



***DENSO***

Crafting the Core

Integrated Report 2017

For the year ended March 31, 2017



# Crafting the Core

Continuing to create valuable products for the future

We view the dramatic changes occurring in the automotive industry as a prime business opportunity. As such, we have established the new slogan of “Crafting the Core,” which will guide our actions as we continue to evolve our business for the future.

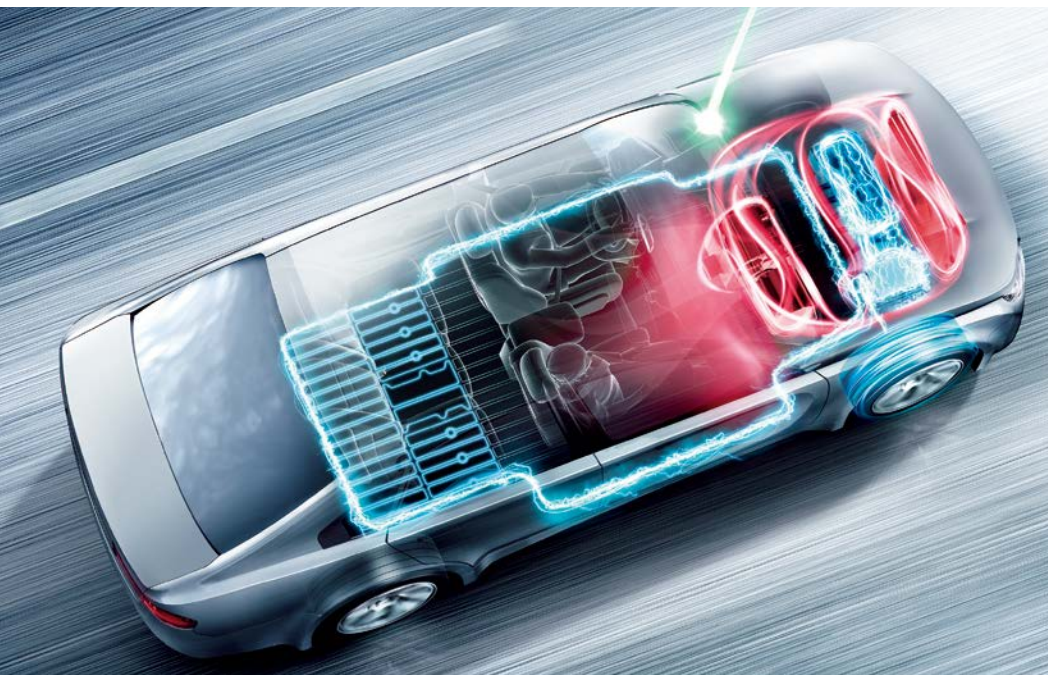






# Crafting the Core— Crafting a new core with our technologies in anticipation of change

Due to companies from other industries entering the market and fierce technological competition, the automotive industry is currently approaching a paradigm shift, which is said to occur once every 100 years. Fully understanding the wave of changes that it faces, DENSO will clear the way for a new motorized society by enhancing and evolving its technologies.



## DENSO Efficient Driving

DENSO envisions a future in which mobility is more efficient and driving is more fun. We are developing electrified technologies for a wide range of vehicles, from gasoline and diesel vehicles to HEV, PHEV, EV and FCV, to improve efficiency with better management of electric, kinetic and heat power. By predicting road conditions and charting the best course, our goal is to reduce energy loss, so people can drive as they wish while also being environmentally friendly.







## DENSO Connected Driving

DENSO envisions a future in which mobility is connected inside and outside of the vehicle, including cars, people and infrastructure, as well as new services. It brings us new experiences for traveling, and helps us develop automated driving systems that are more convenient and comfortable yet extremely energy efficient. Of course, security issues have emerged from connectivity, such as hackers and data leaks, but with an unwavering focus on safety, DENSO will help protect people and cars.



## DENSO Automated Driving

DENSO envisions a future in which everyone can travel freely and safely, regardless of their age or physical condition. That's why DENSO is deeply focused on advances in safety and security. Our goal is to evolve our sensing, information & communication and AI technologies to eliminate limitations to mobility.





# Crafting the Core— Changing the future with our strong desire toward innovation

All of our employees are passionate about accelerating the pace of innovation in this period of dramatic change. At DENSO, we have established an environment in which employees value each other's individuality and system of beliefs and work together to enhance their own capabilities. It is precisely this kind of environment that enables us to give birth to new ideas that can change the future.

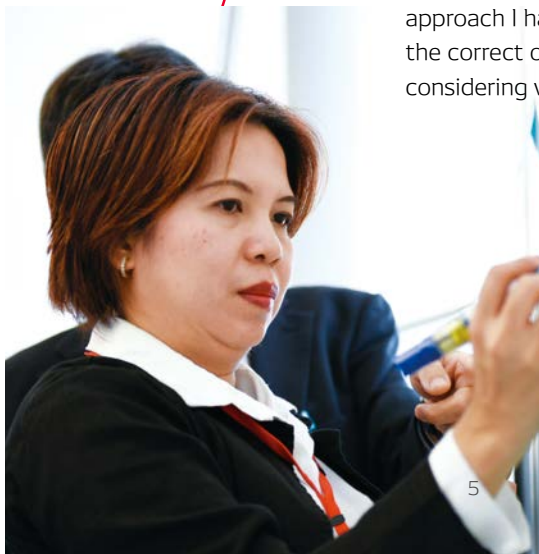
Innovation is a must in this period of change. Accordingly, no matter how busy I am, I give constant consideration to the challenges we as a company should undertake in the future and the best way for us to do so. I also make my thoughts known to those around me. In addition, I put forth the utmost effort to achieve the goals I have established for myself without ever giving up.



My approach to my job is that I work in a way that will make things easier for managers and relevant personnel five to 10 years down the line. I want DENSO's future personnel to view the contributions I am making today as extremely significant. Without ever being satisfied with doing the minimum amount of work that is asked of me, I am always thinking about ways I can do my job better and contribute more.



With a professional awareness, I have tackled issues one by one. However, with all the changes that are occurring in the automotive industry, many new challenges are likely to arise. As such, I do not necessarily believe that the approach I have taken to my work thus far will be the correct one for the future, and I am constantly considering ways I can make improvements.







It is important for automotive part manufacturers to convey how their products contribute to the evolution of cars and transportation systems. As a company that supports the new motorized society, I hope that DENSO continues to invest its unique knowledge and technologies to make significant contributions to a society in which cars and people can coexist peacefully.

—— General User



We are extremely thankful for DENSO's patience and thorough guidance, which has allowed us to maintain high levels of quality and performance. Going forward, we will continue to provide DENSO with new devices and elemental technologies that can respond to changes in the business environment as we work together with DENSO to deliver products that contribute to society.

—— Supplier

# Crafting the Core— Continuing to take on challenges to bring happiness to more people around the world

While continuing to create and enhance valuable products, we will take on challenges without fearing change. In doing so, we will create a new future that brings happiness to all people.





I think it is wonderful that DENSO values connections with local communities and nature and steadily works to nurture human resources and contribute to society. While continuing to fulfill its mission as a corporation, I hope that DENSO helps provide a brighter future for our children and the planet.

—— General User

DENSO is a global company that provides crucial support to the automotive industry. I therefore believe that DENSO can make a significant impact on society. To realize a better future for people and cars, I hope DENSO makes efforts to address major issues such as the elimination of traffic accidents.

—— Local Stakeholder



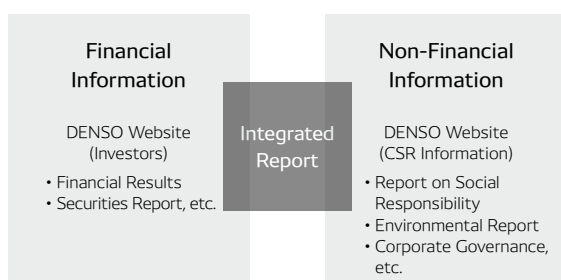
The issues facing the automotive industry are also facing many other industries. In addition, the technology employed in the automotive industry could offer solutions to many issues in other industries. Among Japanese companies, DENSO possesses an expansive technological foundation, and I believe that the Company can contribute to a broad range of areas in society. I expect DENSO to continue to expand the scope of its technologies and become a corporation that can create new markets.

—— Business Partner (OEM)

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## Positioning of Integrated Report





#### Editorial Policy

In addition to providing financial information, such as results and sales overviews as well as management strategy, *DENSO Integrated Report 2017* 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 we 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 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 CSR 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.







*Koji Arima*



## CEO Message

To Our Stakeholders

We are realizing innovation  
so that we can continue to be  
a company that earns  
the understanding of society  
as we approach our  
“second founding.”

Amid the rapidly changing business environment,  
we will increase our number of business partners  
while sharing a system of values with them to promptly realize innovation.  
In doing so, we will contribute to society and deliver happiness  
to people around the world.

Koji Arima  
President & CEO

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

## Business Environment Changes and the Company's Focus Fields

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As the level of uncertainty increases in economies and markets across the globe, the question for a company is no longer how it can achieve conventional growth, but rather how it can anticipate the changes that are likely to occur in the future. In particular, the automotive industry is currently undergoing a paradigm shift with the rise of such trends and technologies as electrification, automated driving, connected cars, and car sharing. These kinds of changes have been occurring at a much faster pace than expected.

In addition, these recent changes in the business environment rival those that were occurring at the time of the Company's founding 60 years ago. With a sense of urgency, we therefore believe that we are approaching the time of our "second founding."

DENSO has adopted the Long-term Policy of "Protecting Lives, Preserving the Planet, and Preparing a Bright Future for Generations to Come." Guided by this policy, we aim to continue to be a company that contributes to society and earns the understanding of people from around the world.

To this end, we have established our focus fields as electrification, Advanced Driver Assistance Systems (ADAS)/automated driving (AD), connected cars, and factory automation (FA), and we will leverage our long-cultivated strengths in R&D, *Monozukuri* (the art of making things), and *Hitozukuri* (human resource development) to realize our "second founding."

Furthermore, to stay one step ahead of the rapid changes that are occurring in the business environment, we are moving forward with discussion on establishing our Long-term Vision for 2025, which will illustrate the kind of company we aim to be by 2025. We plan to announce this vision to our stakeholders during the current fiscal year.

## Initiatives in Focus Fields

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I would like to introduce the initiatives we are currently pursuing in our focus fields.

### Electrification

The need for electric vehicles has been rapidly rising in countries around the world. To meet this need, DENSO established the Electrification Systems Business Group with the intention of further increasing its contributions to the environment. Through the development of products that are essential for hybrid cars over many years, we have realized products with high performance, smaller products, and products that contribute to reduced fuel consumption, thereby establishing a proven track record in global production. These kinds of products are essential for not only hybrid cars but also for plug-in hybrid and electric cars. As such, we will leverage the strengths we have cultivated through the development of such products from the perspectives of both technology and production. Additionally, by drawing on our wide range of business domains, which include the thermal business, we will forge connections between all types of in-vehicle systems and products to realize optimal energy management in terms of driving, power generation, and heat generation. In doing so, we will make dramatic improvements to vehicle fuel performance and realize further reductions in energy consumption.



### **Advanced Driver Assistance Systems and Automated Driving**

In the safety and security field, we aim for a mobile society in which all people can move in a safe and secure manner without traffic accidents. As such, we are promoting the development of products that can help realize such a society as a leading company in automated driving technologies.

In fiscal 2015, we developed vision sensors and millimeter-wave radars that are highly reliable in detecting not only vehicles but also pedestrians. Toyota Motor Corporation has adopted these products for its Toyota Safety Sense P safety technology package. Currently, the products are installed in the company's new Prius and other models.

In addition, we have strengthened collaborations with our business partners, including major corporations and venture companies, with the aim of developing state-of-the-art technologies and enhancing our resources. For fiscal 2020, we have established targets for net sales of ¥200 billion in the ADAS field and net sales of ¥1 trillion for the entire Information & Safety Systems Business Group, and are currently making solid progress toward reaching these targets.

### **Connected Cars**

For the field of connected cars, we are actively promoting collaboration with external partners with our sights set on offering mobility services from the perspective of end-users. To this end, we are investing in venture companies with unique technologies and new business models. In addition, we have established the Connected Service Business Promotion Division to promote connected services for transportation and passenger businesses that deal with commercial vehicles such as trucks and company-owned cars. This division develops and provides operational management and other services that help reduce traffic accidents and improve fuel performance. Going forward, we will work to extend the technologies we have cultivated in commercial vehicles to mobility services for regular vehicles.

### **Factory Automation Business**

Outside of the automotive field, we are promoting the factory automation (FA) business. Against the backdrop of social changes, such as the declining workforce, and the occurrence of technological innovations, the FA market has been expanding. For over 50 years, DENSO has been involved in the development of robots and engaged in the external sale of robots created at Company plants. In light of current trends, the application of FA has expanded to cover a broad range of domains, including not only assembly but also inspection, logistics, maintenance, production management, and IoT utilization. By providing our customers with solutions for FA systems that take into account factory-wide operations, we will contribute to widespread improvements in industrial productivity and in society as a whole.

## Necessary Innovation for Today

Innovation is crucial for expanding the businesses within our focus fields and realizing our “second founding.” In the case of DENSO, innovation refers to creation. Simply making improvements within our existing business fields will not lead to growth under the current business environment. Rather, the key for growth going forward is innovation, which entails the accumulation of improvements to create new approaches and methods that go far beyond conventional ways of thinking. To bring about innovation, each of our employees around the world must ascertain global changes and absorb new value systems and ways of thinking. By experiencing things that defy conventional wisdom, studying change, and holding thorough debate, all of our 150,000 employees around the globe—led by the managerial ranks—will take decisive action to bring about innovation that will shape the future.

## Inheriting the Spirit of Our Predecessors and Taking Action for Innovation

Since our establishment in 1949, we have provided society with the value of security, peace of mind, and environmental friendliness, while maintaining a passion for quality and safety. DENSO was established at the dawn of a new area in the Japanese automotive industry. Over the course of our 60-plus-year history, our predecessors established an in-house structure that comprehensively covers the development, design, and production of integrated circuits (ICs) in anticipation of the shift to electric vehicles. Furthermore, even during the recession of the 1970s, which occurred against the backdrop of turbulent world affairs, our predecessors pursued technological development geared toward the widespread use of air-conditioning in cars and in response to strengthened regulations on emissions. No matter what the circumstances, our predecessors overcame hardships with a desire to further contribute to society and a devotion to shape the future on their own initiative.

Guided by this devotion, our predecessors had to overcome challenges through the years, and this sense of commitment has been continuously passed down like DNA. Moreover, it is embodied in The NIPPONDENSO Spirit, the Company’s original mission statement, which was established in 1956—and the “DENSO Spirit,” which embodies the values expressed in the mission statement, is currently instilled in all of our employees. With this devotion, our employees believe in their own abilities and maintain an awareness of the importance of innovation. Going forward, these employees will take the initiative in bringing about innovation, adopting a three-prong approach consisting of “enhancing sensitivities through foresight,” “pursuing quality with a professional awareness,” and “working together while engaging in honest communication.”

Another essential element in realizing innovation is speed. Within a business environment that is changing at a remarkable pace, prompt measures to spur innovation are needed. To this end, we must avoid an overly inward approach and become more open in terms of forming alliances. However, we cannot form proper alliances by simply getting into contact with external parties. It is important that we form alliances with organizations that share a similar set of values. To better convey the set of values we embrace, we established “Crafting the Core” as our new slogan. “Crafting the Core” communicates our conviction toward making meticulous efforts to continue to create and enhance things that are valuable for people. By communicating what we value as

→ The NIPPONDENSO Spirit  
DENSO established the NIPPONDENSO Spirit, its original mission statement in 1956, which lays out the Company’s stance on creating socially relevant value as well as its vision for employees.





a company and how we contribute to people's happiness to a large number of people, we will share our value systems with external parties to increase our number of business partners and push forward with efforts to bring about innovation.

## A Foundation for Innovation That Supports Business Growth

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To contribute to the creation of an even better society in a sustainable manner, it is important for us to establish a foundation that supports business growth. While they may not reflect directly in numerical figures such as sales and profit amounts, initiatives toward governance, which ensure high levels of transparency that allow us to continue to realize sound growth; environmental management, which work to resolve issues related to the environment and energy and realize a harmonious existence with nature; and dialogue with society, which help create a virtuous cycle with society through interaction with all of our stakeholders, are extremely important in establishing such a foundation. To take decisive action toward innovation, we must further solidify our business foundation and ensure that it is appropriate for the times we live in.

In the case of governance, we made revisions to our management structure with the aim of accelerating our business execution in the midst of major change and invigorating strategic debate at Board of Directors' meetings. With these revisions, we reduced the number of directors and worked to separate the roles of business management and execution by further clarifying the roles of directors, who are in charge of management, and senior executive directors and executive directors, who are responsible for business execution. Going forward, we will constantly consider the necessary foundation for promoting our business through innovation and work to reinforce that foundation.

→ Revisions to Management Structure  
□□ P61

## Continue to Be a Company That Earns the Trust of Society

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I believe that consistent dialogue with our stakeholders is crucial for further enhancing our efforts to establish a foundation for innovation. Last year, we issued an integrated report for the first time. This report was read by a wide range of stakeholders, including our shareholders and other investors and our business partners, who kindly offered us their thoughts and opinions. I would like to offer my sincerest gratitude for the support and trust DENSO has received from a large number of stakeholders.

At the same time, I would like to express my earnest desire to respond sincerely to stakeholder expectations and promote Companywide efforts to allow us to continue to be a company that earns the trust of society.

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



# 1

## Corporate Value Creation Process

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## Our Corporate Value Creation Process

“Contributing to a better world by creating value together with a vision for the future”  
To continue as a company that has earned the trust and meets the expectations of people all over the world, DENSO helps to deliver the convenience and joy of cars to people around the world while aiming to realize its Long-term Policy of “preserving the Earth’s environment” and “creating a society that ensures security and safety.” For that reason, DENSO has been sharing among all its employees the DENSO Spirit passed down since its establishment and contributing to the creation of a better society by leveraging its strengths in unique R&D, *Monozukuri*, and *Hitozukuri* (human resource development). Assuredly leading to the creation of corporate value, this “Business to Society” viewpoint has been underpinning DENSO’s growth.

### Management Principles and Code of Conduct

DENSO has positioned three elements under the framework shown below: its Long-term Policy, which tackles issues in critical operational fields heading toward 2020 based on the DENSO Philosophy that outlines the Company’s corporate stance and mission; its Mid-term Policy, which states the strategies designed to achieve the Long-term Policy; and the DENSO Spirit, which forms a day-to-day code of conduct.



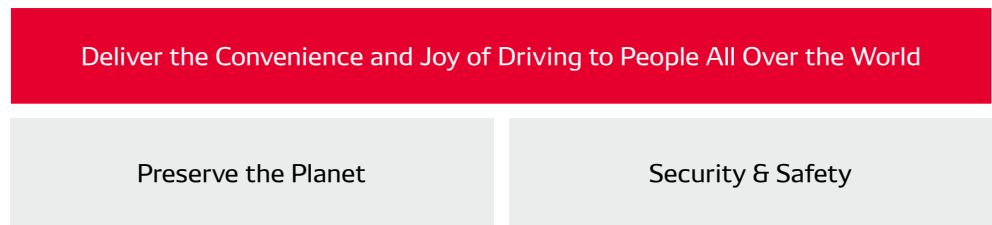
# Long-term Policy

## Slogan

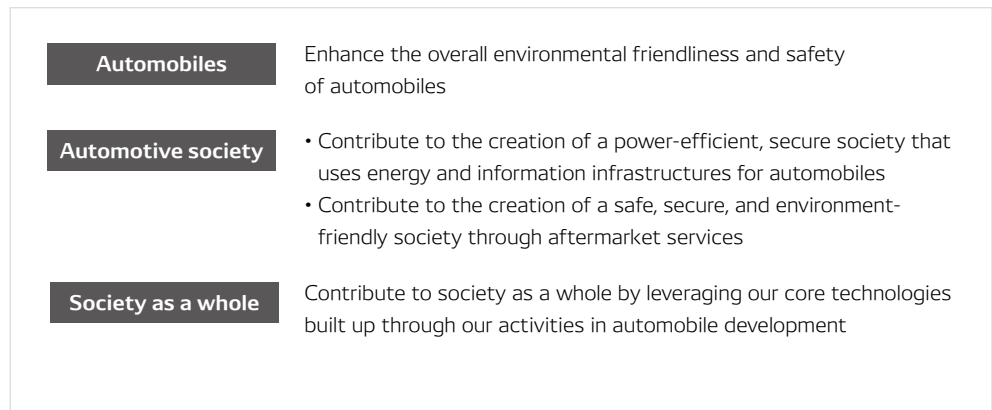
### Protecting Lives, Preserving the Planet, and Preparing a Bright Future for Generations to Come

In light of difficult times expected caused by severe environmental changes, DENSO formulated DENSO Group Long-term Policy 2020 in 2013 while keeping in mind its strong motivation to contribute to society and taking aggressive action on its own accord to remain a company that has earned the trust and meets the expectations of people all over the world.

