

## Integrated Report 2021

For the year ended March 31, 2021



## **DENSO** Philosophy

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

### **DENSO Spirit**

## A spirit of foresight, credibility and collaboration

The DENSO Spirit expresses values and beliefs shared by our employees around the world that have driven us to contribute to the automotive industry and society as a whole since our establishment in 1949.

### Foresight

Providing surprises and

impressions in a way

that only DENSO can

Vision

Creativity

Challenge

## Credibility

Providing quality and reliability beyond customer expectations

**Quality First** 

**On-site Verification** 

Kaizen, **Continuous Improvement** 



"Be trustworthy and responsible." "Cherish modesty, sincerity, and cooperation." "Be pioneering, innovative, and creative." "Provide quality products and services."

### Collaboration

Achieving the highest results by working as a team

### Communication

Teamwork

### Human Development

DENSO Integrated	Report 2021
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#### Publication of DENSO Integrated Report 2021

DENSO publishes an integrated report in order to foster a deeper understanding of its initiatives toward sustainable corporate value enhancement.

DENSO Integrated Report 2021 includes specific information on the strategies and initiatives DENSO is pursuing toward "green" and "peace of mind" with the aim of realizing its Long-term Policy for 2030 of "bringing hope for the future for our planet, society, and all people." In addition, the report introduces the Company's new financial strategies for continuing to create corporate value even under an uncertain business environment.

Going forward, DENSO will continue its efforts to disclose accurate information to its stakeholders in a timely manner. Lastly, I would like to assure the readers that the creation process for this report was done in an appropriate fashion.

Collaborative

Value Creation



Scope of Report Target Organization DENSO CORPORATION and the DENSO Group (In this report, DENSO CORPORATION refers to DENSO on a non-consolidated basis.)

Yasushi Matsui

Director, Senior

**Executive Officer** 

Chief Financial Officer

Reporting Period This report covers the activities of the DENSO Group during fiscal 2021 (April 1, 2020 to March 31, 2021). Certain parts of this report include content on the Group's activities from April 2021 onward.

Target Audience All stakeholders involved with the DENSO Group

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.

Terminology Used in Integrated Report 2021 (Abbreviations for Various Types of Electrified Vehicles) BEV: Battery Electric Vehicle HEV: Hybrid Electric Vehicle PHEV: Plug-in Hybrid Electric Vehicle FCEV: Fuel-Cell Electric Vehicle

#### Positioning of Integrated Report

**Editorial Policy** 

a sustainable society.

In addition to providing financial information, such as

results and sales overviews as well as management

strategy, DENSO Integrated Report 2021 is edited as

an integrated report that reports, in an easily under-

society and on the process of improving that corpo-

integrated manner, information of a non-financial nature on intangible

assets, including on the environment, society and governance (ESG), that

DENSO creates long-term corporate value for all of its stakeholders, including shareholders and other investors, and would appreciate their

understanding for the efforts the Company is making in aiming to realize

In compiling this report, references have been made to the "international

Integrated Reporting Council (IIRC), as well as the "Guidance for Integrated

integrated reporting framework" that is proposed by the International

Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation," formulated by the Ministry of Economy, Trade and Industry.

In addition, with regard to social reporting and the environment, please refer to the "Sustainability" section of the Company's website.

stood manner, on what value DENSO is providing

rate value. This we achieved by introducing, in an

are seen as the foundation underpinning growth.





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DENSO has pledged its support for the Task Force on Climate-related Financial Disclosures (TCFD). For DENSO Integrated Report 2021, we referenced the climate-related disclosure items recommended by the TCFD. The table below shows the correspondence between the TCFD recommended disclosure items within this report and the ones on our corporate website. Furthermore, this integrated report includes sections that disclose opportunities and risks based on scenario analysis and summarize DENSO's initiatives in accordance with the TCFD recommendations. Please see page 64 for details. The table below mainly includes excerpts on these topics from pages other than page 64.

	DENSO Integrated Report 2021	DENSO's Corporate Website
	a) Describe the Board's oversight of climate-related risks and oppor	
vernance	<ul> <li>a) Describe the board's oversigned to trainate-related risks and Opport P66: Efforts to Maximize the Value of "Green"&gt;Governance P86: Corporate Governance&gt;Corporate Governance System</li> <li>b) Describe management's role in assessing and managing climate-</li> </ul>	Who we are>Sustainability>Corporate Governance>Corporate Governance System and Principal Organizations: https://www.denso.com/global/en/about-us/sustainability/governance/management/ Who we are>Sustainability>Sustainability Management>Promotion structure: https://www.denso.com/global/en/about-us/sustainability/management/ Who we are>Sustainability>Commitment to the Environment>EcoVision>Environmental Management (Eco-Management)>Promotion Structure: https://www.denso.com/global/en/about-us/sustainability/environment/ecovision/eco-management/
	P66: Efforts to Maximize the Value of "Green">Governance P86: Corporate Governance>Corporate Governance System	Who we are>Sustainability>Corporate Governance>Corporate Governance System and Principal Organizations https://www.denso.com/global/en/about-us/sustainability/governance/management/ Who we are>Sustainability>Sustainability Management>Promotion structure: https://www.denso.com/global/en/about-us/sustainability/management/ Who we are>Sustainability>Commitment to the Environment>EcoVision>Environmental Management (Eco-Management)>Promotion Structure: https://www.denso.com/global/en/about-us/sustainability/environment/ecovision/eco-management/
	a) Describe the climate-related risks and opportunities the organiza	
	P26–27: Awareness of Business Environment P30: ①Materiality P64–65: Efforts to Maximize the Value of "Green">Scenario Analysis of Business Opportunities and Risks	Who we are>Sustainability>Sustainability Management>Materiality: https://www.denso.com/global/en/about-us/sustainability/management/ Who we are>Sustainability>Commitment to the Environment>EcoVision: https://www.denso.com/global/en/about-us/sustainability/environment/ecovision/ Who we are>Sustainability>Commitment to the Environment>Environmental Action Plan: https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/
	b) Describe the impact of climate-related risks and opportunities o	
Suldie	<ul> <li>P25: Long-term Policy: Our Goal for 2030</li> <li>P26–27: Awareness of Business Environment</li> <li>P28–29: Outline of Management Policies</li> <li>P30: ①Materiality</li> <li>P31: ②Long-term Plan</li> <li>P32–34: ③Mid-term Plan</li> <li>P35-DENSO Revolution Plan "Reborn21"</li> <li>P40–41: Realizing Carbon-Neutral Factories Promoting <i>Monozukuri</i> (Manufacturing) without CO:</li> <li>P53–57: CFO Message</li> <li>P64–65: Efforts to Maximize the Value of "Green"&gt;Scenario Analysis of Business Opportunities and Risks, Impact on Management Strategy, Impact on Financial Planning</li> </ul>	Who we are>Corporate Information>Philosophy>Long-term Policy: https://www.denso.com/global/en/about-us/corporate-info/philosophy/long-term-policy/ Who we are>Sustainability>Sustainability Management>Materiality: https://www.denso.com/global/en/about-us/sustainability/management/ Who we are>Sustainability>DENSO's SDGs https://www.denso.com/global/en/about-us/sustainability/sdgs/ Who we are>Sustainability>Commitment to the Environment>EcoVision: https://www.denso.com/global/en/about-us/sustainability/environment/ecovision/ Who we are>Sustainability>Commitment to the Environment>EcoVision: https://www.denso.com/global/en/about-us/sustainability/environmental Action Plan: https://www.denso.com/global/en/about-us/sustainability/environmental Action Plan: https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ What we do>Innovation>Biotechnology (Micro Algae) (Japanese only): https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ Https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ Https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan/ https://www.denso.com/global/en/about-us/sustainability/environment/action-plan-neutral
	c) Describe the resilience of the organization's strategy, taking into	consideration different climate-related scenarios, including a 2°C or lower scenario
	P64–65: Efforts to Maximize the Value of "Green">Scenario Analysis of Business Opportunities and Risks, Impact on Management Strategy, Impact on Financial Planning	
	a) Describe the organization's processes for identifying and assessi	ng climate-related risks
nent	P30: ①Materiality P66: Efforts to Maximize the Value of "Green">Risk Management P98–99: Risk Management	Who we are>Sustainability>Sustainability Management>Materiality: https://www.denso.com/global/en/about-us/sustainability/management/ Who we are>Sustainability>Commitment to the Environment>Environmental Management (Eco-Management) >Promoting Consolidated Environmental Management, Environmental Risk Management: https://www.denso.com/global/en/about-us/sustainability/environment/ecovision/eco-management/ Who we are>Sustainability>Corporate Governance>Risk Management: https://www.denso.com/global/en/about-us/sustainability/governance/risk/
age	b) Describe the organization's processes for managing climate-relat	ed risks
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	c) Describe how processes for identifying, assessing, and managing	climate-related risks are integrated into the organization's overall risk management
	P.66: Efforts to Maximize the Value of "Green">Risk Management	Who we are>Sustainability>Corporate Governance>Risk Management: https://www.denso.com/global/en/about-us/sustainability/governance/risk/
	a) Disclose the metrics used by the organization to assess climate-	related risks and opportunities in line with its strategy and risk management process
	P.36–37: Maximizing the Value of "Green" and "Peace of Mind" P.66: Efforts to Maximize the Value of "Green">Risk Management	Who we are>Sustainability>Commitment to the Environment>EcoVision: https://www.denso.com/qlobal/en/about-us/sustainability/environment/ecovision/
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stic and Overseas Group

### Overall Layout of DENSO Integrated Report 2021

#### This integrated report is edited based on the layout explained in the chart below. This layout is used to better explain DENSO's value creation story.

