MG Stator**
Developed MG stator in collaboration with Toyota Motor Corporation amid the emergence of hybrid compact cars.
- 2016 **MG Stator** 3
Developed MG stator that is 35% smaller than conventional models. Also, succeeded in reducing power loss while improving quietness.

Aiming to Realize More Compact, Lighter Products with Higher Output

Since its founding in 1949, DENSO has continued to make improvements to its winding technologies, developing dynamometers that boast high levels of productivity and quality and realizing the development, manufacture, and mass production of Japan's first alternator.

Motor generators are an essential component in making vehicles move and allowing them to continue to run. To answer the need for compact vehicles and enhance fuel efficiency, we have steadily evolved our technologies with the aim of realizing more compact, lighter motor generators with higher output.

Promoting Teamwork That Transcends Borders to Create Unprecedented Products

Since the first oil crisis in 1973, there has been a significant social need for the fuel efficiency of vehicles. This social need puts us on the path to developing more compact, lighter alternators that realize significantly improved performance. In 1979, to respond to demands from automobile manufacturers, we formulated Companywide targets of improving the fuel efficiency of alternators by 35% while reducing their weight by 20%. In addition, we also aimed to boost their output by 30%. Guided by these targets, we began to take steps toward the development of type-III alternators, which would play a key role in the next generation.

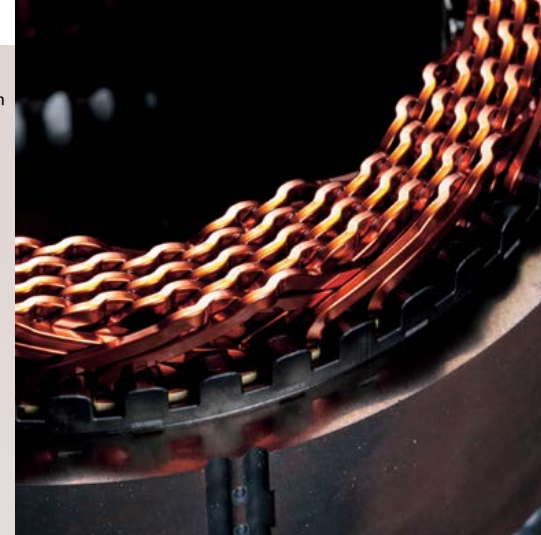
First, to resolve the seemingly contradictory issue of reducing weight and boosting output, we examined the development of high-speed, high-load bearings that allow for 1.5 times the number of revolutions. While initially the business partners we asked to help us develop such bearings refused, stating that they believed it was impossible, we were persistent in our efforts to communicate the kind of mobile future that could be realized through the development of next-generation alternators as well as the importance of the bearings in developing such alternators. Thanks to this persistence, we were able to form a collaborative development team and commence the development process. In addition, to reduce internal power losses, we developed high-density winding technology that made it possible to integrate product, production, and equipment designs. Furthermore, we realized various innovations in terms of both design and production. These included improving the cooling performance of the alternator and reducing the noise it makes, sharing production lines that are able to handle products of different sizes and specifications, and making advanced progress with production technologies, such as those that automatically detect abnormal noises. All of these accomplishments were made under the shared goal of realizing the world's best products through the world's best production systems. These accomplishments also reflect DENSO's unique style of combining technologies, skills, and expertise to steadily

promote honest efforts over and over again. Through such efforts we developed our type-III alternators, representing a groundbreaking product that was more compact, lighter, and achieved a higher output. Garnering high levels of praise both domestically and overseas, these alternators secured the top share in the global market.

Gathering Together Skills and Technologies to Realize New World-Leading Products

Without being content with the results we had thus far achieved, we developed the SC alternator in 2000 as a new product that realizes dramatically improved performance. This SC alternator significantly surpassed our type-III alternator in terms of enhanced output and reduced weight. It also achieved high electromagnetic compatibility (EMC), which inhibits the generation of electromagnetic waves (i.e., noise), and realized minimal electromagnetic noise.

When developing the SC alternator we adopted concurrent engineering, which further evolved the development process we employed for the type-III alternator. We also formed a new project team, called the Manufacturing Laboratory, which combined production and equipment design and brought together engineers and technicians to undertake everything from procurement and process design to the development of processing technologies. Also, by using rectangular conducting wire (segment conductors) as opposed to conventional round-shaped wire, we succeeded in making weld joints that uniformly aligned wires without gaps by having them form a U-shape instead of continuously winding them. Through the strength of concurrent engineering, we were able to overcome this extremely difficult technological hurdle. With our type-III alternators, the limit on coil density was around 42% to 43%. However, with our initial SC alternators we increased that limit to 65%, and as of 2018, we have raised that limit even further, to 70%. As a result, we have created an alternator that is even more compact and realizes significant improvements in power generation efficiency with less noise. By 2012, we had manufactured a



cumulative total of 100 million SC alternators. Now, we continue to maintain a high level of competitiveness for these alternators on a global scale.

Pursuing the New Era of Powertrains with Our Long-Cultivated Winding Technologies

To respond to the era of automotive electrification, we are working to further evolve our MGs. In 2011, we developed our first MG. Together with Toyota, we worked tirelessly to realize the practical application of this product in compact, hybrid vehicles. Compared with similar products, our first MG achieved significantly higher output and enhanced durability against high voltages. In 2016, for original hybrid vehicles, we jointly developed a new MG that made use of SC winding technology. To develop this MG, we made use of rectangular conducting wire in the same manner as we did with our SC alternators, thereby improving the winding space factor in the generator's core, where conducting wire is inserted, by over 10%. Furthermore, to cut down on the overlapping of wires that wind around the stator, we leveraged a unique manufacturing technology that involves layering U-shaped conducting wire one by one in a straight line. Through this design, this MG not only realizes eco-friendly, highly efficient power generation and driving, it also achieves high levels of quality and productivity.

Amid the growing need for the automotive industry to resolve safety and environmental issues, the role that the rotating electrical machine field plays is becoming even more significant. Moving forward, we aim to further develop this field by leveraging the winding technologies that we have accumulated since our foundation.



Strengths We Will Reinforce Going Forward

Enhancing Our Product Development Capabilities in the Soft Domain

As mentioned previously, DENSO's strengths have traditionally referred to its existing businesses, which have centered on the hard domain. Amid the accelerated integration of automobiles and IT, reflected by such technologies as automated driving and connected vehicles, the presence of the soft domain within the automotive industry is increasing, and added value is being created in domains that meld the hard with the soft. To further enhance our competitiveness during this period of significant change, we are cultivating human resources within the Company that specialize in the soft domain and introducing advanced development techniques (agile development). In addition, by actively pursuing external collaboration, we are working to strengthen our development capabilities within the soft domain and accelerate our overall development speed.

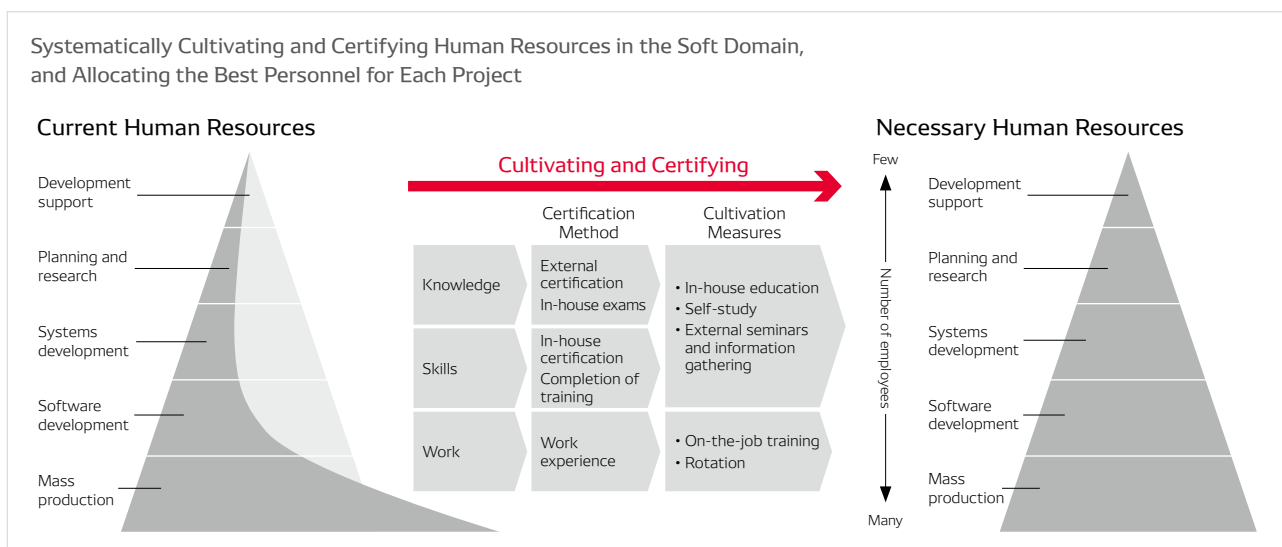
Cultivating Human Resources in the Soft Domain

With technologies such as automated driving and connected vehicles, the integration of automobiles and IT is occurring at an even faster pace. Under these circumstances, the value of the soft domain in terms of automobiles is rising, and competition to acquire outstanding human resources that specialize in this domain is becoming more intense. As productivity in the soft domain depends greatly on the capabilities of the individual, DENSO is

focusing its efforts on advancing the human resources within the Company that specialize in the soft domain and on realizing optimal personnel allocation. Through the software engineer verification system, which helps visualize the capabilities of engineers in the soft domain, we are working to grow the individual capabilities of our employees and place them in the best possible locations. In doing so, we aim to strengthen our competitiveness in the soft domain going forward.

Software Engineer Verification System

Activities	<ul style="list-style-type: none"> • Certify those who fulfill all the designated requirements in terms of the knowledge, skills, and work experience necessary for becoming a software engineer • Work to grow the capabilities of individual software engineers by having them receive the necessary education and training for receiving certification 	
	Individual	Organization
Aim	<ul style="list-style-type: none"> • Promote the skill development of individuals by using the certification to clearly identify the personnel who aim to work as software engineers 	<ul style="list-style-type: none"> • Showcase the software engineers who belong to the organization through the certification and utilize these engineers in the establishment of structures and the allocation of personnel when projects commence
Effect	<ul style="list-style-type: none"> • Improve software development capabilities • Enhance motivation thanks to the clear incentive of becoming certified 	<ul style="list-style-type: none"> • Visualize risks related to human factors within projects and clearly identify personnel in need of support • Systematically cultivate human resources that the Company is lacking or that will become essential in the future



Introduction of Advanced Development Method

In agile development, it is assumed that changes will occur to specifications and design from the early stages of development. Instead of strictly determining requirements from the beginning, agile development starts by breaking development work into small increments based on a flexible set of requirements and gradually moving forward with development by repeating a process that involves frequent installation and test execution.

For example, mobility services, which involve providing transportation methods to people as a service, represent a new domain for both DENSO and its customers, who are automobile manufacturers. The needs of end-users change rapidly and are becoming more diverse, which means that we can no longer adopt a conventional approach to development in which requirements are rigorously determined before actual development begins. Rather than waiting until requirements are determined to commence the development process, we will adopt an agile development approach in which we join together with automobile manufacturers to expand functions while constantly receiving feedback from the end-users.

To incorporate this development method and enhance our competitiveness in the soft domain, we established the Digital Innovation Department in April 2017. This department aims to establish a Companywide ICT* foundation and promote agile development geared toward fields that require large-scale systems, including connected vehicles and automated driving. This department was established in only a year's time since we came up with the idea for creating such an organization, and, at the moment, the department is already promoting five projects. Under an approach of "creating together with the end-users," the department will share the progress of project development with end-users once a week. Through this kind of close communication, the department will rapidly set a cycle of improvement in the development process into motion.

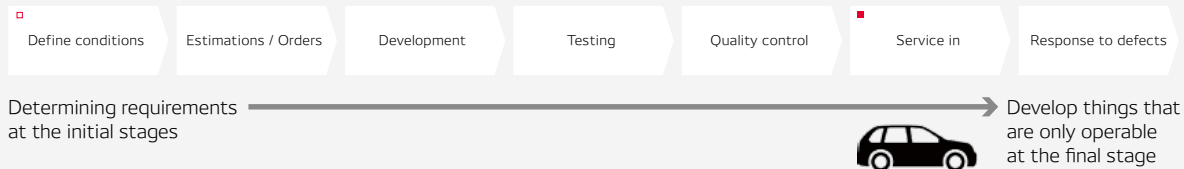
Currently, 40 employees belong to the Digital Innovation Department. However, as this department is receiving a large number of requests from both inside and outside the Company, we intend to increase this number as we expand the department to cover not only Japan but also overseas locations.

* Information and communications technologies such as IoT, cloud, AI, and big data

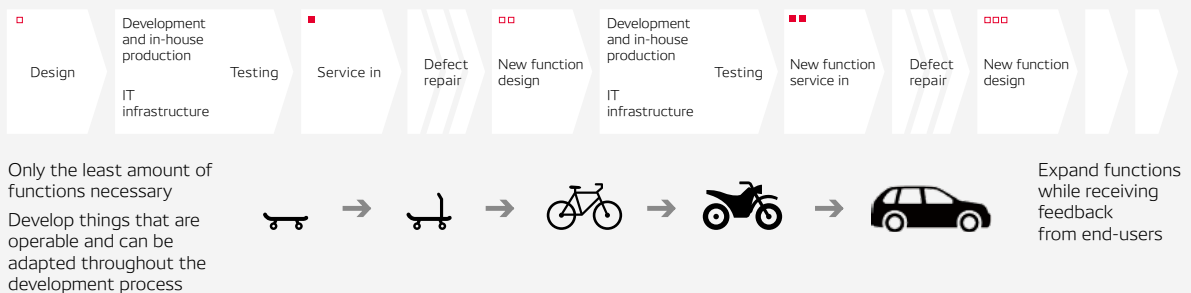
Difference between Agile Development and Conventional Development

Agile development is an optimal development method for meeting the needs of end-users in this era of rapid change.

Conventional Development (Waterfall System Development)



Agile Development



Strengthen External Collaboration (Technologies and Human Resources)

In the automated driving and other new domains, response technologies that focus on the soft domain are becoming more complex and sophisticated, and the speed of technological innovation is increasing. Accordingly, there is a limit on what can be done using only the currently available technologies. Through collaboration with optimal business partners, we are working to strengthen our technological capabilities and accelerate our development speed by acquiring new technologies and personnel.

When pursuing this kind of collaboration, we aim to acquire resources and technologies that are essential in the short and

medium term. We also aim to secure future technologies and new business models over the medium to long term. Guided by these aims, we are making active efforts to form business alliances.

Additionally, to acquire outstanding human resources in the soft domain, we established a branch office in Tokyo in 2016. Building on this expansion in Tokyo, we established a new R&D office in the Tokyo neighborhood of Shinagawa in April 2018. In these ways, we have been making efforts to establish an environment in which a greater number of personnel can gather. Over half of the employees at our Tokyo branch office are mid-career hires. Going forward, we plan on expanding the scope of our operations in Tokyo by acquiring not only software engineers but also personnel that can play a key role in product planning and business model creation.

DENSO's Business Alliance Strategy



TOPIC Establishment of Global R&D Tokyo

Employees: 200

In April 2018, we opened a new office in Minato Ward, Tokyo (near Shinagawa Station, a major railway hub), to serve as a base for conducting R&D on advanced driver assistance, automated driving, and connected vehicles. We will transfer a certain number of R&D functions located at our head office in Aichi Prefecture, as well as at our branch office in Tokyo, to this new office. In addition, we will make proactive efforts to hire software engineers and work to strengthen R&D functions throughout the early 2020s.



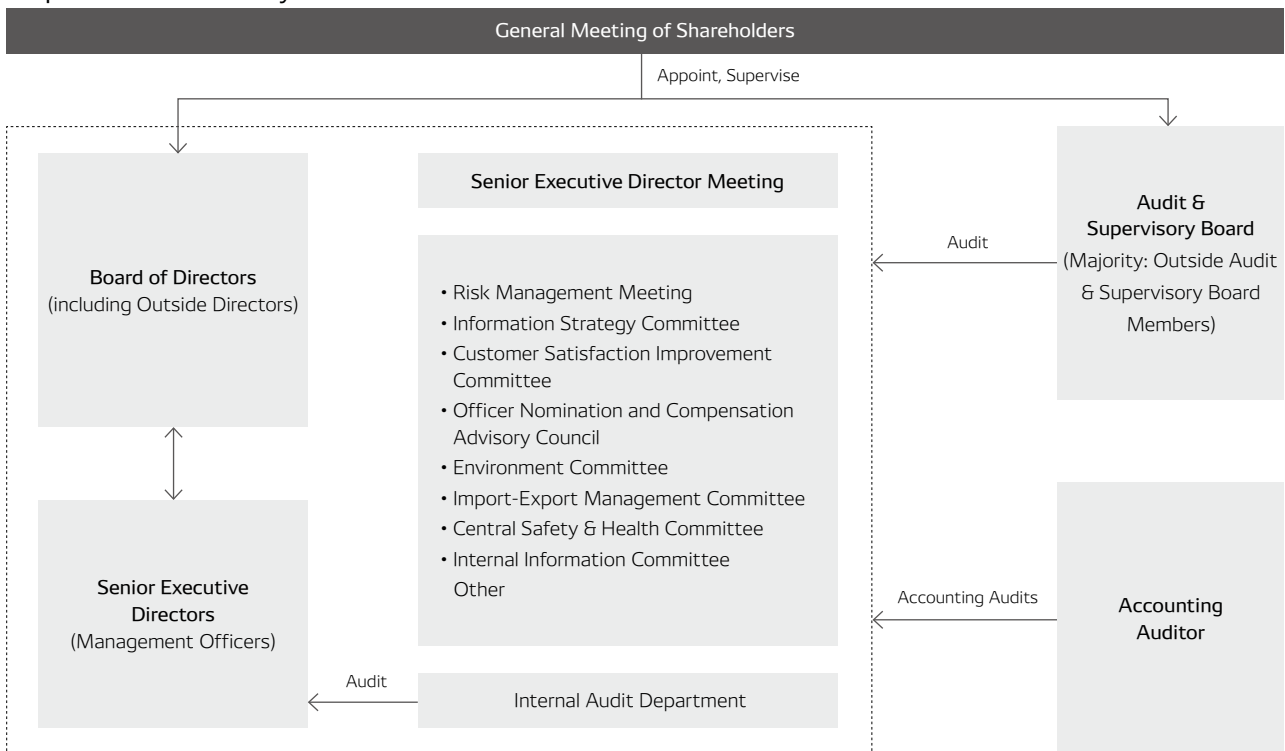
Corporate Governance

Basic Stance

DENSO believes that establishing a corporate governance system designed to strengthen Group competitiveness is the key to maintaining and improving long-term corporate performance in a quickly changing global marketplace. Specifically, DENSO CORPORATION has adopted a corporate auditor system. In addition to statutory bodies such as the General Meeting of Shareholders, Board of Directors, Audit & Supervisory Board, and Accounting Auditor, DENSO CORPORATION has developed various governance mechanisms. We are implementing highly sound, efficient, and transparent management by continuously providing shareholders and investors with information on the state of our business.

In June 2015, DENSO formulated the Basic Policies on Corporate Governance based on the Corporate Governance Code that aims for transparent and efficient corporate management.

Corporate Governance System



Strengthening Relationship with Shareholders

In line with its Basic Policies on Corporate Governance, DENSO is focusing on strengthening its relationship with its shareholders.

Securing the Rights and Equal Treatment of Shareholders

DENSO provides timely and accurate information needed for shareholders to exercise their rights. At the same time, the Company strives to establish an environment in which shareholders can exercise their voting rights and gives due attention to assuring the rights and equal treatment of various substantial shareholders, including foreign and minority shareholders.

Dialogue with Shareholders

DENSO will endeavor to realize good communication with its shareholders and investors by providing enhanced information that encompasses management strategies and financial information as well as by actively holding dialogues with the participation of Board members, senior executive directors, and executive directors in charge. The results of the dialogues are reported to the Board of Directors and the opinions of shareholders are utilized in the Company's management.

Corporate Governance System

Reason for Selecting Our Current Corporate Governance System

In addition to performing management decision-making that emphasizes *genchi genbutsu* (on-site verification), DENSO believes that it is important to build a system that can verify whether management decision-making has met shareholder expectations and whether there is a problem from the point of view of governance. Accordingly, we believe that the current system to supervise and audit the execution of business duties by the Board of Directors including outside directors, as well as Audit & Supervisory Board members including outside Audit & Supervisory Board members, is most suitable.

System Overview

The Company has established a management system that performs accurate decision-making and rapid business execution, while enabling proper oversight and monitoring.

As a system of decision-making for business execution, DENSO has established the Officer Meeting comprising the Board of Directors (which convenes once a month, in principle) as a “decision-making body” that resolves legal matters and important issues, as well as the Senior Executive Director Meeting (which convenes once a week, in principle) as a “deliberative body” that deliberates on matters from a Companywide perspective and submits motions to the Board of Directors.

Through a corporate officer system that separates and clarifies the roles between members of the Board, who are responsible for management (decision-making and supervision), and senior executive directors and executive directors, who are responsible for the execution of business operations, DENSO CORPORATION is streamlining the number of members of the Board and is realizing swift decision-making and business operations. Under this system, depending on the circumstances, members of the Board serve concurrently as senior executive directors and executive directors to ensure that the Board maintains an overall balance of knowledge, experience, and ability. DENSO CORPORATION sets the term of office for members of the Board at one year, with the aim of building a flexible management structure that responds to changes in the management environment and further clarifying management responsibility during the business year.

Moreover, we have strengthened our corporate governance system by establishing the Officer Nomination and Compensation Advisory Council as an ad-hoc committee that corresponds to the Nomination Committee and the Compensation Committee in appointing directors and auditors and determining their compensation.

Overview of Corporate Governance System (As of June 20, 2018)

Format	Audit & Supervisory Board system
Number of directors	7
Chairman of the Board	President
Number of outside directors	2
Term of directors	1 year
Number of Audit & Supervisory Board members	5
Number of outside Audit & Supervisory Board members	3
Number of meetings of the Board of Directors*	15
Number of independent officers	4

* Total for the period from April 2017 to March 2018

Policy and Procedures for the Appointment of Directors and Audit & Supervisory Board Members

Policy	Nominate directors and Audit & Supervisory Board members from the viewpoint of striking a balance between diversity, experience, skills, and expertise so as to promote accurate and swift decision-making.	
Procedures	1	<ul style="list-style-type: none"> The president listens to the opinions of all parties, and taking into overall account performance, character, insight and other factors, he selects people who are suitable for those responsibilities and decides who to nominate in that fiscal year after consulting with the Officer Nomination and Compensation Advisory Council.
	2	<ul style="list-style-type: none"> Directors are selected based on an informal resolution by the Board of Directors and deliberation at the General Meeting of Shareholders. Audit & Supervisory Board members are selected based on an informal resolution by the Board of Directors and deliberation at the General Meeting of Shareholders, with the consent of the Audit & Supervisory Board.