## Value Delivered to Society



Our mission toward 2020



## Corporate Direction

Value	Behavior
Take social responsibility	Each region leads regional innovation
Engage the world proactively	Challenge ourselves in new fields
Trust partners with common aspirations	Deliver elegant solutions

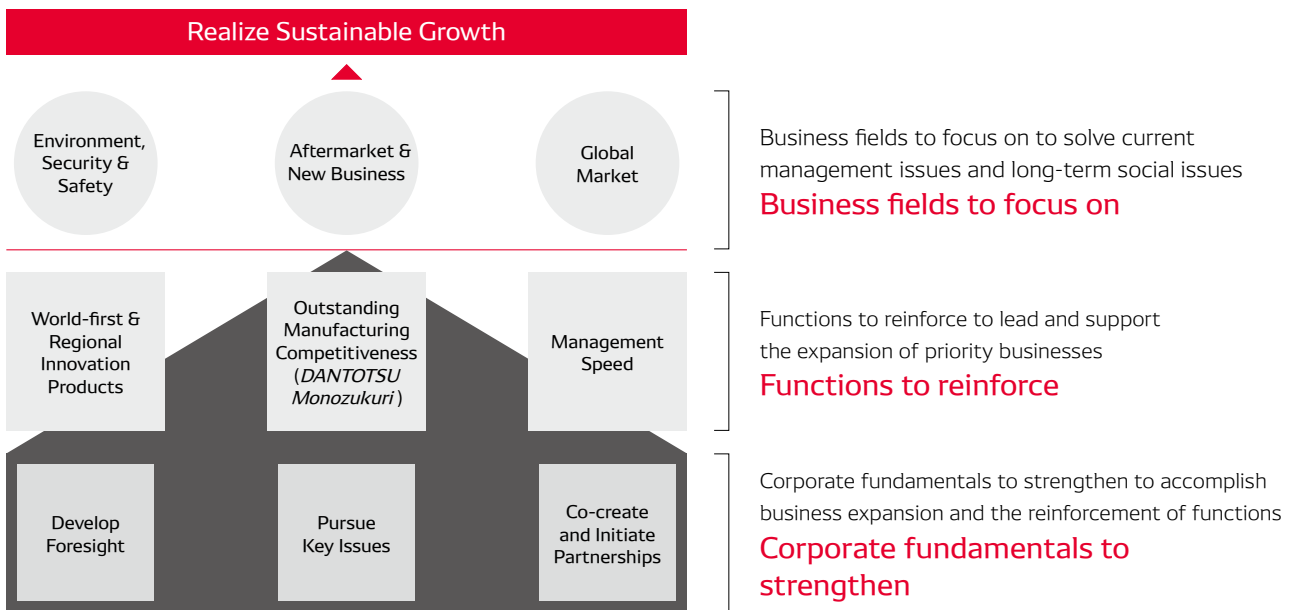


# Mid-term Policy

## Initiatives in Our Focus Fields

### Environment, Security & Safety, Aftermarket & New Business, and Global Market

DENSO Group Mid-term Policy describes the key business fields to focus on, the functions to reinforce, and the corporate fundamentals to strengthen through fiscal 2019 in order to achieve the goals of Long-term Policy 2020.



#### Strategy for Mid-term Policy

	Themes to Promote	Direction
<b>Initiatives in Our Focus Fields</b>	<b>Environment, Security &amp; Safety</b> Create system products that address social issues and help reduce the environmental footprint and traffic accidents	<ul style="list-style-type: none"> <li>Strengthen technological developments toward greater fuel saving, air purification, energy diversification (improve fuel efficiency, electrification, fuel economy, etc.), and system proposal capabilities</li> <li>Strengthen technological developments in vehicle control, human machine interface (HMI), and information and communications systems toward the evolution of advanced driving support</li> <li>Strengthen new product design and development in automobiles and social systems and related areas</li> </ul>
	<b>Aftermarket &amp; New Business</b> Expand aftermarket & new business markets to create new customer value from a societal needs and end-user perspective	<ul style="list-style-type: none"> <li>Propose products that maintain a societal needs and end-user perspective and that create customer value</li> <li>Improve speed from product planning to sales through initiatives that prioritize the front line (customers, markets) and through active collaboration with partners</li> </ul>
	<b>Global Market</b> Reinforce the relationship of mutual trust and raise DENSO's presence in each region so that people around the world can enjoy driving and the convenience of vehicles	<ul style="list-style-type: none"> <li>Predict customers' essential expectations and continually provide value linked to customer brand improvements</li> <li>Provide multifaceted value added—for example, in terms of quality, value, delivery and service—compatible with the needs of each region to become more region-centric</li> </ul>
<b>Functions to Reinforce</b>	<b>World-first &amp; Regional Innovation Products</b> Take on the challenge of advanced technological development that creates the world-first and regional innovation products by realizing regional strengths and community-based wisdom	<ul style="list-style-type: none"> <li>Accelerate advanced technology research and reinforce efforts in social science</li> <li>By predicting the trend in regional needs, enhance the ability to design product concepts and develop advanced technologies</li> </ul>
	<b>Outstanding Manufacturing Competitiveness</b> Enhance <i>Monozukuri</i> capabilities and the global expansion of <i>DANTOTSU</i> through enhanced competitiveness to realize a regional No. 1 production structure, the <i>DANTOTSU</i> plant	<ul style="list-style-type: none"> <li>Reinforce simultaneous development of products and <i>Monozukuri</i> for product evolution (high difficulty level, systems) and expansion of overseas production</li> <li>Establish strong <i>Monozukuri</i> capabilities by One DENSO and realize a regional No. 1 production supply structure and the <i>DANTOTSU</i> plant</li> </ul>
	<b>Management Speed</b> Accelerate management speed by promoting global collaboration and changing our way of working to improve the speed of business operations	<ul style="list-style-type: none"> <li>Collaborate with diverse people</li> <li>Implement global next-generation information systems and change our way of working to improve the speed of business operations</li> </ul>

# DENSO Spirit

## What is 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

Anticipate change

### Creativity

Create new value

### Challenge

Overcome difficulties

## Credibility

Providing quality and reliability beyond customer expectations

### Quality First

Ensure the best quality for our customers

### On-site Verification

Grasp the facts firmly

### *Kaizen,*

### Continuous Improvement

Strive to reach higher levels

## Collaboration

Achieving the highest results by working as a team

### Communication

Understand one another completely

### Teamwork

Do your best as a team

### Human Development

Develop yourself and the next generation

## Foresight

### Source of Advancement—Boldly Taking On Challenges in Electric Vehicle Development

For over 50 years, DENSO has been taking on challenges in electric vehicle development. During this time, the Company has fostered a spirit of “advancement” that involves overcoming various hardships to create new value. This spirit has been passed down to all of DENSO’s current employees.

At the time of DENSO’s founding in 1949, Japan’s economy was suffering from stagnant conditions and demand for automobiles was extremely low, meaning that DENSO had to fight for its own survival. Under these difficult circumstances, the Company leveraged electric component-related technologies and equipment to pursue the development of products that would benefit society. With the desire of DENSO’s employees to support society, the Company launched an electric vehicle development project with the aim of resolving social issues brought about by Japan’s limited access to gasoline at that time.

Despite criticisms that DENSO was looking too far into the future as well as a lack of resources, the Company continued to promote research and development and was able to produce a test model in a period of only nine months. This exceptionally fast pace was driven by the spirit of DENSO’s engineers, who boldly accepted the difficult challenges presented by electric vehicle development and strove to produce results. This test model was able to drive up to 122 miles off a single charge, a distance that rivals today’s electric vehicles. About a year after its launch, DENSO’s electric vehicle went out of production, with only 50 models made, due to the surging popularity of gasoline-powered cars that arose after the Japanese government eased regulations on gasoline. Nevertheless, DENSO fostered a spirit of overcoming hardships by facing challenges head on. That spirit, along with the technologies to develop electric vehicles, remains in the Company today.



### Credibility

## Passion for Quality—The Path to Receiving the Deming Prize and DENSO's Unrelenting Devotion to Excellence

Even if one out of several thousand products a company makes is defective, for the customer who purchases that defective product, that is not one of many products but rather the only one. For DENSO, a company that handles products that directly relate to people's safety, it is essential that all Company employees fulfill their responsibilities in terms of ensuring quality. Since our founding, we have established and rigorously strengthened comprehensive quality control. Through such efforts, we worked to solidify our corporate position and supply high-quality products. In doing so, we have earned the trust of our customers and business partners.

We first declared our ambition to win the Deming Prize 10 years after our establishment. At that time in Japan, the Deming Prize was the most prestigious award for quality control. The standards for winning the award were extremely strict, and we

endeavored every day for two years to meet these standards. Under the guidance of external experts, we continued to promote robust efforts to expand quality control education not only within the Company but also at the factories of our suppliers. As part of these efforts, we established a quality control committee and other committees to thoroughly reinforce quality management. At the same time, we carried out measures to enhance quality on a monthly basis, thereby popularizing quality control activities across the entire Company. These efforts bore fruit in 1961, when we became the first automotive parts supplier in Japan to receive the Deming Prize.

Today, we have established the new slogan of "Quality DENSO" and are continuing to engage in highly reliable manufacturing.

### Collaboration

## DENSO's Comprehensive Strengths—Surpassing Technological Boundaries through the Comprehensive Knowledge and Strengths of Our Employees

In the past, diesel engines had a negative image as they spread black smoke into the air. However, preserving the merits that diesel engines offer, such as power, fuel efficiency, and low life cycle costs, DENSO has become the first company in the world to realize the practical application of a common rail system, which has helped provide diesel engines with a cleaner, more positive image. Within the process of developing and mass-producing this common rail system, we worked tirelessly to examine numerous ways to overcome technological boundaries, guided by the strong desire of our engineers to create brand-new technologies.

In addition to an injection pressure of 1800 bar, which was an extremely high level at the time of the system's creation, this common rail system is able to perform up to five injections (multi-injections) at intervals of 0.4 milliseconds using only a minimum amount of fuel. Furthermore, the common rail

system is equipped with cutting-edge functions such as a "learning control," which allows it to detect and repair individual component differences and deterioration on its own. To realize the multi-injection feature, processing accuracy to the micron was required, as was eliminating the impact of pressure within the system's tube. Such issues were difficult to resolve through measures that use only hardware. Accordingly, it was necessary for us to conduct trials with the involvement of software specialists. Through the combination of hardware and software, we were able to find solutions to such issues by accumulating development logic while repeating the process of trial and error. It was the comprehensive knowledge and strengths of a great number of people, which spanned beyond divisions and fields of development and manufacturing, that allowed us to make the impossible possible with our common rail system.

### Instilling the DENSO Spirit in the Actions of All Employees

The DENSO Spirit has provided us with our competitive edge and has driven us to contribute to the automotive society and the people who live within it. To allow the DENSO Spirit to function as a Groupwide code of conduct, we translated the details of the DENSO Spirit into 17 different languages and have shared them across the globe. In addition, we are providing our workforce with tools that summarize the Company's fundamental approach to day-to-day work based on the DENSO Spirit as well as our methods and processes for developing employees. These tools are shared on a global basis as educational materials.

The DENSO Spirit is more than just a slogan—it is something that is instilled in all of our employees and carried out in their daily actions.

# Value Creation Story

With the major changes that are occurring in the business environment,  
DENSO is approaching the time of its “second founding.”

To continue to be a company that earns the trust of society amid these changes,  
DENSO will resolve social issues through its business activities and realize its future vision.

Since its founding, DENSO has nurtured the strengths of R&D, *Monozukuri*,  
and *Hitozukuri*. By intertwining efforts throughout its focus fields,  
DENSO is promoting corporate activities with a sense of urgency in all of its business domains.

In doing so, all of DENSO’s employees, who embody the DENSO Spirit,  
will provide value to society and help shape the future.

This section introduces the story of DENSO’s value creation.

## Issues Society Will Face in the Future

**Intensifying social issues**

- Global warming and air pollution
- Urbanization and aging populations

**Accelerating technological innovations**

- Digitization (IoT)
- Robotics (AI)

**Changing value systems**

- Diversification of values
- Changing consumer behavior (shift from car ownership to car sharing)



**Long-term Policy**  
□□ P.18

**Protecting Lives,  
Preserving the Planet, and  
Preparing a Bright Future  
for Generations to Come**

**Environment**  
□□ P.36

**Security & Safety**  
□□ P.37

**Focus Fields**

- DENSO Efficient Driving
- DENSO Automated Driving
- DENSO Connected Driving
- FA

**Strengths**  
□□ P.24-29

- R&D
- *Monozukuri*
- *Hitozukuri*

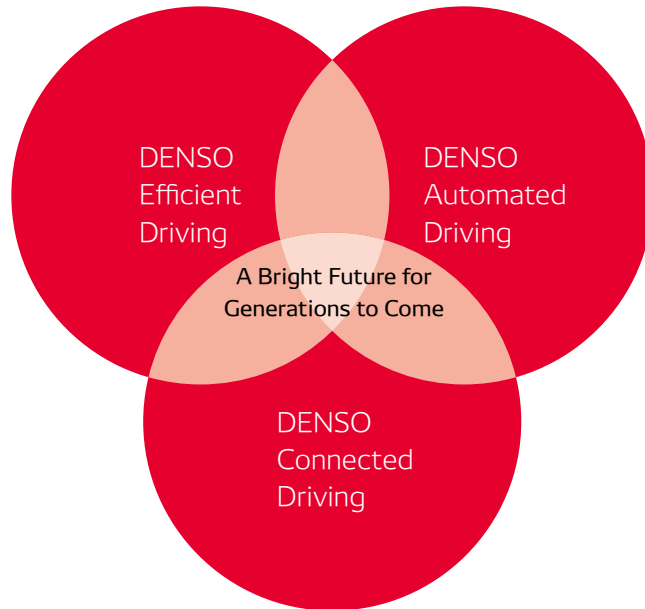
**The Foundation That Supports  
Our Business Growth**  
□□ P.60-87

- Corporate Governance
- Encouraging an Active Role for Our Human Resources
- Compliance
- Risk Management
- Environmental Management
- Quality Assurance
- Intellectual Property Activities
- Engagement with Society

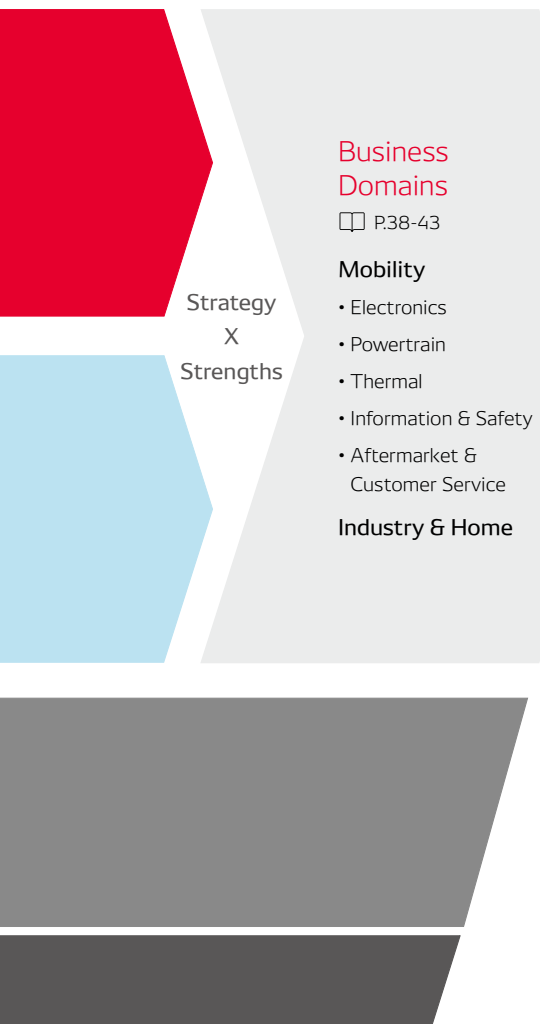
**DENSO Spirit**  
□□ P.20-21



DENSO's Focus Fields and the Value It Aims to Provide



What DENSO Aims to Be



**Offering the freedom and joy of movement to all people**

- Realize a society without traffic accidents
- Get people to the places they want to go
- Give shape to a society that safely connects people with information

**Being eco-friendly and providing people with comfort**

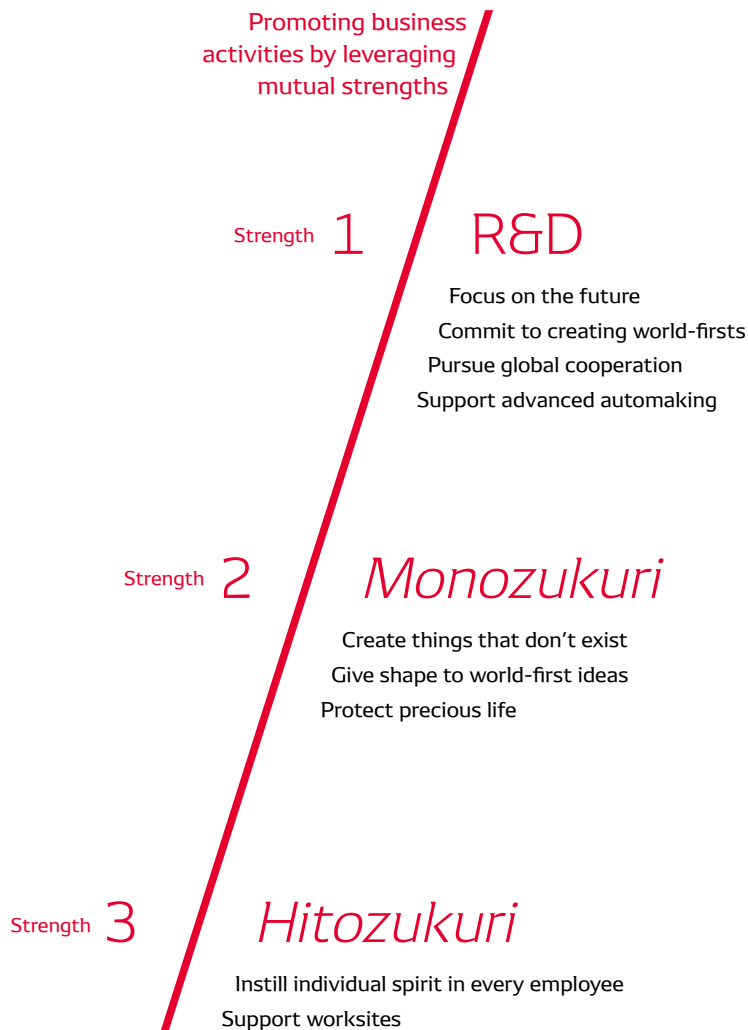
- Allow people to move with comfort in the way they please
- Create a society that helps conserve the global environment the more people travel
- Offer people the things they want, when they want them, and where they want them

**Becoming a company that earns the trust of all of its stakeholders and contributes to the creation of an enriched and secure society**

## Strengths That the Company Has Nurtured Since Its Founding

As stated in the value creation story on page 22,  
DENSO has nurtured the strengths of R&D, *Monozukuri*,  
and *Hitozukuri* since its founding.

By leveraging these strengths and intertwining efforts throughout its focus fields,  
DENSO will deliver value to society that will shape the future.  
This section will explain the secrets behind DENSO's strengths and introduce the initiatives  
the Company is undertaking to further enhance its competitiveness.



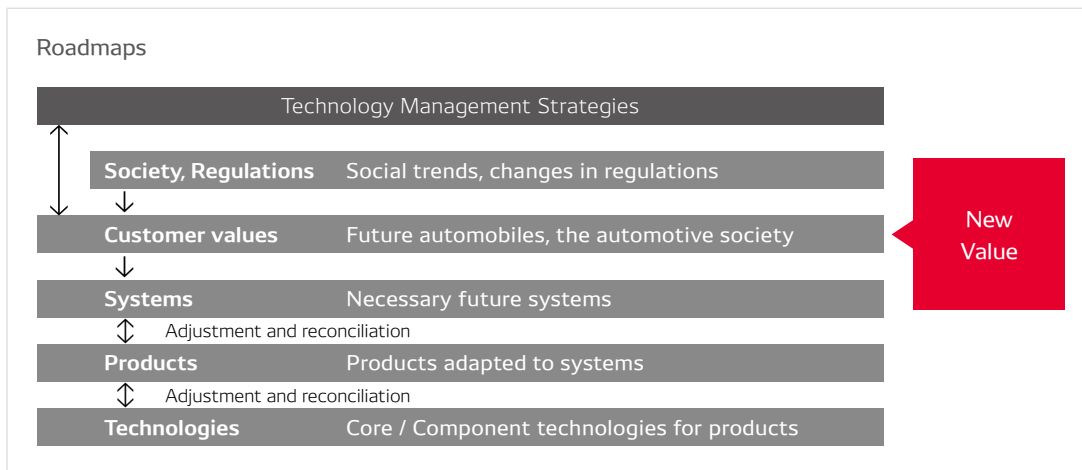


# 1. Research and Development (R&D)

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 has been 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 and will decide 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 at 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 2017, the year ended March 31, 2017, R&D expenditure came to ¥409.2 billion and is expected to be ¥425.0 billion in fiscal 2018.



## The Key to Our Strength

### Advanced Research Focused on the Future

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 semiconductor materials to oil-producing microalgae, 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 the common rail system, which dramatically increases diesel engine performance, the gas-injection heat pump system, which improves the driving distance of electric and hybrid vehicles, and short-range LiDAR, which prevents rear-end collisions and has been commercialized for compact vehicles.



### Global R&D Structure

With technical centers based throughout the world (Japan, the United States, Germany, China, Thailand, India, 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 meets a wide range of end-user needs with technologies and know-how accumulated through the development of new technologies in every field.



## 2. 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 ground-breaking technologies and products conceived by our R&D.

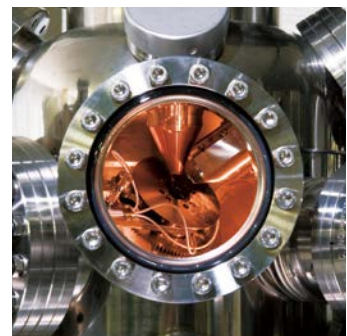
We have striven to develop speedy and efficient production lines and compact unique facilities, as well as streamline distribution and inspection with our own production technology, and we have built a *DANTOTSU*\* plant that performs *Monozukuri* at a *DANTOTSU* price. This has enabled us to also ensure 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 to Create 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*. Materials that DENSO's materials engineers have jointly developed with materials manufacturers 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.