The aim of *DENSO Integrated Report 2021* is to have the reader gain a deep understanding of DENSO's value creation process while promoting an opportunity for dialogue. Throughout the entirety of this booklet, we have created a story line that comprehensively communicates our value creation process while encompassing crucial elements that help the reader understand this process (management philosophy, business model, strategy, governance, etc.). The chart below shows the logical layout of these crucial elements based on the story line we have created. Additionally, we have created an index of keywords affiliated with each element so that readers can easily access the information they wish to know.





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



## Aiming for a Future Overflowing with Smiles Maximizing the Value of "Green" and "Peace of Mind" to Provide New Kinds of Value

To realize the Long-term Policy's slogan of "bringing hope for the future for our planet, society, and all people," DENSO is promoting strategies and initiatives to maximize the value of "green" and "peace of mind."

In the field of "green," we have been working to contribute to the everlasting preservation of the global environment through technologies that help resolve issues such as global warming and energy- and resource-related issues. Today, as the trend toward carbon neutrality gains traction around the world, we aim to achieve carbon neutrality within our production activities by 2035.

In the field of "peace of mind," we have been making efforts to realize a safe society without traffic accidents and free and comfortable mobility. In this way, we have been contributing to the creation of a society in which all people can live with peace of mind. With a strong



desire to create such a society as quickly as possible, we will continue to diligently pursue our research and development activities.

In addition to value creation in the fields of "green" and "peace of mind," our Long-term Policy also adopts the theme of "inspiring." This theme encapsulates our ambition to create a future overflowing with smiles by providing new value that inspires people, even amid a rapidly changing business environment and society.

We often hear that the goals of becoming carbon neutral and realizing a society without traffic accidents are too challenging to achieve. However, to contribute to the happiness of people for generations to come, we will remain committed to the challenge of creating new value that can make these seemingly impossible tasks possible.



DENSO's Value

Creation Story

CEO

MESSAGE

PROLOGUE

I would first like to offer my condolences to the families and friends of those who have passed away due to the COVID-19 pandemic. I would also like to extend my thoughts and prayers to all those who have been otherwise impacted by this pandemic. Furthermore, I would like to express my deepest gratitude to the medical professionals and other essential workers who are endeavoring every day to support our society and keep it in motion. DENSO continues to implement the necessary measures to prevent the spread of the virus, placing the utmost priority on the safety of our customers, business partners, local community members, and employees and their families. At the same time, we are making concerted efforts to contribute to the health and happiness of people

and society as a whole.

### Understanding That DENSO Only Exists Thanks to the Support of Our Stakeholders

Fiscal 2021 was a year in which we undertook extraordinary efforts to continue our business operations as we dealt with frequent adversity due not only to the impact of the COVID-19 pandemic but also to natural disasters and disruptions in our supply chains. The efforts we carried out over the course of the year made me once again realize how grateful I am to the many stakeholders that support us as a company. For the longest time, I had just assumed that the sequence of events that comprise our daily business operations—the delivery of components and materials to the Company, the implementation of ceaseless production activities, and the delivery of finished products to customers-was something that happened as a matter of course. However, over the past year, I gained a profound understanding that these operations are certainly not something that happen as a matter of course. It is precisely because of the fact that our customers sell cars that we are able to supply them with our products. And, it is precisely because of the fact that our suppliers around the world deliver components and materials to us that we are able to continue our Monozukuri (manufacturing) activities. Considering all of this, coupled with the fact that DENSO is but one member of the 5.5 million people who work in the automotive industry, I am not only sincerely grateful

Corporate Governance

CEO MESSAGE To Our Stakeholders

## With our unshakable management foundation as our starting point, we will push forward as a "new DENSO" with the aim of creating a future society overflowing with smiles.

but am also extremely inspired. From the bottom of my heart, I now understand the preciousness of the collaboration that occurs, almost like a miracle, in our day-today operations, the difficulty of conducting these operations on an ongoing basis, and the importance of forming connections throughout this process across the expansive industry that is the automobile industry.

#### Ensuring We Are Fully Prepared for the Next Crisis

We have been able to overcome numerous hardships throughout our history thanks to the support of all of our stakeholders. Looking back on the catastrophic year that was 2020, we were able to draw on our past experiences of dealing with disasters in a variety of settings. For example, we were able to recover from the fire that occurred at a supplier in 2020 in a surprisingly short period of time. I believe the key to this recovery was not only the result of the diligent efforts of the supplier itself but also the experience we gained in 2011 during the Great East Japan Earthquake, where we swiftly collaborated with relevant companies and rapidly implemented an initial response. I believe this example highlights the importance of thoroughly passing on the lessons learned from past experiences and turning them into strengths that can be leveraged, rather than letting them fade away. To that end, we will ensure that we pass on the experience we gained in 2020 from the



DENSO Integrated Report 2021 CEO MESSAGE

PROLOGUE

### **CEO MESSAGE**

series of challenges we faced as important lessons for the future and position crisis management as our most important management issue based on the notion that a crisis will inevitably occur again. By doing so, we will ensure that we are fully prepared for a future crisis through a broad range of efforts, including not only reexamining the way we maintain inventory but also leveraging data to ascertain signs of a potential crisis occurring and implementing initial response training in anticipation of an emergency. In these ways, we will aim to become a company that is resilient to change, possessing both the speed and capacity needed to broaden the scope of measures necessary to address the risks we anticipate and to get an uncontrollable situation under control as quickly as possible.

#### Ascertaining the Changing Value Systems around the World

We have experienced the threat to humanity presented by the COVID-19 pandemic, and this has led to significant changes in value systems around the world. The rapid change in lifestyles, workstyles, and communication methods has caused us to reconsider the importance of having a job, of being in contact with people, and of having mobility. In addition, the groundbreaking idea of carbon neutrality is suddenly and greatly changing value systems for business and consumption, and both individuals and corporations are being called on to change their behavior. Going forward, in addition to eco-friendly products, eco-friendliness throughout the entire process of creating, transporting, using and disposing of a product will be required as a condition for quality products and business transactions. The standard of carbon neutrality will require us to rethink our conventional notions of value and will lead to dramatic changes in the criteria used by consumers to purchase a product and choose a company.

For a company such as DENSO, which competes in the mobility domain and specializes in Monozukuri (manufacturing), these changes mean that we must go beyond simply developing products for non-mobility fields and pursue challenges in completely new fields. In other words, DENSO itself is pressed with establishing a new raison d'être.

#### Building an Unshakable Management Foundation to Become a "New DENSO"

I have once again recognized and come to fully understand that DENSO's Great Cause or, in other words, value of existence is to become a company that can deliver a future overflowing with people's smiles through efforts toward "green" and "peace of mind" that inspire society. Since 2020, we have been striving

to do so through the DENSO Revolution Plan "Reborn21," which involves activities to facilitate internal reforms. To create a solid foundation for transforming ourselves into such a company, we have been undertaking efforts to reestablish a robust quality foundation, strengthen our earnings structure, and promote workstyle reforms. We have also been making Companywide efforts to restore DENSO quality by enhancing our awareness and knowledge of quality and seeking to establish a workplace culture of open communication that is able to quickly detect and address any abnormalities. In terms of our earnings structure, we have been promoting activities to not only temporarily reduce costs but also encourage our employees to consider the idea of medium- to long-term earnings efficiency in their individual work based on return on invested capital (ROIC), which assesses how much profit is generated from capital invested. As a result, our quality and profit indicators have been steadily showing signs of improvement. However, our efforts toward genuine management reform are just getting underway.

Accordingly, in fiscal 2022 we will carry out "Reborn21" to its completion, which in turn will enable us to further enhance quality and establish a robust and resilient organizational structure. We will also strive to establish an unshakable management foundation by reinforcing our crisis management to prepare for all types of risk. To do so, we are tasked with transforming our business portfolio so that we are able to respond quickly to the rapid changes occurring in the business environment. With a focus on "green" and "peace of mind," we will expand our businesses in the CASE domain (connected driving, autonomous driving, sharing, and electrification) and accelerate our response to carbon neutrality. In these ways, we will push forward as a "new DENSO."

In other words, we will rapidly shift gears from the stage in which we were in fiscal 2021, where we reexamined our purpose as an organization and sought to solidify our management foundation and prepare ourselves to tackle upcoming challenges. In this new stage, we will be far more aggressive by making entries into new business fields and amassing practical experience, thereby making a greater impact on society.