Approach to Director Diversity and Size

At the Company, seven directors have been appointed, which is considered the appropriate number or size for promoting continued swift decision-making.

The breakdown is of people who are familiar with the management of each business and its pressing issues and the composition strikes a strong balance between expertise, experience, skills, and global perspective, including of outside directors.

Analysis and Evaluation of the Effectiveness of the Board of Directors as a Whole

Once a year, DENSO interviews all directors and Audit & Supervisory Board members about the effectiveness of the Board of Directors. The challenges and improvement plans extracted from these interviews are then reported to the Board of Directors and steps are taken to improve the Board's effectiveness.

Fiscal 2018 Evaluation of the Effectiveness of the Board of Directors (Held in March 2018)

Results of Interviews	Through the interviews carried out in fiscal 2018, the Company is able to confirm the following accomplishments: Increase in the number of statements from each director and more engaging discussion due to the reduction in the number of directors; proactive use of lunch meetings as opportunities to exchange opinions between inside and outside directors; increase in reports on current affairs from inside directors at the close of meetings; and overall improvement in the effectiveness of the Board of Directors thanks to the lack of any significant issues concerning management, proposals, and decision-making processes.
Issues	While there were invigorated strategic discussions related to investments, it was determined that there is room for improvement in terms of revising the scope and number of discussions.
Measures for Improvement	Based on interview results, DENSO's Board of Directors will implement the following improvement measures after giving them sufficient consideration. <ul style="list-style-type: none"> Hold discussions at off-site meetings and Senior Executive Director Meetings centered on themes submitted by participants in order to strengthen strategic discussion Create an annual schedule and report the results of strategic discussions to the Board of Directors on a regular basis

Audit System

As an audit system, in addition to Audit & Supervisory Board members, who have a legal function, we have established a specialized department for internal audits in our major domestic and overseas companies. In addition to a voluntary inspection system whereby each department of the Company and domestic and overseas subsidiaries inspect their own internal control status, we conduct ongoing site audits that include not only legal compliance but also the adequacy of management and business procedures. Audit & Supervisory Board members attend important meetings including meetings of the Board of Directors and Senior Executive Director Meetings and audit directors' execution of their business duties through the exchange of information with directors, the Internal Audit Department and internal control-related departments, and Accounting Auditors, thereby fulfilling their management oversight function.

Outside Directors and Outside Audit & Supervisory Board Members

The Company has appointed two outside directors. So that the Company can make better management decisions to improve performance and raise corporate value, it appoints people who have extensive knowledge about company management to be outside directors; they provide decision-making and oversight based on their knowledge. In addition, the Company has appointed three outside Audit & Supervisory Board members. In order to ensure the effectiveness of audits, we appoint people who are familiar with the trends in our industries and who are experts in the fields of law, finance, and accounting to be outside Audit & Supervisory Board members. These outside Audit & Supervisory Board members audit the execution of business duties from a standpoint that is professional, neutral, and fair.

Outside Directors	Reason for Appointment	Attendance at Meetings of the Board of Directors (fiscal 2018)
George Olcott*	George Olcott has managerial experience in foreign-capital companies, including his tenure as the head of a U.K.-based investment advisory company's Tokyo branch office. He also is a specialist in human resource development and corporate governance within global business management. The Company has appointed him as an outside director in the expectation that he will leverage his wealth of experience and considerable knowledge in academia and corporate management in the Company's management.	15/15
Takashi Nawa*	Takashi Nawa worked at McKinsey & Company, Inc., a strategic consulting firm, and served as senior advisor of Boston Consulting Group. In addition, he is a specialist in international corporate strategy, currently serving as a professor at Hitotsubashi University. The Company has appointed him as an outside director in the expectation that he will reflect his wealth of experience and considerable knowledge in the field of strategic corporate management in the Company's management.	14/15

Outside Audit & Supervisory Board Members	Reason for Appointment	Attendance at Meetings (fiscal 2018)	
		Board of Directors	Audit & Supervisory Board
Moritaka Yoshida	Moritaka Yoshida joined Toyota Motor Co., Ltd. in 1980 and currently serves as the company's vice president. The Company has appointed him as an outside Audit & Supervisory Board member in the expectation that he will reflect his wealth of management experience working at a leading manufacturer in the automotive industry and deep insight related to corporate activities in the Company's auditing activities.	14/15	15/15
Toshimichi Kondo*	Toshimichi Kondo established Kondo Accounting Office after working at Marunouchi Audit Firm (now Deloitte Touche Tohmatsu). He has been involved in accounting work for many years as a certified public accountant. The Company has appointed him as an outside Audit & Supervisory Board member in the expectation that he will reflect his high level of knowledge related to finance and accounting as well as the experience he cultivated through the analysis of corporate management in the Company's auditing activities.	15/15	15/15
Noriyuki Matsushima*	Noriyuki Matsushima currently serves as chief research advisor of the equity research division of Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. after working as an analyst primarily for the automotive industry at SMBC Nikko Securities Inc. The Company has appointed him as an outside Audit & Supervisory Board member in the expectation that he will reflect his expertise as an analyst for the automotive industry as well as the abundance of experience he has cultivated over many years through the investigation and analysis of corporate management in the Company's auditing activities.	11/11 (appointed in June 2017)	10/10

* Independent officers

Criteria for Judging the Independence of Outside Directors and Outside Audit & Supervisory Board Members

With respect to the independence of outside directors and outside Audit & Supervisory Board members, assuming that they fulfill the independence criteria stipulated by the Financial Instruments and Exchange Act, the Company possesses a wealth of experience and knowledge in specialized areas such as corporate management, law, and accounting and is required to be able to proactively make proposals, suggestions, and give opinions about management issues. The Company declares that four outside officers who meet the qualifications for independent director and Audit & Supervisory Board member are independent officers.

Executive Compensation

Policies

- Compensation for Company directors comprises fixed monthly compensation and a variable bonus based on Company performance. Compensation for outside directors and Audit & Supervisory Board members comprises solely fixed monthly compensation in order to ensure independence from management.
- The level of compensation is deemed appropriate for the Company based on economic and social conditions and trends at other companies.
- In particular, bonuses are decided based on operating profit after taking into overall account dividends, employee bonus levels, trends at other companies, medium- to long-term performance, and the record of past payments.
- Stock options and retirement benefits are not paid.

Directors	Monthly Compensation	Monthly compensation is decided by a resolution of the Board of Directors after consulting with the Officer Nomination and Compensation Advisory Council, and is an amount within a range established by a resolution of the General Meeting of Shareholders (total amount for directors: ¥80 million/month).
	Bonuses	Bonuses to each director are decided by a resolution of the Board of Directors after consulting with the Officer Nomination and Compensation Advisory Council and receiving approval of the resolutions of the Board of Directors and General Meeting of Shareholders concerning total payment to the directors.
Audit & Supervisory Board Members	Compensation Amount	Compensation is decided by consultation with Audit & Supervisory Board members after consulting with the Officer Nomination and Compensation Advisory Council and is an amount within a range established by a resolution of the General Meeting of Shareholders (total amount for Audit & Supervisory Board members: ¥15 million/month).

Compensation of Directors and Audit & Supervisory Board Members

Position	Total Compensation (¥ million)	Total Compensation by Type (¥ million)				Directors / Audit & Supervisory Board Members
		Base	Stock Options	Bonuses	Retirement Benefits	
Directors (excluding outside directors)	722	427	—	295	—	11
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	92	92	—	—	—	2
Outside directors	68	68	—	—	—	6

Internal Controls

With the aim of fair and efficient business operations, the Company formulated the DENSO Basic Policies for Internal Control. We have stipulated basic policies for control, various rules and systems in areas that form the basis of our management such as the code of conduct, management systems, risk management, and compliance. We make revisions and changes when necessary after undertaking regularly scheduled annual verifications of the status of implementation.

Dialogue with Outside Directors

Ideal State of Management for Overcoming the Period of Change and Further Improving Corporate Value



Outside Director

George Olcott

Mr. Olcott has been serving as an outside director with the Company since 2014. He also teaches as a guest professor at Keio University Faculty of Business and Commerce.

Outside Director

Takashi Nawa

Mr. Nawa has been serving as an outside director with the Company since 2014. He is also a professor at the Graduate School of International Corporate Strategy, Hitotsubashi University.

As the automotive industry approaches a paradigm shift, which is said to occur once every 100 years, DENSO has formulated its new Long-term Policy and is working to accelerate initiatives toward further growth. In this section, DENSO's two outside directors offer their candid evaluation and opinion regarding the Company's newly established vision and strategies as well as the direction in which the Company should head.

Please give us your opinion on the new Long-term Policy that DENSO has recently announced.

Olcott As the automotive industry faces up to a time of dramatic change, an urgent issue for DENSO is to evolve its organization so that it can meet the wide range of challenges that are coming. Taking into account this kind of business environment, I believe that the Long-term Policy is logical and that it points to a new organizational direction for DENSO which will enable the Company to respond to the significant changes ahead.

Speed is an important element of responding to change and I believe that we need a flexible but disciplined approach to exiting existing businesses and entering new ones. In particular, DENSO needs to promote the transfer of authority to overseas subsidiaries so that they can act more autonomously in a speedier and more decisive manner, as this will increase DENSO's overall organizational flexibility. If DENSO can transform itself in line with the various measures laid out in the Long-term Policy, the organization will be strengthened and enable these issues to be tackled.

Nawa In a positive sense, the Long-term Policy represents a new challenge for DENSO as it resembles policies of companies in Silicon Valley. While my first impression was that DENSO was aiming too high with this policy, that impression allowed me to recognize that DENSO has changed from the Company that it was before. Accordingly, there are many aspects of the policy that I look forward to with great anticipation. Rather than being a simple extension of previous policies, the new policy clearly conveys DENSO's desire to truly transform itself. It is now crucial that DENSO address the way in which it will accomplish the tasks of this policy and illustrate the path it must take to realize this transformation. If DENSO can explain those aspects more clearly going forward, then my level of expectations for the Long-term Policy will rise even higher.

Olcott I certainly agree with Nawa-san. My feeling is that President Arima has a sense of crisis regarding DENSO's approach to promoting the Long-term Policy, and he has mentioned the need for the Company to undergo a "Second Founding." When he talks about a Second Founding, I believe it sends a clear message to the Company's employees about the need for abandoning their conventional ideas and past successes and act as if they are creating the Company from scratch. However, it is important to transmit the message clearly and forcefully, providing a proper vision of our destination and how to get there.

Nawa DENSO is already burdened with a great deal of responsibilities, and one of which is its highly stable cash cow businesses. For DENSO employees, nurturing these cash cow businesses often becomes the top priority task, and it is extremely difficult to perform this task while also responding to the significant changes that are occurring. As a result, DENSO's management needs to further clarify the path the Company needs to take to realize the Long-term Policy. In addition, management needs to make appropriate preparations for taking on the challenge of not only changing the mind-set of each employee but also changing the very way that employees engage in their work.

What do you feel is the most important task for DENSO to undertake in order to achieve its Long-term Policy?

Growth in the Soft Business Domain

Olcott I have stated this at DENSO numerous times, but speed and scale remain extremely important aspects to address. Over the last 10 to 15 years, DENSO has significantly reduced the size of its Board of Directors, and in the past two years, the number of directors has been lowered to seven. Through actions such as these, DENSO has been working to accelerate the pace of decision-making and streamline the organization. In addition, DENSO has adopted "global

management with optimal use of Group and regional power” as one of the pillars of its management reforms. To this end, the Company has been working to delegate authority to its overseas subsidiaries, which is a crucial step in order to capture innovations that are occurring within the automotive industry. Much of this change and innovation is taking place outside of Japan and DENSO needs to act much more quickly to capture these opportunities, and delegating more authority to local companies is the key to do so. In particular, in the soft business domain and areas of connectedness, not just DENSO but Japanese companies in general are behind. It is therefore more important than ever that DENSO establish an effective framework for global information gathering by strengthening the quality of our global networks.

Nawa DENSO has been accelerating its efforts to combine soft and hard business domains, and I believe this is an area with an abundance of potential. Companies such as Google, Apple, and Tesla are also focusing their efforts on this task with the aim of creating new value. DENSO possesses a wide range of strengths, speaking in physical terms. However, to realize further growth in the soft business domain, the Company must adopt a much more proactive approach.

Olcott That is exactly right. When it comes to hardware, DENSO has unparalleled strengths. DENSO also enjoys a very robust financial foundation. To expand its business in the soft business domain, DENSO must strengthen its capabilities in software by adopting a

more open and flexible organizational architecture which will enable it to absorb, utilize, and mobilize external resources more effectively.

Global External Alliances and Utilization of Human Resources

Nawa Giving consideration to the further development of the DENSO Group, there are currently too few resources available to accomplish this goal. Furthermore, DENSO is beginning to experience the limitations of simply using the knowledge of Japanese people alone. It is therefore essential that the Company embrace diversity and inclusion going forward. Gathering together a pool of talent from outside sources is not effective if the Company does not have the capability to properly “include” this talent. “Inspiring” is a key word underscored in the Long-term Policy. To move forward with external collaboration on a global basis, I feel the significance of this key word will become even greater.

Olcott Through efforts to build up its brand and image, the Company has created the powerful slogan: “Crafting the Core.” By strengthening its brand, DENSO can better communicate its attractiveness both inside and outside the Group, and through this DENSO can increase its appeal as a potential partner or as a company for promising graduates to join.

From the perspective of utilizing global human resources, I feel it still takes far too long for employees from overseas to reach management positions and there are still cases where we rely on Japanese expatriates to fill these positions. To realize organizational evolution and globalize the managerial ranks, there needs to be a much stronger push from the top to encourage the active utilization of global personnel.

In addition, those who are involved in the Company’s important cash cow businesses may feel little incentive to changing the way they do business. I feel there is a particularly high number of these people in the middle ranks of the Company. DENSO’s top management needs to send a firm message to them to reiterate the necessity of adopting a new approach to work.

Nawa As Olcott-san stated, in Japan, those in the position of section manager or assistant director bear significant responsibilities both at their job and in their family life. Accordingly, it is quite difficult for these people to pursue new challenges. However, as people in these positions provide the driving force



behind the Company's business activities, DENSO will be unable to realize a genuine transformation if it does not establish a foundation that enables employees in the middle ranks to take on new challenges with a high level of motivation.

To that end, DENSO must strive to realize one of its key reform pillars, "transforming the way we work." For example, in Japan DENSO needs to extend its view beyond the city of Kariya, where its head office is located, and form connections with the outside world so that it can absorb all kinds of new information and ideas. Accordingly, a framework must be established that allows the Company to accomplish this feat. It is imperative that DENSO mobilize its human resources to an even greater extent in order to further enhance its strengths and foster a corporate culture that is conducive to new value creation.

As an outside director, what kinds of contributions do you want to make to help realize the Long-term Policy?

Olcott One aspect about the Long-term Policy that I evaluate highly is that it outlines a direction for knowing what businesses to exit. With large organizations such as DENSO, once you start something it often tends to stay in the organization forever, even if no results are being produced or value created. To be able to devote resources to areas with the potential to contribute to our bottom line in five to 10 years' time, deciding on a policy for pulling out of businesses is extremely effective. Also, in terms of devolving responsibilities, we should not just focus on the relationship between headquarters and the subsidiaries. I firmly believe that promoting a global operation where there are linkages not just between the head office and the subsidiary, but also between the subsidiaries themselves, will allow DENSO to achieve further globalization. The Long-term Policy lays this out clearly as an objective, but what DENSO needs to do now is to make sure that its top management is fully behind this plan and executes it accordingly.

As for diversity, it is important for DENSO to mobilize its global human resources more effectively. This is a crucial task for DENSO as it aims to promote further globalization. To ensure that the Company is able to realize its Long-term Policy, I will strive to transform DENSO into a truly diverse organization in which all employees are able to contribute to business performance under fair conditions.



Nawa I also believe that the direction of DENSO's strategies is excellent, and this is precisely why the Company must indicate a concrete path for realizing these strategies. In addition, the Company must take on challenges that it has yet to pursue thus far. These include relocating its offices, promoting overseas personnel to management positions, and promoting M&A. All of these efforts represent ways that DENSO can make an entrance into new domains.

I recognize that my role as an outside director is to continue to offer sound criticism, pointing out areas that I believe the Company needs to improve upon without reserve. DENSO is an excellent company, and I believe that is why there is a tendency among many employees to refrain from being critical or calling attention to an issue when necessary. I will therefore remain confident in my role and continue to challenge myself to maintain a critical eye. I am grateful for the fact that the management of DENSO makes active efforts to incorporate the feedback I provide them. In light of this, I will continue to be candid in offering my advice, even if that advice involves topics that the Company does not necessarily want to hear.

Through my work, I obtain a great deal of information on other industries and companies. I have also witnessed companies who have succeeded and failed in their "second foundation" efforts. While introducing these examples to the Company, I will continue to encourage DENSO to pursue challenges without fear, even in areas it has thus far yet to explore.

Directors and Audit & Supervisory Board Members

(As of June 20, 2018)

George Olcott

Outside Director



Shoji Tsuzuki
Member of the Board,
Senior Executive Director



Takashi Nawa
Outside Director

Hiroyuki Wakabayashi
Executive Vice President



Yasushi Yamanaka
Executive Vice President



Koji Arima
President & CEO



Moritaka Yoshida
Outside Audit & Supervisory
Board Member

Toshimichi Kondo
Outside Audit & Supervisory
Board Member

Noriyuki Matsushima
Outside Audit & Supervisory
Board Member

Haruya Maruyama
Executive Vice President

Atsuhiko Shimmura
Standing Audit &
Supervisory Board Member

Motomi Niwa
Standing Audit &
Supervisory Board Member

Directors


President & CEO
Koji Arima

(Date of birth: February 23, 1958)
 1981 Joined DENSO CORPORATION
 2008 Executive Director,
 DENSO CORPORATION
 2014 Senior Executive Director,
 DENSO CORPORATION
 2015 President & CEO,
 DENSO CORPORATION (current position)


Executive Vice President
Haruya Maruyama

In Charge of Overseas Business
 (Date of birth: November 29, 1954)
 1978 Joined DENSO CORPORATION
 2004 Executive Director,
 DENSO CORPORATION
 2010 Senior Executive Director, Member of
 the Board, DENSO CORPORATION
 2014 Executive Vice President,
 DENSO CORPORATION (current position)


Executive Vice President
Yasushi Yamanaka

**Safety, Quality, Production, Corporate
 Foundation Center**
 (Date of birth: March 10, 1957)
 1979 Joined DENSO CORPORATION
 2005 Executive Director, DENSO CORPORATION
 2014 Senior Executive Director,
 DENSO CORPORATION
 2015 Executive Vice President,
 DENSO CORPORATION (current position)


Executive Vice President
Hiroyuki Wakabayashi

R&D Strategy, CISO,* Purchasing
 (Date of birth: January 15, 1956)
 1979 Joined DENSO CORPORATION
 2006 Executive Director, DENSO CORPORATION
 2013 Senior Executive Director, Member of the
 Board, DENSO CORPORATION
 2014 Director, Member of the Board, Senior
 Executive Director, DENSO CORPORATION
 2015 Senior Executive Director,
 DENSO CORPORATION
 2016 Director, Member of the Board, Senior
 Executive Director, DENSO CORPORATION
 2017 Executive Vice President,
 DENSO CORPORATION (current position)

* Chief Information Security Officer


Member of the Board,
Senior Executive Director
Shoji Tsuzuki

Corporate Center, Audit Department
 (Date of birth: April 29, 1959)
 1983 Joined DENSO CORPORATION
 2010 Executive Director,
 DENSO CORPORATION
 2016 Senior Executive Director,
 DENSO CORPORATION
 2018 Director, Member of the Board,
 Senior Executive Director,
 DENSO CORPORATION (current position)


Outside Director **Independent Officer**
George Olcott

(Date of birth: May 7, 1955)
 1986 Joined S.G. Warburg & Co., Ltd.
 1991 Director, S.G. Warburg & Co., Ltd.
 1993 Executive Director, Equity Capital Market Group, S.G.
 Warburg Securities London
 1997 Head of Tokyo Branch, SBC Warburg
 1998 Vice President, LTCB-UBS-Brinson Asset Management
 1999 President, UBS Asset Management (Japan) President,
 Japan UBS Brinson
 2000 Managing Director, Equity Capital Market,
 UBS Warburg Tokyo
 2001 Judge Business School, University of Cambridge
 2005 FME Teaching Fellow, Judge Business School,
 University of Cambridge
 2008 Senior Fellow, Judge Business School,
 University of Cambridge
 2008 Outside Director, Nippon Sheet Glass Co., Ltd.