### Quality Assurance That Helps Protect Precious Lives

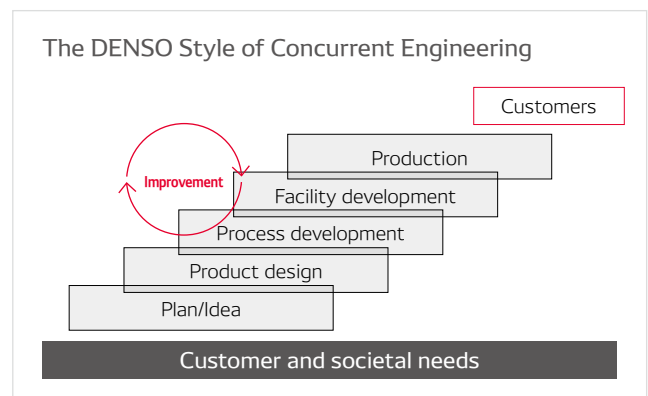
In order to make automobiles that can be driven with peace of mind, DENSO, as a parts manufacturer, has owned a test course from early on. Having evaluation equipment comparable to that of automakers, such as a low-temperature wind tunnel testing room and an electromagnetic wave dark room, DENSO repeatedly 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.



## 3. 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. In addition, 17 of our technicians from Japan, Thailand, Indonesia, Vietnam, and Mexico competed in eight different events at the 44th World Skills Competition, which was held in October 2017 in Abu Dhabi, United Arab Emirates.

#### Accumulated Medals Won at All World Skills Competitions

Total number of acquisitions

61

  
GOLD  
31

  
SILVER  
16

  
BRONZE  
14

## TOPICS

### 2. Monozukuri

## Realizing an Ever-Evolving Monozukuri with Factory-IoT That Utilizes Human Wisdom

DENSO will improve its global productivity by introducing factory-IoT systems to create factories that bring out human wisdom and continue to evolve.

In Europe and North America, factory-IoT involves a cycle of analyzing digital data collected through sensors attached to production facilities and conveying that data back to the facilities without human interaction. In contrast, DENSO's factory-IoT visualizes a diverse range of information unable to be processed by factory-IoT systems used in Europe and North America and feeds that information back to people. Such information includes signs of facility and equipment failure as well as information grounded in the wisdom of experts. Sharing such information between our employees will lead to new realizations and improvements.

While we traditionally have carried out facility repairs after a malfunction has occurred and implemented measures to prevent a recurrence, factory-IoT will allow us to predict, prevent, and respond to facility malfunctions before they occur. Additionally, by using this shared information to stimulate the creativity of our employees, we will give birth to new ideas and carry out innovative improvements that cannot be done via machines. We will also share examples of measures implemented and improvements made through factory-IoT across the globe, thereby realizing further improvements and continuous evolution.

By 2020, we will have our 130 factories worldwide digitally connected with the aim of improving the productivity of the entire DENSO Group by 30%.



### 3. Hitozukuri

## Winning a Total of Three Gold Medals at the 54th National Skills Competition and the 36th National Abilympics



In October 2016, 36 DENSO Group employees participated in nine events at the 54th National Skills Competition held in Yamagata Prefecture, with gold medals being won in the precision device assembly event and the mechanical device assembly event. In addition, two Group employees participated in the 36th National Abilympics, with one winning a gold medal and one winning a bronze medal in the mechanical device assembly event.

The purpose of these competitions is not only for participants to display their outstanding capabilities but also for refining the mental and physical skills of young technicians through training, who will likely become highly skilled technicians in the future. These competitions also aim to pass on techniques from one technician to the next. Going forward, DENSO will continue to nurture young technicians and pass on the necessary skills to them through participation in the National Skills Competition and the National Abilympics.

## Special Feature

# The Safety and Security Created by DENSO Driver Status Monitor

DENSO aspires to create an automobile that lets all people enjoy the freedom of mobility in a safe and secure manner.

The Driver Status Monitor is one example of how DENSO has leveraged its unique strengths to realize that aspiration. By elaborating on the background of the Driver Status Monitor's development, this section introduces the story of DENSO's value creation.

Driving status monitoring system that accurately monitors driver's condition and supports safe driving

### What is the Driver Status Monitor?

The Driver Status Monitor (DSM) is a system that uses a sensor device to monitor the driver's face and eyes and uses a computer to calculate any abnormalities in the driver's condition, such as if the driver is falling asleep at the wheel or looking away from the road. When abnormal conditions are detected, the system uses an alarm to warn the driver and encourage safer driving. If it is determined that no improvement is made in the driver's condition after giving a warning, DSM establishes a link with the vehicle's pre-collision braking system to speed up the timing of braking. The detection sensitivity of DSM is extremely high, allowing it to realize consistently stable detection of not only the driver's condition but also the conditions in which he or she is driving. As such, DSM is a product that helps keep the driver safe and secure at all times.

### Background of Development

For a company like DENSO, which constantly pursues challenges with a devotion to safety and security, reducing the number of traffic accidents and limiting the damage caused by traffic accidents are extremely important issues. Traffic accidents can be caused by environmental, vehicular, and human factors, with human factors being the most prevalent of the three. To decrease the number of accidents caused by human factors, DENSO worked for over 10 years to develop DSM, which monitors the condition of drivers and supports driving safety. There is a considerable amount of ambiguity and variety when it comes to people's faces, and DENSO had to overcome great difficulties to develop a monitoring system that could quantitatively evaluate a person's face with an extremely high recognition rate. Amassing the Company's comprehensive strengths and abilities, DENSO realized the commercialization and mass production of DSM in 2014. DSM is currently being used in trucks and buses as it helps prevent driving while drowsy and distracted driving, which have

become significant social issues. In this way, DSM contributes to driver safety.

### Obstacles That Stood in the Way of Commercializing DSM: Three Product Features That Provided the Strength for Overcoming Commercialization Obstacles

Before the project's development got under way, the concept for DSM took shape in 1991, when collaborative public-private development projects centered on the Ministry of Land, Infrastructure, Transport and Tourism commenced. However, these public-private development projects were unable to realize the commercialization of DSM for many years due to the difficulty of achieving a facial recognition function that could process the ambiguity and variety in people's faces and steadily capture images of faces both during the day and at night, when the lighting environment drastically differs. DENSO's unique technological strengths and the capabilities of its employees provided a path for overcoming this difficulty as well as the many other obstacles



to commercialization that followed.

DENSO's DSM boasts many unique features, including not only its ability to link with a vehicle's braking system but also its independent alarm function and extremely high-performing facial recognition rate. All parties involved in the development of DSM worked together with a desire to leverage DENSO's outstanding technological strengths to realize enhanced levels of safety and security, and it was the culmination of these efforts that led to the successful development of DSM, which offers various functions with unrivaled performance.

**Feature 1 High-performance image recognition technologies that are not easily influenced by the external environment**

Imaging technology that is not easily impacted by external light is essential to the precise detection of a driver's face. After hypothesizing the various environmental conditions of the vehicle interior and repeatedly conducting verification tests, DENSO was able to create an imaging system using near infrared rays, which are not easily affected by surrounding brightness. In turn, this system allowed the Company to realize an imaging performance that is stable in a wide variety of lighting environments and is not significantly impacted by the strength of sunlight. Supported by the Company's long-cultivated image recognition technologies, the DSM development team collaborated with both internal and external divisions to create this superior imaging system through the repetition of the trial-and-error process. Thanks to these efforts, DENSO was able to realize high-performance imaging.

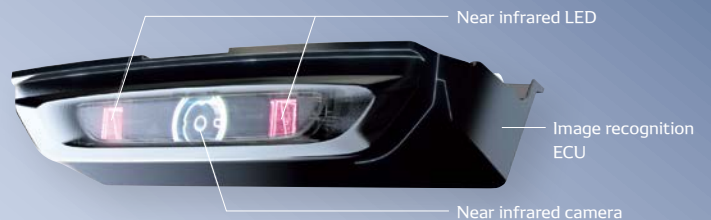
**Feature 2 Image recognition algorithms that can recognize any type of face**

To develop an algorithm that can respond to the ambiguity and variety of people's faces, DENSO collected a variety of facial images from over 6,000 people of different races, genders, and ages, and compiled these images into a database. Leveraging this data, the Company repeatedly carried out verification tests and conducted a wide variety of research so that DSM's electronic control unit (ECU) would be able to recognize the driver's facial contours, eyes, nose, mouth, and other features and make accurate estimations regarding abnormalities (e.g., drowsiness) in the orientation of the driver's face based on the relative location of the driver's facial parts and on the extent his or her eyes are open. As a result, DENSO was able to realize facial recognition technologies that can thoroughly recognize individual differences. Moreover, this research allowed the Company to develop DSM with built-in functions that automatically study the characteristics of a driver's eyes. Thanks to the steadfast approach of the DSM development team and the Company's comprehensive analysis technologies, DENSO was able to overcome the various obstacles within the development process of image recognition algorithms.

**Feature 3 Reduced size that enhances the ease of installation**

To properly recognize a driver's face, it is necessary to capture an image while the driver is facing forward, which means the

Reduced size by offering the camera, ECU, and near infrared LED in a single package



ideal position for a camera is near the speedometer. However, the amount of space for installation is limited as many other devices also occupy this area. As such, DENSO successfully reduced DSM's size by integrating the camera with the ECU and near infrared LED, making it easy for the device to be installed in areas with limited space. While there had been some products that offered cameras and ECUs as separate devices, DSM was the world's first product to integrate the camera and the ECU into one device. The process for integrating these functions into a single package and reducing its size represented a battle with "heat." The dashboard of a vehicle, where DSM is installed, is an area that is exposed to direct sunlight, and the components incorporated within DSM also generate heat. Accordingly, promoting heat loss in an efficient manner represented a significant hurdle. To overcome this hurdle, the personnel in charge of developing DSM's imaging and lighting components collaborated with the personnel in charge of developing the device's facial recognition functions, working under a common goal to examine and propose the best solutions in their respective areas of expertise. This kind of team effort allowed DENSO to create a product that could steadily maintain quality and performance within a wide range of temperatures.

**Expanding the Potential of DSM and Moving On to the Next Challenge**

DENSO took on the challenge of discovering a way to quantitatively evaluate the human face, which is ambiguous in nature, thereby realizing the mass production of DSM. However, to fully address the issue of driver safety and security, there are still many tasks that need to be accomplished. For its initiatives going forward, DENSO aims to develop not only technologies that can detect human error on the part of the driver but also technologies that are more advanced in monitoring the condition of the driver's health and are able to further implement safety measures such as automatically pulling over to the shoulder of the road in place of the driver in the event the driver's condition suddenly worsens. While the current DSM monitors the driver with a high level of sensitivity, DENSO aims to turn DSM into a device that better protects drivers "from the background," allowing them to enjoy a more liberating and secure experience within the vehicle.

# DENSO's History of Corporate Value Creation

DENSO has maintained the corporate mission of addressing shifts in social needs while helping to solve social issues.

Throughout the years, DENSO has anticipated the changes occurring around the world and worked to bring about innovation on its own initiative while becoming even more in tune with social issues.

As a result, the Company has dramatically expanded its business domains and significantly grown its sales.

This section provides details of the Company's growth trajectory as well as its history of innovation in responding to the changing needs of society.

## 1950s

### Major Advancements as a Comprehensive Manufacturer of Automotive Parts

#### Changes in Society:

- The dawn of motorization
- Rapid increase in consumer spending due to high economic growth
- Growing technological gap with Europe and North America

#### DENSO's Innovation:

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 agreement, DENSO received an abundance of useful suggestions on everything from advanced technological development to business management systems. The Company fully digested and absorbed these suggestions and leveraged them to establish sound business systems. In doing so, DENSO made major advancements as a comprehensive manufacturer of automotive parts from both a technical and managerial perspective.



1953: Technical cooperation agreement with Robert Bosch GmbH

## 1960s

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

#### Changes in Society:

- Telltale signs of the coming of car electronics
- Emergence of integrated circuits (ICs) for the general consumer and movements toward tightening regulations on gas emissions of automobiles

#### DENSO's Innovation:

Anticipating the application of electronic components in automobiles, DENSO developed the first alternator in Japan that used silicon diodes. Furthermore, while ICs for the general consumer emerged, this technology was difficult to use as is within the unique environment of the automobile. With the aim of realizing the complete in-house production of ICs that correspond with driving environments, 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, which would occur in the 1970s.



1968: Establishment of the IC Research Laboratory

## 1970s

### Growth Achieved Amid Economic Recession

#### Changes in Society:

- Inflation and economic disorder in Japan brought about by the Nixon Shock and the oil crisis

#### DENSO's Innovation:

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 the five-year period from 1970 to 1975, rising from ¥93.0 billion to ¥226.0 billion, even amid the economic recession. 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.



The Toyota CENTURY, the first automobile to be equipped with an air-conditioning unit

1949

1961

1971

1981

**1980s**

**Full-Scale Development Aimed at Becoming a Global Company**

Changes in Society:

- Recession caused by rapid yen appreciation
- Localization of the automotive industry to act as a countermeasure to the voluntary export restraint agreement with the United States

DENSO's Innovation:

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, establishing Nippon Denso Manufacturing USA, Inc. in 1986 in Battle Creek, Michigan. Through the establishment of Nippon Denso Manufacturing USA, the Company carried out full-scale overseas production. Guided by the strategies of "creating a company worth ¥1 trillion in 10 years" and "securing a stable business foundation in a wide range of international markets," DENSO established an organizational structure geared toward globalization and actively pursued capital expenditures. The Company also worked to localize itself by incorporating the cultures of each area of operation. Through these efforts, DENSO moved forward with its global development.



1986: Establishment of Nippon Denso Manufacturing USA, Inc.

**2000s**

**Further Creation of a Culture of Innovation and Self-Challenge**

Changes in Society:

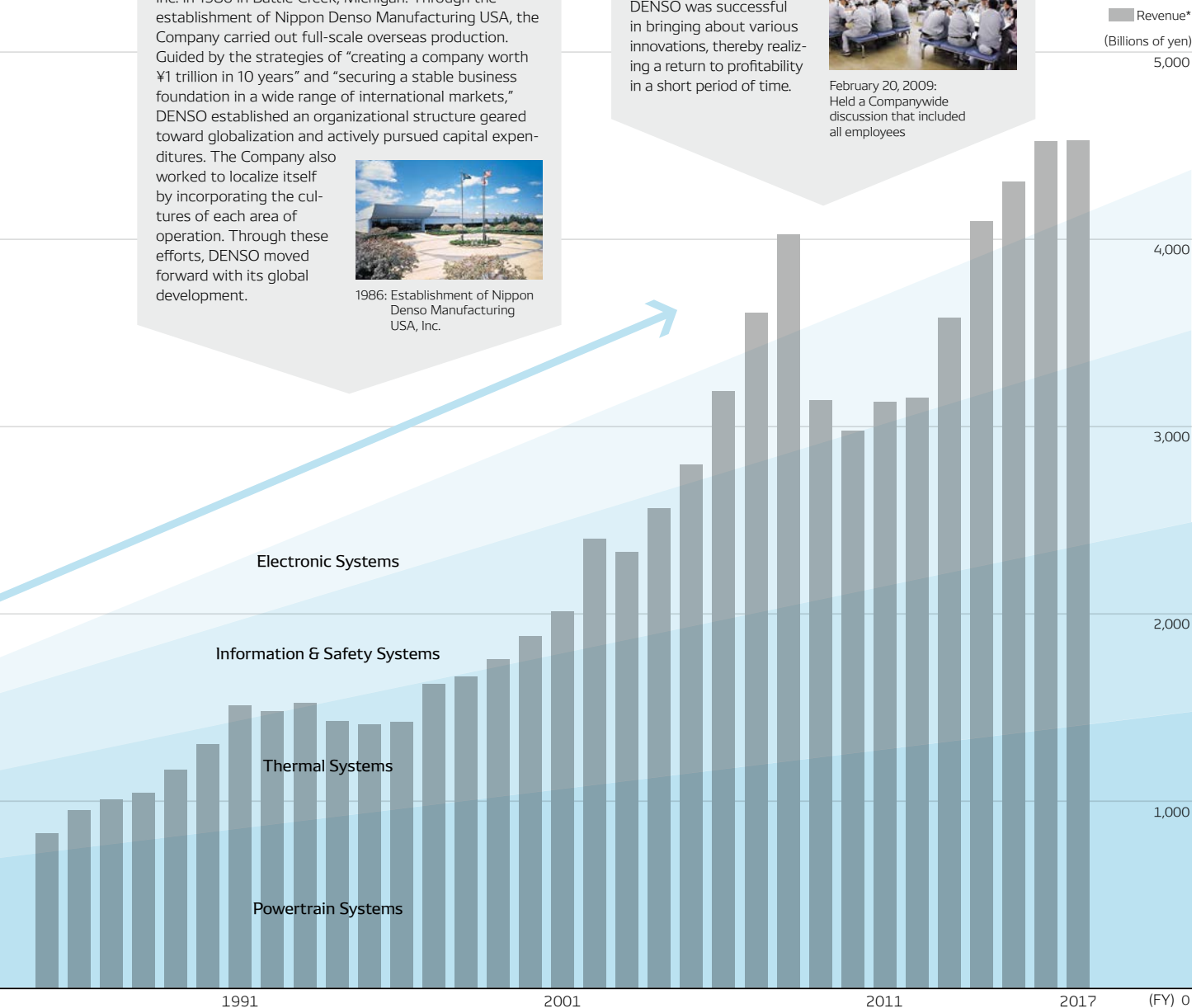
- Sudden worsening of the economy due to the start of the global financial crisis

DENSO's Innovation:

Due to the decline in the global automotive market, DENSO recorded an operating loss (fiscal 2009) 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. In terms of streamlining, DENSO thoroughly revised its capital expenditures and other expenses. For establishing a structure for future growth, the Company promoted the creation of a structure for technological development that responded to the needs of each region of operation through measures to improve fuel economy and reduce CO<sub>2</sub> emissions, among other efforts. Guided by the idea that "if we change as individuals, then we can change as a company," DENSO was successful in bringing about various innovations, thereby realizing a return to profitability in a short period of time.



February 20, 2009: Held a Companywide discussion that included all employees



\* 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

## Business Growth Strategy

35	DENSO's Business Segments and Vision
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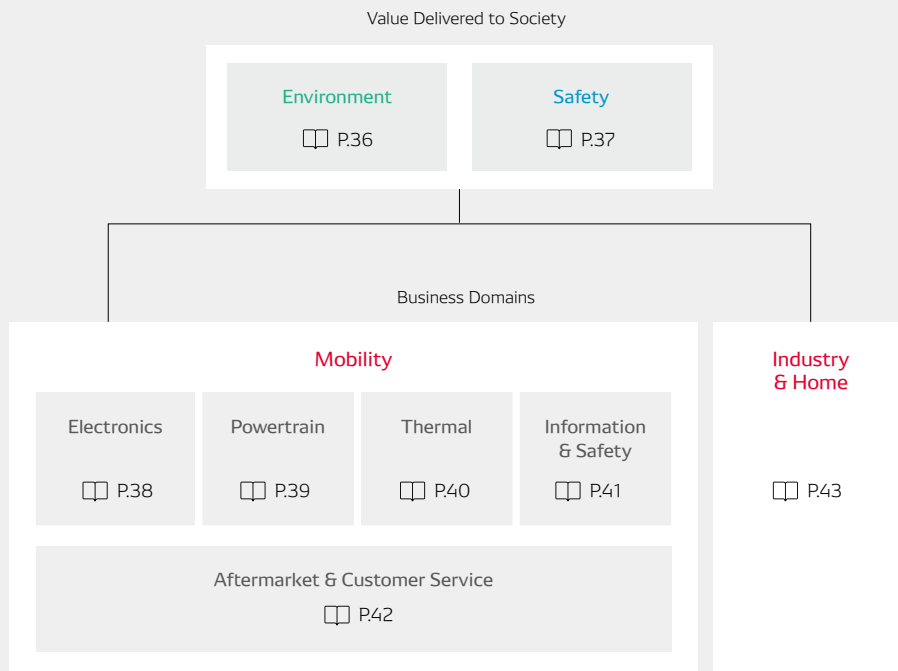
# DENSO's Business Segments and Vision

## DENSO's Business Segments

To deliver an even better future to the next generation, DENSO devotes itself to conserving the environment and providing safety and security. With this devotion, the Company engages in a variety of businesses centered on automobile-related businesses (the "Mobility" field), in addition to the "Industry & Home" field and other fields.

In the Mobility field, to provide comprehensive support for automobiles, DENSO promotes the Electronics, Powertrain, Thermal, Information & Safety, and Aftermarket & Customer Service businesses. For the Industry & Home field, DENSO is promoting initiatives with a focus on having society utilize the Company's long-cultivated technologies to make the world a more convenient and enriched place.

The next page introduces the vision for and value provided by each of the Company's businesses.



Value Delivered to Society

# ENVIRONMENT



## DRIVING CLEAN

As energy and environmental problems are becoming more serious due to the rapidly increasing global population, we are promoting the development of fuel-saving technologies and contributing to the reduction of the environmental impact of society as a whole in order to preserve the global environment.



Value Delivered to Society

# SAFETY



## DRIVING COMFORT

As the number of deaths from traffic accidents is expected to rise in conjunction with the expansion of the automotive market, we will leverage our technologies to realize a mobile society in which people can move in a safe and secure manner with the aim of eliminating traffic accidents.

Business Domains

# ELECTRONICS



## The Core of Intelligence “GROUND”

Dreaming of a more intelligent vehicle.

The DENSO Electronic Systems Business Group wants to create out-of-the-box vehicles that are as thrilling as they are intelligent.

Our goal is to nurture and grow countless ideas that improve vehicle systems in the field of intelligent electronics.