#### Striving to Provide Society with More Sustainable Options

In the "green" field, we are making efforts toward the following three areas: eliminating CO<sub>2</sub> emissions in our Monozukuri (manufacturing) processes, reducing CO2 emissions by promoting products powered by electricity and other mobility products, and eliminating CO<sub>2</sub> emissions resulting from the energy we use in our daily lives. Through these efforts, we aim to become

carbon neutral by 2035. In addition, going beyond measures to greenify our factories and products, we will expand the scope of our efforts to include capturing and recycling CO<sub>2</sub> emitted from households and CO<sub>2</sub> within the atmosphere. In this manner, we will pursue the realization of a carbon-neutral society not on our own but together with local communities. There are a large number of options in terms of the way to achieve carbon neutrality. For mobility products alone, in addition to battery electric vehicles (BEVs), hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and fuel-cell electric vehicles (FCEVs), there is also a broad range of power and fuel sources, such as hydrogen engines and electrofuels. We are pressed to address various situations across all of society, including the tightening of energy and environmental policies in each country and region and the differences between infrastructure to transmit and supply energy in urban areas and suburban and rural areas. To ensure our ability to offer an even greater number of solutions that help eliminate CO<sub>2</sub> emissions, we will leverage our technologies to open the door to new possibilities with a commitment to world-firsts and the world's best.

For the "peace of mind" field, it is extremely important that we popularize advanced safety and other technologies if we are to achieve our goal of eliminating traffic accidents. To that end, we believe there are several practical options to accomplishing this goal. These include not only developing automated driving technologies and advanced safety functions and ensuring that they are installed in new vehicles but



also enhancing the safety of vehicles people already own, which are estimated to be over 1.4 billion around the world. In tandem with new vehicle development, we will promote the popularization of safety equipment that can be retrofitted in vehicles already owned and already sold. By doing so, we will provide an even greater number of options to steadily deliver peace of mind in overseas markets, where used cars are driven for a long period of time, and regions with traffic conditions that make it difficult to roll out automated driving technologies all at once.

Furthermore, we will pursue value creation efforts for "green" and "peace of mind" in not only the mobility and Monozukuri (manufacturing) domains but also social ones. To that extent, we have started to undertake new measures to contribute to urban development that is eco-friendlier and makes it easier for people and cars to exist together. We have also begun efforts to ensure food security by promoting reforms across the entire food value chain, from production through to distribution and consumption. Even if the form of our businesses, products, and services changes going forward, we will not lose sight of our focus on contributing to the well-being of people and society. We will therefore pursue ways of promoting our businesses that are completely new for us as a company based on the stance that if there is something we have the power to do as DENSO, we will not limit our options for doing so. In addition to our existing network, we will collaborate closely with our partners that are deeply rooted in local communities, including service stations and repair facilities

DENSO Integrated Report 2021 CEO MESSAGE

### CEO MESSAGE

around the world. At the same time, we will strive to establish new alliances through this collaboration while working to create optimized solutions that cater to the societies in each country and region. Although these kinds of efforts represent unknown territory for DENSO, we will push forward down a new road with a constant on-site awareness while never forgetting our policy of putting the customer first and working closely with frontline personnel, no matter what business we choose to pursue.

#### Combining the Physical and Virtual World to Maintain an On-Site Awareness

I personally have a love for on-site Monozukuri (manufacturing) and plant operations, as I started my career as a member of DENSO's production engineering team. This experience has given me a firm understanding of how people, goods, and information flow within a plant, which enables me to have a keen sense of the dynamism of DENSO's business. While DENSO deals with an extremely broad range of products, all of our plants have steadily inherited the shared ideas and principles of "wanting to make the customer smile" and "Monozukuri is Hitozukuri (Our performance relies on our people)." I believe that this kind of passion in our frontline operations is what makes DENSO the company that it is today. Before the spread of COVID-19, I often visited our plants and development sites, both in Japan and overseas, closely observing how operations were being carried out and having conversations with colleagues who were enthusiastically engaging in their work. This allowed me to experience the spirit, "氣 (ki)," of the front lines with my own five senses. However, in 2020 it became quite difficult to make such visits. In particular, I have not been able to visit our overseas sites for more than a year. Under these circumstances, we devised virtual plant tours of overseas bases, and through this initiative, I was able to visit on a virtual basis over 20 plants and development sites across North America, Europe, ASEAN, and China. Included in these visits were DENSO Manufacturing Tennessee, Inc., where I was once involved with the establishment of plants and production lines as a member of the production technology team, and DENSO Manufacturing Italia S.p.A. where I served as president and worked diligently to promote management reforms. Although this was a virtual visit, it was very nostalgic for me to reunite with my colleagues with whom I worked together on the front lines. While I have been communicating with colleagues at overseas locations through emails and online chats and conferences even before the pandemic, it was extremely moving to see them live on the front lines working tirelessly and resiliently to endure the COVID-19 pandemic and tackle

new management issues. In addition, these virtual tours served as a valuable experience that

provided me with an on-site awareness that differed slightly from when I was actually able to visit these locations in person. These virtual tours were conducted via the simple method of an online relay between the head office and plants of overseas companies, and I imagine it would have been a completely different experience if we had made use of cutting-edge digital technologies such as virtual reality. However, no matter what the method, this experience allowed me to feel firsthand the importance of continuing to maintain an on-site awareness by making effective use of virtual technologies.

No matter what job a person does, rather it be related to Monozukuri (manufacturing) or something else, there is always a front line on which they perform that job. Although we are unfortunately tending to drift away from the front lines due to the COVID-19 pandemic, the front lines are where we deal closely with the issues facing customers and work together with our colleagues to create new value. I believe maintaining a close connection with the front lines and promptly making decisions and taking action based on that connection are more important than ever in this time of sudden change. For that reason, in the "with COVID-19" and "post-COVID-19" eras, I aim for DENSO to adopt the stance of maintaining a connection with the front lines as we work to create value that is uniquely DENSO through workstyles that combine the physical and virtual world.

#### Creating a Landscape to Inspire All People

The trend toward the greenification and digitization of society will continue to accelerate at an even greater rate going forward. However, no matter how much digitization progresses, it is the strength of people that leads to the creation of value on the physical front lines. The more that automation and AI technologies advance, the more we will likely be able to entrust work to machines. Having said that, there are a great many things that cannot be left to machines and can only be done by humans. Among these, I believe that having a dream and inspiring people, in particular, are something that only humans can do.

"Bringing hope for the future for our planet, society, and all people," which we have adopted as part of our Long-term Policy, is something that can only be thought of through the vibrant imagination of people, as is having the dream to create a carbon-neutral society and eliminate traffic accidents. People may think that it is impossible to completely eliminate CO<sub>2</sub> emissions and traffic accidents, and perhaps they are right. But, without first having dreams, even ones that people believe to be absurd, there is certainly no way we can



Corporate Governance

accomplish these seemingly impossible tasks. The great achievements throughout human history were made by the hands of people who first had a dream and then continued to passionately take on challenges in order to make that dream a reality. Furthermore, by sharing our dreams with others, those dreams become even greater and more powerful. The ability to inspire people is an essential part of turning a dream into reality.

The ability to inspire means the ability to gain the empathy of another and move them emotionally. Machines are able to move faster and more precisely than humans and have certainly made our work and lifestyles more convenient and efficient. However, machines are not skilled at giving us vitality and courage and making us feel emotions. What can directly move the hearts of people is, without question, the hearts of other people. By communicating the ambitions and dreams we hold within our hearts, the dream of one person can become the dream of many. Upon doing so, a dream can eventually become held in the hearts of the masses and provide us with a strong determination to do whatever it takes to make it a reality. If a dream is not some self-righteous vision but rather a dream for the benefit of people and society, then I believe that dream will be able to inspire a large number of people.

DENSO's idea of "bringing hope for the future for our planet, society, and all people" represents a dream that must be fulfilled, no matter what it takes, in order to create a sustainable society. Not only is this dream shared among the approximately 170,000 DENSO employees across the globe, it also encapsulates the "future landscape" that our predecessors have worked tirelessly to create over the 70 years since DENSO's establishment. To make this future landscape a reality and deliver it to our customers as quickly as possible, we will take on the challenge of creating value in all of our frontline operations through honest efforts that are unique to DENSO. Guided by the spirit of our founding, to "provide quality products and services," which has been continuously passed down from generation to generation, we will put forth our utmost efforts for the sake of society with a passion in our hearts to realize on our own initiative a landscape that can inspire not only the people alive today but all those future generations to come.

I would like to ask our shareholders and other investors for their continued support as we strive to realize this future landscape going forward.