2010 Outside Director, NKSJ Holdings, Inc.
 2010 Project Professor, Research Center for Advanced Science
 and Technology, The University of Tokyo
 2014 Guest Professor, Keio University Faculty of Business and
 Commerce (current position)
 2014 Outside Director, Hitachi Chemical Company, Ltd.
 (current position)
 2014 Director, Member of the Board, DENSO CORPORATION
 (current position)
 2015 Outside Director, The Dai-ichi Life Insurance Company,
 Limited (currently Dai-ichi Life Holdings, Inc.)
 (current position)
 2016 Outside Director, BlueOptima Limited (current position)
 2016 Outside Director, JP Morgan Japanese Investment Trust plc
 (current position)


Outside Director **Independent Officer**
Takashi Nawa

(Date of birth: June 8, 1957)
 1980 Joined Mitsubishi Corporation
 1991 Joined McKinsey & Company, Inc.
 2010 Professor, Graduate School of International Corporate Strategy, Hitotsubashi University (current position)
 2010 President, Genesis Partners (current position)
 2010 Senior Advisor, Boston Consulting Group
 2011 Outside Director, NEC Capital Solutions Limited (current position)
 2012 Outside Director, FAST RETAILING CO., LTD. (current position)
 2014 Director, Member of the Board, DENSO CORPORATION (current position)
 2015 Outside Director, Ajinomoto Co., Inc. (current position)

Audit & Supervisory Board Members



**Standing Audit & Supervisory Board Member
Atsuhiko Shimmura**

(Date of birth: June 28, 1957)
1980 Joined DENSO CORPORATION
2011 Executive Vice President, DENSO International America, Inc.
2014 Director, Corporate Planning Division, DENSO CORPORATION
2014 Standing Audit & Supervisory Board Member, DENSO CORPORATION (current position)



**Standing Audit & Supervisory Board Member
Motomi Niwa**

(Date of birth: November 3, 1962)
1985 Joined DENSO CORPORATION
2007 Head of Function Products Planning Division (currently Powertrain Systems Business Planning Department, Powertrain Components Business Unit), DENSO CORPORATION
2013 Director, Human Resources Division, DENSO CORPORATION
2014 Vice President, DENSO Manufacturing Athens Tennessee, Inc.
2018 Standing Audit & Supervisory Board Member, DENSO CORPORATION (current position)



**Outside Audit & Supervisory Board Member
Moritaka Yoshida**

(Date of birth: July 12, 1957)
1980 Joined Toyota Motor Corporation
2009 Managing Officer, Toyota Co., Ltd.
2014 Senior Managing Officer, Toyota Motor Corporation
2015 Outside Audit & Supervisory Board Member, DENSO CORPORATION (current position)
2018 Vice President, Toyota Motor Corporation (current position)



**Outside Audit & Supervisory Board Member
Independent Officer
Toshimichi Kondo**

(Date of birth: February 3, 1955)
1979 Joined the Audit Corporation Marunouchi Accounting Firm
1983 Registered Certified Public Accountant
1985 Director, Kondo Accounting Office (current position)
2011 Outside Audit & Supervisory Board Member, DENSO CORPORATION (current position)



**Outside Audit & Supervisory Board Member
Independent Officer**

Noriyuki Matsushima

(Date of birth: May 3, 1956)
1982 Joined Nikko Securities Co., Ltd.
1982 Seconded to Nikko Research Center, Inc.
1999 Transferred to Nikko Salomon Smith Barney Limited (currently Citigroup Global Markets Japan Inc.)
2000 Managing Director, Nikko Salomon Smith Barney Limited
2013 Chief Research Advisor, Equity Research Division, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
2017 Outside Audit & Supervisory Board Member, DENSO CORPORATION (current position)
2018 Chief Advisor, Consulting Business Division, Mitsubishi UFJ Research and Consulting Co., Ltd. (current position)

Expertise and Abilities That Can Be Leveraged in the Management of the Board of Directors and Audit & Supervisory Board

Koji Arima	Excellent management prowess and leadership
Haruya Maruyama	Considerable marketing experience and leadership in establishing long-term relationships with domestic and overseas customers
Yasushi Yamanaka	Expertise and experience in leading technology departments
Hiroyuki Wakabayashi	Managerial experience in production and operating departments as well as knowledge in advanced fields such as automated driving
Shoji Tsuzuki	Knowledge obtained through experience in a broad range of business reforms conducted in sales and marketing departments as well as functional departments
George Olcott	Relevant expertise as well as abundant experience and deep insight related to corporate management
Takashi Nawa	Experience and expertise in strategic corporate management fields
Atsuhiko Shimmura	Management experience at the North American headquarters, in addition to extensive knowledge and experience within Company business divisions
Motomi Niwa	Managerial experience at overseas subsidiary and extensive expertise in functional and operating departments
Moritaka Yoshida	Management experience at leading manufacturer in the automotive industry and deep insight related to corporate activities
Toshimichi Kondo	Expertise as a certified public accountant and experience cultivated through the analysis of corporate management
Noriyuki Matsushima	Expert knowledge as an analyst for the automotive industry and extensive insight cultivated over many years through the investigation and analysis of corporate management

Compliance

Basic Stance



We believe that key actions to earn the trust and understanding of society pertain to the DENSO Group's observance of all applicable national and regional laws and all Group employees' fair and faithful conduct that embodies the highest ethical standards.

Based on this recognition, in 2006 we adopted the Code of Conduct for DENSO Group Associates, which clearly indicates the standards of conduct for each and every employee. In training and at workplace conferences, we utilize the Code for raising employees' awareness of corporate social responsibility (CSR), which includes all domestic Group companies. Overseas Group companies use a regional version of the Code of Conduct for DENSO Group Associates, formulated by their regional headquarters in accordance with national and regional laws and customs.

Promotion Structure

The DENSO Group has created a global structure for promoting compliance while keeping its organizational structure sensitive to the characteristics of each region, introducing and administering a reporting system, and training employees. In 1997, the DENSO Group established the Corporate Ethics Committee (now a part of the Top Management Meeting), headed by the director in charge of compliance, and created the Compliance Committee and other committees to coordinate regional and global compliance activities, while putting Compliance Leaders and other managers in charge of promoting compliance.

On a regular basis, our legal departments in Japan, North America, South America, Europe, China, Southeast Asia, India, and South Korea share and discuss information and issues related to compliance.

Specific Initiatives

Internal Reporting System

The DENSO Group has set up internal reporting systems at its Japanese and overseas headquarters, as well as at each business site. These systems allow employees to report their concerns and receive consultation on matters related to legal and regulatory violations, via email, telephone, written correspondence, or face-to-face interaction. (Number of consultations and incidents reported: 71 in fiscal 2018)

Inspection and Improvement of Activities

The DENSO Group conducts inspections to ascertain whether its compliance activities have sufficiently taken hold and to look for any potential compliance issues. If an issue is discovered, reports are made to top management, and steps are taken to prevent a recurrence of the issue (activities include audits by the Internal Audit Department, self-check sheets, among others). For example, DENSO holds a CSR survey every year in order to gain an understanding on the extent to which compliance-related measures have taken hold and on potential compliance risks.

Response to Antimonopoly Act

U.S. subsidiary DENSO International America, Inc. was investigated by the U.S. Department of Justice in February 2010. Recognizing the gravity of the situation, the DENSO Group has since then created the Antimonopoly Act Compliance Committee, chaired by the representative director, to ensure strict compliance with the Antimonopoly Act. Under the guidance and supervision of this committee, we have endeavored to reinstitute strict compliance with the Antimonopoly Act across the entire DENSO Group by enhancing awareness and education about relevant rules and ensuring strict adherence to laws and regulations. As a result, we are now in full compliance with laws and regulations. The DENSO Group is keen to restore confidence while further strengthening its compliance structure in accordance with the Antimonopoly Act.

Response to Anti-Bribery Laws

DENSO has formulated the "Global Anti-Bribery Policy" to serve as its basic approach to preventing bribery. At the same time, the Company has set up the Compliance and Anti-Bribery Committee, which is chaired by a relevant Company director. Guided by the instruction and supervision of this committee, DENSO has established anti-bribery rules and is implementing educational and awareness-raising initiatives via e-learning programs. For its suppliers, DENSO promotes bribery prevention between suppliers and third parties through the Supplier CSR Guidelines. In these ways, DENSO makes thorough efforts to prevent bribery on a Groupwide basis.



Please see the "Sustainability Information" section of DENSO's corporate website for more information.
Compliance:
<https://www.denso.com/global/en/csr/governance/compliance/>

Risk Management

Basic Stance

In keeping with the global expansion of business, the DENSO Group is striving to strengthen risk management to help minimize risk. Specifically, the emergence of circumstances with the potential to cause damage to corporate management are classified as risks (situations in which risks have not yet been realized) and crises (emergency situations in which risks have already been realized). For the former, efforts focus on thwarting risks before they have the chance to manifest themselves; for the latter, DENSO strives to make an initial response as well as a response for restoring business operations in a prompt and appropriate manner.

Promotion Structure

DENSO regularly confirms the improvements made to its risk management structure and framework via the Risk Management Meeting. Taking into consideration the conditions of the Company and trends in the external environment, DENSO discusses and determines the direction of important activities to comprehensively manage Groupwide risks and crises. In addition, DENSO has created the Crisis Communication Manual in order to respond promptly and accurately in the event of a crisis. In these ways, the Company is able to flexibly address crises and minimize the damage they may cause.

Specific Initiatives

Ascertaining Risks and Clarifying Response

DENSO makes efforts to constantly ascertain the risks it faces and manage these risks from the perspectives of damage mitigation and business continuity. The Company has selected 42 risk items related to life, credit, business activities, and property based on frequency of occurrence and level of impact. The Company designates responsible departments for each risk item and clarifies various factors pertaining to these items, including level of impact, reason for occurrence, preventive measures, initial response, and recovery efforts. The Company also strives to enhance its preventive measures, initial response, and recovery efforts. DENSO revises its risk items appropriately, giving consideration to the issues currently facing society as well as the frequency of risks occurring at DENSO and the level of impact they have on the Company.

Risk Management Items (Excerpts)

Reason	Risk Items
Internal Factors (Accidents and Mistakes)	Environmental pollution and abnormalities, disasters (work-related accidents, fires, and explosions), recalls, production obstacles (difficulties with energy supply, etc.), information security-related accidents, personnel and work-related incidents (human rights issues, labor issues, and overseas offices), mental health issues, traffic accidents, errors in internal management of information, etc.
Internal Reasons (Legal Violations)	Violations of the Antimonopoly Act, tax evasion, inappropriate employee dispatch or use of contract work, violation of product laws and regulations, violation of anti-bribery laws, etc.
External Factors	Product liability lawsuits, exchange rate fluctuations, natural disasters, supplier-related issues, confrontations and incidents (such as war, terrorist attacks, abductions, disease outbreaks), etc.

Strengthening Earthquake Disaster Risk Response (Formulating Business Continuity Plans)

In Japan, a major earthquake is expected to occur in the near future. As such, DENSO is working to strengthen earthquake disaster risk response measures (i.e., formulating business continuity plans [BCPs]) for the entire DENSO Group from the perspective of business continuity management. The Company is also preparing an emergency situation manual and establishing measures for disaster reduction.

Establishing a Safety, Health, and Environmental Management Structure to Minimize Work-Related Accidents, Fires, and Other Risks

Based on the premise that creating safe and ideal working conditions is the best way to realize both human dignity and high productivity—a premise stipulated in the fundamental principles of safety, health, and environmental management that DENSO formulated in 1969—DENSO has been working continuously to improve workplace safety. At the same time, DENSO has been taking steps to establish a world-leading safety, health, and environmental management structure to minimize such risks as work-related accidents, explosions, and fires. These efforts include the practice of the PDCA (Plan, Do, Check, Act) cycle based on domestic and international occupational safety and health management system (OSHMS) standards.

Strengthening Information Security Structure Following the Change toward a “Connected Society”

Following the advancement of such technologies as automated driving and IoT, cyber security risks related to vehicles and production facilities have become a serious issue.

To ensure that vehicles can be used safely and with peace of mind, DENSO is developing technologies that protect in-vehicle products, such as advanced driver assistance systems and automated driving, from cyber-attacks. The Company is also moving forward with the establishment of unique frameworks for steadily installing these technologies in vehicles. Also, DENSO is setting up security measures for its internal networks, production lines, and other facilities and is working to secure its information assets and realize a steady supply of products to its customers.



Please see the “Sustainability Information” section of DENSO’s corporate website for more information.
 Risk Management:
<https://www.denso.com/global/en/csr/governance/riskmanage/>

Intellectual Property

Basic Stance

To realize the vision adopted in its Long-term Policy 2030, DENSO is working to unify its business unit strategies with its intellectual property (IP) strategies. In particular, DENSO is giving priority toward building a patent portfolio in the four core fields of electrification, automated driving, connected vehicles, and non-automotive businesses (factory automation and agriculture), which were established under Long-term Plan 2025. In addition, the Company is conducting IP activities related to open innovation and utilizing its acquired patents in a strategic manner. By doing so, DENSO is supporting efforts to expand its business and achieve sustainable growth.

Respect for Other Companies' IP Rights

In addition to its own IP rights, DENSO has the utmost respect for the IP rights of other companies. To this end, from the development stage, the Company examines and analyzes the IP rights of other companies and has established clear internal rules to ensure that it handles the valuable IP rights of other companies in an appropriate manner.

Measures Against Counterfeit Products

DENSO takes active measures against counterfeit products (in particular, those with imitation trademarks). There are many quality problems with counterfeit products, and there is the possibility that purchasing such a product in the belief that it was manufactured by DENSO could be detrimental to the purchaser. Since 2005, the Company has been engaging in activities to detect counterfeit products in cooperation with government and customs agencies as well as its overseas locations in North America, Europe, China, and in other countries.

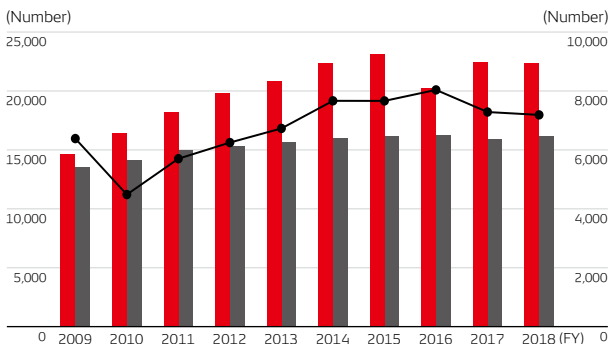
Promotion Structure

Global IP System

To support overseas development and design, we have set up IP organizations at our development and design bases in North America, Europe, and China, thereby strengthening our efforts to acquire IP rights for local inventions and ideas and to examine other companies' IP rights. Furthermore, at our locations in North America and Europe, we deploy patent attorneys to provide support in patent disputes. In China, we protect the DENSO brand by taking measures against counterfeit products and copyright infringements. At overseas locations where we have yet to set up an IP organization, we have established systems to reward inventions and provide education on intellectual properties. In doing so, we are working to encourage local IP activities.

In addition, as part of our efforts in global IP collaboration, we hold the Global IP Conference. This conference brings together the members of IP organizations at our locations around the world with the aim of engaging in debate related to global and local IP issues and to invigorate and further expand our IP activities in each region.

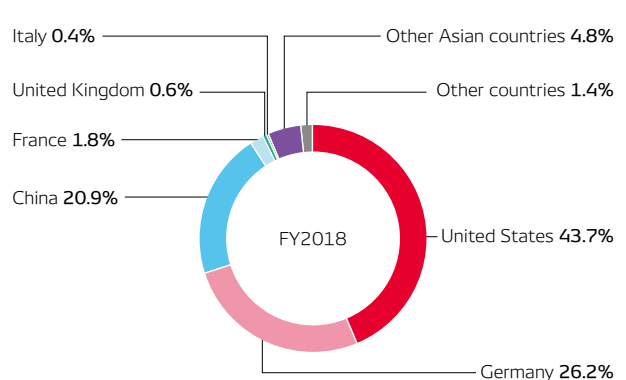
Number of Patents Held and Patent Applications Filed in Japan and Overseas



- No. of patents held in Japan (left scale)
- No. of patents held in foreign countries (left scale)
- ◆ No. of patent applications filed in Japan and overseas (right scale)

Note: The number of patent applications filed shows the total number of filings in Japan and overseas. This figure includes patents filed during DENSO's fiscal year. The number of patent applications filed in Japan includes withdrawn items for priority claim based on Japanese patent applications and divisional applications. The number of patent applications filed in foreign countries includes continuing and divisional applications.

Ratio of Patent Applications in Foreign Countries (%)



Engagement with Society

Basic Stance

DENSO advances its business activities while interacting with various stakeholders. DENSO believes that establishing good relationships with its stakeholders is an essential part of improving corporate value.

To create a better society, DENSO clarifies its responsibility to stakeholders in its business activities, and continues to engage in dialogue with stakeholders as a helpful means of avoiding self-satisfying activities that are biased by its own logic and preconceptions. DENSO fulfills its social responsibility while reflecting stakeholder opinions and the needs of society in its corporate activities.

Examples of Engagement with Stakeholders (fiscal 2018)

<p>Customers</p>	<p>Customer Consultation Center To engage in <i>Monozukuri</i> from the customer's perspective, we provide the feedback we receive from customers via the Customer Consultation Center to relevant departments, which we then use to offer even better products and services.</p>	<p>Approx. 5,500 inquiries related to products</p>
<p>Employees</p>	<p>Global Conference At the Global Conference held in 2018, directors and members of management from our locations around the world gathered to discuss innovation and action geared toward realizing the Long-term Policy and implementing long-term plans.</p>	<p>Approx. 80 Group companies participated from around the world</p>
<p>Suppliers</p>	<p>General Meeting of Suppliers As a measure to deepen interactions with our suppliers, we provide information to major suppliers inside and outside Japan about our procurement policy and the initiatives of each business division.</p>	<p>Approx. 360 suppliers participated from around the world</p>
<p>Shareholders and Investors</p>	<p>Ordinary General Meeting of Shareholders At the Ordinary General Meeting of Shareholders held in 2018, the chairman of the Board provided a report on the Company's future initiatives and answered questions from the shareholders. Also, a tour of the Company's factories was held.</p> <p>Dialogue with Investors Through briefings on results and future strategies, individual interviews and teleconferences, overseas road shows, and other means, we actively hold dialogues with investors both in Japan and overseas. In addition, we hold briefings for individual investors several times a year.</p>	<p>Approx. 1,400 people participated</p> <p>Approx. 750 Dialogue with institutional investors (total number of companies)</p> <p>Approx. 550 Dialogue with individual investors (total number of participants)</p>
<p>Local Communities</p>	<p>Community Service Day DENSO has designated a day ("Community Service Day") for employees to give back to their local communities. DENSO aims to contribute to society in ways that reflect its unique position and role in society.</p> <p>Corporate Sports <input type="checkbox"/> P.62 TOPICS Sports Activities of the DENSO Group We offer encouragement to our employees through sports activities. At the same time, we value the connections we make with local communities through sports and contribute to the development of the sports industry in Japan.</p>	<p>Approx. 57,000 employees participated from around the world</p>

TOPICS

Sports Activities of the DENSO Group

DENSO established athletic clubs in the 1950s, soon after its founding, with the aim of bringing vitality to the workplace. Through Groupwide efforts, DENSO currently supports teams and athletes in a wide variety of sports.

Teams and Athletes Representing DENSO



Volleyball DENSO Airybees



Softball DENSO Brightpegasus



Basketball DENSO Iris



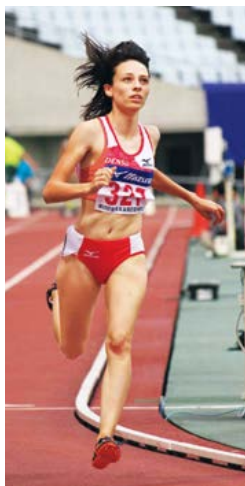
Table tennis Women's Table Tennis Club



Long-distance running DENSO Fleetserows



Boating DENSO Boating Club



Short-distance running
Mariko Nagano



Short-distance running
Miki Sugiyama



Deaf soccer Haruka Otani



Deaf curling Hisho Aratani



Nine-member volleyball
DENSO TEN Red Phoenix



Alpine skiing Konatsu Hasumi



Ice hockey Nana Fujimoto

Reasons Why We Make Efforts in Sports



Creating Connections with Local Communities

We wish to deepen our interaction with local communities by offering excitement to people living near Company offices and sharing with them our dreams and energy.



Encouraging Our Employees

Through the emotions, excitement, and inspiration that come from sports, we aim to increase the vitality of the workplace.



Making Progress Together with the Sports Industry

We hope to realize people's dreams by supporting teams and athletes that are active on a global stage. Through sports, we will show our gratitude toward society.



Passionately Enhancing Our Technological Capabilities

We develop and provide products to the teams we sponsor. Through the support we have continued to offer to motorsports since the 1960s, we have been pursuing outstanding levels of quality and world-leading advanced technologies.



/ DENSO at Work /



Aiming to improve corporate value by realizing the sustainable growth of society



A diverse workplace that offers new realizations and enhances teamwork



3

SUSTAINABILITY MANAGEMENT

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(Corporate Foundation)

Sustainability Management

Sustainability management at DENSO involves incorporating the perspective of social sustainability within our management strategies. Through the implementation of sustainability management, we aim to improve our corporate value.

Since our foundation, the perspective of sustainability has been part of the management thinking that flows through the core of our business. It is a perspective that has provided the foundation for creating the DENSO Creed as well as our Basic Philosophy and Long-term Policy. It is also a perspective that we have inherited over many years.

To enhance the transparency of our sustainability management and accelerate related initiatives, we have determined new material issues (materiality). Going forward, we will gain the understanding of a wide range of stakeholders through the implementation of sustainability management. At the same time, by helping to realize the sustainable growth of society, we will aim to improve our corporate value.

Materiality From the various issues that society faces, we determined the material issues (materiality) toward which we should give priority. By working to resolve these issues through our business activities, we will steadily implement sustainability management.

Process for Determining Materiality

Step 0 Reflect on DENSO's past sustainability activities

Summarize and self-evaluate activities carried out in the past that centered on CSR, and assess issues that are relevant to sustainability management

Step 1 Identify social issues by referencing the SDGs and ESG trends (FTSE, MSCI, etc.)