With so many possibilities, DENSO is constantly moving closer to creating the innovative vehicles of your dreams.





Business Domains

# POWERTRAIN



## The Core of Driving Pleasure “HORIZON”

Joy that fuels you and the planet.

Typically, the words “driving power” evokes adrenaline pumping experiences that meld driver and vehicle.

At DENSO, it goes far beyond the expected response from vehicles.

Our goal is to balance the joy of driving with the eco-friendly values that preserve our environment.

While these may seem contradictory ends, finding a balance is essential to ensure.

We’ll all be able to drive beyond the horizon in ways we’ve never imagined.





Business Domains

# THERMAL



## The Core of Comfort “OASIS”

Making your vehicle the most comfortable place to be.

From the beginning, it was not enough just to provide a stress-free driving Oasis when it's blazing hot or freezing cold.

In developing the Thermal Core Technologies, our goal was to design a system that is as comfortable and safe for drivers and passengers as it is for the environment.

With the DENSO Thermal Systems Group's innovative thermal management technologies, we'll all be able to breathe a little easier, no matter what comes next.



Business Domains

# INFORMATION & SAFETY



## The Core of Experience “HARMONY”

Orchestrating the excitement of a new era.

As technology continues to push the boundaries of what’s possible, the DENSO Information and Safety Systems Group ensures these advancements help everyone move more freely by ultimately harmonizing people, vehicles, and society.

By combining and integrating cutting-edge technologies, we help drivers feel safe, secure, and comfortably focused.

The result is a synchronous harmony that moves people’s hearts like never before.





Business Domains

# AFTERMARKET & CUSTOMER SERVICE



## The Core of Satisfaction "TRUST"

Your trusted partner for the road ahead.

By delivering optimal products and precise, prompt service, we can provide a rewarding driving experience.

And because we always want to fulfill your expectations, our priority is to always be by your side, listening to your needs and forever improving our products in order to enhance your driving experience, for as long as you own your vehicle.





Business Domains

# INDUSTRY & HOME



## The Core of Solution "SYNERGY"

Making society run better.

Society is rapidly changing. DENSO wants to help make some of these changes for the better.

Our knowledge and expertise already generate new solutions for a shifting automotive industry, but now we are also applying that experience to other segments of society. These products and systems are helping to forge a more convenient, efficient and exciting world in which to live.

And in the years ahead, we will continue to create more solutions to make everyday life more comfortable, providing greater peace of mind.



# At a Glance

Centered on its regional headquarters in Japan, North America, Europe, and the Greater Asia region, DENSO has established an autonomous structure for development, procurement, production, and sales in each region of operations. This structure allows for the promotion of decision-making in line with the needs of local customers. In addition, DENSO is organized around business groups and engages in a broad range of businesses, primarily in fields related to automobiles.

These business groups coordinate with one another, leveraging their respective strengths to accommodate systemization and modularization.

## Revenue

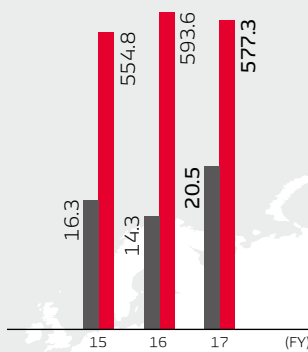
¥4,527.1 billion

## Overview by Geographical Segment

■ Revenue (Billions of yen)  
■ Operating profit (Excluding other income and expenses) (Billions of yen)

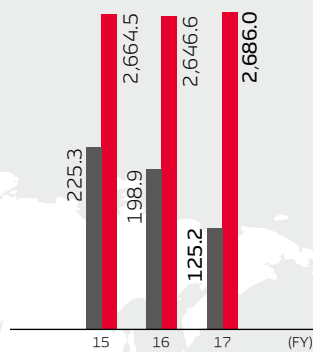
### Europe

No. of bases **35**  
No. of employees **16,312**



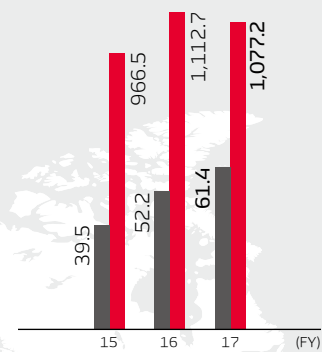
### Japan

No. of bases **63**  
No. of employees **67,601**



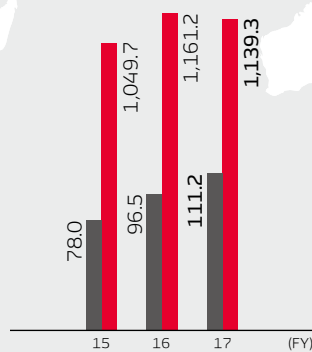
### North America

No. of bases **28**  
No. of employees **22,325**



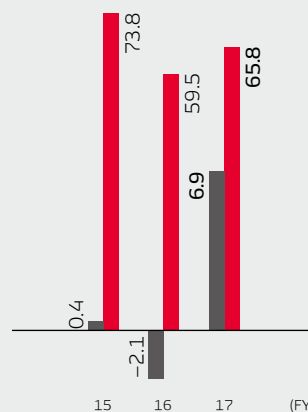
### Asia

No. of bases **59**  
No. of employees **45,125**



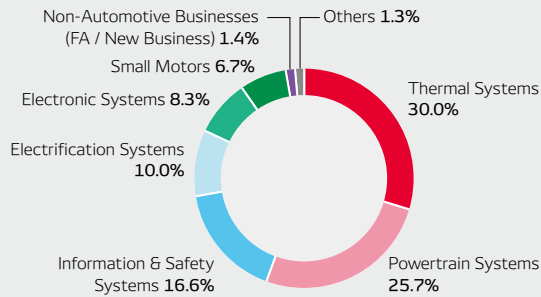
### Others

No. of bases **6**  
No. of employees **3,130**



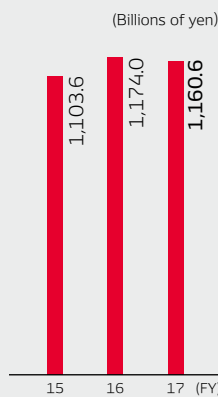
Note: The number of employees excludes personnel dispatched to consolidated companies but includes personnel on loan from consolidated companies. Temporary staff are also excluded from the number of employees.

## Overview by Product



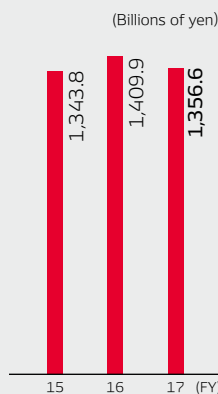
### Powertrain Systems

In fiscal 2017, revenue for powertrain systems saw a dramatic increase on an actual basis, rising 6.2% due to increased sales of gasoline direct injection products, including injectors and pumps, and common rail systems. However, due to the impact of yen appreciation, revenue declined 1.1% year on year, to ¥1,160.6 billion.



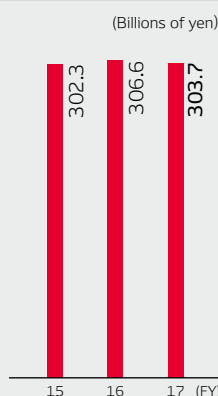
### Thermal Systems

In fiscal 2017, revenue for thermal systems was up significantly on an actual basis, rising 5.1% due to increased vehicle production in China and Europe and expanded sales of air-conditioning systems. However, taking into account yen appreciation, revenue declined 3.8% year on year, to ¥1,356.6 billion.



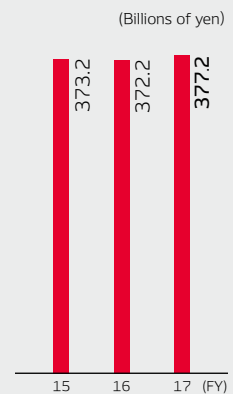
### Small Motors

In fiscal 2017, revenue for small motors rose 5.4% on an actual basis as a result of increased vehicle production and sales in Japan and North America, in addition to the contributions of a gradual economic recovery in the Greater Asia region, centered on China. However, due to the impact of yen appreciation, revenue edged down 1.0% year on year, to ¥303.7 billion.



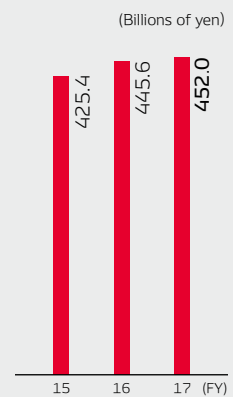
### Electronic Systems

In fiscal 2017, revenue for electronic systems grew significantly on an actual basis (which excludes the impact of foreign exchange rates), increasing 6.5% due to the rise in the number of vehicles in Japan, North America, and the Greater Asia region. However, factoring in yen appreciation, revenue edged up 1.3% year on year, to ¥377.2 billion.



### Electrification Systems

In fiscal 2017, revenue for electrification systems rose 1.4% year on year (8.7% on an actual basis), to ¥452.0 billion, owing to increased sales of hybrid car-related products, such as power control units and motor stators, primarily in Japan.



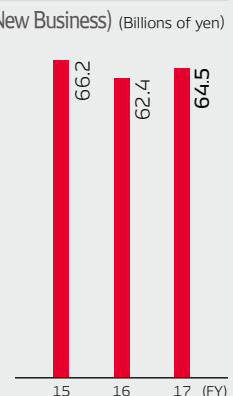
### Information & Safety Systems

In fiscal 2017, revenue for information & safety systems grew 9.2% year on year (15.3% on an actual basis), to ¥753.0 billion. This result was due not only to increased sales of display products and meters in Japan and North America but also to higher sales volume of vision sensors and millimeter-wave radar sensors, which are supplied to Toyota Motor Corporation for its Toyota Safety Sense P safety technology package.



### Non-Automotive Businesses (FA and New Business)

In fiscal 2017, revenue for factory automation (FA) and new business was up 3.5% year on year (5.6% on an actual basis), to ¥64.5 billion. This increase was the result of the introduction and increased sales of new industrial robots as well as the introduction and increased sales of new models in lifestyle-related fields, such as air-conditioning systems for entire buildings and EcoCute (CO<sub>2</sub> heat pump hot water supply system).





## Overview by Product

# ELECTRONIC SYSTEMS

### Main Products



Engine Electronic Control Unit



In-Car Semiconductor Sensor

### Business Activities

Development and manufacture of electronic products and in-car semiconductor sensors for engine control computers as well as of microelectronic devices such as ICs

### Strengths

- Extensive product lineup in the field of in-car electronics
- 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

### Our Understanding of the Business Environment

The automotive industry is seeing a trend toward further installation of car electronics, brought about by more stringent environmental regulations, the advancement of electrification, and the accelerated development of automated driving systems, and this has led to:

- Increased technological sophistication (improvements in precision/responsiveness, reliability, and durability)
- Accelerated development and commercialization

### Mid-term Policy

#### Construction of Development System Capable of Responding to Customer Needs

Amid increasing technological sophistication, we are entering the upstream processes of vehicle development and undertaking product development that predicts manufacturer and market needs. With regard to our global customers, we are providing application development systems that are completed locally.

#### Technology Differentiation and Streamlined Development through Strengthening of Partnerships

We are raising our differentiated technological capabilities and accelerating the pace of development through wide-ranging partnerships (in industrial fields: general manufacturers; industry and academia: research institutes and universities; horizontal relationships: industry standardization, alliances, etc.). Furthermore, by going one stage further into the completion level of current development themes, we are creating world-first and regionally developed technologies.

#### Software Standardization

Rather than developing software individually customized for each vehicle, we work to streamline development by arranging the software structure, such as by integrating the software for each function, and advancing standardization. For example, rather than a jumble of individual components, software is designed to control each domain arranged by function, such as the functions for conveying information to the driver, or detecting the driver's status, and the design standardized to allow changes to the software and to allow for the software's evolution.

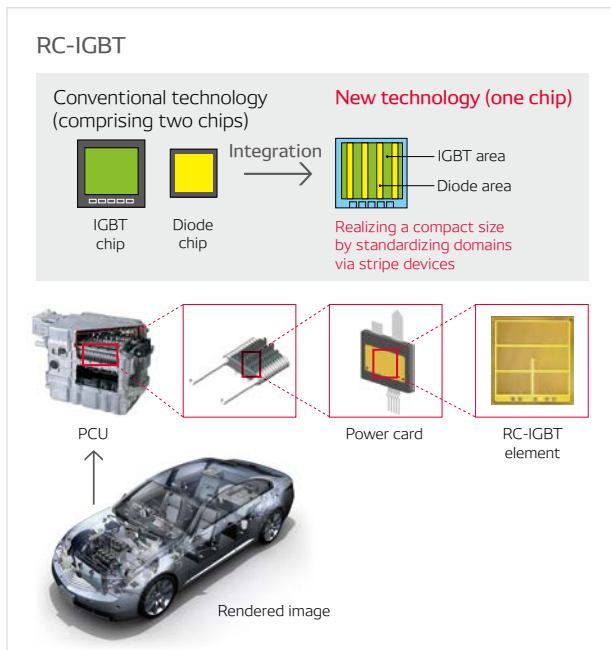
### Fiscal 2017 Overview

#### Accelerated the Development and Commercialization of Electrification Technologies to Promote the Widespread Use of Electric Vehicles

In terms of developing high-performance, next-generation power devices,\*1 which help to standardize and reduce the size of power control units (PCUs) that regulate the high electrical output needed to power motors for hybrid and electric vehicles, DENSO collaborated with Fuji Electric Co., Ltd. to successfully develop the first-ever reverse-conducting IGBT (RC-IGBT\*2) for automobiles. Used to support large currents and high-pressure resistance, the RC-IGBT integrates an IGBT and a freewheeling diode into one chip, a task that was thought to be next to impossible in the automotive industry.

\*1 Power device: A semiconductor used for inverters, the main component in a power control unit

\*2 RC-IGBT: Reverse-conducting insulated gate bipolar transistor. A type of power device used to support large currents and high-pressure resistance



#### Establishing a New Company to Strengthen Product Development (Standardization and Improved Speed)

With the aim of standardizing processes and improving speed to boost development efficiency, DENSO established AUBASS CO., LTD. in April 2016, a company that oversees the development of basic software for automobiles. Additionally, in November of the same year, DENSO established Toyota Tsusho DENSO Electronics (Thailand) Co., Ltd., a joint venture with Toyota Tsusho Corporation that oversees the development of applications for engine control units (ECUs).

## VALUE PROVIDED TO SOCIETY

### Social Issues

The incidence of unauthorized entry into computers and cyberattacks to enable fraudulent manipulation is on the rise.

In anticipation of automated driving, amid expanding collaboration between cars and with social infrastructure, measures for the cyber security of cars have also become necessary.

#### Protection from Cyberattack



### DENSO's Aspiration

To achieve the high-level safety of a "connected car"

#### Taking Steps to Resolve Social Issues

In 2016, we established new organizations that specialize in the promotion and development of support for cyber security. Guided by the chief information security officer (CISO), the Information Security Promotion Office, which oversees Companywide information security, and the Safety and Security Technology Development Office, which carries out the advanced development of security platforms as part of the Electric Platform System Development Division, have completed the development of security frameworks and platforms that will be necessary for products launched from 2019 and onward. Currently, we are pursuing the development of security platforms for various domains, including "out-cars area," which supports always-on connectivity and highly sophisticated automated driving.

# POWERTRAIN SYSTEMS

## Main Products



Gasoline Direct Injector



High Pressure Pump



Variable Cam Timing



Exhaust Gas Sensor



Common Rail Systems

## Business Activities

Development of next-generation powertrains and development and manufacture of engine-related products, such as gasoline and diesel engine control systems and fuel pumps, variable valve timing-related products, and sensors, in addition to 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 that extend from gasoline and diesel internal combustion engines to products that are powered by electricity, including hybrid cars, electric automobiles, and fuel-cell vehicles. We are also able to produce products in these domains using highly advanced production techniques.

## Our Understanding of the Business Environment

Looking at the fuel economy and exhaust gas emission regulations of various countries, requirements are becoming increasingly stringent. As a result, we are seeing:

- An increase in the number of automobiles equipped with idle-stop systems as well as hybrid, electric, and fuel-cell vehicles
- The growing importance of improved gasoline and diesel internal combustion engines

## Mid-term Policy

### Deliver High-Value-Added Internal Combustion Engines

Amid the growing use of electric technologies in automobiles, we recognize the need for gasoline, diesel, and other internal combustion engines to deliver additional value. In order to ensure that the internal combustion engine business remains a mainstay pillar of the Group, we are therefore shifting our focus to high-value-added development and production.

### Strengthen Manufacturing Capabilities

DENSO is working to improve production quality through the utilization of big data analytics and enhance production efficiency using IoT. At the same time, DENSO works diligently to ensure that its products are efficient, reliable, and easy to use. Every effort is also made to apply a standard design that transcends regional boundaries. In this manner, DENSO promotes the seamless overseas expansion of its high-value-added products while reinforcing its cost-competitive advantage.



## Fiscal 2017 Overview

### Reinforcement of Product Competitiveness

DENSO developed and commenced the mass production of a large number of products that help improve the environmental performance of powertrains mounted on the all-new Toyota Camry.

#### 1 Gasoline direct injectors

By using a newly developed cone shape for the fuel-injecting nozzle, DENSO's gasoline direct injectors help improve air-fuel mixture and contribute to the high-speed combustion of new powertrains. In doing so, these injectors help realize clean exhaust emissions and enhance fuel economy.

#### 2 High-precision A/F sensors

DENSO offers A/F\* sensors that control the air-fuel ratio with an extremely high level of precision and use exhaust control systems that realize clean exhaust emissions. These A/F sensors detect the downstream theoretical air-fuel ratio of exhaust emission purifiers (catalytic converters) and use unique DENSO technologies to achieve a level of precision that, in principle, is impossible to realize using conventional technologies. These unique technologies allow the gas emission purifiers to be controlled with an even greater level of precision.

\* Abbreviation for air-fuel ratio, the mass ratio of air to fuel within gas mixtures

## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Regulations on Harmful Exhaust Emissions

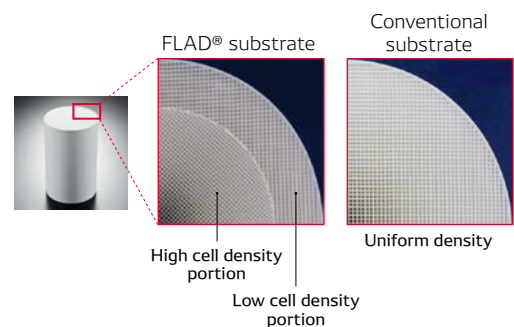
Countries around the world are strengthening regulations on exhaust emissions and will continue to do so in the years to come. As a result of these measures, there is a need for the development of technologies that purify harmful exhaust emissions in order to meet these regulations and ensure environmental sustainability.

### DENSO's Aspiration

We aim to use our unique exhaust technologies to keep the air clean.

### Taking Steps to Resolve Social Issues

DENSO is the world's only manufacturer that can develop products and systems that play a key role in purifying exhaust emissions. With this ability, we are pursuing system-oriented product development. Our Flow Adjustable Design Cell (FLAD®), a new ceramic monolith substrate, is able to reduce the amount of precious metal catalysts needed to purify exhaust emissions. At the same time, while cell designs for substrates have thus far been uniform, FLAD®'s cell design is divided into two portions, an inner portion and an outer portion, which allows it to meet increasingly strict exhaust standards. Through the use of innovative production technologies, we are now able to mass-produce FLAD®. Combining FLAD® with our exhaust sensor technologies, we are working to create systems that purify exhaust emissions.



# ELECTRIFICATION SYSTEMS

## Main Products



Power Control Unit



Motor Stator



Battery ECU



Lithium-ion Battery Pack



Starter (for ISS)

## 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

## 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, we engage in comprehensive, system-based development.

## Our Understanding of the Business Environment

■ As a measure to respond to fuel economy and exhaust gas emissions regulations of various countries, there has been an increase in the number of vehicles equipped with various electric systems and products, including vehicles with idle-stop systems (ISS) as well as hybrid, electric, and fuel-cell vehicles. As such, it is necessary for us to respond appropriately to the electrification of society, which continues to progress in a manner that is becoming more diverse.

## Mid-term Policy

### Strengthen Electric System and Product Development Capabilities

With the increasingly fast-paced application of electric systems, automobile manufacturers and the market as a whole are demanding higher levels of efficiency as well as products that are more compact and low-cost and deliver higher output.

With this in mind, DENSO is committed to preempting these needs by developing the necessary technologies. To do this, DENSO is enhancing its resources and functions for the development and production of electric systems and related products. In addition, the Company is bolstering its collaborative ties with automobile manufacturers.




### Establish Production Bases for Products Powered by Electricity

DENSO has established five production bases around the world for products that are powered by electricity, thereby contributing to the popularization of electric vehicles.

### Fiscal 2017 Overview

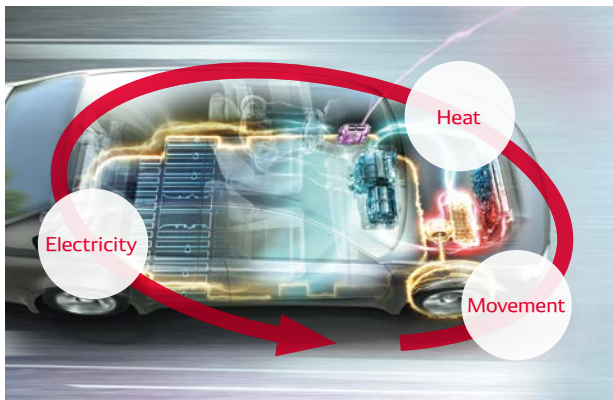
#### Expanded the Number of Car Models Equipped with DENSO Products through Quality Improvements

DENSO realized higher output, enhanced efficiency, and reduced size for many of its products, including power control units, motor generators, DC-to-DC convertors, battery ECUs, and HV-ECUs for strong hybrid vehicles as well as battery packs for mild hybrid vehicles. As a result, the Company increased the number of car models that adopt its products.