September 2021

poji (Dima

Koji Arima Representative Directo President & CEO

### History of Creating Value to Address Social Issues

address global gasoline shortages

#### 1950s-

Taking on the challenge of resolving social issues using cutting-edge technologies from the time of our founding

CEO

MESSAGE

- Developed and mass-produced battery electric vehicles (BEVs) to
- Reinforced corporate foundation through technical cooperation with Robert Bosch GmbH and by successfully competing for the Demina Prize

#### 1960s-

#### Efforts to address air pollution in advance of tightening emission regulations

- · Succeeded in realizing the practical application of injection systems to respond to the worsening issue of air pollution ahead of the introduction of strict emission regulations
- · Promptly established a system for the complete in-house production of integrated circuits (ICs) for automobiles

#### 1980s-

Commercialization of safety systems for preventing traffic accidents

• Leveraged the research we have engaged in since the 1960s to realize the practical application of various safety systems, including anti-lock brake systems, airbag sensing systems, and forward collision warning systems

#### 1990s-

#### Contributions to eco-friendly lifestyles with core technologies

- · Focused on the development of car air-conditioning systems that use natural refrigerant to curb the destruction of the ozone layer caused by conventional air-conditioning refrigerant
- Commercialized household heat pump water supply systems that contribute to energy savings. Also, developed water filters, QR codes, and other products that make people's lives more comfortable through the application of our core technologies

#### 2000s-

#### Acceleration of business-wide CO<sub>2</sub> reduction initiatives to combat global warming

- · Accelerated the development of eco-friendly products in all product fields
- Launched DENSO Eco Vision 2005 to share our environmental quidelines worldwide and accelerate initiatives for reducing CO<sub>2</sub> emissions from our business activities and realizing zero emissions

#### 2010s

Contributing to society by maximizing the value of "green" and "peace of mind"

 Accelerated efforts toward sustainability management since 2018 to contribute to the resolution of social issues in the fields of "green" and "peace of mind" within the mobility society—an ambition that forms the core of the DENSO Creed

#### Revenue\*

\* 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 Financia Reporting Standards (IFRS). (Japanese accounting standards were employed up to and including fiscal 2013.)



### DENSO's Value Creation Story

### Past, Present, and Future

# Continuing to Create Value for the Mobility Society

## Identity

#### What We Have Inherited Since Our Founding

Imbued in the DENSO Creed is the universal DENSO Spirit. In 1956, seven years after the Company's founding, we formulated the DENSO Creed to express in words the mentality of all DENSO employees—which we have had even before splitting from Toyota Motor Co., Ltd.—while taking the next step toward new progress based on a clear self-awareness. The DENSO Creed lays out four ideals that have served as the source of the Company's progress, and these ideals are still inherited today by our approximately 170,000 employees across the globe. One of these ideals is "provide quality products and services." This ideal

signifies DENSO's approach since its founding for continuing to be a company that society needs by pursuing innovations in anticipation of the changing times and resolving social issues through quality products and services. In addition, this ideal serves as the basis for our approach to sustainability management, toward which we are currently accelerating efforts. As we enter into the period of a paradigm shift, all employees will reflect on the essence of the DENSO Creed as we work together to continue to resolve social issues in the generations to come by maximizing the value of "green" and "peace of mind."

## **Fundamentals**

What We Have Cultivated in the Over 70 Years Since Our Founding

With the DENSO Spirit as the driving force, DENSO's innovations start from a focus on the future and what makes people happy. Our mission as a corporation is to anticipate changes in society and resolve social issues from the perspective of sustainability. Based on this mission, we have continued to realize growth

while consistently leading changes in the mobility domain and repeatedly pursuing innovations and new creations. Throughout this journey, we have cultivated strengths and capitals that will continue to be the source of our value creation well into the future, thereby expanding our business domains.

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2: Monozukuri

The Greatest Strengths That Have Driven DENSO's Growth

## Our Three Cultivated Strengths

Over its 70-year history, DENSO has cultivated various unique strengths. These strengths have been passed down since DENSO's founding and further refined through the Company's DNA, the DENSO Spirit, which permeates the actions of all DENSO employees around the world. The connections between these strengths have driven DENSO's growth over the years. Amid a challenging business environment going forward, DENSO will further enhance these strengths as the driving force behind value creation that is uniquely DENSO.



### 1: Research and Development

Through the accumulation of a long research and development (R&D) track record, which has supported our cutting-edge car manufacturing techniques, we are able to make full use of technologies that cover a broad range of fields, including chemistry, physics, electronic engineering, and software. This in turn enables us to create competitive products.

### The Key to Our Strengths

Commitment to world-firsts Olobal Development Network Odvanced research with a view to the future

### Roots of Our Strengths

- 1953 Commenced a technical cooperation agreement with Robert Bosch GmbH. Under this agreement, we established a technological and production base for becoming a comprehensive manufacturer of automotive parts that can keep pace with global companies.
- 1985 Established Nippondenso America, Inc., with which we jointly created our first overseas technical center. Through this center, we built an optimized structure for the development, production, and supply of local products.
- 1991 Established the Fundamental Research Center. At this center, we carried out R&D activities on future technologies that covered a wide range of fields. Today, this center continues to create a large number of innovative technologies that lead to the development of world-first products.
- 2001 Commenced efforts to discover seeds of business development from external sources. With these efforts, we explored and began working toward long-term R&D themes through visits to over 50. universities and research institutions in the U.S. and a framework for industry-academia collaboration
- 2014 Completed the establishment of technical centers in seven regions across the globe. Through these centers, we have set up a structure to create competitive products that can promptly meet diversifying local needs

#### Further Enhancing Our Strengths

We established "Global R&D Tokyo-Haneda" as a new base for our R&D activities. Through the integrated planning, development, and verification of cutting-edge technologies and advanced mobility systems, we have set up an R&D structure that allows us to swiftly offer value to the market. Furthermore, through "Global R&D Tokyo-Haneda," we aim to exponentially accelerate the speed of development by strengthening open innovation and acquiring outstanding human resources.

Through our Monozukuri (manufacturing) capabilities that combine our technologies and techniques, we create innovative, world-first ideas one after the other. Through the high-level production technologies we possess, we create added value in the form of high efficiency and high quality. We also independently create semiconductors that require a high level of accuracy.

#### The Key to Our Strengths

• World-leading production engineering Factory-IoT that leverages the knowledge of people to the greatest extent possible Excellent factory (EF) activities that realize growth for both plants and people

#### Roots of Our Strengths

- 1968 Created the IC Research Center to establish a structure for the production of IC technologies completely in-house in anticipation of the shift to the electronic control of automotive parts in the future.
- 1972 Established our first overseas production company. Since then, we have accelerated the establishment of additional overseas production companies, helping us gain an understanding of the needs in each region and begin production activities that meet those needs
- realized through our comprehensive in-house manufacturing of production lines and equipment.
- readers and RFID, which we pursued in a similar manner as robots, helped establish the foundation of our current external sales business
- 1997 Commenced EF activities. Aiming to strengthen our manufacturing structure, we began to undertake activities to improve our factories, led by activities focused on quality improvements.

#### Further Enhancing Our Strengths

We established the Electrification Innovation Center (EIC) at our Anjo Plant as part of our efforts to strengthen our production structure in the electrification domain. In addition, we integrated Toyota Motor Corporation's core electronic component business into DENSO and relaunched the business at our Hirose Plant. By further strengthening our production structure centered on the Anjo and Hirose plants, we will establish development and production systems and expand high-quality production lines at our manufacturing bases around the world.

### 3: Hitozukuri

Based on the idea that "the best products are made by the best human resources," we have been instilling the DENSO Spirit, our DNA, in all employees in an effort to cultivate personnel who can tackle the issues they face and create new technologies and products without fearing change.

## The Key to Our Strengths

### Roots of Our Strengths

- 1954 Established the Technical Training Center. This center fostered the principles of "Monozukuri is Hitozukuri (Our performance relies on our people)" and "Engineering and technique go hand in hand." These principles are still practiced by the Company today.
- Received the Deming Prize, the most prestigious award for quality control. The efforts made by all employees to win this prize laid the foundations for 1961 the "Quality First" approach and corporate culture that we still adopt to this day.
- our attention since our founding. Since then, DENSO has earned nearly 70 WorldSkills medals.
- 2001 among our engineers through group discussion and interaction.
- 2005 Established DENSO Training Academy Thailand, our first overseas regional training center. This center helped us build a structure for educating engineers and technicians on a global basis.

#### Further Enhancing Our Strengths

DENSO has been sending employees to the WorldSkills Competition since the 20th competition held in 1971, and has won a large number of medals. Our employees undertake special training to prepare for the WorldSkills Competition, and going forward we will continue to train young employees with the aim of becoming highly skilled technicians in the future, at which time they can pass on their skills to the next generation.