Reference the SDGs, which have gained the consensus of international society, and the themes that ESG investors are paying attention to in order to identify economic, environmental, and social issues

Step 2 Set priorities and determine targets by analyzing the degree of importance to the Company and to society as a whole

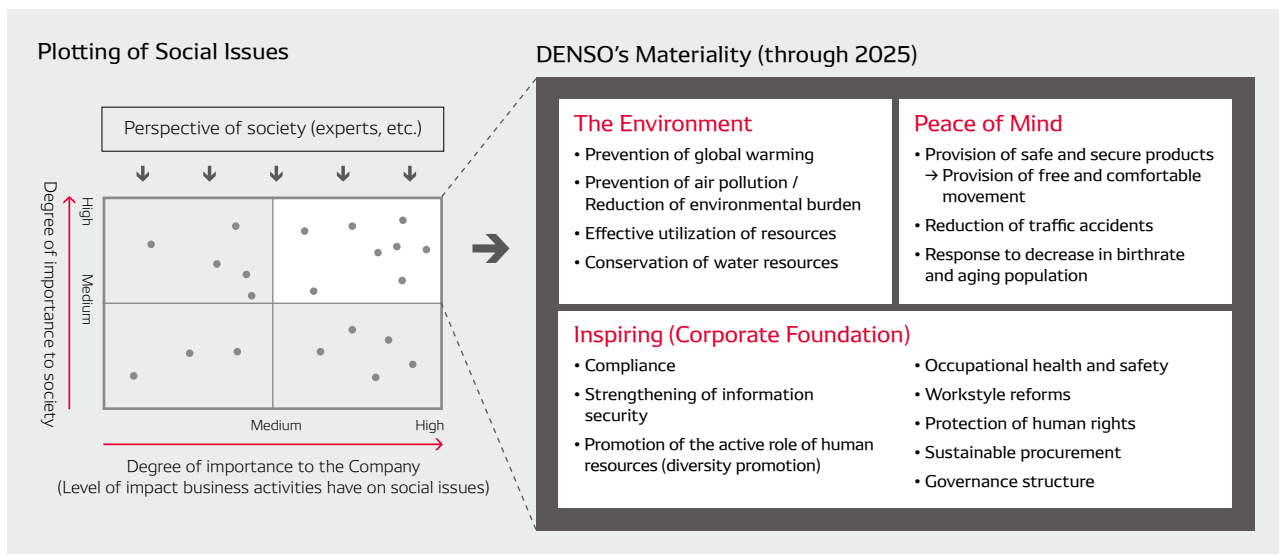
In addition to the social issues we are already addressing, determine targets based on the level of recent social interest and DENSO's management vision and policies

Step 3 Discuss with external experts (stakeholder engagement)

Exchange opinions with external experts, such as various investors, research institutions and NPOs, and outside directors regarding materiality proposals

Step 4 Discuss and approve at the management level

At Senior Executive Director Meetings (chaired by the president and attended by all of the senior executive directors), discuss and approve the materiality proposals that have been revised based on the opinions of external experts



Relationship of Materiality to the SDGs

	Materiality theme	Vision	Related SDGs (Large icons: direct contribution; Small icons: indirect contribution)
The Environment	<ul style="list-style-type: none"> Prevention of global warming Prevention of air pollution / Reduction of environmental burden Effective utilization of resources Conservation of water resources 	<p>By reducing environmental burden and realizing highly efficient mobility, we will contribute to an eco-friendly and sustainable society.</p> <ul style="list-style-type: none"> Contribute to maintaining the sustainability of the global environment through the use of technologies to solve global warming issues and issues related to energy and resources Continue to be a company that rigorously adheres to laws and realizes growth together with society through the constant pursuit of improvements Realize a society that shares the wisdom and blessings of nature through corporate activities that aim for a peaceful coexistence with the planet 	
	<ul style="list-style-type: none"> Provision of safe and secure products → Provision of free and comfortable movement Reduction of traffic accidents Response to decrease in birthrate and aging population 	<ul style="list-style-type: none"> Provide safe and secure products that are of high quality in order to gain the trust and satisfaction of our customers Contribute to the creation of a society in which all people can live with peace of mind by eliminating traffic accidents and realizing free and comfortable mobility 	
Peace of Mind	<ul style="list-style-type: none"> Compliance Strengthening of information security 	<ul style="list-style-type: none"> In addition to adhering to the laws and regulations in each country and region, ensure that all employees act in a fair, honest, and ethical manner Prepare for the information security-related risks facing the "connected society" and offer customers safe and highly reliable products. At the same time, thoroughly improve efforts to protect information assets 	
	<ul style="list-style-type: none"> Promotion of the active role of human resources (diversity promotion) Occupational health and safety Workstyle reforms Protection of human rights 	<ul style="list-style-type: none"> Promote the development of "people, organizations, and environments" so that all employees utilize their capabilities to the greatest extent possible and work in a lively manner with peace of mind Promote business activities that respect the human rights of our stakeholders, starting with our employees, throughout the entire supply chain 	
	<ul style="list-style-type: none"> Sustainable procurement Other 	<ul style="list-style-type: none"> Pursue business activities that give consideration to environmental issues, human rights issues, and compliance together with our suppliers 	


Future Initiatives

We have shared the materiality we will address by 2025 with the entire Company. To link materiality-related efforts with our business activities and continuously control the progress of these efforts, we have determined long-term targets and KPIs in accordance with each materiality theme. With our KPIs, we will examine methods for improving employee motivation by visualizing the level of achievement we have made toward our targets. This level of achievement will be reported to the executive officers on a regular basis. In turn, these reports will help us make improvements to future initiatives based on the issues we face in achieving our targets. In these ways, we will carry out sustainability management in an even more effective way.

TOPIC Efforts toward Sustainability Management
Long-term Policy: "Inspiring" Workshop

We believe that by having our employees take on new challenges with the aim of realizing Long-term Policy 2030, we will help realize the sustainable development of society. Guided by this belief, we held a workshop that gathered together employees that will lead the Company into the next generation from 2030 and beyond.

Focusing on "inspiring," a keyword that has been newly added to our Long-term Policy, we held discussions on how we can inspire people and the kind of value we need to create to do so.



The Environment

Materiality theme

- Prevention of global warming
- Prevention of air pollution / Reduction of environmental burden
- Effective utilization of resources
- Conservation of water resources

Overview of Initiatives

Following the adoption of the Paris Agreement in 2015, the world embarked on a new path toward a low-carbon society. Accordingly, expectations of efforts by the automotive industry, in particular, are higher than ever before, as automobiles have a significant impact on the global environment. Under such a business environment, we face risks related to the tightening of emission standards and other regulations. At the same time, we believe this environment gives us an opportunity to create new businesses using our environmental technology and know-how.

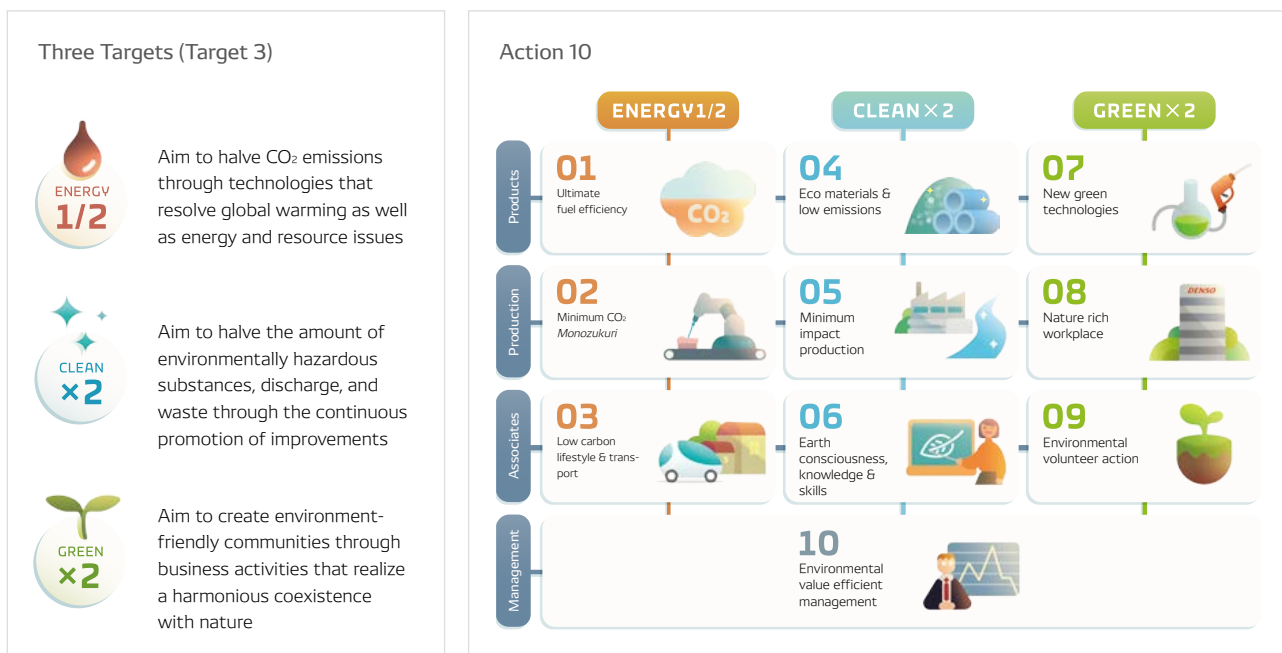
To realize a sustainable mobile society that is eco-friendly and in which all people can achieve happiness and peace of mind, we aim to be a company that can continue to create new value. To that end, we are working to reduce the environmental impact of our business activities. At the same time, we are engaging in environmental management that creates economic value through the pursuit of world-leading environmental performance and high resource productivity.

We have formulated the Eco Vision (updated every 10 years) to serve as a long-term environmental policy to help us promote our environmental management. At the same time, we have determined the Environmental Action Plan (updated every five years) to embody the commitment and environmental policy set out in our Eco Vision.

Major Action

DENSO Eco Vision 2025

DENSO has formulated the new DENSO Eco Vision as an action plan toward realizing sustainable regions and societies in 2050. This latest Eco Vision sets three targets (Target 3) to be achieved in 2025: ENERGY 1/2; CLEAN × 2; and GREEN × 2. The Company will also promote 10 specific actions (Action 10) to realize these three targets in the respective categories of products, production (factories), associates (employees), and management.



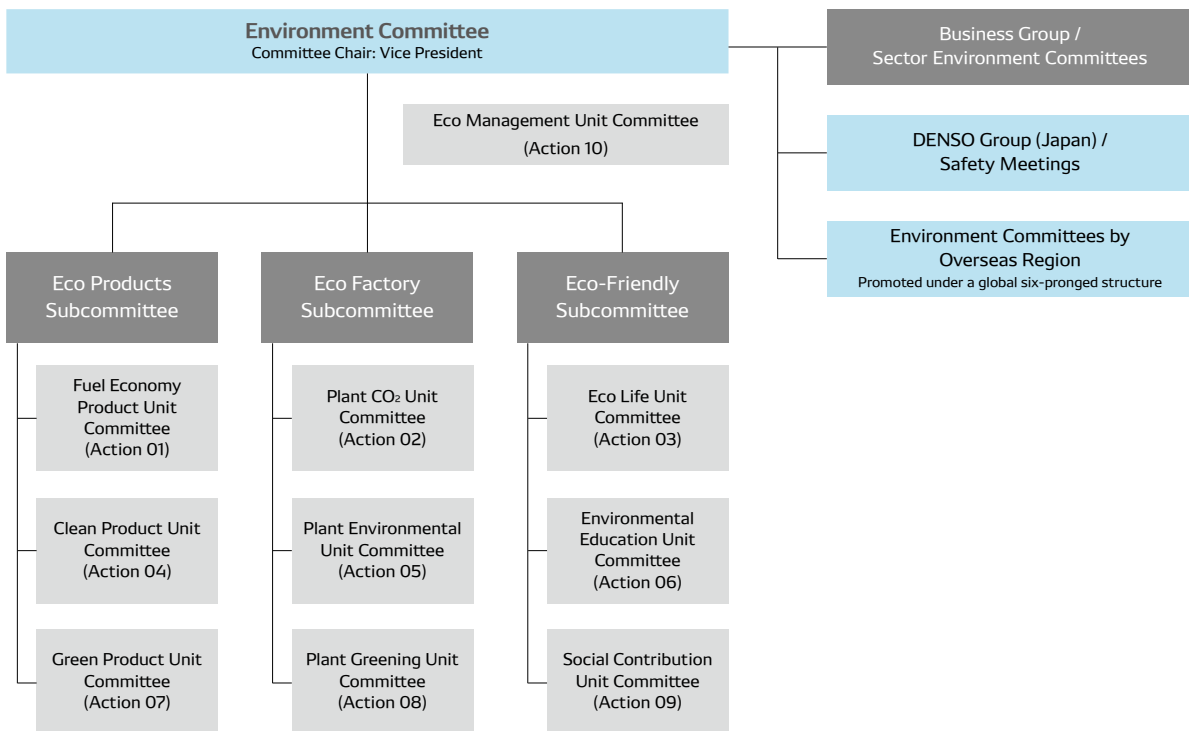
Please see the "Sustainability Information" section of DENSO's corporate website for more information.
Eco Vision: <https://www.denso.com/global/en/csr/environment-report/ecovision/>

Related SDGs



Promotion Structure

DENSO established its Environment Committee in December 1997. Chaired by the vice president and attended by senior management—those in charge at overseas regional headquarters and those responsible for matters concerning environmental management at Group companies—the Environment Committee meets twice a year to formulate policy, verify the status of progress made on activities, and undertake examinations of issues and solutions.



TOPIC

External Evaluation

Through the active disclosure of environmental information, DENSO is promoting environmental communication with its stakeholders.

In fiscal 2018, DENSO received a “B” ranking in CDP* Climate Change Survey 2017.

* The Climate Disclosure Project (CDP) is an international NGO that implements projects together with institutional investors that encourage companies around the world to disclose their strategies to address climate change as well as their greenhouse gas emission volumes.



Please see the “Sustainability Information” section of DENSO’s corporate website for more information.
Environmental Report: <https://www.denso.com/global/en/csr/environment-report/>

Specific Initiatives

ENERGY1/2

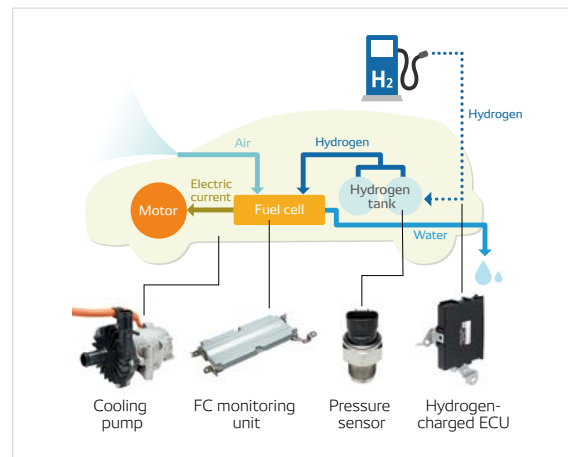
DENSO is developing new technologies and products that improve fuel consumption and are compatible with various kinds of fuel. In addition, the Company is promoting energy conservation activities that respond to production fluctuations while improving logistics. Through these efforts, we aim to halve the CO₂ emissions that accompany automobile use and our business activities by leveraging the vast know-how we possess in resolving issues pertaining to global warming, energy, and resources.

Action 01

Developing Products for Fuel-Cell Vehicles, the Next Generation of Eco Cars

DENSO is moving forward with the development of technologies that contribute to the promotion of fuel-cell vehicles (FCVs), which use hydrogen to generate electricity.

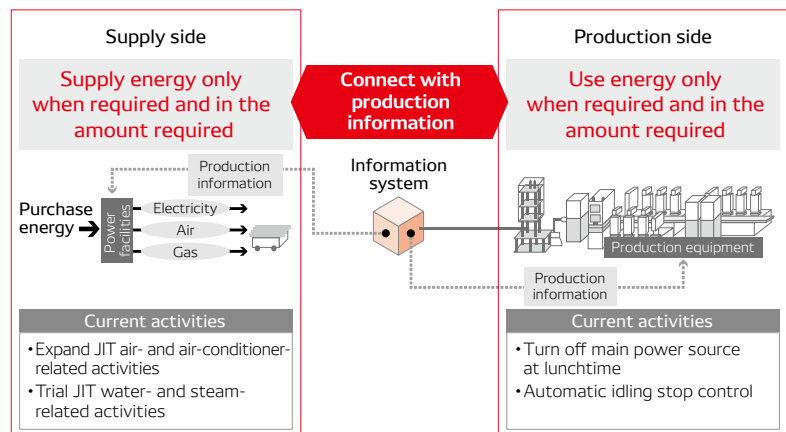
The FCV-related products that DENSO has developed thus far, including high-voltage power system components, such as a power control unit and fuel cell boost converters, and cooling system units, such as radiators and cooling pumps that greatly improve cooling performance, have been installed on the MIRAI, an FCV manufactured by Toyota Motor Corporation.



Action 02

Energy JIT (Just-in-Time)—Aiming for Minimum CO₂ Monozukuri

Based on the idea that “energy for production is not fixed infrastructure but another component to be controlled,” DENSO is working to establish a system for the utilization and supply of just the right amount of energy at the necessary time. The Company is working to optimize energy from the perspective of both energy supply and energy consumption.



Action 02

Introduction of Leading Low-Carbon Technologies at Overseas Group Companies in Emerging Nations

As a participant in the Joint Crediting Mechanism (JCM),* we are accelerating the widespread use of leading low-carbon technologies at DENSO Group companies in emerging nations. Through this program, we have introduced cogeneration systems at companies in Thailand and Indonesia. These systems utilize municipal gas, which produces only a small amount of CO₂ emissions, as fuel for power generation and make use of waste heat. By doing so, these systems have contributed to a reduction of roughly 14,000 tons of CO₂ a year.

* Joint Crediting Mechanism: A mechanism that contributes to measures to mitigate global warming on a worldwide basis by facilitating the widespread use of low-carbon technologies in emerging nations. These contributions are evaluated appropriately and subsequently applied to Japan’s targets for reducing greenhouse gas emissions.

CLEAN × 2

To offer all of its stakeholders peace of mind, DENSO aims to continuously promote improvements to halve the amount of environmentally hazardous substances, discharge, and waste it generates. For example, we are making efforts to improve the air quality in the regions where we operate through the development of technology that reduces vehicle exhaust emissions. We are also working to reduce the amount of waste generated and water consumed at our factories and throughout our logistics cycle.

Action 04

Using Plant-Based Resins in Our Products

DENSO has been engaging in the research and development of resin materials that utilize the molecular structures of plants. We have also applied starch-based bio-polycarbonates and castor oil-based urethane resins in certain products.

Plant-based resins do not make use of fossil fuels, making them a renewable resource. In addition, these resins are garnering attention due to the fact that they do not increase total CO₂ volumes in the atmosphere even if they undergo thermal recycling. For many years, we have pursued the development of plant-based resins, and in 2009, we developed a castor oil-based radiator tank together with E. I. du Pont de Nemours and Company. We are currently working to commercialize these radiator tanks and expand their installation in vehicles.



Action 05

JIT Water Management—Addressing Global Risks Related to Water

Just-in-Time (JIT) water management is a management system that supplies water at the necessary time, in the necessary amount, and to the necessary place through the establishment of a comprehensive management model that covers facilities for everything from water supply to water disposal. Through JIT water management, we are able to ascertain the day water was used, the time it was disposed, the necessary water amounts, and the concentration of drainage in a manner specific to each production line and facility. Furthermore, this system works to separate industrial water, city water, and circulated water, in addition to adjusting water consumption amounts and controlling the amount of chemicals introduced in accordance with drainage concentration.

GREEN × 2

To pass down a rich natural environment to the next generation, DENSO is promoting new environmental businesses such as biofuel research and agricultural support as well as enhancing factory greening. In these ways, we are carrying out our activities that aim to realize a harmonious coexistence with nature. Furthermore, in each of our operating regions and offices, we are implementing social contribution activities and holding events under environment-related themes, thereby aiming to create environment-friendly communities.

Action 07

Utilization of CO₂ Absorbing Technologies and Microalgae

Since April 2008, DENSO has been pursuing collaborative research with the Institute for Advanced Biosciences of Keio University on a new type of algae, for which the Company has patents, that can absorb CO₂ and be used to produce biofuel. This research has focused on *Pseudochoircystis*, an extremely small microalga that is only five μm (micrometers, equivalent to one two-hundredth of a millimeter). In addition to absorbing CO₂ and producing starch through photosynthesis, this microalga is unique for producing an oil containing a diesel component that can be used in diesel engines. *Pseudochoircystis* also grows quickly and absorbs CO₂ more efficiently than trees. In fact, a cultivation area of *Pseudochoircystis* can absorb up to 10 times more CO₂ than a forest of equal size. If the practical application of *Pseudochoircystis* can be realized, CO₂ emissions from factories could be greatly reduced, as could risks related to the rising price of grain, which is a main component of biofuel. Accordingly, *Pseudochoircystis* has the potential to significantly contribute to the resolution of energy-related issues and global warming mitigation efforts.



Peace of Mind

Materiality theme

- Provision of safe and secure products
→ Provision of free and comfortable movement
- Reduction of traffic accidents
- Response to decrease in birthrate and aging population

Overview of Initiatives

DENSO is stepping up its efforts in the fields of FA and AI. In addition to quality control activities that ensure the delivery of safe and secure products to customers, these fields contribute to the provision of products that realize open and convenient mobility, which in turn offers peace of mind in people's lives. These fields also promote technological development that helps reduce traffic accidents and respond to the issue of the declining workforce amid Japan's declining population.

Primary Activities

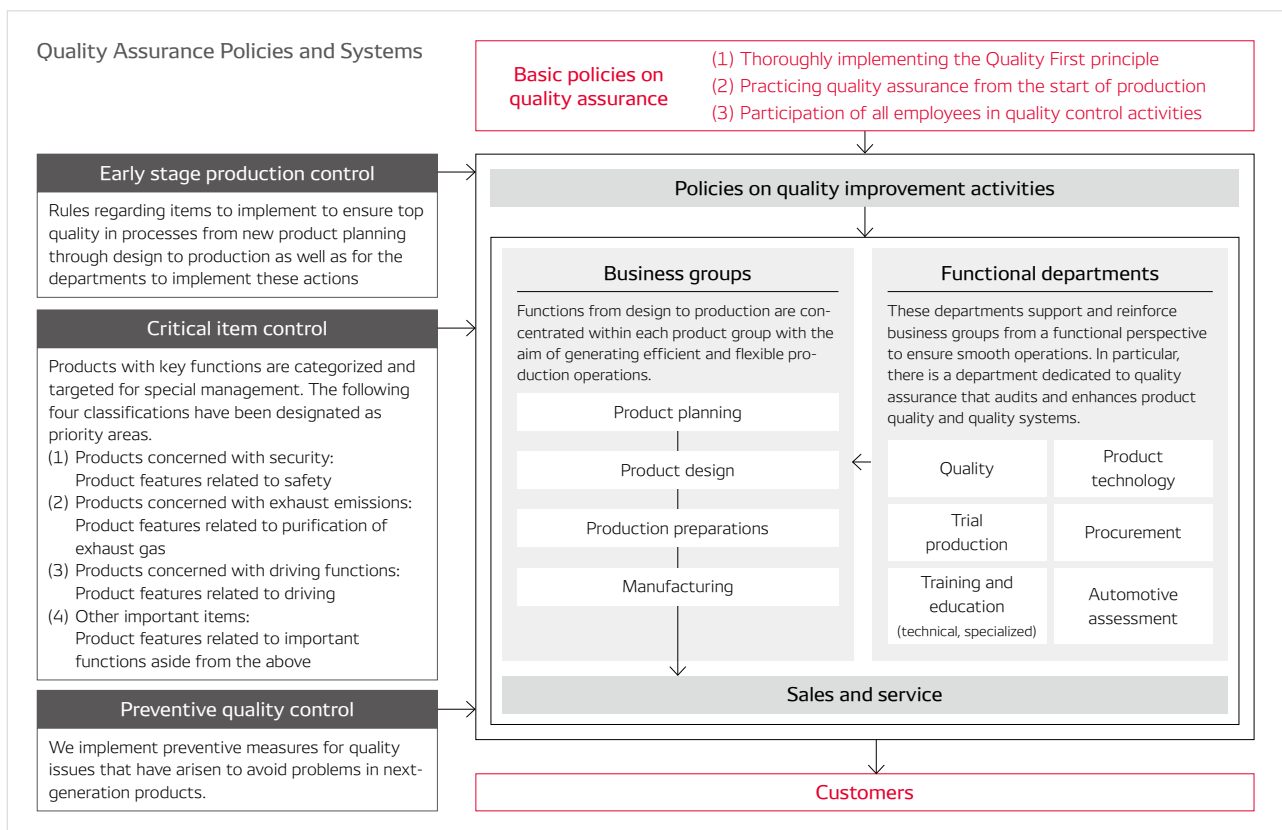
Quality Assurance

Since its founding, the DENSO Group has been dedicated to providing safe, reliable, and high-quality services that will satisfy customers and earn their trust based on a commitment under the DENSO Group Declaration of Corporate Behavior. We have designated the thorough implementation of the Quality First principle, the practice of quality assurance from the beginning

of production and the promotion of quality control with full employee participation as basic quality assurance policies, and we are committed to carrying out a Customer First principle in creating products. Additionally, based on information collected from customers, we are continuously making efforts to enhance customer satisfaction in terms of quality, cost, and delivery.