<p><b>Inverter:</b> Controls electric current and voltage</p>  <p><b>33% reduction in size</b> (compared with the previous model)</p>	<p><b>Motor:</b> Drives and generates power for vehicles</p>  <p><b>20% reduction in weight</b></p>	<p><b>Battery ECU:</b> Monitors condition of battery</p>  <p><b>Increased precision</b></p>
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#### Accelerating Business Expansion and Development

In January 2017, DENSO established the Electrification Systems Business Group with the aim of further strengthening product development and business expansion in all fields of electric mobility, including electric vehicles. By further evolving its products that are powered by electricity and leveraging algorithms that maximize product performance, DENSO is accelerating the development of management systems that collect and utilize the kinetic, electric, and thermal energy generated within vehicles in a proactive and efficient manner.



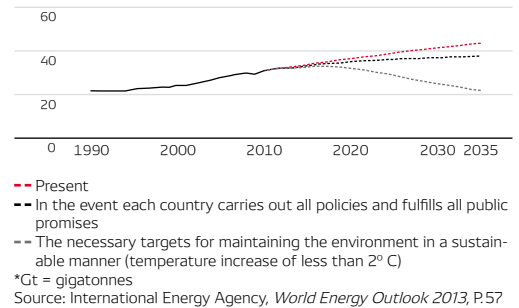
## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Increase in CO<sub>2</sub> Emissions Attributable to Global Warming

The International Energy Agency predicts that, unless major changes occur, CO<sub>2</sub> emissions in 2035 will be 120% higher than they were in 2010. To reduce CO<sub>2</sub> emissions of automobiles to the greatest extent possible, there is a need to accelerate the development of electric systems and related products and promote their widespread use.

#### CO<sub>2</sub> Emissions (Gt\*)



### DENSO's Aspiration

Our goal is to make the world a more beautiful place and contribute to a society in which people can live in an even more comfortable environment.

### Taking Steps to Resolve Social Issues

In the Electrification Systems Business Group, we will promote collaboration with the Thermal Systems Business Group, the Information & Safety Systems Business Group, and other business groups to form connections between information from inside and outside a vehicle to improve safety, security, and comfort. At the same time, we will pursue initiatives aimed at realizing energy management that contributes to environmental conservation.



# THERMAL SYSTEMS

## Main Products



HVAC Unit



Radiator

## 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

## Our Understanding of the Business Environment

- Differentiation difficult; susceptible to price competition
- Fuel economy regulations in each country becoming increasingly stringent
- Increase in the incidence of traffic accidents attributable to human error, including day-dreaming, inattention, and a lack of due diligence

## Mid-term Policy

### Strengthen the Competitiveness of Existing Products

Turning to the Group's existing products, we are determined to leverage our relationships with customers throughout the world and to further standardize global specifications and attributes in an effort to strengthen cost competitiveness while addressing market needs.

Basing our activities around standardized products, we will strengthen the competitiveness of our products by adding value in line with the driving conditions of each region while upgrading and expanding our product lineup.

### Develop the World's Most Advanced Fuel-Saving Products for Air-Conditioning Systems and Vehicles as a Whole

We will look to differentiate ourselves from competitors by employing proprietary fuel-saving technologies. Every effort will be made to reduce power consumption in the air-conditioning field. To this end, we will work to reduce heat loss caused by air ventilation and minimize air-conditioning capacity by directing both heating and cooling functions solely to passengers, and by promoting increased power-saving capabilities.

We will place considerable weight on increasing fuel economy in connection with each vehicle as a whole through proper thermal management. This will include various measures including efforts to reduce thermal damage and to promote the recovery and use of waste heat.

### Develop Products That Enhance Comfort and Contribute to Increased Security and Safety

We will endeavor to commercialize technologies that help minimize the incidence of traffic accidents as a part of efforts to explore opportunities in new value fields. To this end, we will pursue increased comfort focusing mainly on the five human senses as well as human biology research. At the same time, energies will be channeled toward further differentiating existing products with a particular emphasis on air-conditioning products and systems in which we maintain a top global share.

## Fiscal 2017 Overview

### Reinforcement of Product Competitiveness

Through DENSO Fukushima Corporation, the Company has commenced the mass production of radiators and condensers and put in place a structure for the production and supply of heat exchangers for its customers. In addition, DENSO began local production of cold storage evaporators in North America, which help conserve energy. The Company also expanded its product lineup to address local needs. For example, for the pickup truck and high-performance automobile market in North America, the Company developed large radiators with widths that are 25% thinner than conventional radiators.

### Development of Energy-Conserving Technologies

DENSO has developed heat pump air-conditioning systems with gas-injection functions, which help plug-in hybrid and electric vehicles drive longer distances. Additionally, the Company has developed low-noise radiator fans that incorporate the shape of owl wings into their design. DENSO has also created automotive lithium-ion battery refrigerators that are able to control the temperature of refrigerated and frozen products even when a delivery truck's engine is stopped.

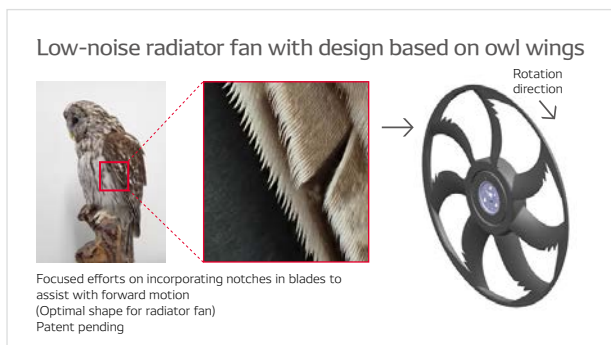


Image provided by the Sagami-hara City Museum

### Commercialization of Products That Offer Comfort, Safety, and Security

By evolving seat ventilation functions,\* which help reduce the unpleasantness of getting into a hot vehicle in the summer, DENSO has developed and commercialized a system that employs an air intake method to shorten the amount of time it takes to reach a comfortable in-vehicle temperature. Additionally, the Company has developed ceiling circulators that help maintain comfortable temperatures in the backseat of a vehicle at a low cost. Production of these circulators has commenced in emerging nations and will be expanded to other regions going forward.

\* A function that blows out and takes in air from a fan built into the car seat

## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Technological Development for Environment-Friendly Vehicles with No Engine Waste Heat

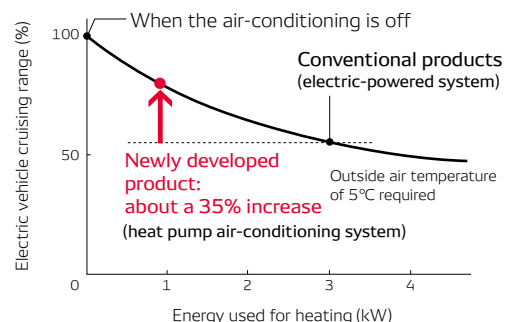
As environmental regulations have become stricter in recent years, there has been a pickup in the development of environment-friendly vehicles such as plug-in hybrid and electric vehicles. Due to the fact that these types of vehicles produce no engine waste heat, the vehicles need to be equipped with technologies that can heat the vehicle interior. During winter, there are cases where the driving distance of an electric vehicle is halved due to the energy consumed to heat the vehicle interior.

### DENSO's Aspiration

We aim to continue to conserve the global environment by developing highly efficient, energy-conserving technologies.

### Taking Steps to Resolve Social Issues

Heat pumps are garnering attention as a highly efficient technology to generate heat. As part of our efforts to resolve issues related to the reduced driving distances of plug-in hybrid and electric vehicles when the vehicle interior is being heated, we have commercialized gas-injection heat pump air-conditioning systems that realize a high level of performance in terms of gas injection, dehumidifying, and heating. These systems help increase the driving distance of electric vehicles by about 35% compared with electric-powered systems and have been installed in the all-new Toyota Prius PHV.



# INFORMATION & SAFETY SYSTEMS

## Main Products



Millimeter-Wave Radar Sensor



Vision Sensor



Instrument Cluster



Head-Up Display Unit



Telematics Control Unit



Dual Drive Electric Power Steering

## Business Activities

We develop and manufacture products and provide services across a wide range of human machine interface (HMI), information and communications, body electronics, advanced safety, collision safety, vehicle motion control, and related fields.

## 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.
- Our competitive advantage also rests on the combined basic research that underpins each of these technology fields.

## Our Understanding of the Business Environment

- Acceleration of initiatives aimed at the practical application of ADAS and AD
- Growing demand for “connected vehicles” in line with the evolution toward an information society

## Mid-term Policy

### Road Environment Recognition Field

Drawing on the technological expertise and know-how gained through our efforts to develop automated driving systems for use on such roads as expressways, we are expanding into next-generation advanced driver assistance systems.

### HMI Field

We are focusing on technologies that hone in on a driver’s physical and mental condition including drowsiness and inattention as well as systems that draw from a wide range of data to convey to the driver select information. In this way, we are strengthening our ability to develop technologies that provide drivers with important information in an easy-to-understand manner without imposing any excess burden.

### Information and Communications Field

Envisioning a world in which all cars are connected, DENSO is working to support various communication systems while, as a means to enhance cyber security, promoting technological development that enables the creation of multilayer defense systems. In doing so, the Company is establishing safe and secure telecommunication systems.

### Vehicle Motion Control Field

We are pushing forward efforts to develop and provide power steering control systems that deliver enhanced reliability in a bid to address the needs for advanced driver assistance systems and automated driving.



### Fiscal 2017 Overview

#### Development of World's Smallest Stereo Image Sensor\*

DENSO developed the world's smallest stereo image sensor to serve as a means for improving the safety of compact vehicles, which have limited space for installation. Image sensors use cameras to identify the white lines on the road and physical objects in front of the vehicle and are equipped with a break support function and a lane departure warning function that help avoid collisions with oncoming vehicles and pedestrians in times of emergency. This world's smallest stereo image sensor has been adopted in Smart Assist III, the crash avoidance system for the Daihatsu Tanto.



\* As of November 2016  
(DENSO research)

#### Development of Large Screen Display for Multiple Apps

In new product development, DENSO has developed a large screen display that can be used for multiple apps. This 11.6-inch vertical display allows for a wide variety of information to be displayed at once, such as car navigation, television, and air-conditioning and audio controls. This display has been installed in the all-new Toyota Prius PHV.



#### Strengthening of Structure for Accelerated Development in New Domains

Amid the progression of car manufacturing that leverages big data analytics, DENSO has established the DP-Mobility IoT Promotion Office in order to examine the roles DENSO fulfills on a cross-organizational basis and to develop new technologies. In addition, DENSO established the new company DENSO ADAS Engineering Services GmbH in Germany in an effort to strengthen its development capabilities for image recognition technologies. Meanwhile, for alliances with other companies, DENSO commenced a business collaboration with Toshiba Corporation and NEC Corporation in the field of AI for automated driving. Also, DENSO made Fujitsu Ten Ltd. a consolidated subsidiary with the aim of bolstering its ability to develop automotive sensors. In the field of HMI, DENSO also carried out an investment in NTT Data MSE Corporation for the purpose of enhancing its software development capabilities. In these ways, DENSO has endeavored to strengthen its development structure both inside and outside the Company.

## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Reduce the Number of Deaths from Traffic Accidents—An Issue Shared Around the World

In 2010, the number of people who died from traffic accidents was 1.3 million. By 2020, that number is expected to increase to over 1.9 million. To address this issue, the United Nations established targets to reduce the number of traffic accidents by half between the 10-year period from 2011 to 2020 under the UN Decade of Action for Road Safety 2011–2020 initiative, which was announced in 2010.

### DENSO's Aspiration

We aim to create a mobile society in which all people can move safely and securely.

### Taking Steps to Resolve Social Issues

With the aim of creating a mobile society in which all people can move safely and securely, we are promoting the development of the technologies and components needed to realize automated driving. To create high-quality, highly reliable components, we are developing test vehicles for automated driving and implementing public road testing. We are also working to reflect the issues we discover through this testing in the development of products related to road environment recognition, such as millimeter-wave radar and image sensors, as well as in the development of HMI technologies, such as head-up displays and cockpit systems.



Public road testing being conducted on Minamichita Road in Aichi Prefecture

# SMALL MOTORS

## Main Products



Windshield Wiper System



Power Window Regulator Motor

## Business Activities

Development and manufacture of all types of small motors, including windshield wiper systems, power windows, power seats, power steering, motors for engine control systems, blowers, and cooling fans (ASMO Co., Ltd.)

## Strengths

- Speedy development system through close collaboration between machine (small motor) technology and electronic control technology specialists within the Group and the orchestration of comprehensive capabilities
- Monozukuri capabilities that realize smaller, lighter, and more efficient products—precisely because we have a thorough knowledge of small motors

## Our Understanding of the Business Environment

- Due to the increase in vehicles equipped with electrically powered systems for a range of functions, the number of small motors being installed in cars is increasing.
- Amid the accelerated efforts toward the commercialization of automated driving, there are expanding needs for small motors, but on the other hand, competition is also intensifying.

## Mid-term Policy

### Product Development Compatible with Switch to Electric-Powered Vehicles and Related Products

There will be a rise in development capabilities that enable small motors to be controlled with greater precision. In the environment field, amid the increase in numbers of small motors installed in cars, the development of more compact and lighter small motors that have lower energy consumption will be undertaken to contribute to improvements in fuel economy. In the security and safety fields, as advanced control becomes necessary—for example, running, turning, stopping as automated driving progresses—efforts will also be directed toward the development of more functional products.

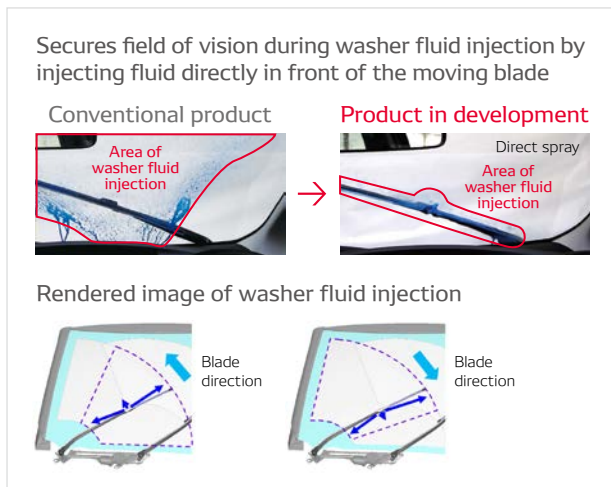
### Strengthening of *Monozukuri* Competitiveness

In response to moves to increase the production of small motors due to the switch to electric-powered vehicles and related products and the commercialization of automated driving, we are addressing the establishment of a stable, global production structure. For example, we will realize launches of new products with fewer losses and greater operational efficiency by advancing concurrent development from the product design stage so that production technologies, processing machines, and trial production all come together. Moreover, we will address the acceleration of product launches and the undertaking of stable production by promoting the standardization of the facilities and equipment themselves and the modularization of each process.

### Fiscal 2017 Overview

#### Mass Production of Products That Secure a Safe Field of Vision for Drivers

DENSO commenced the mass production of a linkage-less smart windshield wiper system that helps secure space in front of the windshield on the driver's side, improve camera performance, and enhance the driver's field of vision to provide more safety. This windshield wiper system, dual-motor simultaneous control function eliminates the need for linkage, thereby reducing the space needed for system installation by half. In addition, the washer fluid injection control function and the ability to change injection methods (from hood nozzle to integrated nozzle and wiper arm) help reduce obstacles to the driver's field of vision, which in turn helps secure driver safety.



#### Mass Production of Products That Reduce Engine Fuel Consumption

In the field of environment-friendly products, DENSO commenced the mass production of motors for variable valve timing (VVT) systems that reduce the fuel consumption of engines as well as high-output brushless motors for engine cooling fans.

#### Efficiency Enhancements for *Monozukuri*

High-output brushless motors for engine cooling fans are electromechanically integrated products that combine electric control units with motors. To mass-produce these motors, DENSO used corrugated plastic to put together model processes from the stage of trial development and worked to give shape to processing standards and facility specifications to carry out the process concept.

Through these efforts, the Company reduced start-up loss at the commencement of mass production and achieved an improved level of completeness for the final product.

## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Increase in the Number of Traffic Accidents in Rainy Weather

To ensure visibility in the rain, improvements in wiping performance that does not obstruct the driver's view are being demanded.

The number of accidents per hour on the expressway\* increases

nearly **5 times**  
in rainy weather

\* The Shuto Expressway in the Tokyo metropolitan area

### DENSO's Aspiration

Realize safe, comfortable driving from a variety of perspectives

### Taking Steps to Resolve Social Issues

To promote wide-ranging technological development, ASMO Co., Ltd. concluded a comprehensive collaboration agreement with Toyohashi University of Technology and began to move forward with joint research in fiscal 2017 under the Advanced Motion Technology Research Project. Under this project, ASMO and the university are focusing on human cognition and sensitivity to quantify motor system movement that feels comfortable as well as the timing of the wiping operation. They are also engaged in R&D from various points of view, including the efficiency of energy consumption, and are aiming to commercialize these wiper systems as a next-generation advanced technology.

Cognition / Sensitivity	Verification of eyesight specificity when driving
	Sense of obstruction / Stress quantification
	Cognitive-emotional evaluation of all types of control systems



### Provide new value

Automatic ON/OFF, pleasant movement  
Balance performance and feel (trade-off)

# NON-AUTOMOTIVE BUSINESSES

(FA and New Business)

## Main Products



Vertical Articulated Robot



Barcode and 2D Code Handy Terminals



CO<sub>2</sub> Heat Pump Hot Water Supply System



Platforms that support surgery by automatically following the surgeon's arm movements (iArmS)



Environmental control systems for greenhouse cultivation (Profarm)

## Business Activities

Development and manufacture of consumer products and other products\* not in the automotive field, such as industrial products for industrial robots (for which Denso Wave Inc. is responsible) and CO<sub>2</sub> heat pump hot water supply systems.

\* Security, health care, biotechnology, agricultural support, cold chain, information solutions, among others

## Strengths

- Advanced recognition, control, and sensing technologies accumulated from the automotive field
- Understanding of customers' and society's needs and efforts to propose innovative products and services

## Our Understanding of the Business Environment

- The shift to automation is accelerating on an industrywide basis following declining global birthrates and aging populations as well as a decrease in the workforce.
- Society is evolving into a new digital, super smart society in conjunction with the proposal for "Connected Industries" and "Society 5.0."

## Mid-term Policy

### Factory Automation Business: Contribute to Improved Social and Industrial Productivity

In the factory automation (FA) business, DENSO will leverage its strengths of superior speed and reliability, which the Company cultivated through nearly 50 years of engaging in robot development and external sales. Robots are an essential element of FA, and DENSO will utilize AI and the Internet of Things (IoT) to continue to pursue evolution through various means, including making it easier to introduce robots on the production line and put them to use in day-to-day production and maintenance activities as well as making robots more intelligent by leveraging people's wisdom. FA is expanding from assembly lines to cover a broad range of fields. As such, DENSO has established the FA Business Division within its Production Innovation Center, a facility that acts as the driving force behind the Company's *Monozukuri*. Through this establishment, DENSO will propose and provide optimal solutions for the FA systems of its customers and work to improve both social and industrial productivity.

### New Business:

#### Realize an Enriched Society in Which Everyone Can Live Safely and Securely

DENSO has accumulated a wide range of technological capabilities through the development and production of automotive parts, such as semiconductors and heat exchangers, as well as through the development of communication, sensory, and manufacturing technologies. DENSO has been making efforts to apply these technological capabilities in areas other than the automotive industry.

To resolve the new issues society faces, such as aging populations and energy-related problems, not only will DENSO make use of its long-cultivated technologies in areas outside of the automotive industry, it will also form new partnerships to actively explore new business fields that allow it to leverage its technologies to enrich people's lives.



## Fiscal 2017 Overview

### Industrial Products Field (Denso Wave Inc.)

#### 1 Product development and sales that meet new needs

To promptly develop products that better meet customer needs, Denso Wave established a new company in Singapore in April 2016. For transaction settlements, this new company has launched the industry's first electronic money settlement terminal that uses a QR code scanner. Denso Wave will pursue business expansion in the electronic money market, which is expected to grow rapidly going forward.

Also, in robotics Denso Wave has launched low-cost robots in the Chinese market. The company will take steps to expand sales in China, where the robot market is anticipating significant expansion.



Electronic money settlement terminal that uses a QR code scanner

#### 2 Commercialization of IoT

Denso Wave will establish in-house structures aimed at commercializing IoT. At the same time, the company will create communication services that will provide the core for product development. Through these efforts, DENSO will develop and expand new IoT businesses.

### New Business Fields:

#### Contribute to the Resolution of New Social Issues

Leveraging the technological capabilities it has cultivated in the field of automotive parts, DENSO has been contributing to the resolution of new social issues. As an example of such contributions, DENSO has commenced the provision of the Life Vision service for a system verification business\* operated by Yuzawa City in Akita Prefecture that assists the elderly. Life Vision is a system that uses tablets and smartphones to electronically provide elderly people with local information as well as emergency information in times of a disaster. Life Vision also provides assistance in watching over the elderly in such ways as making the process for arranging a taxi easier. Amid Japan's declining birthrate and aging population, DENSO will continue to draw on ICT technology to offer solutions that help invigorate local communication.