1979 Received the Okochi Memorial Production Prize. This prize was received in recognition of our highly accurate, high-quality product creation that was

1984 Launched a project for the practical application of robots. After doing so, we introduced multiple robots manufactured in-house, which played an active role on the production line and helped us reinforce our production function. Furthermore, the development of such technologies as barcode

personnel on the front lines of production. EF activities have since been expanded on a global basis and represent the origins of DENSO's ambitious

DENSO Spirit Oldobal human resource development Ocultivation of young technicians

1977 Received our first gold medal in the WorldSkills Competition. Receiving this medal was the result of our skills training on which we have been focusing

Commenced the Technology Discussion Forum, which serves as a place for combining our technologies and skills and encourages healthy competition

Capitals That Enable Us to Be a Leading Company in the Mobility Domain

## Our Accumulated Capitals

The capitals that we have accumulated while achieving growth as a company now support our business activities and provide us with the funds needed to enhance our corporate value. Efforts to refine the substance of the strengths that drive our growth will allow us to reinforce our manufacturing, human, intellectual, social and relationship, and natural capitals, which in turn will help us increase our financial capital. To realize sustainable growth through this kind of cycle, we will not only maintain but also enhance these capitals going forward.



vehicles—something in which people entrust their lives—is a crucial element in achieving differentiation. Drawing on the car manufacturing insight we have cultivated in the over 70 years since our establishment, we are taking the initiative to evolve our facilities by introducing the latest technologies while refining our technological and business execution capabilities.

approximately ¥1 trillion in cash through its business activities (including operating cash flow plus other cash generation activities). Going forward, we will realize further business growth by effectively using this cash in capital expenditures and R&D investments.

of different genders, ages, and nationalities and lead different lifestyles—in order to constantly evolve. To that end, we are promoting an active role for all employees and striving to establish a corporate culture where each employee can continue to work in good physical and mental health.

even more important. DENSO considers R&D expenditure at around 9% of revenue to be an appropriate level. Based on this level, we are expanding our developmental domains and accelerating the speed of our development activities. At the same time, we are improving investment efficiency through the introduction of cutting-edge technologies, such as standardization activities and evaluations via simulators, as we work to patent our developmental assets.

every 100 years, we need to respond to the needs of society with a sense of speed and This is a task that we cannot do on our own, and it is therefore necessary to collaborate with our various stakeholders. To that end, we are constantly holding dialogues with our stakeholders to convey to them our dreams and aspirations in an effort to find partners who share the same aspirations as we do and will work together with us to achieve mutual growth. In these ways, we strive to become a company that is truly inspiring to society.



### Natural Capital

□ P.63–66

DENSO's business activities have a close relationship with natural capital as we make use of industrial water and utilize mineral resources as raw materials for our products. Assessing natural capital from the perspectives of both risks and opportunities, we will work to efficiently make use of natural capital and reduce our burden on the environment by further refining our long-cultivated environmental technologies. By doing so, we will preserve the global environment while creating economic value.



4()% reduction compared with fiscal 2013 (non-consolidated) Fiscal 2021

Growth Strategy

Pursuing a Variety of Businesses That Will Support the Mobility Society of the Future

## Creating New Value through Our Seven Core Businesses

#### Relationship between Our Four Focus Fields and Seven Core Businesses



DENSO was established as a manufacturer of electrical equipment and radiators. Since its establishment, the Company has expanded its business domains in conjunction with social change, applying the technologies it has cultivated in the automotive field, its main area of operation, to develop lifestyle- and industrial-related equipment. At the moment, DENSO has seven core businesses that devise solutions for the mobility society of the future. Centered on these core businesses, DENSO is making full use of the technologies it has accumulated in the automotive domain as it pursues a variety of businesses that support the mobility society of the future.

DENSO's Value Creation Process

## Maximizing the Value of "Green" and "Peace of Mind" to Continue to Grow with Society



### Strengthening Our Capitals

activities: Achievement of a 40% reduction compared with

Recording of ¥320.0 billion in sales in the ADAS\*<sup>2</sup> domain

### Green

Inspiring

tion of the air purifier Puremie, which visualizes in-vehicle

## Realizing a Sustainable Society

Contributing to the SDGs through our corporate activities



\*1 Per unit = CO<sub>2</sub> emissions/Revenue (limited to CO<sub>2</sub> emissions from energy sources)

\*2 Advanced driver assistance system Note: Figures for each capital and

alue provided are based on fiscal 2021 results.

# Growth Strategy

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## Long-term Policy: Our Goal for 2030

With the aim of realizing a sustainable society, DENSO has formulated the Long-term Policy, which serves as a vision for what the Company aims to be by 2030. In addition to maximizing the value we provide through "green" and "peace of mind," two of our conventional areas of focus, we have adopted the new theme of "inspiring" and are working to create new value for society that can inspire our diverse stakeholders. Furthermore, we are moving forward with various strategies aimed at achieving our Long-term Policy.

#### Slogan

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

#### Our Goal for 2030

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

#### Green

Lasting vitality for the environment Contribute to sustainability by increasing efficiency and reducing environmental impact

#### Peace of Mind

#### Providing a sense of well-being Contribute to future mobility that is safer, more comfortable, and convenient for everyone

#### Inspiring

Making a difference

Contribute to happiness for everyone through inspiring value-added offerings

#### Growth Indicators to Realize the Long-term Policy and Social Issues We Aim to Resolve

To realize its Long-term Policy, DENSO is working to achieve growth in its top line by realizing growth in new mobility domains and promoting management reforms, among other efforts. However, with the increased level of uncertainty regarding the outlook for consumption demand, and based on the fact that our highest priority issue recently has been to establish a structure that is resilient to changes in the business environment, we are now placing the most emphasis on profitability as an indicator for growth and aim to achieve ROE of 10% or higher and an operating margin of 10% by fiscal 2026.

Furthermore, we have made connections between the social issues we aim to resolve through our business activities and the Sustainable Development Goals (SDGs), and have clarified the goals we aim to achieve on a Companywide level. At the same time, our employees have determined individual goals that they can work toward through their job and are working on a daily basis to do so.



### Growth Indicators (Fiscal 2026)



Awareness of Business Environment

Amid global population increases, aging societies, and advancing urbanization, the progression of global warming and the increase in traffic accidents are becoming serious social issues. In addition, people's value systems and consumption behavior are diversifying due to the digitization of society and advancements in robotics. Furthermore, social issues and value systems are becoming increasingly more complex and diversified as a result of the COVID-19 pandemic.

In the mobility domain, the evolution of electrification, automated driving, and connected driving due to the progression of IoT and AI has been remarkable. At the same time, a significant number of issues have been emerging. Going forward, we will continue to pursue the resolution of social issues while accurately assessing and responding to risks and opportunities related to these various social changes.

#### Social Changes as of 2030 and Key Initiatives for DENSO

Response Measures to Risks

We are narrowing down our forecasts of future society, revising them every year through PEST (political, economic, social, and technological) analysis, using social changes as of 2030 as a key theme. In accordance with this theme, we have analyzed risks and opportunities and identified key initiatives for DENSO moving forward. We will continue to pay close attention to the impact of the COVID-19 pandemic and thoroughly examine whether or not the pandemic will have an impact on the key initiatives for DENSO going forward. While doing so, we will work to gain an accurate understanding of the outlook for the CASE revolution and changes in the mobility society.

Forecasts of Future Society	Risks and O	pportunities	and Opportunities	<b>Business Domains</b>
Politics         • Shift from low carbon to carbon free         Acceleration of international cooperation to respond to climate change in light of         the urgent need to address global warming       ①         Necessity of promoting renewable energy and a hydrogen-based society       ①         • Stiptening supply and demand of energy due to increased demand from both advanced       ①         and emerging countries       ①③         • Tade conflict between the United States and China stemming from trade imbalances, enclosure of technological and intellectual property rights, and human rights issues, etc.       ④ <b>Economy</b> • Growing economies in emerging countries and global multi-polarization       ③④         • Deepening and compartmentalization of economic collaboration       ②④         • Real economy and the shift to borderless capital transactions       ②④	Risks	<ul> <li>ward a recycling-oriented, carbon-free society</li> <li>Tightening environmental regulations on the automotive industry</li> <li>Advancing the introduction and expansion of environmental taxation by the governments in each country and region</li> <li>Increasing trend in establishing limitations on GHG emissions</li> <li>Growing need for electrification systems</li> <li>Further increase in need for improving fuel efficiency</li> </ul>	Regarding the risk of climate change, we believe there will be greater opportunities for us to popular- ize our long-cultivated technologies for fuel effi- ciency, low exhaust gas, and electrification around the world. Through flexible cooperation and compe- tition with other companies, we aim to accelerate the development of technologies for reducing CO <sub>2</sub> emissions and realize the stable supply of such technologies on a global scale. Additionally, we will strive to curtail CO <sub>2</sub> emissions from our business activities, including in our manufacturing activities and across our supply chain, as we aim to achieve a carbon-free society.	Hard X Soft Domain X Domain Electrification Green Peace of Mind Relevant themes for changes in society as of 2030 ① ② ④
Veal economy and the shift to bordeness capital transactions      Progression of IT and increased disparity due to business oligopoly      Sequence of the sequence of t	Automation of divestment       3         automation in various industries       2         Automation of urban regeneration due to       3         Automation of urban regeneration due to       3         Automation of urban regeneration due to       3         Automation regeneration of urban regeneration due to       3         Autor tobotics, changes in work ethic       <		By swiftly responding to diversifying needs such as automated driving and the provision of safe and comfortable vehicle interiors, we can increase the number of growth opportunities for DENSO. To respond to the risk of companies from other industries entering the automotive industry, we are collaborating with other companies both inside and outside the automotive industry to leverage our respective fields of expertise while also strengthening our unique technological and <i>Monozukuri</i> (manufacturing) capabilities. By doing so, we will invigorate our development activities in new domains with a sense of speed.	Advanced Safety and Automated Driving Green Peace of Mind Relevant themes for changes in society as of 2030 2 3 4 Connected Driving Green Peace of
• Integration of digital and physical domains due to the progression of IoT and wearable devices, thereby advancing the shift to a digital twin society	Emerge     Risks     Opportunities	<ul> <li>nce of social issues</li> <li>Trend in turning away from automobiles due to the impact of social issues (increase in traffic accidents due to the declining birthrate and aging population, air pollution, worsening traffic congestion resulting from urbanization, etc.)</li> <li>Expansion of businesses that contribute to the resolution of social issues (growing needs for automated driving, the prevention of</li> </ul>	Alongside the commercialization of products such as household appliances and automobiles, social issues such as the aging population, depopulation of rural areas, overcrowding of urban areas, and traffic con- gestion have become more severe. To resolve these issues, we will strive to constantly develop technolo- gies and create businesses that help keep people safe and work to expand these technologies and busi-	Mind         Relevant themes for         changes in society         as of 2030         ① ② ③         Non-Automotive         Businesses         (FA and AgTech)
Keywords for Social Changes by 2030         I Shift toward a recycling-oriented, carbon-free society Changes in the powertrain mix (electrified vehicles, internal combustion engine vehicles)         Obvices ification of people's values and consumption behavior Diversifying consumption behavior and value systems Evolution of IT communications × Automobiles         Image Colspan="2">Image Colspan="2"         Image Colspan= 2"         Ima		traffic accidents, food safety, electrification to address labor shortages, etc.)	Growth in the automotive market will shift toward emerging countries such as China and India. This presents us with an opportunity to incorporate new growth. However, rather than simply applying the business practices we have adopted in developed 	Mind         Relevant themes for changes in society as of 2030         ① ② ③ ④         Reinfor         That         Establishing a solid organizational
Shift of power to emerging countries Market diversification	Opportunities	to the growth of emerging and developing countries (particularly the growing demand for eco-friendly products and systems)	global network that we have built up over many years.	becoming more complex and dive establish workplaces where empl DENSO is supporting the creation