Promotion Structure

In order to provide customers worldwide with optimum products matched to the characteristics of each region, we have established Technical Centers (T/Cs) in Japan, the United States, Germany, Thailand, China, India, and Brazil. This global structure allows us to conduct product development, quality testing, and evaluation in accordance with local characteristics. In addition, the DENSO Group has completed the acquisition of ISO/TS16949 certification.



Related SDGs



Specific Initiatives

1 Assuring the Quality of New Products—*Monozukuri* That Places the Utmost Priority on Ensuring Safety

To assure the quality of new products, specialized departments including quality control and production technology work in unison to strictly check quality by visualizing the degree of product completion and product risks.

Our design departments thoroughly conduct both safety designs, such as fail-safe designs,*1 and safety evaluations and work to promote system and product design pursuant to ISO 26262 certification for functional safety. Particularly, in the design stage, we conduct in-vehicle testing on the Company's test course under a range of conditions such as high-speed driving, rough roads, low temperatures, and icing, as well as various tests in our environmental testing room. By repeatedly carrying out these tests, we rigorously confirm the quality of our products.

Additionally, our functional departments clearly specify operational procedures, from product planning to production and shipment, and designate responsible departments for these procedures. At the same time, the functional departments strictly monitor compliance with applicable laws and regulations at each stage. When launching new products, in particular, the responsible departments are required to conduct safety evaluations based on internal regulations and to report on the results of legal compliance checks.

We establish various methods for our products related to advanced driver assistance systems (ADAS), including methods to assess malfunctions in collision avoidance braking systems. At the same time, we have in place evaluation equipment that responds to the next-generation New Car Assessment Programme*2 (nighttime and bicycles). Additionally, on our test course, we recreate conditions responsible for malfunctions discovered during vehicle test driving in an effort to thoroughly ensure safety.



A nighttime pedestrian model used in our assessment of collision avoidance braking systems

*1 A design philosophy requiring products to be controlled in a safe manner in the event of an accident or erroneous operation

*2 New Car Assessment Programme: An automobile safety test

2 Education, Training, and Awareness-Raising Activities

DENSO is focusing on *Hitozukuri* to provide a foundation for realizing high-quality *Monozukuri*. In addition to systematically and continuously developing engineers and technicians, DENSO is working to pass on first-class *Monozukuri* techniques through practical education and training in which employees can gain hands-on experience.

TOPIC

**Aiming to Realize a Society Without Traffic Accidents
Global Traffic Safety Project**

The main causes for the occurrence of traffic accidents are vehicles, infrastructure, and people. Under the aim of realizing a society without traffic accidents, DENSO not only offers products that ensure safety, it also implements traffic safety educational activities, which are carried out by employees, for members of local communities around the world. These activities focus on the “people” aspect of traffic accidents and aim to offer peace of mind to those most vulnerable to accidents, including children and the elderly (educational activities commenced in fiscal 2016 and, as of fiscal 2018, have been carried out by 63 Group companies, including DENSO CORPORATION, in Japan and 19 other countries and regions around the world).

Our employees act as models for practicing traffic safety and work to form connections with local communities. By doing so, we believe we can encourage people around the world to give consideration to the perspective of sustainability.



Please see the “Sustainability Information” section of DENSO’s corporate website for more information.
Quality Control: <https://www.denso.com/global/en/csr/sociality-report/customers/quality-control/>

Inspiring (Corporate Foundation)

Materiality theme

- Compliance
- Strengthening of information security
- Promotion of the active role of human resources (diversity promotion)
- Occupational health and safety
- Workstyle reforms
- Protection of human rights
- Sustainable procurement
- Governance structure

Overview of Initiatives

To conduct sound and stable business activities and realize sustainable growth amid the rapidly changing business environment, a solid corporate foundation is essential. To this end, DENSO is engaged in efforts to promote the active role of its personnel and to enhance the motivation of its employees through health management and other measures to ensure they are able to utilize their abilities to the greatest extent possible. DENSO is also working to strengthen information security and compliance. Efforts such as these help ensure that the Company does not damage its corporate value.

Primary Activities

Promoting Diversity & Inclusion

We value new ideas that are created by our employees with diverse backgrounds, and we believe that nurturing kindhearted, thoughtful employees who respect each other's individuality is essential for realizing sustainable growth. To this end, we are promoting diversity and inclusion, which involves making full use of the skills and perspectives of our employees around the world in order to realize an organizational environment and culture that embraces all individuals, regardless of personal attributes such as gender, age, nationality, disability, career history, and value systems, thereby allowing a diverse group of employees to work with enthusiasm and energy.

Promotion Structure

In order to clarify global policies, share initiatives and policy progress in each region, and debate common challenges, DENSO is pursuing activities such as establishing a Global Diversity & Inclusion Committee made up of executives, representatives of each region, and other members, in addition to a promotion meeting committee system in each region.

Specific Initiatives

1 Promoting the Active Role of Female Employees

We have been engaging in efforts to provide career-building support and reform workstyles so that women can advance their careers throughout each major life event. For example, we have introduced various support programs that far surpass the legal requirements, such as childcare leave, shortened work hours, and mobile working, thereby enhancing the flexibility of our female employees in terms of working location and work hours. In addition, we are making efforts to raise Companywide awareness of the issues facing women in the workplace by conducting training that provides opportunities for women to consider their careers and approach to work (trend in the number of female managers □□ P.99).

2 Promoting the Employment of People with Disabilities

Since starting the regular employment of persons with disabilities in 1978, DENSO has actively worked to expand employment and occupational opportunities for people with disabilities.

In 1984, we established DENSO Taiyo Co., Ltd., a special-purpose subsidiary that primarily hires people with physical disabilities. This company is engaged in the production of such products as vehicle instrument clusters and smart keys. In 2016, we established the new special-purpose subsidiary DENSO Blossom Co., Ltd. This company offers employment opportunities to people with mental and intellectual disabilities and is engaged primarily in clerical work.

At the moment, we employ over 700 people with disabilities on a Groupwide basis that includes our head office and these two subsidiaries.



DENSO Blossom Co., Ltd.

As cultures and economic conditions vary by country, we face various diversity-related issues. However, I believe the nature of our diversity-related efforts, which involve understanding those around you, embracing differences, and considering the perspective of others, is the same across the globe. Through our activities to promote diversity and inclusion, I hope we can transform DENSO into a company that believes in the individual potential of employees with diverse personal attributes and allows all employees to leverage the abilities they possess to the greatest extent possible.



Keiko Shimokata

Officer in Charge of Diversity & Inclusion Promotion
Executive Director



Please see the "Sustainability Information" section of DENSO's corporate website for more information.

Encouraging Diversity and Promoting a Work-Life Balance: <https://www.denso.com/global/en/csr/sociality-report/employees/diversity/>

Related SDGs



Health and Productivity Management*1

Good physical and mental health is essential for ensuring the happiness of our employees and their families, and provides the source for working in a lively and energetic manner.

DENSO positions promoting the health of its employees as an important management task, and announced its Health Declaration*2 in September 2016. At the same time, to encourage activities that promote employee health and raise the level of health awareness in the workplace, DENSO is working to enhance its health-related initiatives from the perspective of both physical and mental health.

For the second year in a row, DENSO was included in the Health & Productivity Stock Selection,*3 a joint initiative carried out by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE), as well as the Superior Health & Productivity Companies (the White 500) Program,*4 which is promoted by the TSE and the Nippon Kenko Kaigi (Japan Health Council). In addition, eight domestic Group companies*5 have also been included in the White 500 Program.



*1 "Health and productivity management" is a registered trademark of the NPO Kenko Keiei Kenkyukai.

*2 To read the entire DENSO Health Declaration, please refer to the "Sustainability Information" section of the Company's corporate website.

*3 The Health & Productivity Stock Selection selects listed companies on the TSE that strategically consider and implement health and productivity management for their employees as a top management priority. The Health & Productivity Stock Selection introduces the selected corporations as an attractive investment option for investors who prioritize the improvement of corporate value from a long-term perspective. Through this effort, METI and the TSE aim to encourage corporations to further pursue efforts in "health and productivity management."

*4 The Superior Health & Productivity Companies (the White 500) Program is not restricted to listed companies and recognizes corporations that implement superior health and productivity management in collaboration with

insurers such as health insurance associations. This program commenced in 2017.

*5 Including ASMO Co., Ltd., with which DENSO integrated in April 2018

Promotion Structure

DENSO has established the Health Care Committee as an organization affiliated with the Health Care Promotion Division and other divisions. In doing so, we are promoting health-related initiatives on a Companywide basis. Furthermore, since 2016 we have set up "health care leaders" at each office who engage in activities that promote employee health. Together with these health care leaders, we make efforts to encourage healthy habits among our employees in accordance with annual plans (health care action plans) drafted for each individual office.

Furthermore, we provide necessary and appropriate support to promote the mental and physical health of our employees Groupwide based on the sanitary conditions and medical care environment at each location and worksite.

Specific Initiatives

Promoting "Health Day" Training

To improve the health awareness of our employees, it is important to have them understand and thoroughly reflect on the conditions of their physical and mental health. For employees who are approaching 39 years of age, we conduct a one-day training session called "Health Day." In this training, employees undergo a health examination, measure their physical strength, receive instruction on health maintenance and healthy eating habits, and participate in educational activities. Employees also set health-related goals for their 40s.



Lecture on health

TOPIC

Strengthening Partnerships for Sustainable Procurement

Health Lectures and Other Efforts at the General Meeting of Suppliers

Sustainable growth for DENSO can only be realized through growth across the entire supply chain. Accordingly, DENSO places the same amount of value on having the employees of its suppliers work in a lively and energetic manner as it does with its own employees. At the General Meeting of Suppliers in fiscal 2018, we offered health lectures given by our industrial physicians and provided opportunities for our suppliers to receive health-related measurements. In this way, we have been supporting the health and livelihood of our suppliers.



Please see the "Sustainability Information" section of DENSO's corporate website for more information. Promoting Employee Health: <https://www.denso.com/global/en/csr/sociality-report/employees/health/>

/ DENSO at Work /



Promoting front-line operations, where products are created, as the foundation of DENSO



Products created with uncompromising passion that brings together people, skills, knowledge, and experience while inheriting traditions



4

OVERVIEW BY PRODUCT

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- 86 Mobility Systems
- 88 Electronic Systems
- 90 Non-Automotive Businesses
(Factory Automation and Agriculture)

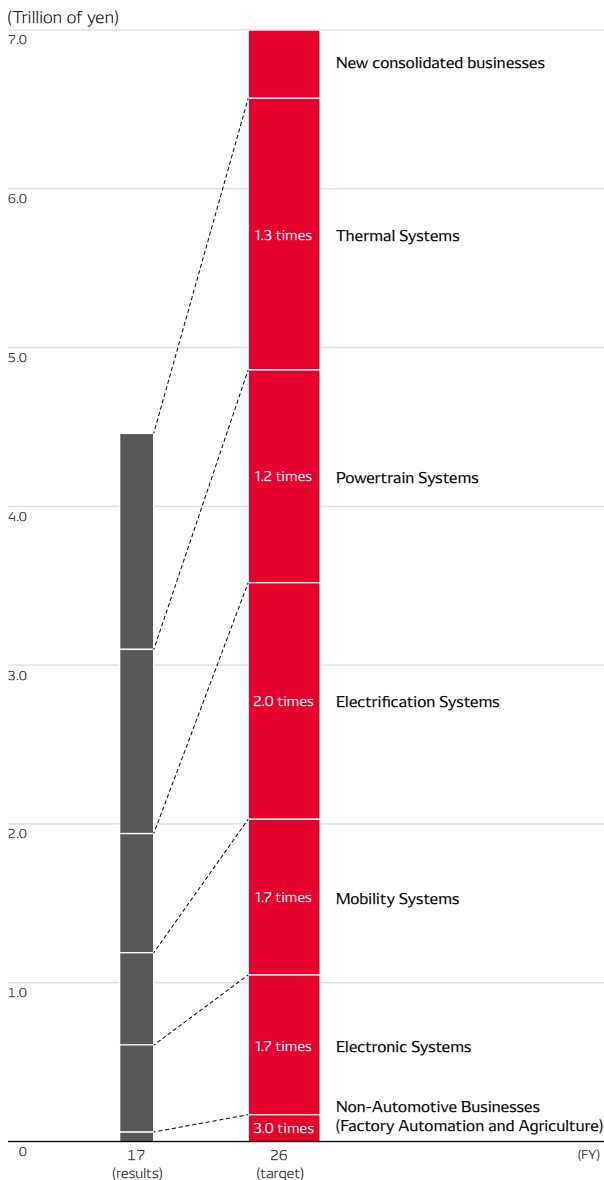
Business Highlights

DENSO is organized around business groups and engages in a wide range of businesses, centered on fields related to automobiles. These business groups collaborate with one another, leveraging their respective strengths to accommodate systemization and modularization. With the aim of reaching its long-term strategic growth target of generating ¥7.0 trillion in revenue, DENSO is developing and investing in products that meet the needs of its customers in every region and working to expand its businesses into new domains geared toward future growth.

Fiscal 2026 Target
(set in the fiscal year ended March 31, 2017)

Consolidated Revenue

¥7.0 trillion



Thermal Systems

Drawing on our No. 1 share of clients around the world and our regional development capabilities, we will develop and introduce products that offer new value (with reduced fuel consumption, comfort, and comprehensive heat management) and work to expand sales of core products in emerging countries. By doing so, we will steadily realize stable growth that capitalizes on the annual growth of the global automotive market.

Powertrain Systems

In developed countries, we will promote efforts aimed at enhancing the efficiency of internal combustion engines in the age of electrification and developing new products that contribute to electric vehicles and automated driving. At the same time, in emerging countries we will realize optimized specifications using existing products and work to reduce costs, which in turn will contribute to compact, inexpensive vehicles that are eco-friendly. In these ways, we will realize stable growth.

Electrification Systems

As the leading supplier of energy management systems for electric vehicles and electric drive systems that allow for superior control over driving, turning, and stopping, we will achieve sales growth in electric vehicle-related products at a rate that exceeds the pace of growth in the global electric vehicle market.

Mobility Systems

We will boost sales through the introduction of highly competitive, next-generation products with the aim of capitalizing on growth in the automated driving and connected car markets. In addition, to reach the next stage of growth, we will expand our business in the out-car domain and in new domains that connect the in-car and out-car domains. Through these efforts, we will realize growth that surpasses our Companywide sales growth targets.

Electronic Systems

We will strive to enhance the competitiveness of our ECUs, semiconductors, and sensors, which are the products that provide us with a source for realizing differentiation. In this way, we will achieve sustainable growth and establish a favorable position in the on-board electronics field.

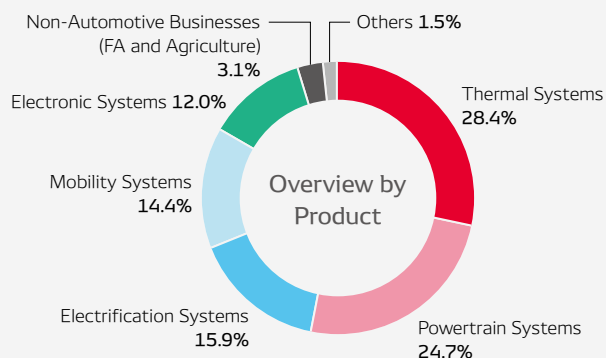
Non-Automotive Businesses (Factory Automation and Agriculture)

In the factory automation (FA) field, we will endeavor to commercialize lean automation. In the agricultural field, we will work to industrialize agriculture itself. By doing so, we will establish these fields as new pillars in our non-automotive businesses.

Performance in Fiscal 2018

Consolidated Revenue

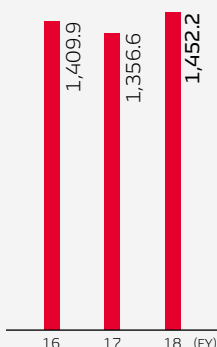
¥5.1 trillion



Thermal Systems

(Billions of yen)

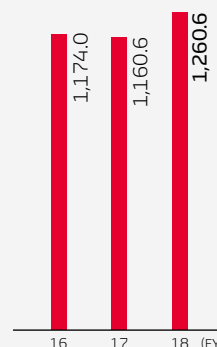
In fiscal 2018, revenue for thermal systems was up 7.0%, or 3.6% on an actual basis, to ¥1,452.2 billion, due to an increase in vehicle production in Japan and China and expanded sales of air-conditioners in China.



Powertrain Systems

(Billions of yen)

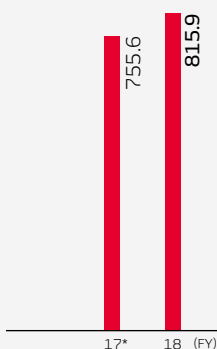
In fiscal 2018, revenue for powertrain systems saw an increase of 8.6%, or 5.2% on an actual basis, to ¥1,260.6 billion, owing to an increase in vehicle production in Asia and growth in common rail system sales in North America.



Electrification Systems

(Billions of yen)

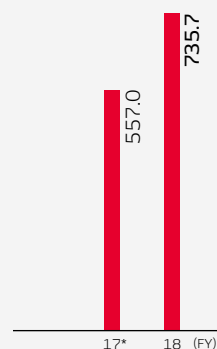
In fiscal 2018, revenue for electrification systems was up 8.0%, or 6.9% on an actual basis, to ¥815.9 billion. This increase was due primarily to the increase in sales of products for hybrid vehicles in Japan, including power control units and motor generators, as well as to expanded sales of starters in China.



Mobility Systems

(Billions of yen)

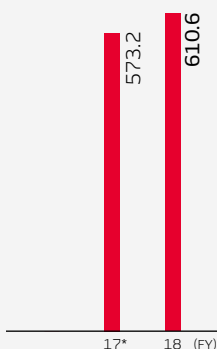
In fiscal 2018, revenue for mobility systems grew 32.1%, or 31.7% on an actual basis, to ¥735.7 billion, as a result of increased vehicle production in Japan, the impact of making DENSO TEN Limited a consolidated subsidiary, and the increased rate of installment of accident prevention and safety products.



Electronic Systems

(Billions of yen)

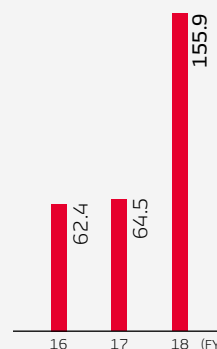
In fiscal 2018, revenue for electronic systems rose 6.5%, or 3.6% on an actual basis, to ¥610.6 billion, following increased vehicle production in Japan and China.



Non-Automotive Businesses (FA and Agriculture)

(Billions of yen)

In fiscal 2018, revenue in our non-automotive businesses came to ¥155.9 billion. This result reflected increased sales due to the impact of making TD Mobile Corporation a consolidated subsidiary. It also reflected the strong sales performance in Japan of barcode handy terminals and industrial-use robots as well as the robust sales of products in lifestyle-related fields, such as air-conditioning systems for entire buildings.



* As DENSO reorganized its business group structure in fiscal 2018, figures for fiscal 2017 have been provided for reference purposes only.

THERMAL SYSTEMS



Providing safe, comfortable systems that use the least amount of energy possible in consideration of the environment

Business Activities

- Development and production of air-conditioning systems for cars and buses, truck refrigeration units, air purifiers and related air-conditioning products, radiators, and cooling systems

Strengths

- Leading share of the global market
- Outstanding proposal and development capabilities that link closely to a wide range of products from engine-related control systems to meters that convey information to drivers

Main Products



HVAC Unit



Radiator

Business Environment

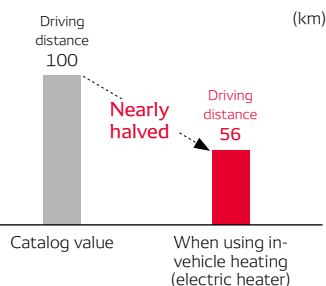
Increase in the Electrification of Vehicles

In conjunction with the trend in countries around the world of introducing progressively stringent regulations regarding CO₂ emissions and fuel performance, car manufacturers have been stepping up their efforts to develop electric vehicles. However, as these vehicles produce almost no engine waste heat, they lack a sufficient source for providing heating inside the vehicle, making it necessary to develop heat pump systems that efficiently pump in heat from outside air. It is also important to use the little waste heat these vehicles do produce as efficiently as possible. In addition, heat management needs for these vehicles are beginning to emerge, including during times of rapid battery charging and when the battery needs to be heated, cooled, or maintained at a certain temperature depending on the conditions of the vehicle.

Distance Electric Vehicles Can Drive When Using

In-Vehicle Heating

Instances when driving distance is nearly halved due to energy consumption

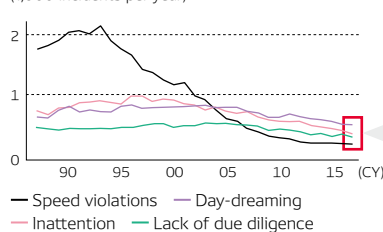


Rapid Development of Advanced Safety and Automated Driving Technologies

Due to such factors as requirements to wear seat belts and upgrade other safety equipment, deaths caused by excessive speed are declining. In contrast, the proportion of deaths due to human error, including day-dreaming, inattention, and a lack of due diligence, is greater. Also, as automated driving technologies become more widespread, vehicle interiors are becoming spaces where people can spend time doing something other than driving. Accordingly, there is a growing need to enhance the comfort these spaces offer.

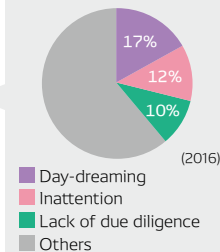
Trends in Fatal Accidents by Cause*

(1,000 incidents per year)



* Graph created by DENSO based on data from the Tokyo Metropolitan Police Department

Increase in percentage of accidents due to human error



Risks The budgets of car manufacturers are expected to be directed more toward electric vehicles and automated driving technologies. In addition, new competitors are likely to make an entrance into the market. Due to these factors and others, the Company anticipates that price competition will intensify especially in terms of products for which differentiation is difficult to achieve.