\* A business in Yuzawa City that conducts verification tests on lifestyle support systems and other systems for the elderly



Main screen of the Life Vision service

## VALUE PROVIDED TO SOCIETY

### Social Issues

#### Effectively Utilizing Large Amounts of Medical Data

In operating rooms and other areas of medical facilities, doctors and medical staff conduct treatment while evaluating massive amounts of diverse information generated from medical devices within a limited amount of time. To address the difficulties posed by this situation, the Japan Agency for Medical Research and Development has been utilizing IoT to establish links between all types of medical devices in order to comprehensively assess the progress of surgery and the conditions of patients. In doing so, the agency is moving forward with the development of the Smart Cyber Operating Theater (SCOT),\* which helps improve the accuracy and safety of surgical procedures.

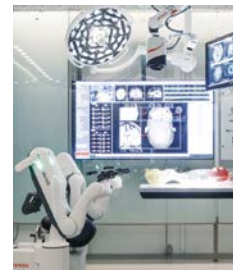
\* Japan Agency for Medical Research and Development is pursuing development of SCOT together with five universities, centered on Tokyo Women's Medical University, and 12 companies, including DENSO.

### DENSO's Aspiration

By enhancing our technologies that support safety, we hope to save the lives of even more people.

### Taking Steps to Resolve Social Issues

For the development of SCOT, we are applying our OPeLiNK® system to the field of medical devices. The OPeLiNK® system was developed to control and manage a diverse range of manufacturing equipment in our factories—where there is a far more diverse range of equipment compared with medical rooms—in an integrated manner. We are now promoting the establishment of a network between this system and medical devices in treatment rooms. In doing so, we are working to prevent issues caused by mistakes in the configuration of medical equipment while also improving the accuracy and safety of surgical procedures through the provision of medical information and external advice during surgery.



# 3

## The Foundation That Supports Our Business Growth

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Details on our ESG information can be found on the CSR information page of our website:  
<https://www.denso.com/global/en/>

# Corporate Governance

## Initiatives to Strengthen Corporate Governance

### Revisions to Management Structure

The business environment DENSO faces is approaching a paradigm shift, which is said to occur once every 100 years. With the aim of promoting decision-making and business execution that can anticipate future changes, the Company has made revisions to its management structure.



**//** *With overwhelming speed and competitiveness that can lead the next generation, DENSO will continue to evolve through steady innovation in order to deliver real value to its customers and society as a whole. These strong ambitions have been ingrained in the Company's new management structure.*

————— Koji Arima (President & CEO)

### Enhancing Effectiveness

Since the appointment of outside directors, DENSO has given thorough consideration to the transparency of information in such ways as providing explanations to the outside directors regarding important agenda items before Board of Directors' meetings. In doing so, DENSO has made concerted efforts to substantially improve the effectiveness of the Board of Directors so that open-minded discussions can be held.

In fiscal 2017, DENSO reduced the number of directors from 13 to 9 so that it may better respond to the fierce changes occurring in the business environment. The Company also separated and clarified 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. Through these means, DENSO established a management structure that allows for swift decision-making. In addition, DENSO changed the timing of senior executive directors' and executive directors' promotions to April, which marks the transition to the new fiscal year, with the aim of streamlining and clarifying executive responsibilities. The Company also put in place a structure that enables more strategic discussion and Board of Directors' meetings by transferring authority to directors in charge of business execution.

To further improve its governance, DENSO will continue to examine the best kind of management structure and work to establish such a structure.

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

Once a year, DENSO CORPORATION interviews the representative director, outside 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 effectiveness.

In fiscal 2017, DENSO established a new management structure to respond to the fierce changes occurring in the business environment. At the same time, the Company worked diligently to make improvements based on the results of the interviews regarding the Board of Directors' effectiveness carried out in fiscal 2016.

### Fiscal 2016 interviews regarding the Board of Directors' effectiveness

(Carried out in April 2016)

<b>Results of Interviews</b>	It has been confirmed that the Board of Directors of DENSO CORPORATION reviews matters to be resolved and reported and makes improvements based on a corporate culture that adequately discloses information and encourages open and vigorous debate.
<b>Issues</b>	On the other hand, DENSO has identified several challenges, including the reinforcement of statements and discussions from a Companywide and outside stakeholder perspective, the intensification of debate about future themes that are shared throughout the Company, and the delegation of authority or promotion of simplification concerning matters to be resolved that are still partially open to discussion.
<b>Measures for Improvement</b>	Based on the results, DENSO's Board of Directors will implement the following improvement plan after conducting a sufficient review. <ul style="list-style-type: none"> <li>• Build an operation and system that stimulates discussion from a Companywide and outside stakeholder perspective</li> <li>• Create a mechanism for discussing future themes that are shared throughout the Company</li> <li>• Promote the delegation of authority concerning the resolution of the execution of business duties</li> </ul>

### Fiscal 2017 interviews regarding the Board of Directors' effectiveness

(Carried out in March 2017)

<b>Results of Interviews</b>	Through interviews with the representative director, outside directors, and Audit & Supervisory Board members about the effectiveness of the Board of Directors, the Company confirmed that the effectiveness of the Board of Directors has improved due to the following reasons: Discussions on important Companywide strategies are being held at the Board of Directors' meetings; efforts are being made to revise agenda standards for Board of Directors' meetings as well as to transfer authority; the number of directors will be reduced starting from fiscal 2018 and separation is being created between management and execution; and no significant problems have been found in terms of Board operation, agenda items, and decision-making processes.
<b>Issues</b>	Some of the issues identified through the interviews included expanding the range of themes for strategic discussion and promoting the free exchange of opinions regarding everyday themes.
<b>Measures for Improvement</b>	Based on interview results, the Company will implement the following measures for improvement after each measure is thoroughly examined by the Board of Directors. <ul style="list-style-type: none"> <li>• Invigorate strategic discussion by adopting a broader range of themes</li> <li>• Promote the free exchange of opinions regarding everyday themes</li> </ul>



## 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

### 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 Committee of Senior Executive Directors (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 or Compensation Committee in appointing directors and auditors and determining their compensation.

### Overview of Corporate Governance System (As of June 20, 2017)

Format	Audit & Supervisory Board system
Number of directors	9
Chairman of the Board	Chairman
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 2016 to March 2017

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

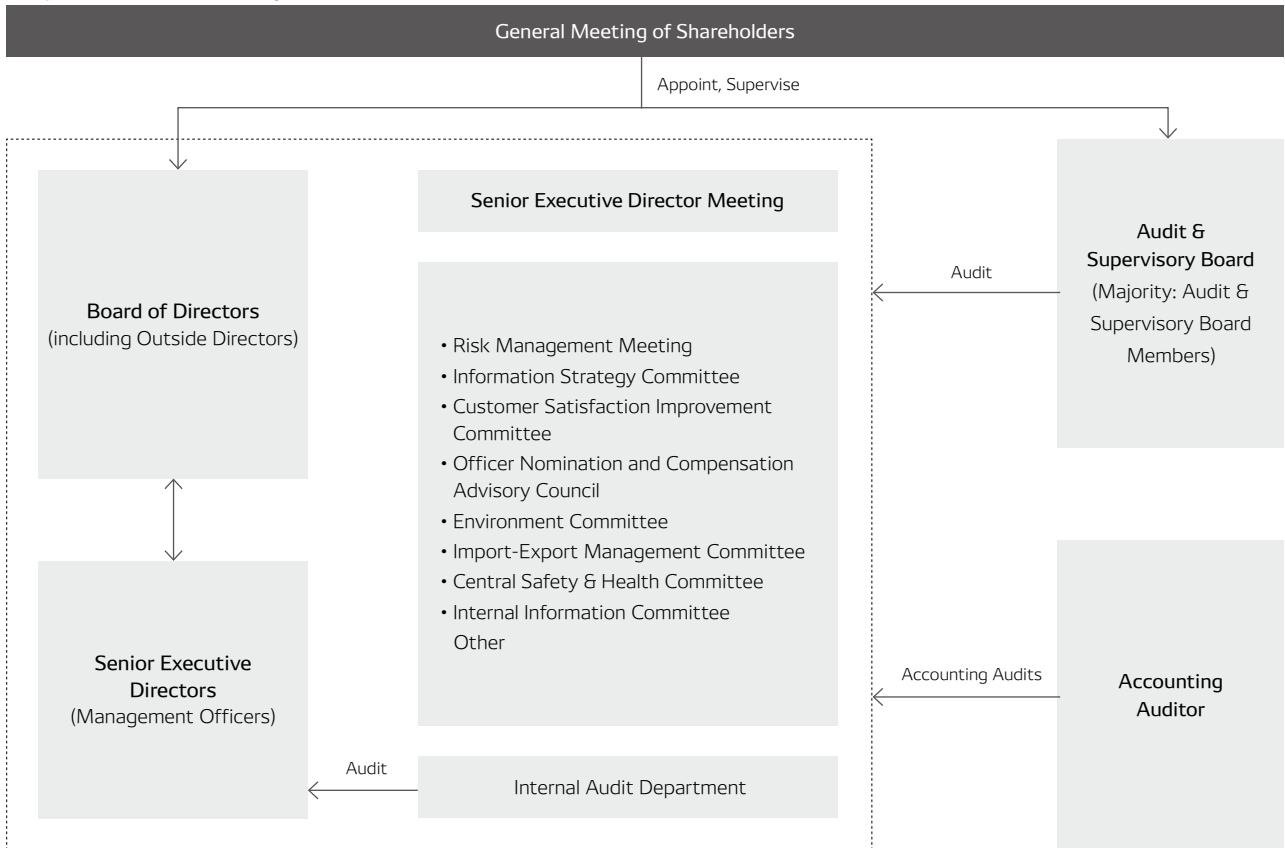
Policy	Nominate directors and Audit & Supervisory Board members from the viewpoint of striking a balance between diversity, experience, skills, and expertise so as to promote accurate and swift decision-making.	
Procedures	<b>1</b>	<ul style="list-style-type: none"> <li>The president listens to the opinions 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.</li> </ul>
	<b>2</b>	<ul style="list-style-type: none"> <li>Directors are selected based on an informal resolution by the Board of Directors and deliberation at the General Meeting of Shareholders.</li> <li>Audit &amp; 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 &amp; Supervisory Board.</li> </ul>

### Approach to Director Diversity and Size

At the Company, nine 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. In the appointment of directors, we plan to adhere to the same number and approach that we have had in the past.

Corporate Governance System



**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 the Top Management Meeting 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 2017)	
		Board of Directors	Audit & Supervisory Board
George Olcott*	To reflect his wealth of experience and considerable knowledge in academia and corporate management in the Company's management	15/15	14/15
Takashi Nawa*	To reflect his wealth of experience and considerable knowledge in the field of corporate management strategy in the Company's management	15/15	14/14
Outside Audit & Supervisory Board Members	Reason for Appointment	Attendance at Meetings (fiscal 2017)	
		Board of Directors	Audit & Supervisory Board
Moritaka Yoshida	To reflect the wealth of experience and broad knowledge as a corporate executive in the Company's auditing activities	15/15	14/14
Toshimichi Kondo*	To reflect his high level of knowledge as a certified public accountant in the Company's auditing activities	15/15	14/14
Noriyuki Matsushima*	To reflect his expertise related to the automotive industry and his abundance of corporate management experience in the Company's auditing activities	— (appointed in June 2017)	—

\* 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.

### Procedures

<b>Directors</b>	<b>Monthly Compensation</b>	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 (total amount for directors: ¥80 million/month) established by a resolution of the General Meeting of Shareholders.
	<b>Bonuses</b>	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.
<b>Audit &amp; Supervisory Board Members</b>	<b>Compensation Amount</b>	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 (total amount for Audit & Supervisory Board members: ¥15 million/month) established by a resolution of the General Meeting of Shareholders.

### 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)	914	565	—	349	—	12
Audit & Supervisory Board members (excluding outside Audit & Supervisory Board members)	92	92	—	—	—	2
Outside directors	68	68	—	—	—	5

## 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

The automotive industry is approaching a paradigm shift. The time for innovation is now, and DENSO is working to further enhance its governance from the perspectives of the entire Company and its stakeholders.

DENSO is making efforts to reinforce its governance so that it may act as a foundation for creating corporate value on a sustainable basis. In this section, DENSO's two outside directors discuss the necessary steps for DENSO to take as it approaches a period of significant changes in the business environment.



## DENSO's approach to corporate governance and the evaluation of the effectiveness of the Board of Directors

**George Olcott** From my experience, I feel that the board of directors at most Japanese companies has many elements that are ceremonial in nature. Amid this trend, I recognize the need to change the effectiveness of DENSO's Board of Directors so that it engages in more substantive and strategic debate compared with other Japanese companies. And I believe that improvements are starting to be made in this regard.

**Takashi Nawa** Overall, fiscal 2017 was a year in which significant improvements were made. To eliminate ceremonial debate to the greatest extent possible, we have seen an increase in the number of opportunities at Board of Directors' meetings to discuss not only matters to be resolved and reported but also more informal matters for which the process of debate is only beginning. In addition, we have started to hold meaningful discussions in informal settings such as lunch and offsite meetings. I find these new initiatives to be extremely refreshing. I also evaluate DENSO highly for promptly implementing measures that focus on the importance of substantive debate, which was an issue that was brought up in the previous fiscal year.

**Olcott** I agree with Mr. Nawa's assessment. During the three years I have been a director, I have certainly sensed a sincere wish and desire on the part of the management to improve the corporate governance and decision-making process of the Company. In that time, I believe that substantial improvements have been made. These improvements have included the introduction of extremely effective offsite meetings, as Mr. Nawa previously mentioned. At the offsite meetings held in fiscal 2017, we spoke with the inside directors, without an agenda, regarding an important issue or challenge DENSO is facing, which allowed us to realize extremely fruitful discussions. The Board has also been successful in reducing the number of agenda items at meetings, thereby achieving more open and meaningful discussion. In addition, the Board has ensured transparency within



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 the Faculty of Business and Commerce at Keio University.



Outside Director

### Takashi Nawa

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

its discussions so that we as outside directors are able to freely voice our opinions about the Company's direction. This transparency is reflected in our ability as outside directors to influence the themes and agenda items that are brought up at Board meetings. Also, the Company set up the Officer Nomination and Compensation Advisory Council in fiscal 2017. While this committee is still very much in its early stages, it has begun holding active discussions on the future direction of remuneration and succession planning.

Furthermore, the outside directors hold regular meetings with the Audit & Supervisory Board members, who monitor the Company's business execution from the perspective of risk management. In this way, the Company encourages us to have a much closer dialogue with the auditors, and I believe that is an extremely good development in terms of strengthening the function of the Board of Directors.

**I recognize the need to change the effectiveness of DENSO's Board of Directors so that it engages in more substantive and strategic debate compared with other Japanese companies. And I believe that improvements are starting to be made in this regard.**

————— **George Olcott**

### The necessary steps to take as the automotive industry approaches a paradigm shift

Nawa DENSO has been steadily making improvements to the Board of Directors' effectiveness. However, if we take into account the fact that the business environment is undergoing a period of major, paradigm-shifting change, it is important to move forward with an appropriate sense of speed and scale. DENSO has a very strong sense of solidarity among its management. However, if we look at that from a different perspective, it also means that its homogenous group of directors tends to adhere to similar ways of thinking. To respond to the rapid changes that are occurring, there is a need for the Company's management to have a strong resolve and pursue more dynamic ways of thinking.

To this end, the Company must work to bring about multifaceted innovation not just in terms of its management structure but also in such ways as incorporating elements that are completely new to DENSO that will change the Company's organizational structure and culture. This can be done in several ways, including greatly increasing the diversity of its human resources, including people from different countries and industries, as well as through the acquisition of new capabilities and corporate culture via M&A.

**We need to establish a culture that energizes debate from many different angles, taking a wider range of perspectives into consideration.**

————— Takashi Nawa

Olcott In light of the changes occurring in the business environment, DENSO has conceived the new slogan of "Crafting the Core." The new slogan represents a solid effort to fundamentally consider what the Company's strengths and core essence are and to explain them to the outside world. Under severe business circumstances, I believe DENSO needs to promptly facilitate an understanding of what its new slogan means throughout the Company in order to enhance competitiveness over the next five to 10 years.

And, as Mr. Nawa has pointed out, the incorporation of a diverse group of human resources and the acceptance of elements completely new to DENSO will provide an excellent opportunity to bring about significant change. We will not have much success if we simply try to lure in new talent through the current homogenous culture of DENSO. To truly attract such talent and have it play an active role, we need to become a company with many different cultures. To this end, we need to pursue new, radical ways of thinking that differ drastically from what the Company has done in the past.

Nawa DENSO has a strong, factory-oriented approach. As such, the Company tends to consider only the perspectives of technologies and products when formulating its roadmap for the future. This means the Company does not invest a sufficient amount of time in considering the perspective of marketing. To avoid discussions that are biased toward certain perspectives, we need to establish a culture that energizes debate from many different angles, taking a wider range of perspectives into consideration.

### Initiatives to be valued from both a Companywide and outside stakeholder perspective in light of the new management structure that has been established through organizational reforms

Nawa Japanese companies have a tendency to focus too much on the results of each individual business, and there is a lack of consideration for management based on KPIs from a companywide perspective. When thinking from a companywide perspective rather than from individual results, it is crucial to consider the most effective means of utilizing cash and allocating assets. This can also be said about intangible assets such as human resources and brand value. As such, there is a need for people who are not representatives of specific divisions to have an opportunity to hold strategic debate in small numbers. We need to all be on board and think, overall, from the very high perspective of the Board. Against the background of the structural



reforms DENSO has recently implemented, I believe the Company needs to create these kinds of opportunities and make concerted efforts to hold more constructive debate.

**Olcott** One of the positive aspects about the new management structure is that it separates the role of business management and business execution, thereby allowing us to concentrate better on discussions at a higher, more strategic level. The new structure enables us to make quicker decisions and to make those decisions not from the perspective of a particular division, but rather on what is best for the long-term competitiveness of the Company. Under this system, we can increase accountability by further enhancing our financial KPIs. The increased accountability toward achieving KPIs will encourage management to place priority on analyzing success and failure more than ever before. This, in turn, will allow us to address the shortcomings of the Company to try and make sure that failures are not repeated. This will also provide benefit to our shareholders.

Through the constant monitoring of the major changes that are occurring in our industry, we need to pursue initiatives for change by taking a much more fundamental look at the world over the next five to 10 years to determine the direction DENSO needs to head. I believe we are off to a good start in this regard. However, to overcome the challenges of this new business environment, it is necessary for us to further strengthen our strategic decision-making capabilities and deepen our focus on determining the appropriate allocation of resources.

### Approach as an outside director going forward

**Nawa** I intend to continue to tell the management of DENSO that what its view of the world is not necessarily shared by the wider, outside world. The Board of Directors has been very receptive to accepting and responding to the opinions of the outside directors, and I view that to be extremely positive. However, I place importance on constantly pushing the Company to bring out more of its potential without being satisfied with the

current situation. In addition, to further broaden the perspective of each member of the Board, I would like to invite people with global experience and outside experts of all kinds to come to the Board to hold discussions together. In this way, I hope to create a large number of opportunities for the Board to be exposed to outside opinions.

**Olcott** While DENSO is a global corporation, we are still too domestically oriented. There is therefore a need to make the Board of Directors' mind-set more globally focused. For example, we should have a more open mind-set in terms of collaborating with not only domestic business partners but also major companies from around the world. My personal challenge this year is to try to focus the Board's mind on a more global orientation.

**Nawa** I am greatly encouraged that DENSO's management, starting with President Arima, possesses a sense of crisis regarding the need to make changes so significant—so much so, in fact, that this period of transition could be considered the “second founding” of the Company. The next wave of innovation is upon us and if we can successfully ride that wave, there will be significant opportunities for growth. Unlike the time of DENSO's first founding, when there was nothing to lose, DENSO has many things it needs to protect with its second founding. As it is necessary to continue to take on challenges during this period of change, we recognize the need for the Company's management to exercise strong leadership capabilities.

**Olcott** One of DENSO's strengths is the solid competitive edge it possesses. If we can ride the next wave of innovation, that strength will be the key to our success. However, to ride this next wave, we need new ideas, a new way of thinking, and a new culture. With our solid balance sheet, competitive technologies, and strong front-line operations, we have the foundation to pursue change. All that is left now is to determine strategies and execute them appropriately.