26

#### Focus Fields in DENSO's ns

Key Initiatives for DENSO

#### Maximizing the Value of "Green" and "Peace of Mind" to Be Inspiring

The changes in society that will occur present a significant opportunity for a company such as DENSO, which has continued to refine technologies and gain experience in the mobility domain. With the aim of reducing our environmental burden and realizing a society without traffic accidents, we will actively promote the creation of a mobility society with a view to achieving the goals of "lasting vitality for the environment" and "safe, comfortable and flexible mobility for all people." Furthermore, we will continue to create new value that inspires society.

#### Long-term Policy: 🛄 P.25

#### Reinforcing Both Hard and Soft Domains

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

#### Reinforcing the Corporate Foundation That Underpins Our Key Initiatives

rganizational foundation is key to flexibly resolving social issues, which are olex and diverse. To that end, DENSO is taking steps to minimize risks and where employees can demonstrate their capabilities. Through such efforts, the creation of new value.

DENSO's Value CEO CONTENTS PROLOGUE Growth Strategy MESSAGE Creation Story

## **Outline of Management Policies**

The DENSO Philosophy provides the foundation for drawing the outline of the Company's management policies, and sustainability management acts as the core for realizing these policies. In light of the aforementioned changes in the business environment and from the perspectives of both risks and opportunities, DENSO has formulated its Long-term Policy, which focuses on 2030. The Company also established material issues (Materiality) and its Long-term Plan as a path for realizing its Long-term Policy. Through these efforts, DENSO is implementing sustainability management. Please see the relevant pages for details on DENSO's Long-term Policy, Materiality, and business strategies.

#### **DENSO** Philosophy

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

#### Sustainability Management

	Dringing hone for th	e future for our planet, s	aciety and all people
Long-term Policy —		•	- · ·
	Green	Peace of Mind	Inspiring
	Important	issues for achieving the Long-	term Policy
Materiality ———	Green	Peace of Mind	Corporate Foundation
,			
2 Long-term Plan ——	Plan to be achieved b	by 2025 with the aim of realizing	the Long-term Policy
Basic Strategies	Growth	Profitability Contributio	Organizational
D P.31			Capabilities
Specific Measures $\sqsubset$	Five	e Pillars of Management Re	form
(Organizations that	Enhancement of vehicle perspective		al manage- Ways of working
underpin our businesses)	and streamlining of agile develo	realize smaller but use of the stronger	with optimal with tremendous of Group and speed and
□ P.67	development globall	headquarters regi	onal power efficiency
Γ	3		
		Four Focus Fields	
		anced Safety and Connected Driving	
Specific Measures			(FA and AgTech)
(Businesses) — — — — — — — — — — — — — — — — — — —	Electrification Systems		
LD P.20-21, 09-05	Powertrain Systems		
	Thermal System	IS	
	M	obility Systems	Industrial Solutions
	Ma Sensor Systems & Semico	obility Systems onductors	Industrial Solutions Food Value Chain
3 Mid-term Plan ———	Sensor Systems & Semic		Food Value Chain

#### Road Map for Achieving Our Goal for 2030

With sustainability at the center of its management, DENSO aims to be inspiring by maximizing the value of "green" and "peace of mind," two themes of its Long-term Policy. The following is a road map that shows the specific path we must take to realize our goal for 2030. Based on the outline of our management policies, this road map summarizes our Long-term Policy and sharpens our awareness of the projected business environment and material issues, in addition to their timeframes and relationships with each strategy.

2018 2019 2020 2021	2022 2023 2024		
	Sustainability		
2 Long-1	term Plan		
3 Mid-term Plan	Medium- to Long-term Vis (currently being formulate		
Reborn21 "Green" and "Peace of Mind" Strategy			
	1 Materiality		
Awareness of the projected	business environment of 2030		

### **O**TOPIC

#### Establishing Medium- to Long-term Targets with a View to Maximizing the Value of "Green" and "Peace of Mind"

To date, DENSO has undertaken a broad range of efforts aimed at maximizing the value of "green" and "peace of mind," contributing to the resolution of social issues while doing so. Recently, DENSO has established medium- to long-term targets to accelerate these efforts going forward even amid the significant changes occurring in the business environment.



Make the manufacturing industry environmentally neutral to contribute to the creation of a sustainable society (realize carbon neutrality by 2035)

Please see the relevant pages indicated below regarding specific strategies and initiatives for achieving the medium- to long-term targets for "green" and "peace of mind."

Special Feature: Maximizing the Value of "Green" and "Peace of Mind" P.36–43





① Eliminate traffic accidents and realize freedom of mobility for all ② Create peaceful, comfortable spaces ③ Establish a society where people are supported and their potential is nurtured



We have determined material issues (Materiality) to be addressed in order to achieve our Long-term Policy by 2030 and are accelerating sustainability management in an effort to resolve these issues. Among our social forecasts based on our awareness of the projected business environment of 2030 as well as the various social issues that are present today, including those highlighted in the SDGs, we determined that the three themes of "green," "peace of mind," and "corporate foundation" represent areas that have a high level of importance for realizing a sustainable society and areas in which we can make particularly significant contributions. Accordingly, we are sharing information on the material issues we have identified in each of these fields on a Companywide basis and have established a specific vision and KPIs (numerical indicators, or guides) related to each material issue we have identified. By achieving these KPIs through our business activities, we will strive to realize our Long-term Plan and resolve social issues going forward.

	Materiality	Vision	Related SDGs
Green	<ul> <li>Prevention of global warming </li> <li>Prevention of air pollution / Reduction of environmental burden </li> <li>Effective utilization of resources </li> <li>Conservation of water resources</li> </ul>	<ul> <li>Contribute to an eco-friendly and sustainable society by reducing environmental burden and realizing highly efficient mobility</li> <li>Reduce our CO<sub>2</sub> emissions from our factories to zero</li> <li>Contribute to the electrification of automobiles and reduce our CO<sub>2</sub> emissions to the greatest extent possible</li> <li>Contribute to realizing a carbon-neutral society through technologies that collect and reuse CO<sub>2</sub></li> <li>Reduce environmentally harmful substances, emissions, and waste to help permanently preserve the global environment</li> <li>We have formulated the Eco Vision to serve as help us promote our environmental management in the substance of the su</li></ul>	nt. vebsite for more information on the Eco Vision.
Peace of Mind	<ul> <li>Reduction of traffic accidents </li> <li>Provision of flexible and comfortable movement </li> <li>Provision of safe and secure products </li> <li>Response to decrease in birthrate and aging population </li> </ul>	<ul> <li>Popularize safe products in order to eliminate traffic accidents</li> <li>Address the need for ensuring a safe air environment and provide comfortable spaces</li> <li>Support working people by offering technologies that help resolve the issue of a declining workforce</li> </ul>	3 COMMENT       7 STREAMENT         A MAX HILL HER       7 STREAMENT         A MAX HILL HER       9 Second Household         A MAX HILL HER       9 Second Hou
ation	<ul> <li>Compliance</li> <li>Information security </li> </ul>	<ul> <li>Ensure that each employee acts in a fair, honest, and ethical manner while complying with laws and regulations in each country and region</li> <li>Provide safe and reliable products to cus- tomers, protect information assets, and prepare for cyber security risks that the "connected society" faces</li> </ul>	3 GOOM MEAN → ↓ ↓ 10 HENOLD ↓ ↓ ↓ 11 HEIGHARD 111 ↓ ↓ ↓ 11 HEIGHARD 111 ↓ ↓ ↓ 11 HEIGHARD 111 ↓ ↓ ↓ ↓ 11 HEIGHARD 111 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Corporate Foundation	<ul> <li>Diversity and inclusion</li> <li>Healthy and safe working environment</li> <li>Workstyle reform</li> <li>Protection of human rights</li> <li>Sustainable procurement</li> <li>Corporate governance</li> </ul>	<ul> <li>Promote the development of <i>people</i>, organizations, and the working environment to encourage our employees to maximize their abilities and work with enthusiasm and peace of mind</li> <li>Respect the rights of all our stakeholders, including our employees and people throughout our supply chain, in our business activities</li> <li>Pursue business activities that take into account environmental issues, human rights issues, and compliance together with our suppliers</li> </ul>	3 MARKEN       4 Martin       5 Martin       8 Martin