Opportunities As DENSO boasts strengths in reducing thermal damage and promoting the recovery and use of waste heat for vehicles as a whole, the widespread use of electric vehicles presents opportunities for the Company to achieve differentiation and sustainably expand its business. Also, due to the widespread use of automated driving technologies, there is an opportunity for DENSO to create and expand a new market for "comfortable cabins" in light of the fact that vehicle interiors are becoming more than just a space for driving. At the same time, the Company finds itself with an opportunity to contribute to the reduction of accidents by creating environments that allow drivers to focus more on driving.

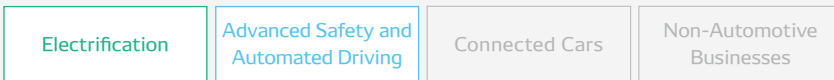
The Value We Aim to Offer Society

We will incorporate and create heat value, which is expanding and diversifying, and contribute to the future of society as a leading company that works to reduce fuel consumption to earn the trust of its customers while offering comfortable heat management systems and components.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets Drawing on our No. 1 share of clients around the world and our regional development capabilities, we will develop and introduce products that offer new value (with reduced fuel consumption, comfort, and comprehensive heat management) and work to expand sales of core products in emerging countries, including car air-conditioning systems and radiators. By doing so, we will steadily realize stable growth of 3% per year, which is in line with the annual growth of the global automotive market.

Profitability Through rigorous efforts to reduce costs, we will strengthen the cost competitiveness of our core product lineups, which provide the foundation of our overall business. We will also introduce world-first technologies and market-first products that offer new value, thereby creating unique value for vehicles and enhancing our profitability.

Differentiation We will work to achieve differentiation by using our unique energy-conserving technologies to resolve internal combustion issues related to regulations on fuel economy and exhaust gas emissions. We will also pursue increased comfort focusing mainly on the five human senses and human biology research and work to systemize our air-conditioning products—for which we boast the No. 1 global share. In these ways, we will promote efforts to differentiate our existing products. Furthermore, in the field of electric vehicles, we will steadily capitalize on growth in the market going forward by promptly introducing comprehensive heat management products.

Organizational Capabilities We will carry out a full-scale shift from our core product fields to fields for products that offer new value. We will also undertake structural reforms to help us achieve our strategies through such means as strengthening collaboration on a global basis and utilizing business alliances.

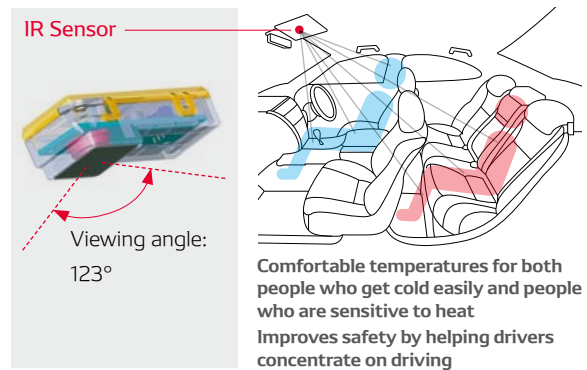
Progress

Development of Energy-Saving, Highly Comfortable Products

With the aim of improving fuel economy, we developed a heat pump system for use in plug-in hybrid and electric vehicles, which was installed in the Toyota Prius PHV. In addition, we developed a small, high-performance water-cooled condenser that can be fitted in vehicles in replacement of water heating heat pumps and air-cooled condensers. This condenser has been installed in the Renault Kangoo.

We also developed a thin, water-cooled intercooler. While conventional intercoolers involve two parts that have to be installed separately in front of the engine, our newly developed intercooler integrates these two parts into one unit and utilizes a high-performance core and right-angle-bent water pipes. In addition, to realize “hospitable air-conditioning,” we developed a four-seat temperature sensor that, by itself, is able to detect the temperature of all four seats in a vehicle and control the air-conditioning at a level that best suits each passenger. Both of these products have been installed in the all-new Lexus LS.

Passenger Temperature Detection via the Newly Developed Wide-Viewing-Angle Sensor



Making your vehicle
 the most comfortable place to be

Yasuhiro Iida
 Head of Thermal Systems Business Group

POWERTRAIN SYSTEMS



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

Business Activities

- Development and manufacture of gasoline and diesel engine management systems, which cover everything from combustion to intake and exhaust
- Development and manufacture of engine-related products, such as variable cam timing (VCT) systems and exhaust gas sensors; and products for drive systems, such as oil pressure control valves

Strengths

- From the perspective of systems, we maintain and comprehensively develop a wide variety of technologies and are active across a broad range of business domains related to powertrains, extending from gasoline and diesel vehicles to hybrid and electric vehicles. We are also able to manufacture products in these domains using highly advanced production techniques.

Main Products



Gasoline Direct Injector



High Pressure Pump



VCT



Exhaust Gas Sensor



Common Rail Systems



Spark Plug

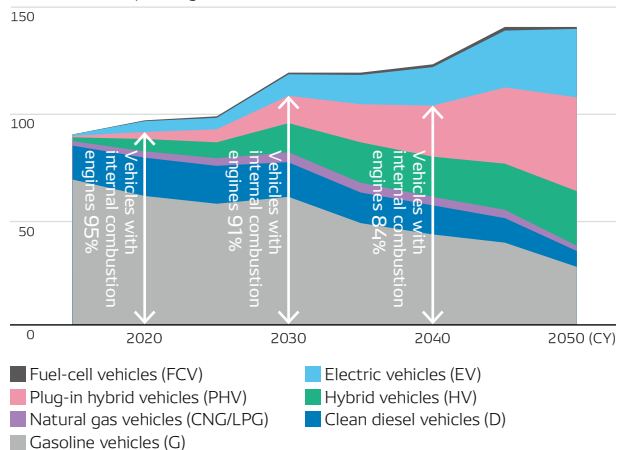
Business Environment

The Electrification of Powertrains and Enhanced Efficiency of Internal Combustion Engines

Risks and Opportunities In developed countries, the electrification of powertrains has been advancing alongside the trend of introducing regulations on fuel consumption. At the moment, it is anticipated that, among electric vehicles, hybrid vehicles equipped with internal combustion engines will become mainstream. Meanwhile, in emerging nations, there is expected to be a continued need for internal combustion engines in inexpensive eco-friendly vehicles, and it is therefore necessary to make these engines more efficient and reduce their environmental burden.

For diesel engines, there is a need in commercial and construction fields to develop engines with common rail direct fuel injection systems and high-performance engines. In light of this, it is expected that from 2025 gasoline and diesel engines will continue to be needed in fields deemed necessary by customers and society at large.

Forecast for Vehicles Equipped with Internal Combustion Engines
Sales volume of passenger vehicles (millions of vehicles)



Source: Documents from the 1st Strategic Commission for the New Automotive Era, Ministry of Economy, Trade and Industry

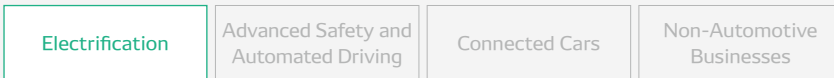
The Value We Aim to Offer Society

In order to reduce the environmental burden of vehicles to the greatest extent possible and offer the joy of driving well into the future, we will support the development of internal combustion engines needed by society through the pursuit of both environmental and driving performance. While continuing to provide systems and components, we will strive to create and deliver new value in order to contribute to society as a whole.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets In developed countries, we will promote efforts aimed at enhancing the efficiency of internal combustion engines in the age of electrification and developing new products that contribute to electric vehicles and automated driving. Meanwhile, in emerging countries we will realize optimized specifications using existing products and work to reduce costs. These efforts will in turn contribute to compact, inexpensive vehicles that are eco-friendly. Furthermore, by 2021 we will complete the development of technologies we originally intended to complete by 2025. By expanding our business in emerging markets and entering into new electrification domains, we aim to achieve a stable annual growth rate of 3%.

Profitability We will realize unbeatable levels of cost competitiveness in the expanding markets of emerging countries.

Differentiation We will achieve superior environmental performance (reduced fuel consumption, emission control components) through innovative technologies. Leveraging our core technologies, we will allocate resources to the development of subsystems in new electrification domains.

Organizational Capabilities We will pursue innovation in our development process, starting with model-based development that is able to conduct beforehand assessments via a simulation model rather than a trial product. We will also make full use of factory IoT to spur innovation in our production process. In these ways, we will enhance our system development capabilities and production technology capabilities, which are both Company strengths. By investing the resources we generate through these efforts in our core business fields, we will further improve the efficiency and speed of our management with the aim of achieving our business strategies.

Progress

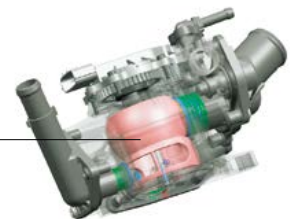
Development of Multi-Flow Control Valve—A Strategic Product That Contributes to Improved Fuel Economy

We have developed a multi-flow control valve (MCV), which functions as a key component of technologies that improve fuel economy through engine heat management. In September 2017, we commenced the mass production of these valves.

MCV is a control valve that realizes the ideal temperature for cooling water in accordance with the operating status of the engine. MCV is a strategic product that is expected to be increasingly adopted in vehicles primarily in developed countries. At the same time, MCV is a product that can contribute to realizing optimal temperature adjustments and enhanced efficiency of electric drive systems and battery devices in hybrid and electric vehicles. By 2025, we aim to have this product achieve the No. 1 share in the global market.

Realizing a performance that surpasses other companies in terms of low valve leakage, first-class response, and low pressure damage

DENSO's unique, highly sophisticated spherical resin valves and water pressure cancellation mechanisms



Delivering the joy of life with vehicles to the world

Katsuhisa Shimokawa
 Head of Powertrain Systems Business Group

ELECTRIFICATION SYSTEMS



Supporting electrification in all areas of mobility to realize an enriched environment and the joy of driving

Business Activities

- Development and production of hybrid and electric car drive systems, power supply and related products, and power supply and starting system parts such as alternators and starters
- Development and production of small motor systems for automobiles, such as wiper systems, power windows, power seats, power steering, engine control motors, blowers, and cooling fans

Strengths

- We maintain a wide variety of technologies and are active across a broad range of business domains that extend from internal combustion engine starting systems and power charging products to products powered by electricity such as hybrid cars, electric automobiles, and fuel-cell vehicles. Drawing on these technologies and extensive business domains related to electrification, we engage in comprehensive, system-based development.
- We boast a solid production track record and global share of core products for electric vehicles, including motor generators and inverters.

Main Products



Power Control Unit



Motor Generator



Battery ECU



Lithium-ion Battery Pack



Windshield Wiper System



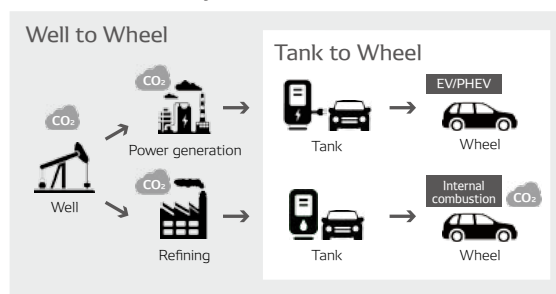
Power Window Regulator Motor

Business Environment

Increase in Electric Vehicles

Risks and Opportunities To respond to the CO₂ emissions and fuel consumption regulations in each country, it is expected that there will be an increase in various kinds of vehicles, including idle-stop vehicles, hybrid vehicles, electric vehicles, fuel-cell vehicles, and vehicles equipped with various electric drive systems and products. Meanwhile, in countries that are highly dependent on coal-fired thermal power, there are significant CO₂ emissions related to the generation of electricity and, as a result, the environmental value that electric vehicles offer is not being sufficiently realized. Accordingly, there will likely be differences in the pace at which electric vehicles become widespread depending on the energy mix in each country. Additionally, the driving distance of electric vehicles and the affordability of batteries are becoming widespread issues. Amid these circumstances, DENSO is leveraging the strengths of its global production and supply structure in countries such as Japan, the United States, and China, where the Company is already producing a variety of parts related to vehicle electrification that realize a high performance. Accordingly, DENSO is able to respond to the expansion of the electric vehicle market in accordance with the needs of each region.

Increasing the Number of Electric Vehicles in Regions Where Environmental Burden Can Be Reduced through Well-to-Wheel Analysis



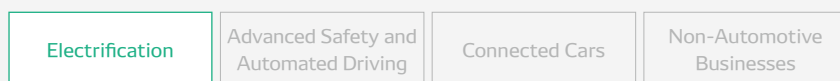
The Value We Aim to Offer Society

To offer systems for electric vehicles that make driving more eco-friendly and fun, we have been engaged in the development of electrification technologies for many years. Through these efforts, we have amassed a solid production track record around the world, enhancing the performance and reducing the size of key products that are essential for hybrid vehicles while also realizing reduced fuel consumption. Moving forward, we will leverage the wide range of business fields in which we are involved to form linkages between various in-vehicle systems and products and thoroughly manage energy efficiency. In these ways, we will further enhance fuel performance and contribute to the conservation of energy.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets DENSO is the leading supplier of energy management systems for electric vehicles and electric drive systems that allow for superior control over driving, turning, and stopping. As such a company, we aim to achieve sales growth in electric vehicle-related products at an annual rate of over 20%, which exceeds the pace of growth in the global market.

Profitability We will extend the technologies we have cultivated for hybrid vehicles to electric vehicles and fuel-cell vehicles in order to enhance our product lineup. Additionally, in anticipation of the continued global increase in the number of electric vehicles, we have established five production bases around the world, thereby further promoting the shift toward the electrification of vehicles.

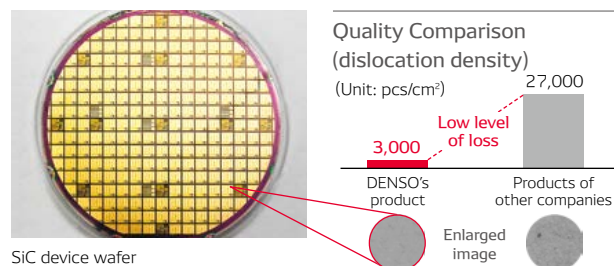
Differentiation DENSO has extremely thorough knowledge of the characteristics of automobiles. Using the technologies we possess, we will develop small, high-performance inverters and motors that help improve the fuel economy of vehicles. We will also work to enhance the competitiveness of our products. In these ways, we will improve the value of vehicles as a whole, from components to systems.

Organizational Capabilities To strengthen the competitiveness of our products and expand our product lineup, we will increase the number of personnel well-versed in electronic technologies both in Japan and overseas. Through the integration of the small motor business (formerly ASMO Co., Ltd.), we will promote the development of sophisticated system products that offer high added value. In addition, we will strengthen our operations on a global basis through alliances and partnerships with other companies.

Progress

Development of Silicon Carbide Power Device That Makes Inverters More Efficient

The electric power it takes to move an electric vehicle emits heat when it is converted by the inverter from a direct current to an alternating current. To curtail this loss of energy, we developed a power device that uses silicon carbide (SiC), a material that generates very little heat. This SiC power device reduces energy loss by one-third. In addition, we established a special formation technology that makes it possible to grow high-quality SiC crystals, thereby making it easier to apply SiC in automobiles.



Establishment of New Company to Collaboratively Develop Technologies with Mazda and Toyota

In October 2017, we concluded a contract with Mazda Motor Corporation and Toyota Motor Corporation for the joint development of structural technologies and established a new company, EV C.A. Spirit. Through highly efficient collaborative technological development, each company will invest resources in pursuing the true value that vehicles have to offer. By doing so, we will promote the development of vehicles that provide the added value of each company's brand while also strengthening the development of technologies related to electric vehicles.



Realizing electrification that brings happiness to people and is friendly to our planet

Yukihiro Shinohara
Head of Electrification Systems Business Group

MOBILITY SYSTEMS



Aiming to realize Quality of Mobility* by achieving a three-way harmony between people, vehicles, and society as a whole

* Refers to enhancing the quality of a mobile society and offering the joy of driving to people all over the world

Business Activities

- Development and provision of electronic systems, services, and platforms that support all aspects of mobility
- Development and manufacture of advanced safety and automated driving products, such as millimeter-wave radar sensors, vision sensors, driver status monitors, airbag systems, and electric power steering; and connected cockpit products, such as telematics control units, vehicle-to-vehicle and road-to-vehicle communication devices, head-up displays, meters, and cockpit systems

Strengths

- We are active in four key areas that are essential to realizing advanced driver assistance systems (ADAS) and automated driving (AD). These areas are road environment recognition, human machine interface (HMI), information and communications, and vehicle motion control technology. We are able to undertake the development of products that draw on our comprehensive strengths in these four areas.
- By melding the unique value and performance of in-vehicle products with IT products, we are able to earn a level of trust with our customers that encourages them to continue to use our products with peace of mind. We are also able to develop products with outstanding levels of security to ensure the safety of our customers.

Main Products



Stereo Vision Sensors



Millimeter-Wave Radar Sensor



Instrument Cluster

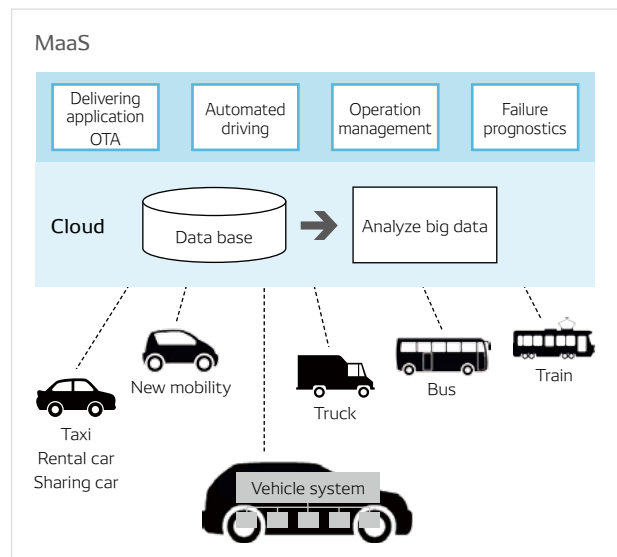


Telematics Control Unit (TCU)

Business Environment

Expansion of the Automated Driving and Connected Car Markets
Risks and Opportunities Due to the changes in the mobile society, including connectedness, automation, sharing, and electrification (CASE) as well as Mobility-as-a-Service (MaaS), the automated driving and connected car markets are rapidly expanding. In addition, as connected technologies become more advanced, vehicles are becoming more like smartphones, and it is anticipated that new added value can be created in not only the in-car domain but also the out-car domain and domains that connect in-car and out-car.

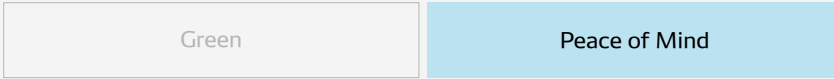
Meanwhile, in addition to conventional automotive parts manufacturers, companies from the IT and other industries are making an entry into these new kinds of domains, giving rise to an increase in technological alliances between OEMs and companies from other industries. As a result, the competitive environment is expected to become even more intense going forward.



The Value We Aim to Offer Society

- We will promote efforts from the perspective of comprehensive systems, including sensors, semiconductors, engine control units (ECUs), and platforms. In this way, we will contribute to the realization of a safe, secure, and comfortable mobile society without accidents and where people can move freely.
- We will undertake initiatives with a comprehensive focus on the in-car and out-car domains. By doing so, we will realize a new mobile society where vehicles, people, and things are linked.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets We will expand sales through the introduction of highly competitive, next-generation products with the aim of capitalizing on the growth in the automated driving and connected car markets. Also, to reach the next stage of growth, we will expand our business in the out-car domain and in new domains that connect the in-car and out-car domains. Through these efforts, we will achieve growth that surpasses our Companywide sales growth targets.

Profitability To address the increase in the number of man-hours to develop software brought about by the increase in the size of systems, we will work to enhance the efficiency of our platform development, thereby boosting our profitability.

Differentiation We will offer new products that leverage such strengths as our collaborative development in the technological fields of road environment recognition, HMI, information and communications, and vehicle motion control, as well as the unique quality and performance of our in-vehicle products, which we cultivated over many years in various domains, including the out-car domain.

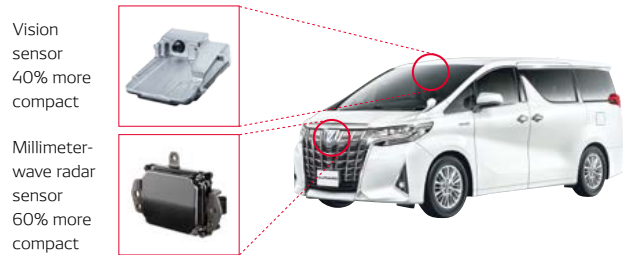
In addition, with the establishment of Global R&D Tokyo, we will accelerate the development of differentiated technologies by strengthening industry–government–academia alliances.

Organizational Capabilities To assess all aspects of vehicle systems, including the in-car and out-car domains, propose optimal solutions from the perspective of comprehensive systems, and accelerate development aimed at realizing such solutions, we established the Mobility Systems Business Group in April 2018, a new business group that integrated the former Information & Safety Systems Business Group.

Progress

New Development of Vision Sensors and Millimeter-Wave Radar Sensors Aimed at Promoting Safety Products

We developed a new vision sensor and millimeter-wave radar sensor geared toward widespread use. These products sense other vehicles and nighttime pedestrians, and various obstacles, thereby enhancing vehicle safety performance. These sensors have been installed in the all-new Toyota Alphard and Vellfire.



Development of the World's Largest Automotive Head-Up Display

We developed an all-new thin-film transistor (TFT), liquid-crystal head-up display (HUD), which functions as an HMI product that projects critical information onto the windshield for drivers to view. This product is featured in the all-new Lexus LS.



All-new HUD

This new HUD is able to realize a 24-inch projection approximately three meters ahead of the driver, making it the world's largest* HUD for automobiles.