# Directors and Audit & Supervisory Board Members

(As of June 20, 2017)



**Masato  
Iwase**

Standing Audit &  
Supervisory  
Board Member

**Noriyuki  
Matsushima**

Outside Audit &  
Supervisory  
Board Member

**Moritaka  
Yoshida**

Outside Audit &  
Supervisory  
Board Member

**George  
Olcott**

Outside Director

**Yasushi  
Yamanaka**

Executive Vice  
President

**Koji  
Kobayashi**

Vice Chairman

**Koji  
Arima**

President & CEO



**Nobuaki  
Katoh**

Chairman

**Haruya  
Maruyama**

Executive Vice  
President

**Hiroyuki  
Wakabayashi**

Executive Vice  
President

**Takashi  
Nawa**

Outside Director

**Toshimichi  
Kondo**

Outside Audit &  
Supervisory  
Board Member

**Yoshikazu  
Makino**

Director,  
Member of the Board,  
Senior Executive  
Director

**Atsuhiko  
Shimmura**

Standing Audit &  
Supervisory  
Board Member

The Foundation That Supports Our Business Growth

Directors



**Chairman**  
**Nobuaki Katoh**  
 (Date of birth: November 3, 1948)  
 1971 Joined DENSO CORPORATION  
 2000 Executive Director, Member of the Board, DENSO CORPORATION  
 2004 Executive Director, DENSO CORPORATION  
 2007 Senior Executive Director, Member of the Board, DENSO CORPORATION  
 2008 President & CEO, DENSO CORPORATION  
 2015 Chairman, DENSO CORPORATION (current position)



**Vice Chairman**  
**Koji Kobayashi**  
 (Date of birth: October 23, 1948)  
 1972 Joined Toyota Motor Co., Ltd.  
 2004 Executive Director, DENSO CORPORATION  
 2007 Senior Executive Director, Member of the Board, DENSO CORPORATION  
 2010 Executive Vice President, DENSO CORPORATION  
 2015 Vice Chairman, DENSO CORPORATION (current position)



**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 and CEO, DENSO CORPORATION (current position)



**Executive Vice President**  
**Haruya Maruyama**  
**Support of President & CEO, Overall Sales and Marketing, Corporate Strategy**  
 (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**  
**Support of President & CEO, Overall R&D, Future Creation Technology**  
 (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**  
**Overall Production, Safety, Environment & Quality Center, ADAS**  
 (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)



**Director, Member of the Board, Senior Executive Director**  
**Yoshikazu Makino**  
**Corporate Center, Audit Department, Thermal Systems Business Group**  
 (Date of birth: July 1, 1955)  
 1978 Joined DENSO CORPORATION  
 2005 Executive Director, DENSO CORPORATION  
 2014 Senior Executive Director, DENSO CORPORATION  
 2015 Director, Member of the Board, Senior Executive Director, DENSO CORPORATION (current position)



## The Foundation That Supports Our Business Growth



Outside Director  
**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  
**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 President, Next Smart Lean Co., Ltd.
- 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  
**Masato Iwase**

(Date of birth: February 4, 1955)

- 1978 Joined DENSO CORPORATION
- 2002 Associated Fuel Pump Systems Corporation, Company Secretary
- 2003 General Manager of Legal Division, DENSO CORPORATION
- 2009 Standing Audit & Supervisory Board Member, DENSO CORPORATION (current position)



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 of DENSO CORPORATION
- 2014 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 (current position)
- 2015 Outside Audit & Supervisory Board Member, DENSO CORPORATION (current position)



Outside Audit & Supervisory Board Member  
**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  
**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. (current position)
- 2017 Outside Audit & Supervisory Board Member, DENSO CORPORATION (current position)

# Encouraging an Active Role for Our Human Resources

By having its employees work energetically in a way that fully leverages their abilities, DENSO is able to offer its customers extremely safe products that are of the highest quality. These products give birth to a virtuous cycle that realizes growth and improves corporate value, which in turn passes value on to all of the Company's stakeholders.

This section introduces DENSO's initiatives aimed at creating an environment in which all of its employees can play an active and fulfilling role.

## Diversity

### Basic Stance

DENSO's employee base comprises people of different genders, ages, nationalities, and career goals. This base also includes people with disabilities. Leveraging the rich individuality and different values of each employee as its organizational strength, DENSO aims to be a company in which a diverse group of global talent can exercise their abilities to the greatest extent possible. To this end, the Company realizes new value by encouraging interaction between employees with different ideas and strengths, actively creating opportunities for employees to learn from and cooperate with external organizations, and promoting honest discussion. DENSO believes that these kinds of efforts are necessary to realizing sustainable growth in this period of rapid change. Accordingly, the Company is taking steps to promote diversity.

### 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 Committee made up of executives, representatives of each region, experts, and other members, in addition to a promotion meeting committee system in each region.

### Specific Initiatives

#### Promoting an Active Role for Female Employees

Aiming to be a company where female employees can enjoy an active role, DENSO is working to provide career support and innovate workstyles so that women can continue to advance their careers while fully partaking in every 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 our female employees have 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 targets female employees and their supervisors. This training encourages supervisors to work together with female employees to support their career development and consider ideal workstyles.

Going forward, we will continue to systematically hire and promote the development of women as we aim to increase the number of women in management positions to 100 by 2020 (a 300% increase compared with 2014; actual number of women in management positions in fiscal 2017: 53).

#### Actively Employing People with Disabilities

Since starting the regular employment of persons with disabilities in 1978, DENSO has actively worked to expand employment and occupational opportunities, provide education and training, and improve appropriate facilities for persons with disabilities. In 1984, we established DENSO Taiyo Co., Ltd., a special-purpose subsidiary\* that produces primarily vehicle instrument clusters, and smart keys.

Until recently, we have focused our efforts on employing and promoting an active role for people who are hearing or orthopedically impaired, primarily in production facilities. However, in January 2016 we established DENSO Blossom Co., Ltd. with the aim of creating occupational opportunities and encouraging an active role for an even greater range of people with disabilities. DENSO Blossom employs primarily people with mental and intellectual disabilities, who perform cleaning and clerical work such as sending e-mails.

\* Subsidiary established to promote the employment of persons with disabilities



DENSO Blossom Co., Ltd.

## Health Management

### Basic Stance

Good mental and physical health not only provides happiness to our employees and their families, it also represents the source for invigorating employees in their work.

Positioning the promotion of employee health as an important management issue, DENSO announced its Health Declaration\*1 in September 2016. In addition, the Company has adopted improvements in employee awareness of health promotion and the promotion of health management in the workplace as its Mid-term Policy 2018 and has also incorporated the approach of “health and productivity management.”\*2 Furthermore, 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 mental and physical health.

\*1 To read the entire DENSO Health Declaration, please refer to the CSR section of the Company’s website.

\*2 “Health and productivity management” is a registered trademark of the NPO Kenko Keiei Kenkyukai.

### 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, 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.



#### TOPICS

### Included in the 2017 Health & Productivity Stock Selection and Certified in the Superior Health & Productivity Companies (the White 500) Program

DENSO was included in the 2017 Health & Productivity Stock Selection,\*1 a joint initiative carried out by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE). In addition, the Company was certified in the Superior Health & Productivity Companies (the White 500) Program, which is promoted by the TSE and the Nippon Kenko Kaigi (Japan Health Council).\*2

\*1 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 for “health and productivity management.”

\*2 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.



# 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 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, 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.

### 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 as necessary, and steps are taken to prevent a recurrence of the issue (activities include audits by the Internal Audit Department, self-check sheets, among others).

### 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. In these ways, DENSO is working to thoroughly reinforce bribery prevention Groupwide.



# Risk Management

## Basic Stance

In keeping with the global expansion of business, the DENSO Group is striving to strengthen risk management as part of its internal control system 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.

### 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.

\* In the event that operations are interrupted by an earthquake or other large-scale natural disaster, BCPs are designed to minimize damage to the Company's business by aiming to restore operations within a targeted timeframe.

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

In 1969, DENSO CORPORATION adopted fundamental principles of safety, health, and environmental management based on the premise that creating safe and ideal working conditions is the best way to realize both human dignity and high productivity. In the following year, the Company established the DENSO Safety, Health, and Environmental Standards, which have since then guided the Company's efforts to continuously improve workplace safety.

Additionally, DENSO is 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.

# Environmental Management

The number of car owners is expected to increase in the future, centered on emerging nations. Against this backdrop, DENSO believes that its mission as a member of the automotive industry is to minimize greenhouse gases.

To preserve the global environment and realize growth as an organization, we aim to become a corporate group that can contribute to the creation of an advanced motorized society. To this end, we will work to reduce our environmental footprint in all areas of our business. At the same time, we will promote “environmental management,” which strives for world-leading environmental efficiency and the creation of economic value through the pursuit of higher resource productivity.

## Basic Stance

Every 10 years, DENSO formulates its DENSO Eco Vision to demonstrate its long-term commitment and to serve as its environmental policy for the environmental management to which the Group aspires. Every five years, DENSO defines an Environmental Action Plan to embody the commitment and environmental policy set out in its Eco Vision.

## 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, factories, associates (employees), and management.



## Promotion Structure

DENSO established its Environment Committee in December 1992. 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.

### TOPICS

## Received the LCA Japan Forum's Chairman Award at the 13th LCA Japan Forum Awards

The Life Cycle Assessment Society of Japan was established in 1995 in order to encourage and expand life cycle assessments (LCA)\* and environmentally efficient business approaches and to realize sustainable economic and social growth. The Company's DENSO Eco Vision 2025, which strives for environmental management from a life cycle perspective, was evaluated highly by the Life Cycle Assessment Society of Japan, as was its support for activities to encourage LCA and other environment-related activities.

\* Life cycle assessment refers to a method for quantitatively and objectively assessing the environmental impact generated in each stage of a product's life cycle from resource procurement to manufacture, shipping, use, disposal, and recycling.

## Fourth Place in the 20th Nikkei Environmental Management Survey's Overall Ranking of Manufacturers

In the 20th Nikkei Environmental Management Survey conducted by Nihon Keizai Shimbun, Inc., DENSO placed fourth in the overall ranking of manufacturers.

The Company received particularly high evaluations for its product-related measures and measures for preventing pollution and protecting biodiversity.



## Eco Factories—The Foundation of Environmental Management

With the construction of production plants in Japan and overseas in the 1960s, DENSO determined that the fundamental principles underpinning its business operations were "observing the environmental standards of respective regions" and "giving due consideration to local communities." Accordingly, the Company started reviewing all of its plants prior to the enactment of the Basic Law for Environmental Pollution and the Water Pollution Control Law in Japan. In 1972, aspects pertaining to environmental preservation were incorporated into the DENSO Safety, Health, and Environmental Standards, thereby improving the foundation of the Company's environmental management by establishing internal standards that are more stringent than laws and regulations in terms of facilities and management.

In the 1980s, environmental issues, which were previously dealt with through regional pollution measures, expanded to become issues of a global scale. And in the 1990s, the prevention of global warming became the most important environmental issue. At that time, in addition to developing products for eco cars, DENSO made Groupwide efforts to visualize the energy consumption of its factories, enhance energy efficiency through Company technologies and facility assessments and improvements implemented via a team of energy-conservation specialists, and reduce its CO<sub>2</sub> emissions. These efforts embodied environmental management adopted under the DENSO Philosophy and marked the first step for DENSO toward becoming a world-leading company in terms of environment-friendly initiatives.

Specific Initiatives

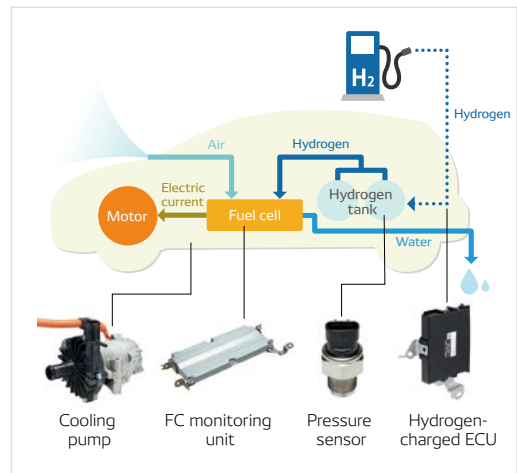
ENERGY1/2

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 CO<sub>2</sub> 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. Going forward, we will continue to provide products that help increase the reliability and performance of FCVs and also help lower their costs.

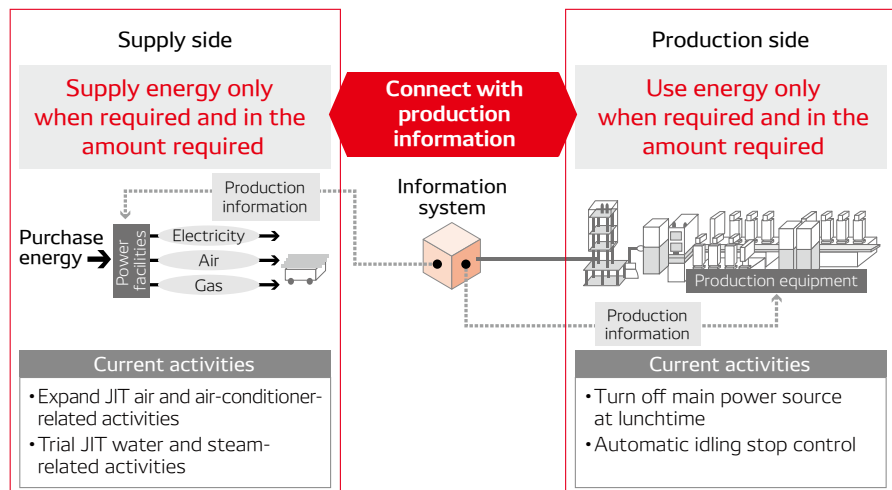


**Action 02: Aiming for Minimum CO<sub>2</sub> Monozukuri**

CO<sub>2</sub> emissions from energy consumption account for 95% of the principal greenhouse gases that DENSO emits in its production operations. Considering it important for energy loss to be as close as possible to zero, DENSO is concentrating its efforts on reducing electricity, the form of energy that is used the most.

Energy Just-in-Time (JIT) Activities Adapted to Production Fluctuations

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 optimizing both JIT supply that provides energy and JIT production that uses energy.





**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: Promoting the Development of Eco Materials**

Based on a basic policy to reduce the use of harmful chemical substances throughout a product's life cycle to the greatest extent possible, DENSO is striving to lower the amount of harmful chemical substances contained in its products in light of the trends in the laws and regulations of each country where it operates, starting with the ELV\* directive in Europe.

\* ELV (End-of-Life Vehicles) directive: A series of regulations concerning used automobiles that entered into force in the European Union in October 2000. In principle, the regulations will be gradually enacted to prohibit the use of harmful chemical substances in vehicle materials and components put on the market after July 2003.

**Action 05: Addressing Global Risks Related to Water**

Recently, a wide variety of water-related issues have started to become more serious, such as water pollution, water shortages, and floods. As such, there has been a heightened need for initiatives aimed at addressing risks involving water. DENSO has identified the water-related risks it is exposed to on a Groupwide basis and has evaluated these risks while taking into account regional factors. By strengthening measures to address these risks and sharing successful examples of such measures across the entire Group, DENSO is promoting the reduction of water-related risks.

**Just-in-Time Water Management**

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: Commencing Large-Scale Demonstration Tests for the Practical Application of Biofuel**

To realize the practical application of biofuel, DENSO has constructed a 20,000 m<sup>2</sup> test facility for a culture of *Pseudochochocystis ellipsoidea*,\* an oil-producing microalga, in Amakusa City, Kumamoto Prefecture. This facility is one of the largest of its kind in Japan and commenced operations in April 2016. By fiscal 2019, we aim to establish elemental technologies that allow for the practical application of biofuel extracted from *Pseudochochocystis ellipsoidea* microalga.

\* *Pseudochochocystis ellipsoidea* is an oil-producing microalga patented by DENSO that is fast-growing, vigorous, and easy to cultivate.

**Action 08: Promoting Tree-Planting Activities under the "Green Project" in Collaboration with Local Communities**

With the aim of restoring and preserving the diverse range of living creatures that inhabit the ecosystems near DENSO's offices, Company employees and their families are working with local NPOs and community members to promote greening activities (including tree-planting, thinning, and pruning) in the areas surrounding its offices, as well as near highways, under the "Green Project."

# Quality Assurance

## Basic Stance

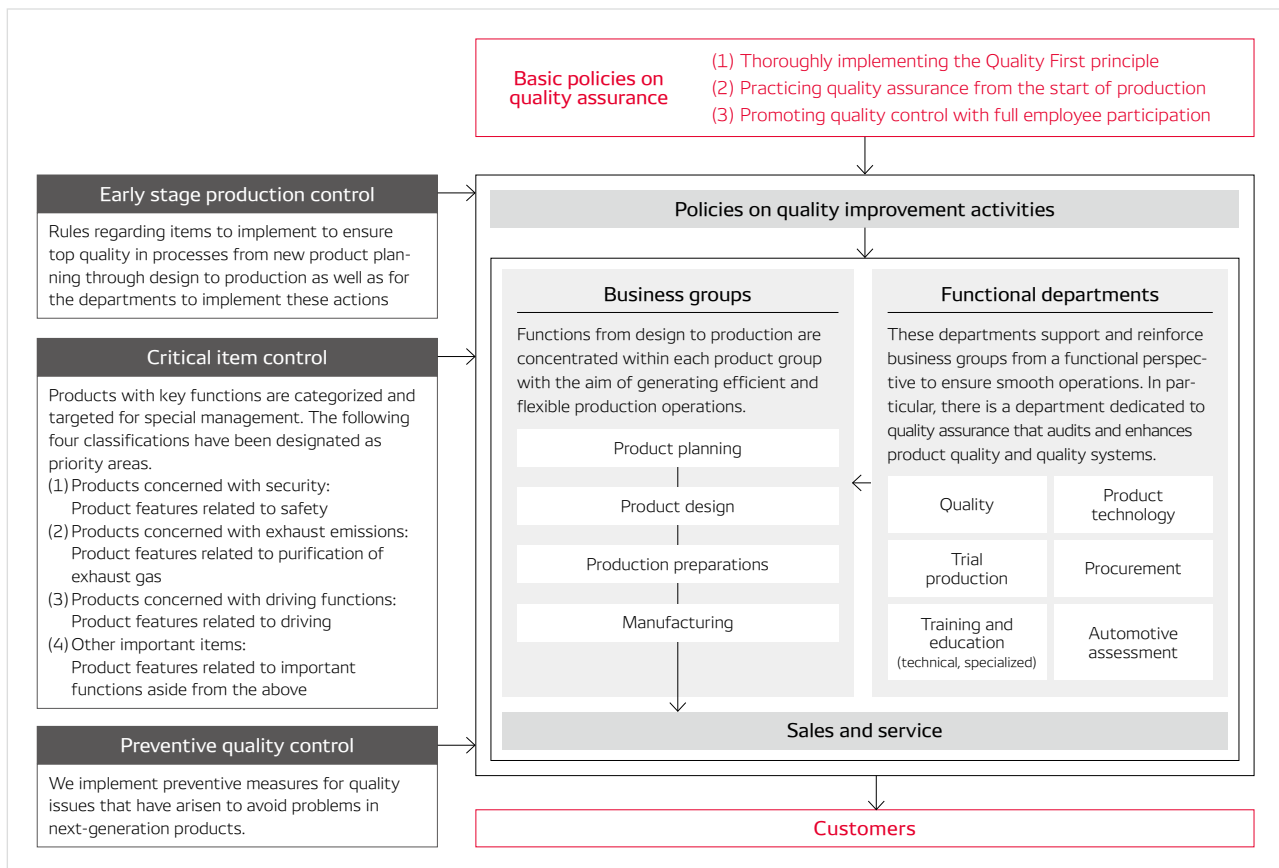
Since its founding, the DENSO Group has been dedicated to providing reliable, safe, and high-quality services that will satisfy customers and earn their trust based on a commitment under the DENSO Group Declaration of Corporate Behavior. We have designated the thorough implementation of the Quality First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

## Quality Assurance Policies and Systems



## Specific Initiatives

### 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,\* 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.

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



Quality confirmation using evaluation equipment



Car driving test on country road at the DENSO Abashiri Test Center

## Future Initiatives

Automotive technologies continue to evolve, as represented by ADAS, automated driving, connected cars, and other technologies. However, no matter how advanced automobiles become, our mission to provide high-quality products that help avoid traffic accidents will never change.

Going forward, we will continue to provide society with high-quality products and services by bolstering future-oriented quality assurance frameworks and initiatives with our sights always set on the future.

# Intellectual Property Activities

## Basic Stance

DENSO is endeavoring to unify its business unit strategies with its intellectual property (IP) strategies in a bid to better engage in business activities that help resolve such critical issues as preserving the Earth's environment and ensuring security and safety. In line with the DENSO Group's Global Mid-term Policy, energies are directed on a priority basis toward building a patent portfolio of system and world-first products in the environment, security, and safety fields as well as conducting IP activities related to open innovation. The Company is supporting efforts to expand its business and achieve continued growth by utilizing in a strategic manner the patents that have been acquired.

## Respect for Other Companies' IP Rights

DENSO sees problems related to other companies' IP rights as equally important as major quality problems in its own products. From the development stage, the Company examines the IP rights of other companies and has clearly defined internal rules to ensure that its products do not infringe on the IP rights of third parties.

## 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, and China.

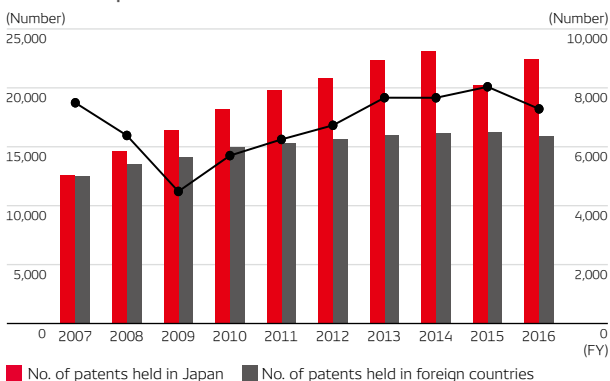
## Promotion Structure

### 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.

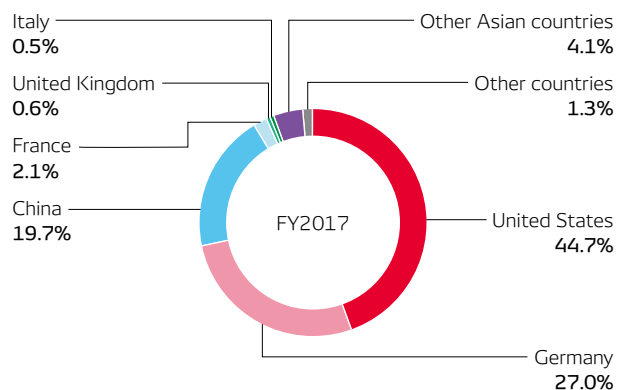
In addition, as part of our efforts in global IP collaboration, we hold the Global IP Conference. This conference brings together the members of IP organizations at our locations around the world with the aim of engaging in debate related to global and local IP issues and to invigorate and further expand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

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



■ No. of patents held in Japan ■ No. of patents held in foreign countries  
● No. of patent applications filed in Japan and overseas  
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.