2 Long-term Plan

DENSO has established its Long-term Plan for fiscal 2026, which acts as a pathway for realizing its Long-term Policy. Centered on the Basic Strategies shown below, DENSO has established four focus fields based on social changes. In addition to these fields, DENSO has adopted the Five Pillars of Management Reform (III P.67) to enhance organizational capabilities and reflect its ambition to transition to an organization that can compete even under a challenging business environment. By promoting these reforms, DENSO will contribute to the realization of a sustainable society and enhance its corporate value.

#### **Basic Strategies** By pursuing value from the perspective of the vehicle, we will accelerate the commercialization of new mobility fields, thereby driving growth. New customers and Driving new Growth value creation growth Elec Pursuing value from Accelerating the perspective growth of the vehicle We will enhance the profitability of our existing in-vehicle technology business and further solidify our earnings base to support future growth. Profitability Pursuing value through Mar Improving subsystems Sul profitability Cor Strong components To realize overwhelming levels of competitiveness for our components and systems, we are streamlining technological development related to ECUs, semiconductors, sensors, and motors. We are also improving the profitability of our existing businesses and strengthening our competitiveness in new mobility fields. Through such efforts, we Contributions will make **contributions** to meeting the needs of our customers. Making Refining contributions to competitiveness meeting the EC by streamlining needs of technology our customers To realize the above initiatives, we will draw on our management reforms to accelerate the speed of business execution, invigorate the workplace, and strengthen our organizational capabilities. Organizational Capabilities Accelerating our business execution and invigorating the workplace as we transition to an organization that can compete in an era of rapid changes

O Targets that can be achieved using our products and services

30

ctrification	Advanced Safety and Automated Driving	Connected Driving
--------------	--	-------------------

Thermal nagement bsystems	Energy Management Subsystems	Information Management Subsystems
mponents	Components	Components

CUs	Semiconductors	Sensors	Motors



To make steady progress toward achieving our Long-term Plan, we have formulated a Mid-term Plan and determined specific action plans from the perspectives of "taking on the challenge of creating new value," "strengthening profitability to support future growth," and "reforming our management foundation." These action plans serve as a guideline for our efforts up to fiscal 2022.

### Mid-term Plan

/	Creating New Kinds	s of Value		
	Corresponding Long-term Plar	(Basic Strategies)		
	Growth	Profitability	Contributions	Organizational Capabilities
	roaden our range of collaborat helectrification and in automat	ions in integrated vehicle platfo ed driving	rms that straddle product sec	tors to help assert leadership
ntegrate menced 1	d electronic platforms that form of the introduction of these platform	ty society that offers safety and p onnections between our product f s into the automobile industry. In a technologies that connect cars w	ields as well as between cars and addition, we commenced efforts t	l society at large. We also com-
2 C	reate and deploy business mod	lels for generating new value in	mobility services and dramati	cally improving convenience
keys, whi with the partner c	ch objectively ensure safety. By si freedom of safe and secure mobil	sight into automobiles, we develop upplying a wide lineup of highly sea ty. In addition, we launched a syste usiness offers solutions that help ti	cure systems to these service pro ems solution business for service	viders, we provided end-users providers together with a
$\rightarrow$	osition factory automation and a strong presence in those sect	l AgTech as pillars of new busin ors	ess development and employ	bold concepts to assert
ntroduces arge-scale oped large global rolle	s technologies for the industrializatior e agriculture and labor shortages. This e-scale greenhouse solutions togethe put of these solutions. Going forward	with Asai Nursery, Inc., we commence of agriculture (environment control ar s test is being conducted through the i with Certhon Group, which possesses in addition to agricultural production, consumption, which continues to diver	nd labor-saving technologies) to prep mplementation of large-scale greent s world-leading advanced greenhouse we will expand our business domain:	are for the global shift toward house operations. We also devel- e technologies, and commenced the s to encompass the entire food
	onnect with brilliant minds at t tream of new products	he centers of innovation world	wide to increase our agility in r	nurturing a continuing

Progress: We have been steadily establishing satellite R&D teams at epicenters of innovation worldwide (Helsinki, Israel, Montréal, Seattle, Pittsburgh, etc.). At the same time, we have been working to enhance our presence within the business ecosystems of these locations. We also have been taking steps to enhance open innovation by accelerating collaboration with a wide array of partners, including universities, research institutions, and start-up companies. Going forward, we will further strengthen collaboration with local customers and companies in an effort to contribute to their businesses by enhancing product competitiveness.

Build on the wisdom that resides in the Toyota Group to overcome the unprecedented change that is transforming the automobile industry and generate benefits for customers and society worldwide

Progress: In April 2019, we established J-QuAD DYNAMICS together with four other Toyota Group companies with the aim of developing software for automated driving. In the same month, we established BluE Nexus Corporation, which develops and sells driving module packages needed for electrification, together with Aisin Seiki Co., Ltd. In April 2020, we established MIRISE Technologies, a joint venture with Toyota Motor, through which we are promoting the advanced development of next-generation in-vehicle semiconductors. Moving forward, we will promote Groupwide collaboration as we continue to concentrate our efforts on the fields of electrification, advanced safety, and automated driving.

#### 2 Strengthening Profitability in Support of Future Growth

Corresponding Long-term Plan (Basic Strategies)		
Growth	Profitability	

smaller but stronger headquarters and performance-oriented business units and subsidiaries

Progress: We delegated authority to business units and Group companies in such ways as raising transaction amount-based authority delegation standards, simplifying performance follow-up procedures, and reorganizing various committees, thereby accelerating the pace of our decision-making and business execution. In addition, we appointed local CEOs and business managers and clarified their roles and levels of authority in an effort to establish a structure to promote swift business execution on a global basis. Going forward, we will work to enhance our local market analysis and proposal-making capabilities with the aim of improving the quality of the strategies we formulate.

#### Advance the performance of key products, such as motors, ECUs, semiconductors, and sensors, with leading-edge technologies, and reinforce the basis of our competitiveness through a commitment to asserting key product standards

Progress: To boost the effects of streamlining technological development for motors, ECUs, semiconductors, and sensors within the Company and enhance the competitiveness of these key products, we reorganized the business groups under direct control of the Company. With this reorganization, the Electrification Systems Business now oversees the development of motors and ECUs, and the Sensor Systems & Semiconductors Business oversees the development of semiconductors and sensors. Additionally, we consolidated Toyota Motor Corporation's electronic component business within DENSO in April 2020, relaunching the business as the DENSO Hirose Plant (semiconductor plant). In these ways, we are working to establish a speedy and competitive development and product structure and expand our business in the electrification domain

undertaken with optimal partners

Progress: In the Chinese market, which is showing remarkable growth, we are promoting alliances to help us promptly capture local needs and learn local development processes. As an example, we have entered into a capital alliance with a local development partner under which we are accelerating technological development centered on the automated driving and electrification domains. At the same time, we are reinforcing our sales structure to expand sales to new local customers. Moving forward, we will work to deepen our collaboration with these local partners in an effort to further expand our business.

advances in DANTOTSU ("best by far") plants and for evolving our plants through the Factory-Internet of Things (F-IoT)

Progress: We have developed an F-IoT platform with the aim of using IT and IoT technologies to connect our 130 factories around the world. Through this platform, we accumulate various kinds of data gathered from monitoring devices set up in each factory within a single cloud system, which we can then utilize. As we move forward, we will gradually connect each of our factories to this platform while promoting educational activities regarding the platform and cultivating app developers. In these ways, we will further accelerate on-site improvement activities using IT and IoT.