Display image

* As of October 2017, based on in-house research



Creating a brand-new future unlike anything ever before

Yukihiro Kato
Head of Mobility Systems Business Group

ELECTRONIC SYSTEMS



Driving the industry with electronic technologies to promote the widespread use of electric vehicles and automated driving

Business Activities

- Development and manufacturing of powertrain control computers, body control computers, and other electronic devices
- Development and manufacturing of in-car semiconductor sensors and microelectronic devices such as ICs

Strengths

- Extensive product lineup in the field of in-car electronics and development capabilities in elemental technologies
- Advanced technological strengths capable of in-house semiconductor manufacturing
- Development capabilities in vertical integration of semiconductors* that satisfy individual product needs

* DENSO proprietary integrated semiconductor development, from semiconductors to ECUs and actuators

Main Products



Powertrain Electronic Control Unit



In-Car Semiconductor Sensor

Business Environment

Accelerated Electrification of Cars

When manufacturing powertrains, car manufacturers must focus on both the shift toward electrification and enhanced fuel efficiency. In addition, these manufacturers are stepping up the pace of development aimed at realizing automated driving. This accelerated development of car electronics and automated driving systems has led to greater electrification of automobiles. In accordance with this trend, there has been increased technological sophistication leading to improvements in durability, reliability and precision/responsiveness, and accelerated development and commercialization.

Risks Amid a drastic paradigm shift toward a new mobile society, we are enhancing the development of our core technologies to meet the multi-faceted demands of a diverse set of customers. At the same time, we must accelerate our rate of development and commercialization, or risk being thrust into a highly competitive business environment when entering a new competing market.

Opportunities Making use of a wealth of car-related expertise gained over many years, we are able to create highly reliable system components that can withstand harsh environments. Providing these items to the world is a major business opportunity to lead the industry.

The Value We Aim to Offer Society

We will thoroughly enhance our cross-organizational development of ECUs (head), semiconductors (brain), and sensors (eyes) in an effort to support innovation in automobiles (see □ P.29). In addition, through the development of electronic elemental technologies that offer value optimized for the new mobile society, we will reduce environmental burden and contribute to the realization of a society in which people can move safely and with peace of mind.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets In addition to our combustion-based businesses, we will promote businesses related to electrification, advanced safety, and automated driving. To support such businesses, we will develop products that anticipate the needs of the automobile manufacturing market. Also, for our global customers, we will provide a structure that allows for the development of apps to be completed on a local basis. We will also make concerted efforts to enhance the competitiveness of our ECUs, semiconductors, and sensors, which provide us with a source for realizing differentiation. In these ways, we will realize sustainable growth and establish a competitive position in the in-car electronics field.

Profitability Rather than develop software for each vehicle on an individual basis, we will establish a function-specific software development structure and work to standardize this structure. By doing so, we will enhance the efficiency of our development efforts.

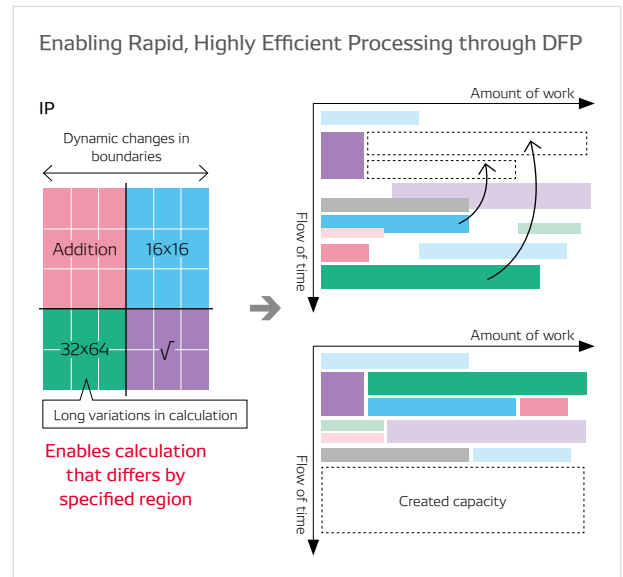
Differentiation We will enhance highly differentiated technologies through a diverse range of partnerships, including with manufacturers of consumer products, research institutions, and universities, in addition to forming business alliances and establishing industry standards, thereby speeding up the pace of our development. Also, by further fleshing out our current development themes, we will create world-first and regional-based technologies.

Organizational Capabilities We will bring together our ECU, sensor design, and quality assurance functions, which are currently dispersed throughout the Company, and create specialized organizations to oversee these functions, thereby making our development more efficient and accelerating the pace of our management execution.

Progress

Establishment of a New Company for Semiconductor IP

In September 2017, we established NSITEXE, Inc., a new company that develops and designs semiconductor intellectual property (IP)—an essential technology for semiconductors used in automated driving. In the age of automated driving, there is a need for energy-efficient semiconductors that can process a large amount of information at high speeds and make decisions necessary for automated driving functions. NSITEXE is currently engaged in the development of a next-generation processor (DFP), which provides the core for semiconductor IP that realizes highly efficient data processing. While simultaneously engaging in multiple processing procedures, this process is able to suspend unnecessary processing operations and use the newly available capacity to conduct new processing.



Striving to realize an intelligent and ideal automobile

Hiroyuki Ina
 Head of Electronic Systems Business Group

NON-AUTOMOTIVE BUSINESSES: FA



Enhancing the productivity of the manufacturing industry and contributing to an improved quality of life with a commitment to our long-cultivated technologies

Business Activities

- Development and manufacture of industrial equipment best exemplified by our automated equipment, modules, and industrial-use robots
- Development and manufacture of equipment for use by society, including handy terminals and QR solutions, and provision of services

Strengths

- Integration of technologies accumulated in the automotive field and unique technologies created in non-automotive fields

Main Products



Automated Modules



Vertical Articulated Robot



IoT Data Servers



Barcode and 2D Code Handy Terminals



QR Solution Services

Business Environment

Acceleration of Industrial Innovation

Risks and Opportunities The industry in which DENSO is involved is approaching a paradigm shift on a global scale due in part to the declining global workforce and the rise in labor costs in emerging countries. The manufacturing industry in Japan is no exception to such trends, and the rising age of and decline in workers to support the industry is becoming a serious issue. In addition, the entire manufacturing industry is facing other significant changes as a result of reforms to workstyles in Japan, epitomized by the increasing importance of achieving a work-life balance.

There has been an acceleration in the government policies of countries around the world to promote industrial innovation. Some major examples of such policies are the Connected Industries Initiative in Japan, INDUSTRIE 4.0 in Germany, and Made in China 2025 in China. In these ways, there has been stronger support for activities to realize a new society in which people, machines, and systems live in harmony.

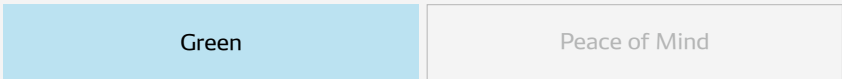
We view these kinds of changes as a promising business opportunity and will leverage our long-cultivated experience and technologies in manufacturing to provide new solutions to society to an even greater extent.

The Value We Aim to Offer Society

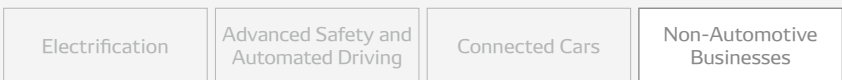
Leveraging our solid track record of introducing factory automation (FA) at 130 factories around the world, we will propose and provide FA systems that are able to meet the needs of our customers. In our lean automation packages, which incorporate the process design and on-site management know-how we have cultivated over many years of manufacturing automobile components, we offer automated processes that leverage robots, QR and barcodes, and radio frequency identification (RFID).* We also offer support for making improvements via IoT. Through these packages and other products, we will make significant contributions to the advancement of the automotive industry.

* RFID is a system that uses electromagnetic waves to simultaneously scan multiple sales tags without making contact.

Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets We will commercialize lean automation in an effort to establish it as a business pillar in the non-mobility field.

Profitability We held an exhibit at the 2017 International Robot Exhibition, which took place at the end of November 2017 at Tokyo Big Sight. Through this exhibit, we introduced our lean automation packages, which meet the on-site needs of our customers in a flexible manner and help eliminate waste. Going forward, through proposing and enhancing automation by process and module rather than by individual equipment, we will move forward with the commercialization of solutions packages that can be easily introduced in any location. We will also promote the development and mass production of these solutions in collaboration with a wide range of internal and external partners as we work to realize the full-scale commencement of these solutions as a business during fiscal 2019.

Differentiation By melding our automated technologies and improvement know-how with the core technologies of Denso Wave Inc., including its robots, sensors, verification systems, and QR codes, we aim to develop high-level FA systems that can be introduced easily in any location.

Organizational Capabilities In May 2018, we established the internal Denso Wave Kariya Office, thereby strengthening collaborative development between DENSO's FA Business Unit and Denso Wave's Robot Business Unit. Going forward, we will deepen our collaboration with external partners who share the same desire to promote the widespread use of lean automation as we work to spur industrial innovation.

Progress

Demonstration on Lean Automation to Develop System Integrators

For many years, we have been working to incorporate lean automation in our production processes. Lean automation is a system that thoroughly eliminates waste by enabling highly efficient automated production. Leveraging our know-how on lean automation, we have commenced a demonstration project in Thailand that aims to develop system integrators that handle production and FA equipment.

Through this demonstration experiment, we have established a consortium under the support of the Ministry of Industry in Thailand that includes the National Innovation Agency of the Ministry of Science and Technology of Thailand, five universities and one educational facility in Thailand, seven local system integration companies, as well as several Japanese partner companies. Together with this organization, we have established a showcase production line within a Ministry of Industry facility. This showcase production line offers an opportunity for people to gain a hands-on learning experience in the latest systems in an open setting. By developing practical system integrators on a local basis, we will strengthen the competitiveness of the automated domain in the Thai manufacturing industry and accelerate the promotion of automated processes in local production.



Thai engineers gaining knowledge from the showcase production line



Offering new value to society through lean automation

Katsuhiko Sugito
 Head of FA Business Unit

NON-AUTOMOTIVE BUSINESSES: AGRICULTURE



Combining technologies and ideas to contribute to an enriched society where all people can live safely and with peace of mind

Business Activities

- Development, manufacture, and sale of agricultural production equipment and cloud services, in addition to the provision of after-sale services

Strengths

- Highly sophisticated control and sensing technologies cultivated in the automotive field

Main Products



Environmental Control Systems for Greenhouse Cultivation, *Profarm*



Equipment for Maintaining Freshness, *futec*

Business Environment

Advancement of Technologies in Food and Agricultural Fields

Risks and Opportunities Following increases in the global population and growth of economies around the world, it is expected that demand for food resources will continue to expand going forward. Meanwhile, in Japan, the rising age and declining number of agricultural workers is becoming a serious issue, and there is also an increasing concern over the safety of food. Furthermore, due to changes in dietary habits, the market for processed foods such as prepared deli foods and boxed lunches is expanding. As a result of such factors, the agricultural industry is undergoing significant changes.

In addition, with the aim of realizing the sustainable development of agriculture, the Japanese government is implementing policies that ramp up support for the widespread use of smart agriculture, which uses robotic technologies and ICT to conserve energy and realize improvements to food quality, as well as support for efforts to conserve the environment and secure workplace safety.

Viewing these kinds of changes as a positive business opportunity, we will provide new solutions leveraging our long-cultivated industrial technologies.

The Value We Aim to Offer Society

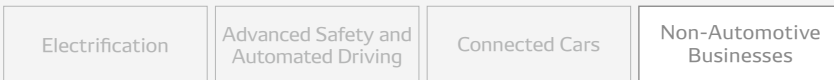
In addition to our accumulated technologies to control the environment for greenhouse cultivation, we will leverage the industrial technologies we have cultivated in the automotive field to accurately assess the food supply chain, enhance the efficiency of agricultural production, and realize a safe and stable supply of food.



Long-term Policy



DENSO's Focus Fields



SDGs



Business Strategy

Growth Targets Through the commercialization of agriculture, we will establish our agriculture business as a pillar in the non-automotive field. We have currently launched *Profarm Monitor*, *Profarm-Controller*, and *futecc* and are providing useful services for enhancing the efficiency of agricultural production and maintaining the freshness of fruits and vegetables. In addition to our sensing and control technologies, we will further leverage our manufacturing expertise we have gained in the automotive field to develop robots for greenhouse cultivation and introduce automated technologies in factories that grow plants using artificial lighting, which are expected to increase in number going forward with the aim of enhancing cultivation quality. By doing so, we will further enhance production efficiency and realize a savings in labor. Furthermore, we will provide solutions that comprehensively take into account the entire food supply chain through such means as leveraging our expansive production know-how to improve quality and safety levels in the processing of fresh vegetables. Going forward, we will form partnerships with agricultural production corporations that possess advanced technologies, combining our strengths with such corporations to realize new value in terms of food safety.

Profitability Agricultural production is increasing in scale and new companies are getting involved in such production one after another. In addition, there has been an uptick in efforts to further improve sanitation management and enhance productivity. By accurately assessing these kinds of changes in the food production industry, we will provide industrial solutions for the entire supply chain as we aim to further expand our businesses.

Differentiation We will draw on our technologies (sensor, control, robotic, and improvement technologies as well as management know-how, etc.) to the greatest extent possible. In this way, we will aim to develop practical agricultural technologies together with agricultural producers.

Operational Capabilities In April 2018, we established the AgTech Promotion Division. By strengthening our in-house development structure through this division and forming alliances with external partners who aim to commercialize agriculture, we will lead the way for innovation in the agricultural industry.

Progress

Business Alliance to Commercialize the Next-Generation Agricultural Greenhouse Domain

By leveraging air control technology provided by *Profarm-Controller*, a system for controlling the environment for greenhouse cultivation, we pursued the joint development of next-generation agricultural greenhouses, which achieve enhanced agricultural productivity, together with the major greenhouse manufacturer Daisen Co., Ltd. and Japan's leading seed and seedling company Toyotane Co., Ltd. By introducing the Active Ventilation System* for the air-conditioning of greenhouses, we will realize a stable cultivation environment and contribute higher yields and improved quality.

In addition, with the aim of establishing a total support structure for greenhouses that covers everything from environmental control to cultivation and maintenance, we reached a basic agreement with Daisen and Toyotane to establish a joint venture.

Through this collaboration, we will provide useful services for further enhancing the efficiency, stability, and added value of agricultural production.

* An automated system that controls the necessary air levels through an artificial ventilation system that uses a ventilation fan



Providing new value for the future

Masahiko Ito
 Head of New Business Unit

/ DENSO at Work /



Pursuing a clean and pristine manufacturing environment as the source of achieving high levels of reliability



Balance between productivity improvements and high levels of quality that combines the strength of people and robots



5

CORPORATE DATA

- 96 Financial Strategy
- 97 Overview by Geographical Segment
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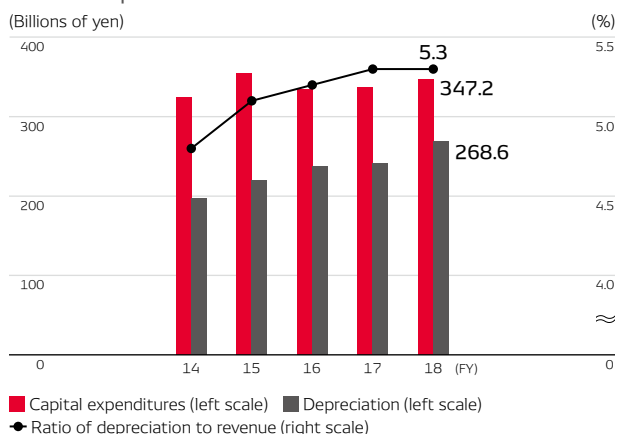
Financial Strategy

With the aim of realizing sustainable growth and further improvement in corporate value, DENSO leverages the cash flow generated through its operating activities primarily in capital expenditures, R&D, shareholder returns, and M&A.

Capital Expenditures / Depreciation

While working to control our ratio of depreciation to revenue, we will continue to invest in rationalization with the aim of reaching our targets for revenue of ¥7 trillion and an operating margin of 10%, which we adopted under our Long-term Plan 2025. In addition, we will accelerate investments in new fields such as electrification, advanced safety, and automated driving, which we believe will be competitive in the future.

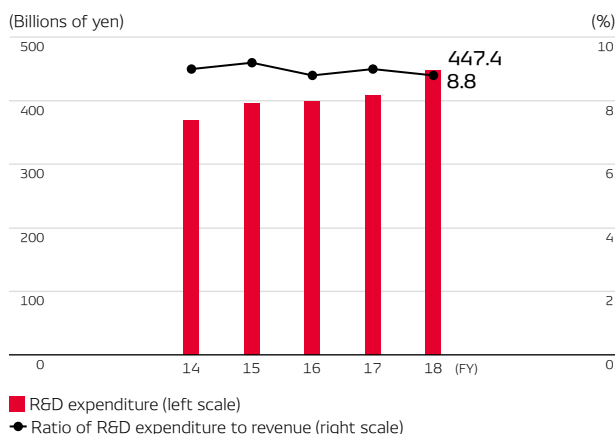
Capital Expenditures / Depreciation / Ratio of Depreciation to Revenue



R&D Expenditure

In terms of R&D, which represents the source of our future growth, we will work to enhance development efficiency to continue to carry out R&D investment while maintaining a 9% ratio of R&D expenditure to revenue. By doing so, we will continue to develop and provide even more appealing products.

R&D Expenditure / Ratio of R&D Expenditure to Revenue

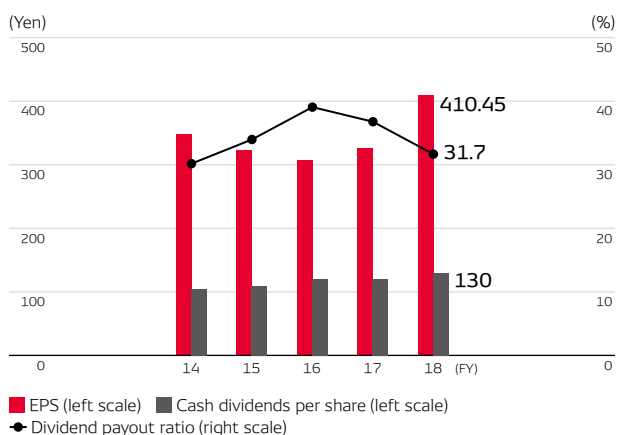


Shareholder Returns

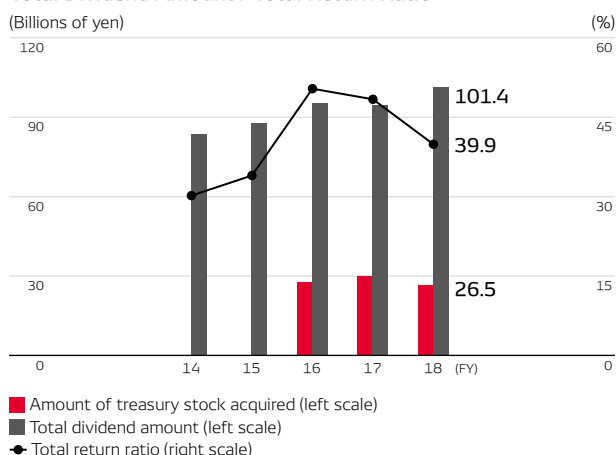
Continuing to provide stable dividends over the long term helps offer our shareholders peace of mind. Adhering to the belief of doing everything we can to avoid lowering dividends after we have raised them, we strive to maintain and improve a payout ratio for each period of around 30% to 40%.

Also, taking into consideration the state of financing and market conditions, we will work to further enhance shareholder returns through the flexible acquisition of treasury stock.

EPS / Cash Dividends per Share / Dividend Payout Ratio



Amount of Treasury Stock Acquired / Total Dividend Amount / Total Return Ratio



M&A and Business Alliances

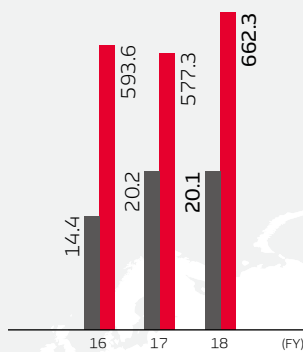
Over the past few years, the number of M&A projects has been relatively small, as were investment amounts. However, in fiscal 2018 we began to further accelerate our M&A efforts. To respond to the dramatically changing business environment, we will actively pursue M&A-related investment with the aim of securing essential resources and technologies and acquiring new business models.

	Fiscal 2014–Fiscal 2017 (Four Years)	Fiscal 2018
Number of projects	Approx. 20	Approx. 20
Investment amount	Approx. ¥10.0 billion	Approx. ¥120.0 billion

Overview by Geographical Segment

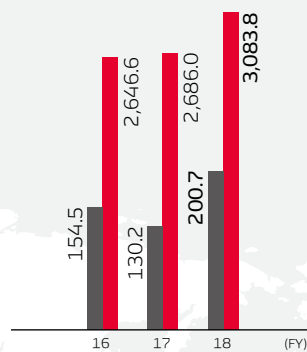
Europe

No. of bases **35**
No. of employees **17,071**



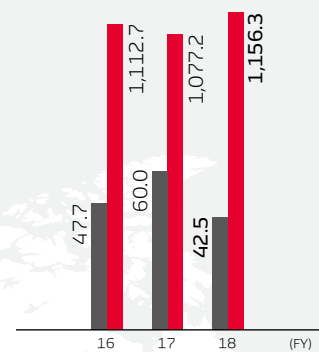
Japan

No. of bases **73**
No. of employees **74,604**



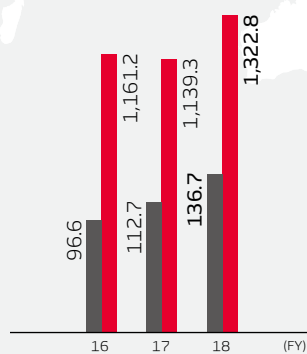
North America

No. of bases **31**
No. of employees **24,330**



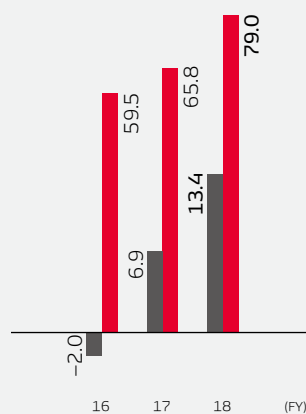
Asia

No. of bases **76**
No. of employees **49,740**



Others

No. of bases **6**
No. of employees **3,068**



■ Revenue (Billions of yen)
■ Operating profit (loss) (Billions of yen)

Notes: 1. The number of employees excludes personnel dispatched to consolidated companies but includes personnel on loan from consolidated companies. Temporary staff are also excluded from the number of employees.