Global Conference

## Examples of Engagement with Stakeholders (fiscal 2017)

Customers	Employees	Suppliers
<p><b>Customer Satisfaction Improvement Exhibition</b></p> <p>DENSO holds an exhibition to present its <i>Monozukuri</i> initiatives and associated case examples—which are based on customer feedback and undertaken from the customer’s perspective—to employees, Group companies, and suppliers.</p> <p>Approx.  <b>20,000</b> people attended</p>	<p><b>Global Conference</b></p> <p>At the Global Conference held in 2017, directors and members of management from our locations around the world gathered to discuss innovation for the sustainable development of the entire Group as well as long-term functional and regional issues and measures to address such issues.</p> <p>Approx.  <b>150</b> people participated from around the world</p>	<p><b>General Meeting of Suppliers</b></p> <p>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.  <b>340</b> suppliers participated from around the world</p>
Local Communities	Shareholders and Investors	
<p><b>Community Service Day</b></p> <p>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 reflects its unique position and role in society.</p> <p>Approx.  <b>41,000</b> employees participated from around the world</p>	<p><b>Results Briefings for Institutional Investors</b></p> <p>DENSO holds results briefings for the purpose of disclosing business and financial information in a timely and appropriate manner and enhancing management transparency through dialogue.</p> <p>Approx.  <b>130</b> people participated in each of the four annual events</p>	<p><b>Ordinary General Meeting of Shareholders</b></p> <p>At the Ordinary General Meeting of Shareholders held in 2017, 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>Approx.  <b>1,450</b> people participated</p>

# 4

## Corporate Data

- 89 Financial Strategy
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- 93 Stock Information

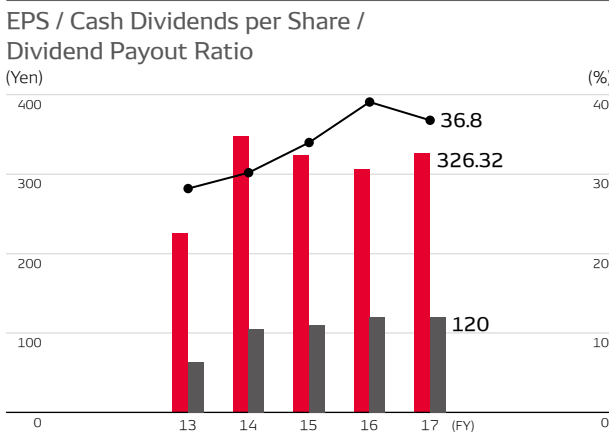
# Financial Strategy

DENSO generates approximately ¥1 trillion a year through its sales activities. Going forward, in order to further enhance corporate value, DENSO will leverage these funds with a focus on capital expenditures, R&D, shareholder returns, and M&A.

We will continue to allocate nearly ¥300.0 billion to capital expenditures, which will be aimed at further enhancing our global *Monozukuri* capabilities through such means as expanding our *DANTOTSU* plant activities overseas and promoting factory-IoT.

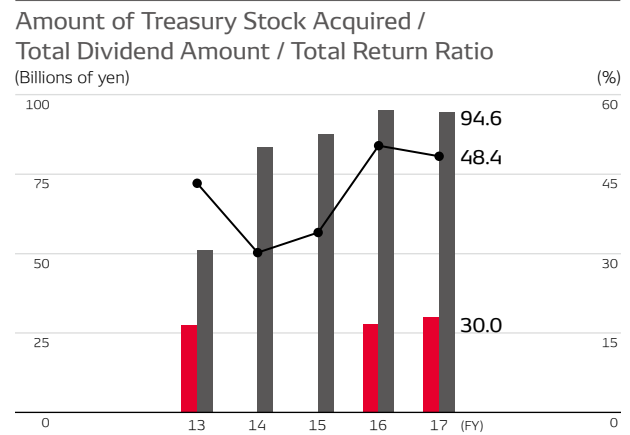
In terms of R&D, which represents the source of our future growth, we will continue R&D investment while maintaining a 9% ratio of R&D expenditure to revenue so that we are able to develop and provide even more appealing products.

Also, we will actively pursue M&A and business alliances. At the same time, we will provide a stable dividend to continue to meet the expectations of our shareholders over the long term. Additionally, we will further enhance shareholder returns through the flexible acquisition of treasury stock.



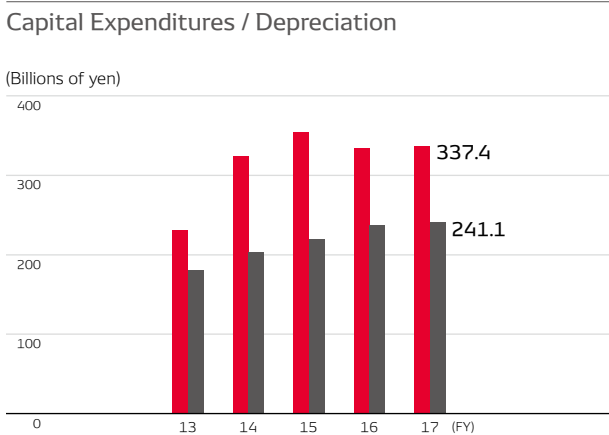
Dividend payout ratio: 30%–40%

■ EPS (left scale) ■ Cash Dividends per Share (left scale)  
● Dividend Payout Ratio (right scale)



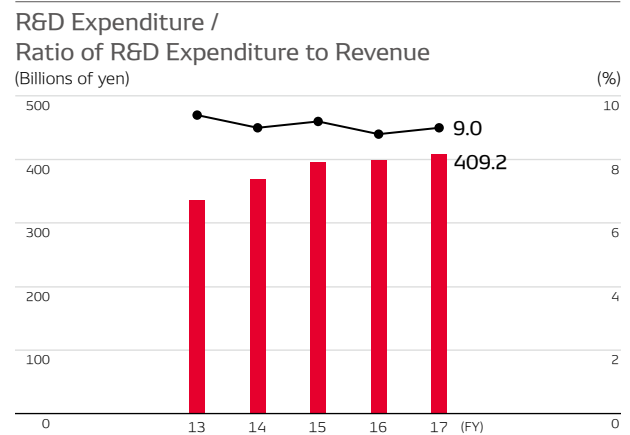
Flexible and continuous acquisition of treasury stock

■ Amount of Treasury Stock Acquired (left scale) ■ Total Dividend Amount (left scale)  
● Total Return Ratio (right scale)



Maintain a level of around ¥300.0 billion in capital expenditure allocation

■ Capital Expenditures ■ Depreciation



Maintain a 9% ratio of R&D expenditure to revenue

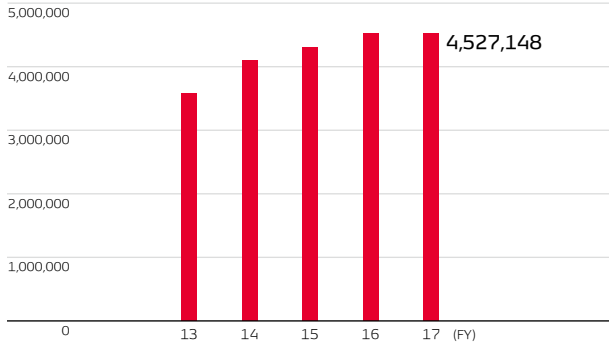
■ R&D Expenditure (left scale) ● Ratio of R&D Expenditure to Revenue (right scale)

Note: 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.)

# Facts & Figures

## Revenue

(Millions of yen)

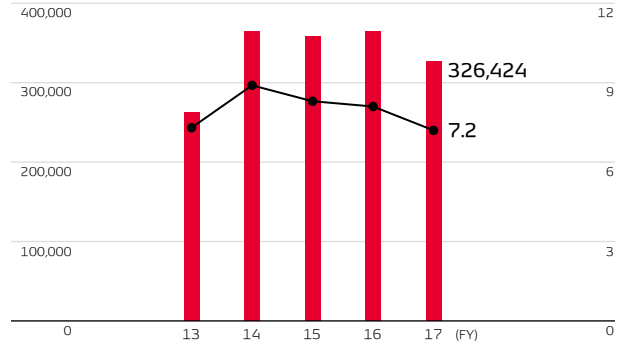


## Operating Profit /

## Operating Margin (excluding other income)\*

(Millions of yen)

(%)



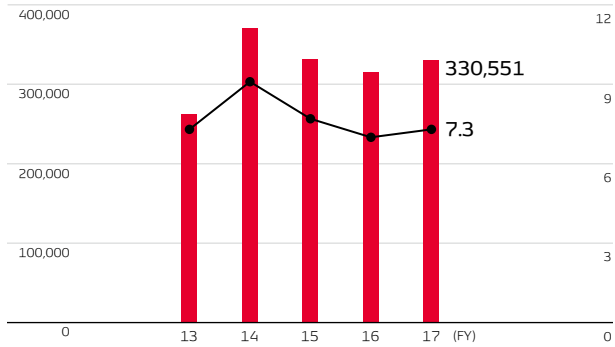
■ Operating Profit (excluding other income) (left scale)  
● Operating Margin (excluding other income) (right scale)

\* As figures before fiscal 2013 were prepared based on Japanese accounting standards, other income and expenses are not included in operating income.

## Operating Profit / Operating Margin

(Millions of yen)

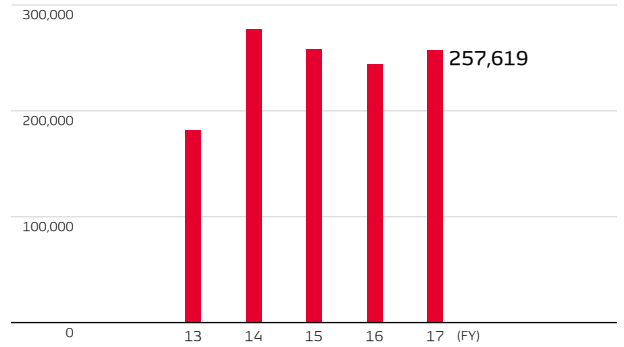
(%)



■ Operating Profit (left scale) ● Operating Margin (right scale)

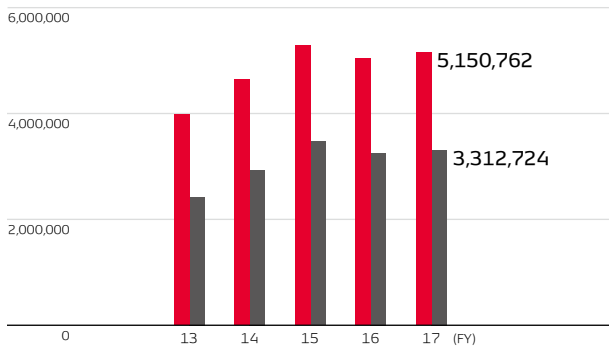
## Profit Attributable to Owners of the Parent Company

(Millions of yen)



## Total Assets / Equity Attributable to Owners of the Parent Company

(Millions of yen)



■ Total Assets ■ Equity Attributable to Owners of the Parent Company

Note: 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).

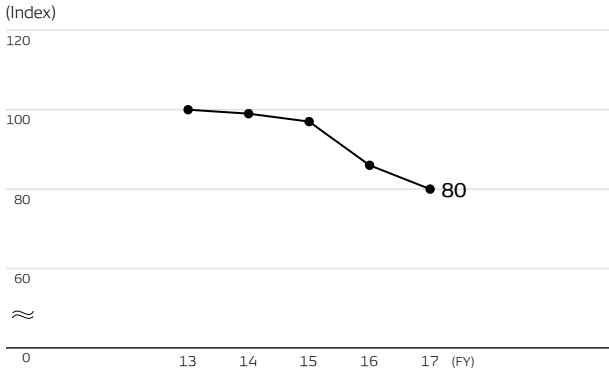


Please find more details on financial information via the link below.  
[https://www.denso.com/common/confidential-static-contents/global/en/investors/library/annual\\_report/documents/2017\\_annual\\_report.pdf](https://www.denso.com/common/confidential-static-contents/global/en/investors/library/annual_report/documents/2017_annual_report.pdf)



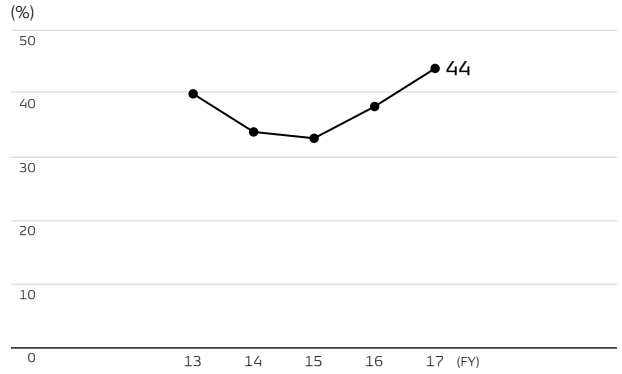
Corporate Data

CO<sub>2</sub> Emissions per Unit\*

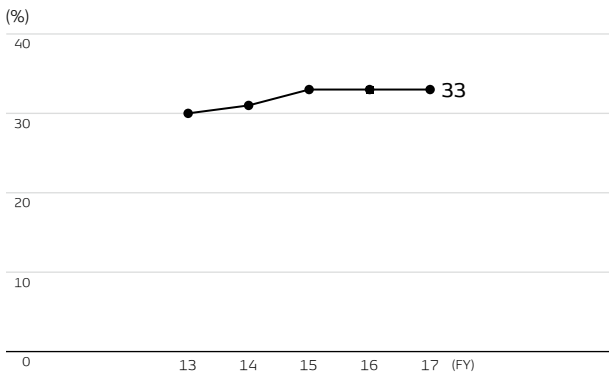


\* Per unit = CO<sub>2</sub> emissions / Revenue (indexed to fiscal 2013 as 100%)

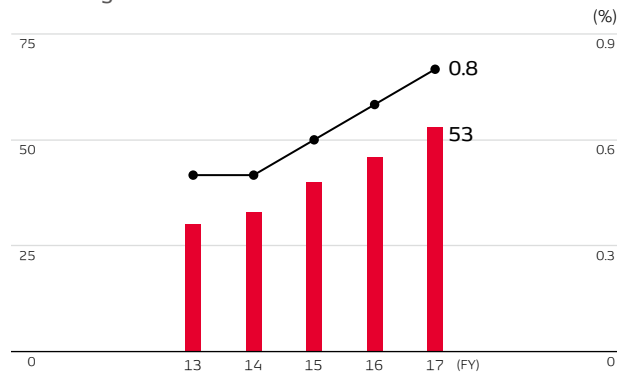
In-house Power Generation Ratio



Ratio of Local Employees in Leadership Roles at Bases



Number and Ratio of Female Employees in Managerial Positions



■ Number of Female Employees in Managerial Positions (left scale)  
 ● Ratio of Female Employees in Managerial Positions (right scale)

# Company Overview

(As of March 31, 2017)

## Company Profile

Company Name	DENSO CORPORATION
Established	December 16, 1949
Capital	¥187.4 billion
Head Office	1-1, Showa-cho, Kariya, Aichi 448-8661, Japan
Employees	Consolidated basis: 154,493 Non-consolidated basis: 38,914
Consolidated Subsidiaries	190 (Japan 62, North America 28, Europe 35, Asia 59, South America/Others 6)
Companies Accounted for by the Equity Method	36 (Japan 13, North America 4, Europe 4, Asia 13, 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	794,068,713 shares (including DENSO CORPORATION owning 8,186,085 shares of treasury stock)
Number of Shareholders	61,178 (including DENSO CORPORATION owning treasury stock)
Securities Identification Code	6902
Stock Exchange Listings	Tokyo, Nagoya

## Regional Headquarters

### The Americas

#### DENSO INTERNATIONAL AMERICA, INC.

24777 Denso Drive, P.O. Box 5047,  
Southfield, Michigan 48086-5047, U.S.A.  
Tel: +1-248-350-7500  
<http://www.densocorp-na.com>

### Europe

#### DENSO EUROPE B.V.

Hogeweyselaan 165, 1382 JL Weesp,  
The Netherlands  
Tel: +31-294-493493  
Fax: +31-294-417122  
<http://denso-europe.com>

### Asia

#### DENSO INTERNATIONAL ASIA CO., LTD.

888 Moo 1, Bangna-Trad Km. 27.5,  
Tambol Bangbo, Amphur Bangbo,  
Samutprakarn 10560, Thailand  
Tel: +66-2-315-9500  
Fax: +66-2-315-9559  
<http://www.denso.com/th/en>

#### DENSO INTERNATIONAL ASIA PTE., LTD.

51 Science Park Road, #01-19 The Aries,  
Science Park II, Singapore 117586  
Tel: +65-67768268  
Fax: +65-67768698  
<http://www.denso.com/sg/en>

### China

#### DENSO (CHINA) INVESTMENT CO., LTD.

Room No. 518, The Beijing Fortune Building,  
No. 5 Dong San Huan Bei-Lu, Chaoyang District,  
Beijing 100004, China  
Tel: +86-10-6590-8337  
Fax: +86-10-5758-2781  
<http://www.denso.com.cn>

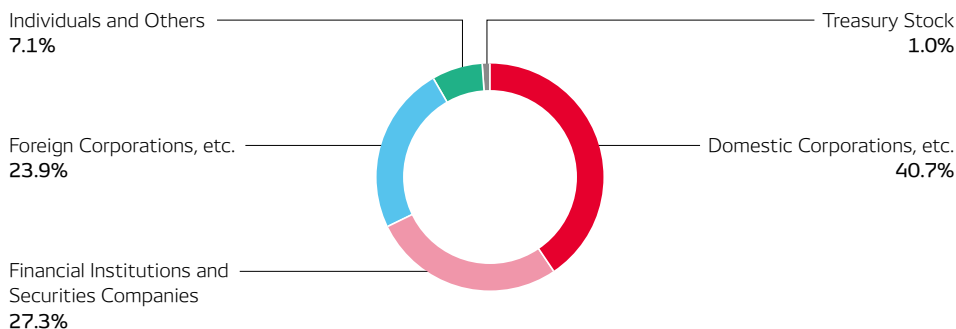
# Stock Information

(As of March 31, 2017)

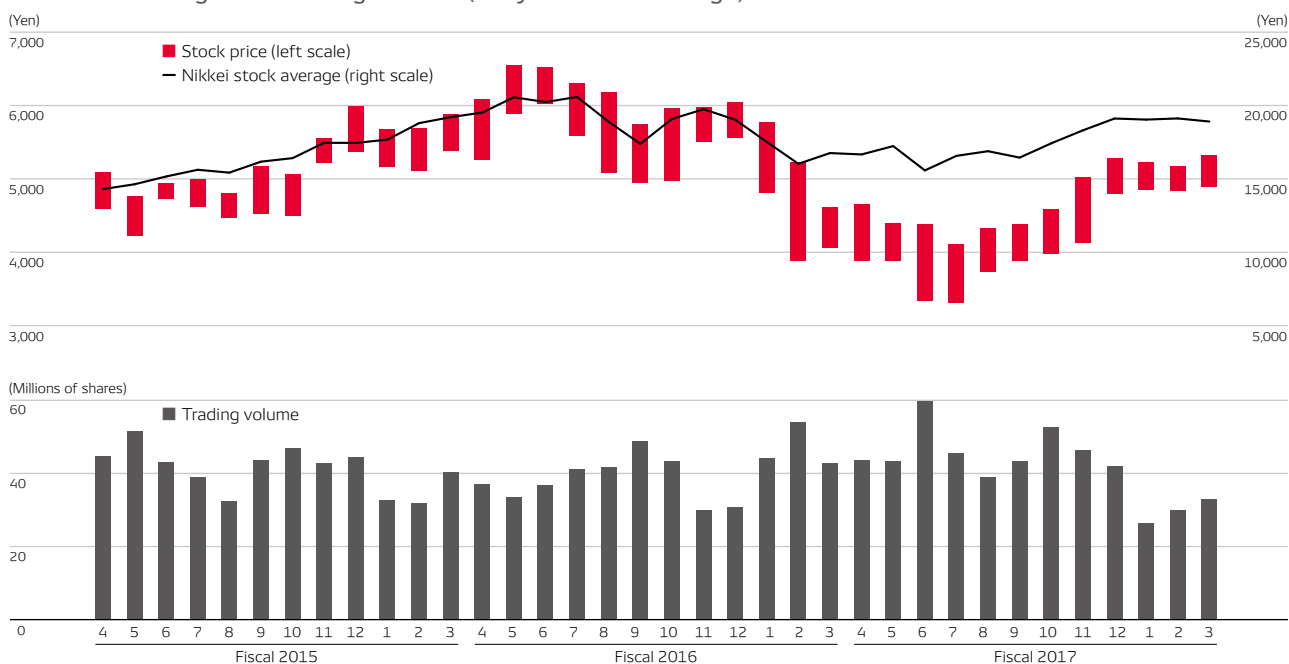
## Principal Shareholders (Leading 10 Principal Shareholders)

	Number of shares held (thousands)	Voting share ratio (%)
Toyota Motor Corporation	194,949	24.81
Toyota Industries Corporation	69,373	8.83
The Master Trust Bank of Japan, Ltd. (Trust Account)	36,311	4.62
Towa Real Estate Co., Ltd.	33,309	4.24
Japan Trustee Services Bank, Ltd. (Trust Account)	29,746	3.78
Nippon Life Insurance Company	21,645	2.75
DENSO Employees' Shareholding Association	12,615	1.60
Aisin Seiki Co., Ltd.	12,518	1.59
Mitsui Sumitomo Insurance Co., Ltd.	9,544	1.21
Japan Trustee Services Bank, Ltd. (Trust Account 5)	9,058	1.15

## Breakdown of Shareholders



## Stock Price Range and Trading Volume (Tokyo Stock Exchange)



## **DENSO CORPORATION**

1-1, Showa-cho, Kariya, Aichi 448-8661, Japan  
Tel: +81-566-25-5511 (Information Center)  
[www.denso.com/global/en/](http://www.denso.com/global/en/)