2. The figures for revenue and operating profit (loss) include adjustments between segments.

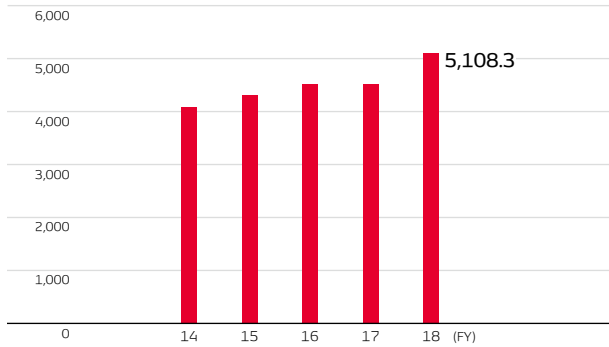
Facts & Figures

Financial Highlights

Revenue

¥5.1 trillion

(Billions of yen)

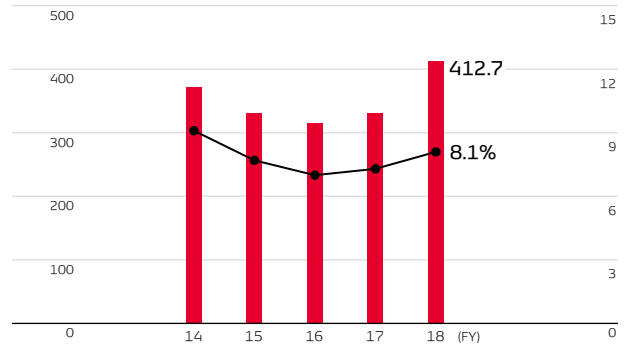


Operating Profit / Operating Margin

¥412.7 billion / 8.1%

(Billions of yen)

(%)

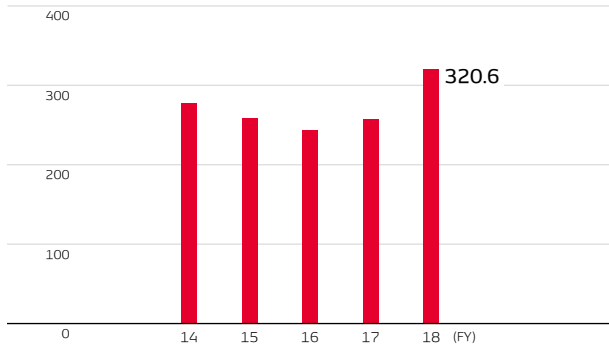


■ Operating profit (left scale) ● Operating margin (right scale)

Profit Attributable to Owners of the Parent Company

¥320.6 billion

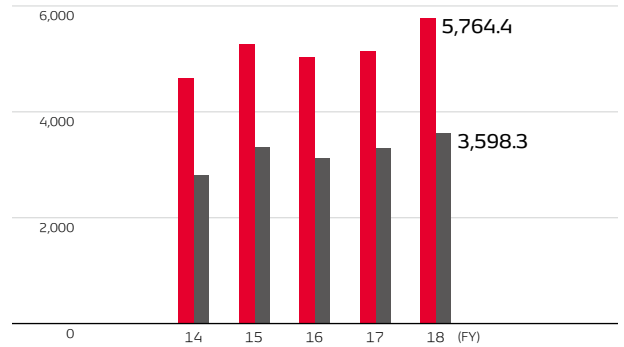
(Billions of yen)



Total Assets /
Equity Attributable to Owners of the Parent Company

¥5.8 trillion / ¥3.6 trillion

(Billions of yen)

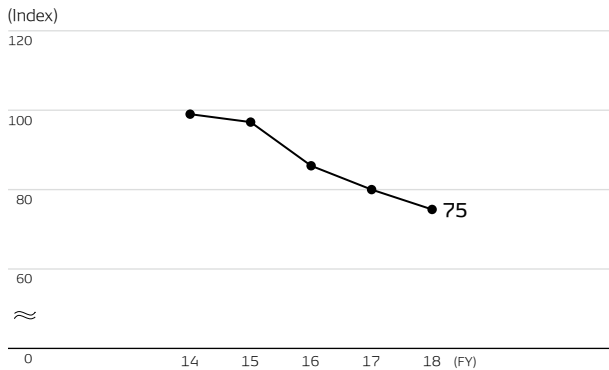


■ Total assets ■ Equity attributable to owners of the parent company

Non-Financial Highlights

CO₂ Emissions per Unit* (Non-Consolidated)

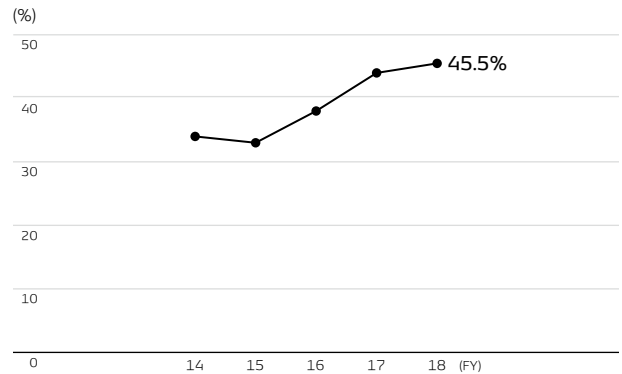
75 (indexed to fiscal 2013 as 100%)



* Per unit = CO₂ emissions / Revenue (indexed to fiscal 2013 as 100%)

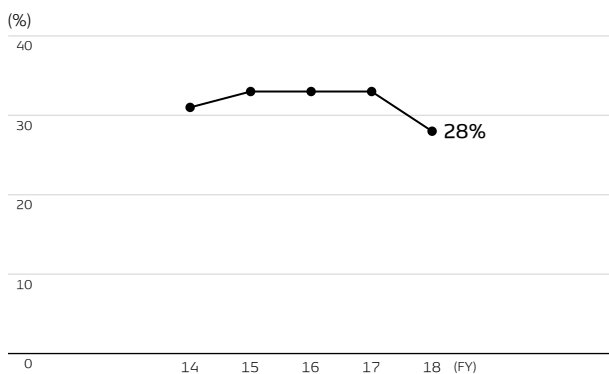
In-house Power Generation Ratio (Non-Consolidated)

45.5%



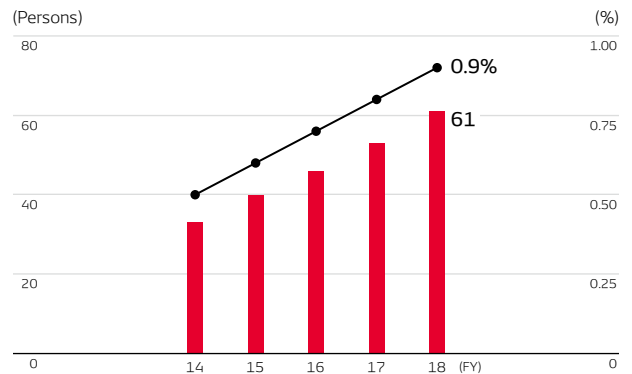
Ratio of Local Employees in Leadership Roles at Overseas Bases

28%



Number and Ratio of Female Employees in Managerial Positions

61 / 0.9%



■ Number of female employees in managerial positions (left scale)
● Ratio of female employees in managerial positions (right scale)



Please find more details on financial information via the link below.
https://www.denso.com/common/confidential-published/global/en/investors/library/annual_report/documents/2018_annual_report.pdf

10-Year Data

		Japanese GAAP				
		(FY)	2009	2010	2011	
Financial Data	Revenue	Total	3,142.7	2,976.7	3,131.5	
	By Region*1	Japan	1,668.0	1,553.5	1,548.2	
		North America	554.2	526.7	528.9	
		Europe	451.6	402.0	389.6	
		Asia	468.8	494.6	604.7	
		Others	—	—	60.2	
	By Customer	OEM	2,776.5	2,673.1	2,813.9	
		Toyota Group	1,528.0	1,558.6	1,548.5	
		Ratio of revenue from Toyota Group transactions to total revenue	48.6%	52.4%	49.4%	
		After market and non-automotive	366.2	303.6	317.6	
	Operating Profit (Loss)		(37.3)	136.6	188.3	
	Operating Margin		—	4.6%	6.0%	
	Profit (Loss) Attributable to Owners of the Parent Company		(84.1)	73.4	143.0	
	Return on Equity (ROE)		—	4.0%	7.4%	
	Capital Expenditures		314.4	114.4	145.1	
	Depreciation		276.6	237.9	193.1	
	Ratio of Depreciation to Revenue		8.8%	8.0%	6.2%	
	R&D Expenditure		297.1	270.1	290.1	
	Ratio of R&D Expenditure to Revenue		9.5%	9.1%	9.3%	
	Total Dividend Amount		32.2	21.8	37.1	
	Amount of Treasury Stock Acquired		8.4	—	—	
	Earnings per Share (EPS) (yen)		(104.13)	91.11	177.49	
	Cash Dividends per Share (yen)		40	27	46	
	Dividend Payout Ratio		—	29.6%	25.9%	
	Total Return Ratio		—	29.6%	25.9%	
	Stock Price (yen)		1,952	2,785	2,760	
	Dividend Yield		2.0%	1.0%	1.7%	
	Price Earnings Ratio (PER) (times)		42.3	30.6	15.5	
	Price Book-Value Ratio (PBR) (times)		0.9	1.2	1.1	
	Net Cash Provided by Operating Activities (A)		209.9	357.1	395.5	
Net Cash Used in Investing Activities (B)		(234.3)	(155.1)	(327.9)		
Free Cash Flow (A+B)		(24.4)	202.0	67.6		
Net Cash Used in Financing Activities		90.3	29.2	(44.8)		
Cash and Cash Equivalents at End of Year		450.5	6,81.7	688.6		
Cash on Hand		494.0	783.0	933.6		
Interest-Bearing Debt		356.6	409.5	399.6		
Equity Attributable to Owners of the Parent Company		1,789.7	1,916.6	1,962.4		
Total Assets		3,018.4	3,364.1	3,380.4		
Ratio of Equity Attributable to Owners of the Parent Company to Total Assets		59.3%	57.0%	58.1%		
Non-Financial Data	Number of Employees		119,919	120,812	123,165	
	Local		58,280	57,083	59,549	
	Non-Consolidated		36,768	38,597	38,318	
	Ratio of Female Employees (Non-Consolidated)		—	—	—	
	Number of Female Employees in Managerial Positions		—	—	—	
	Ratio of Female Employees in Managerial Positions		—	—	—	
	Ratio of Local Employees in Leadership Roles at Overseas Bases		—	—	—	
	CO ₂ Emissions per Unit*2 (Non-Consolidated)		—	—	—	
	CO ₂ Emissions per Unit*2 (Domestic and Overseas Group)		—	—	—	
	In-house Power Generation Ratio (Non-Consolidated)		37.4%	41.4%	40.9%	
	Exchange Rate (during FY)	USD (yen)		101	91	86
		EUR (yen)		146	129	113

*1 The countries and regions included in "by region" have changed as follows.

Fiscal 2009–fiscal 2010: Japan, North, Central, and South America, Europe, and Australia; fiscal 2011–fiscal 2015: Japan, North America, Europe, Australia, and Others; fiscal 2016 and onward: Japan, North America, Europe, Asia, and Others

Billions of yen

		IFRS					
2012	2013	2014	2015	2016	2017	2018	
3,154.6	3,580.9	4,095.0	4,309.8	4,524.5	4,527.1	5,108.3	
1,640.0	1,808.9	1,895.5	1,838.4	1,801.5	1,871.8	2,140.7	
504.1	625.0	799.4	942.3	1,081.1	1,050.5	1,122.8	
373.2	348.8	470.5	524.8	568.2	550.2	620.2	
579.8	734.5	855.4	930.8	1,014.7	989.5	1,146.0	
57.6	63.8	74.1	73.5	59.0	65.1	78.5	
2,813.5	3,220.0	3,639.5	3,830.7	4,048.2	4,061.8	4,521.4	
1,549.4	1,832.0	1,995.8	2,007.1	2,047.5	2,075.0	2,300.6	
49.1%	51.2%	48.7%	46.6%	45.3%	45.8%	45.0%	
341.1	360.9	455.5	479.1	476.3	465.3	586.9	
160.7	262.4	371.4	331.4	315.7	330.6	412.7	
5.1%	7.3%	9.1%	7.7%	7.0%	7.3%	8.1%	
89.3	181.7	277.2	258.4	244.3	257.6	320.6	
4.5%	8.4%	11.5%	8.4%	7.6%	8.0%	9.3%	
179.4	230.6	324.1	354.2	334.1	337.4	347.2	
180.6	181.1	197.2	220.1	236.8	241.1	268.6	
5.7%	5.1%	4.8%	5.1%	5.2%	5.3%	5.3%	
298.4	335.5	368.7	396.4	399.3	409.2	447.4	
9.5%	9.4%	9.0%	9.2%	8.8%	9.0%	8.8%	
37.1	51.2	83.7	87.7	95.3	94.6	101.4	
—	27.5	—	—	27.7	30.0	26.5	
110.81	226.59	348.05	324.01	307.19	326.32	410.45	
46	64	105	110	120	120	130	
41.5%	28.2%	30.2%	34.0%	39.1%	36.8%	31.7%	
41.5%	43.3%	30.2%	34.0%	50.4%	48.4%	39.9%	
2,765	3,985	4,948	5,483	4,524	4,897	5,820	
1.7%	1.6%	2.1%	2.0%	2.7%	2.5%	2.2%	
25.0	17.6	14.2	16.9	14.7	15.0	14.2	
1.1	1.4	1.5	1.3	1.1	1.2	1.3	
176.7	374.8	471.2	383.2	552.9	467.8	558.0	
(271.2)	(269.2)	(376.0)	(111.5)	(544.8)	(108.0)	(529.1)	
(94.6)	105.6	95.2	271.7	8.0	359.7	28.9	
78.8	(98.5)	(176.0)	(135.7)	(104.7)	(240.5)	(40.3)	
665.4	707.3	641.7	792.4	672.5	793.6	783.3	
1,022.1	1,095.2	1,034.1	944.0	876.7	858.4	918.3	
523.1	507.5	435.7	447.2	476.6	350.3	473.9	
2,009.0	2,300.1	2,799.9	3,327.9	3,123.6	3,312.7	3,598.3	
3,607.7	3,979.1	4,642.1	5,283.3	5,042.9	5,150.8	5,764.4	
55.7%	57.8%	60.3%	63.0%	61.9%	64.3%	62.4%	
126,036	132,276	139,842	146,714	151,775	154,493	168,813	
62,100	67,525	74,289	81,060	85,464	86,892	94,209	
38,323	38,385	38,581	38,493	38,489	38,914	39,315	
—	11.4%	11.6%	11.9%	12.3%	12.7%	13.1%	
—	30	33	40	46	53	61	
—	0.5%	0.5%	0.6%	0.7%	0.8%	0.9%	
26%	30%	31%	33%	33%	33%	28%	
—	100	99	97	88	80	75	
—	100	85	80	76	73	68	
40.7%	37.5%	34.3%	32.9%	38.0%	43.9%	45.5%	
79	83	100	110	120	108	111	
109	107	134	139	133	119	130	

*2 Per unit = CO₂ emissions / Revenue (indexed to fiscal 2013 as 100%)

Company Overview and Stock Information

(As of March 31, 2018)

Company Profile

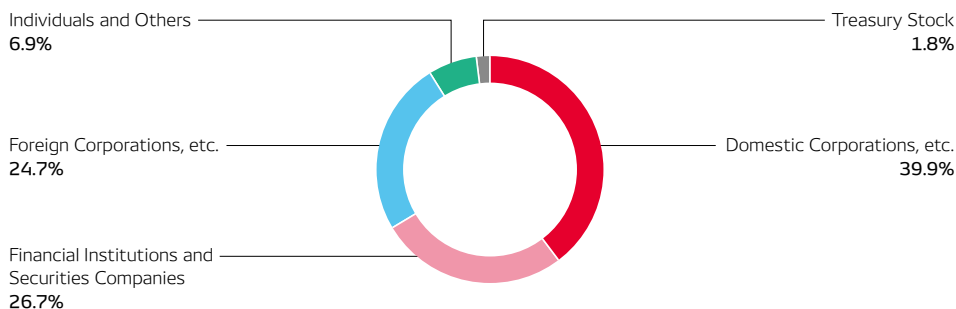
Company Name	DENSO CORPORATION
Established	December 16, 1949
Capital	¥187.5 billion
Head Office	1-1, Showa-cho, Kariya, Aichi 448-8661, Japan
Employees	Consolidated basis: 168,813 Non-consolidated basis: 39,315
Consolidated Subsidiaries	220 (Japan 72, North America 31, Europe 35, Asia 76, South America/Others 6)
Companies Accounted for by the Equity Method	38 (Japan 14, North America 4, Europe 4, Asia 14, South America/Others 2)
Fiscal Year	From April 1 to March 31
Ordinary General Meeting of Shareholders	June
Share Trading Unit	100 shares
Number of Shares Issued	779,754,625 shares (including DENSO CORPORATION owning 14,314,088 shares of treasury stock)
Number of Shareholders	66,101 (including DENSO CORPORATION owning treasury stock)
Securities Identification Code	6902
Stock Exchange Listings	Tokyo, Nagoya

Principal Shareholders

(Leading 10 Principal Shareholders)

	Number of shares held (thousands)	Voting share (%)
Toyota Motor Corporation	188,949	24.23
Toyota Industries Corporation	69,373	8.89
The Master Trust Bank of Japan, Ltd. (Trust Account)	40,948	5.25
Japan Trustee Services Bank, Ltd. (Trust Account)	34,195	4.38
Towa Real Estate Co., Ltd.	33,309	4.27
Nippon Life Insurance Company (Standing proxy: The Master Trust Bank of Japan, Ltd.)	19,481	2.49
Aisin Seiki Co., Ltd.	12,518	1.60
DENSO Employees' Shareholding Association	11,977	1.53
Mitsui Sumitomo Insurance Company, Limited	9,544	1.22
State Street Bank West Client-Treaty 505234 (Standing proxy: Settlement & Clearing Services Department, Mizuho Bank, Ltd.)	8,878	1.13

Breakdown of Shareholders

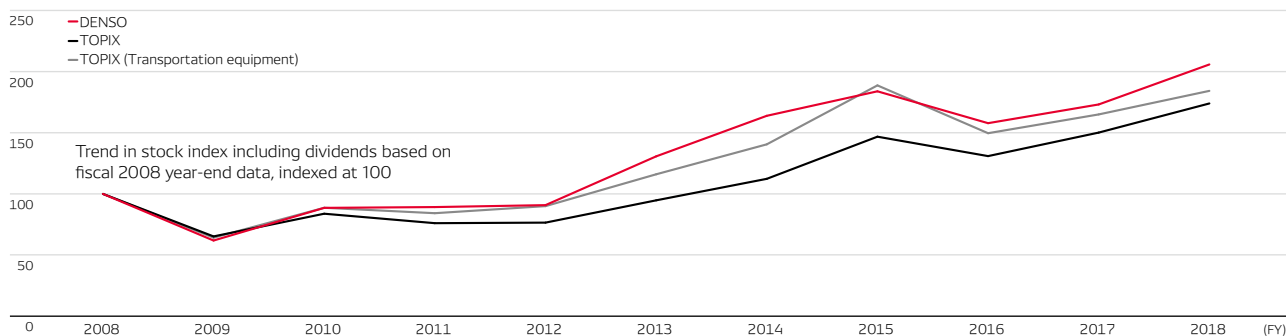


Trend in TSR*

TSR (Cumulative / Annual Rate)

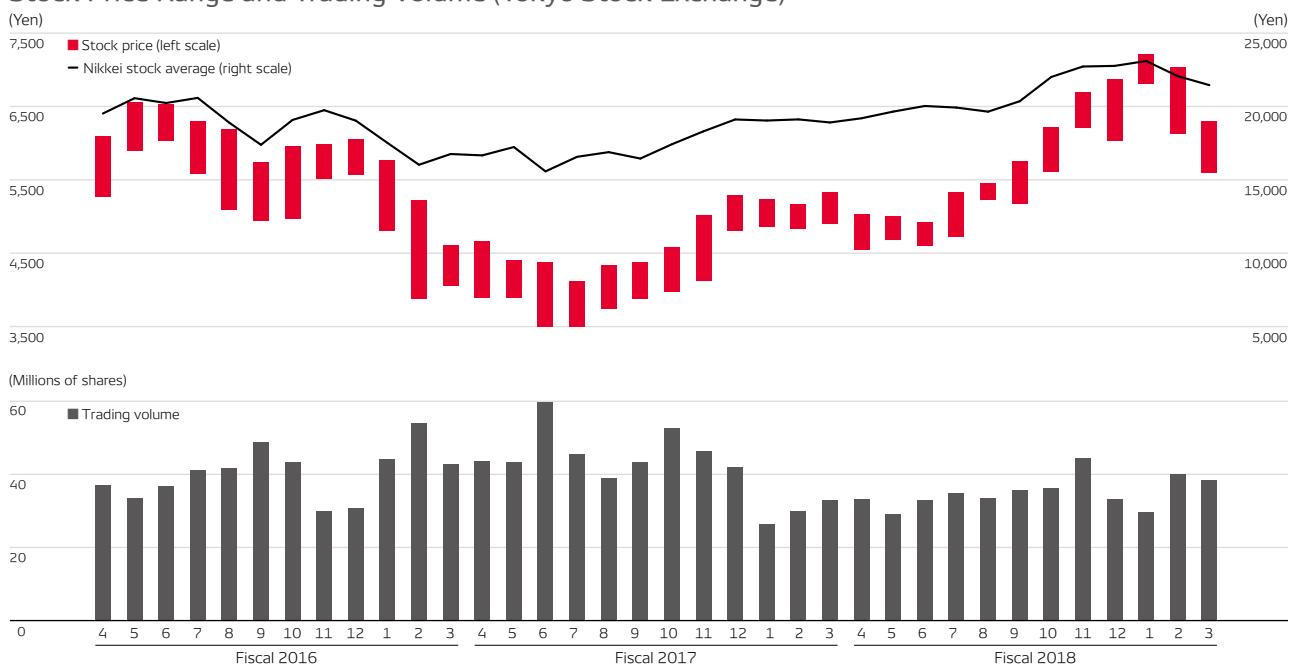
Investment period	1 year		3 years		5 years		10 years	
	Cumulative / Annual rate	Cumulative	Annual rate	Cumulative	Annual rate	Cumulative	Annual rate	
DENSO	21.5%	12.9%	4.1%	60.7%	10.0%	105.8%	7.5%	
TOPIX	15.9%	18.5%	5.8%	83.6%	12.9%	73.9%	5.7%	
TOPIX (Transportation equipment)	11.7%	-2.4%	-0.8%	58.8%	9.7%	84.2%	6.3%	

Note: Created in-house based on market data



* Total shareholder return: Total return on investment that combines capital gains and dividends

Stock Price Range and Trading Volume (Tokyo Stock Exchange)



DENSO CORPORATION

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Tel: +81-566-25-5511 (Information Center)
www.denso.com/global/en/