#### Accelerate product development and achieve high profitability by working independently and with partners to revolutionize development processes

**Progress**: We are promoting alliances with various companies in order to acquire new perspectives and technologies (concluded contracts with a total of approximately 50 companies between fiscal 2019 and fiscal 2021). In the focus fields of electrification and advanced safety and automated driving, as well as the semiconductor domain which provides the key to technological innovation in these focus fields, we have established numerous joint ventures that bring together the strengths of each Toyota Group company. Through these joint ventures, we are strengthening our development structure and accelerating technological development in these respective fields in order to popularize new technologies around the globe and contribute to the realization of the next-generation mobility society.

trategy	Foundation for Creating New Value	Overview by Product	Corporate Governance	Corporate Data

	Contributions

Organizational Capabilities

## Upgrade our interregional interaction and increase our management agility by reworking our organization to realize a

#### Anticipate customer expectations in both growing and changing markets and address those needs through new projects

## In our core product sectors, generate unprecedented workplace performance by pressing ahead with measures for achieving further

## DENSO Revolution Plan "Reborn21"

In fiscal 2020, the business environment that surrounds DENSO underwent dramatic changes. These included the occurrence of a quality-related issue, which shook the foundation of our management, and the impact of the COVID-19 pandemic, which put a halt to our soaring growth in revenue. In light of these changes, we aim to restore our quality, which is the foundation of our business and trust, and transition to a firm and robust corporate structure, which will allow us to respond to changes in the external environment in any age and provide new value. Accordingly, we formulated the DENSO Revolution Plan "Reborn21," which we are implementing alongside the Mid-term Plan. We are moving forward with initiatives to accomplish the goals of both plans by fiscal 2022 and make a new start for ourselves as a company with even higher added value.



DENSO Integrated Report 2021

Growth Strategy

Foundation

## SPECIAL FEATURE Maximizing the Value of "Green" and "Peace of Mind"

With the aim of contributing to the happiness of people, DENSO has been working to maximize the value it provides through its business activities in the fields of "green" and "peace of mind." From 2000, we have adopted the DENSO Eco Vision in the field of "green." Under this vision, we are working to reduce our CO<sub>2</sub> emissions within the entirety of our corporate activities through the diligent pursuit of electrification and continuous technological development. In the field of "peace of mind," we have been continuously providing accident prevention and safety products since the 1980s, thereby helping reduce the number of traffic accidents around the world. We have established medium- to long-term targets to further accelerate initiatives for maximizing the value of "green" and "peace of mind." This section introduces the strategies and examples of specific initiatives we are undertaking in order to achieve these targets.



### Aiming to Become Carbon Neutral by 2035

DENSO has been promoting "environmental management," under which it works to reduce the environmental burden in all areas of its business activities and create economic value through environmental conservation activities. Meanwhile, initiatives to first lower carbon and then become carbon neutral are accelerating around the world. In light of these developments, we aim to realize carbon neutrality within our production activities in the not-too-distant future of 2035 by further promoting the environmental efforts in which we have engaged thus far. To make this ambition a reality, we are pursuing efforts in the three fields of "Monozukuri (manufacturing)," "mobility products," and "energy use."



### Monozukuri (Manufacturing)

#### Aim Realize carbon neutrality at our plants

We will reduce CO<sub>2</sub> emissions by utilizing renewable energy such as solar power and enhancing the efficiency of our manufacturing process. In addition, we aim to realize carbon neutrality at our plants by capturing the CO<sub>2</sub> emitted in the production process and reusing it as energy.

#### Specific Initiatives and Targets

PROLOGUE

- · At our plants, rigorously engage in energy-saving activities and promote the use of renewable energy through in-house power generation
- In terms of the CO<sub>2</sub> emitted from energy procured via external sources, seek to achieve carbon neutrality in 2025 by offsetting the CO<sub>2</sub> emitted from electricity-derived energy through the procurement of renewable energy and offsetting the CO<sub>2</sub> emitted from gas-derived energy through the use of carbon credits
- Realize carbon neutrality at our plants by 2035 and work to expand and support carbon neutrality throughout the supply chain

### Mobility Products

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

#### Specific Initiatives and Targets

- Centered on driving systems and thermal systems, promote farsighted technological development in all facets of mobility, from HEVs, BEVs, and FCEVs through to e-VTOL aircraft, thereby realizing energy management that connects cars and other forms of mobility with society
- · Apply electrification technologies to the new field of air mobility and further refine them. At the same time, return the high-output, high-efficiency, and ultra-lightweight technologies acquired through this effort to the automotive industry

### Energy Use

### Aim Capture and reuse CO<sub>2</sub> to contribute to carbon neutrality within society as a whole

We will capture CO<sub>2</sub> within the atmosphere and reuse it as an energy source. By doing so, we will help reduce CO<sub>2</sub> emissions throughout society.

#### Specific Initiatives and Targets

- Develop and commercialize technologies that can capture  $\text{CO}_2$ from wherever needed, such as CO<sub>2</sub> from industries and households and CO<sub>2</sub> within the atmosphere, and convert it into renewable energy and resources
- Develop technologies for storing electricity, hydrogen, and fuel gas in an effort to realize the stable supply of renewable energy

#### Introducing Internal Carbon Pricing in Investment Decision-Making and Systematically Procuring Renewable Energy

carbon-neutral Monozukuri (manufacturing). To that end, we have introduced internal carbon pricing (ICP) in our investment decision-making. We have set the value for ICP based on the region, as this value differs significantly from region to region due to the political circumstances in each country.

Furthermore, we are systematically promoting the procurement of renewable electricity from external sources and the acquisition of carbon credit certificates. Led by efforts at the Anjo Plant, which serves as a model for plants in Japan, in fiscal 2022 we commenced the stable procurement of renewable electricity at our plants in Europe and North America as well. Going forward, we will accelerate these initiatives as we work to achieve carbon neutrality (including credit use) by 2025.





### Aiming to Become a Leading Company That Provides "Peace of Mind" to Society

For a company like DENSO, which aims to contribute to the happiness of people, it is absolutely essential that we provide peace of mind to society by resolving social issues through our business activities. This section introduces the three pillars of DENSO's contributions to the field of "peace of mind." Supported by these pillars, we aim to resolve various social issues, such as traffic accident injuries and deaths, the declining birthrate and aging population, air pollution, infectious diseases, and natural disasters, and become a leading company that provides peace of mind to society.

### Elimination of Traffic Accidents

Aim Popularize safety products through efforts focused on "depth" and "width," thereby realizing free mobility without traffic accidents

With the aim of eliminating traffic accidents, we are promoting efforts under a two-pronged approach focused on "depth," which involves reaching the cutting edge of technology, and "width," which involves realizing the widespread adoption of advanced driver assistance system (ADAS)-related products in a large number of cars. For "depth," we are further evolving our safety products and working to have them adopted in a greater number of advanced mobility fields. For "width," we are working to realize attractively priced safety products and enhance our lineup of retrofitted products.



retrofitted products that can be applied to already-sold vehicles in an effort to provide value that responds to various situations, vehicle types, and needs



### Creation of Comfortable Spaces

CEO

MESSAGE

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

Following the progression of automated driving, there has been a growing need for providing cars not simply as a means of transportation but also as a "private space that enables mobility." To that end, DENSO seeks to create comfortable spaces by evolving the four environments within vehicles: temperature, sound, air, and visibility.

#### Specific Initiatives and Targets

- · In addition to existing technologies, innovate purification and sensing technologies to eliminate viruses and visualize toxic substances, thereby realizing safe and secure air quality
- · Refine technologies to create comfortable interiors in passenger vehicles and public transportation vehicles. In addition, expand such efforts beyond vehicles to offer comfortable public spaces

ldeal space	2025 "peaceful space" Space that eliminates people's concerns related to life and health	2030 "vibrant space" Space that is comfortable and soothing and provides a tremendous sense of confidence and passion
Temperature environment	Comfortable temperature when entering the vehicle	Relaxing level of warmth
Sound environment	Able to have a conversation without stress	Sound that offers tranquility
ir environment	Air constantly purified and visualization of air quality status	Air that can revitalize the body
Visual environment	Able to confirm hazards with driver's own eyes	Field of vision that offers a sense of freedom

### Support for Working People

Aim Draw on the technologies we have calculated in the automotive domain to establish a society where people are supported and their potential is nurtured

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

#### Specific Initiatives and Targets

- In the agricultural field, contribute to the stable and secure supply of food by resolving issues throughout the food value chain
- In the logistics field, provide ultra-high-quality comprehensive solutions that cover everything from framework improvement through to the rationalization of entire factories
- For plant operations and factory automation (FA), combine core technologies such as robots and sensors with automation techn products catered to the front lines from the perspectives of both FA

Industries Where V	We Aim to Provide	Peace of Mind
Kaizen (continuous improvement)	Environmental control	Automation
	Leverage DI	ENSO's outstanding techno
Agricu	ulture	Logisti



Current level of achieve	ement		2030	
Verification and commercializatio		agricult plant op	enue from the ural, logistics, and berations/FA fields 300.0 billion	
ology and improvemen manufacturers and end		/ in order to	provide systems and	
ICT	Just-in	-Time	Cold chain	
nologies to provide "peac	e of mind"			]
tics	F	Plant opera	tions and FA	
				_

CONTENTS

CEO

MESSAGE

CASE STUDY 1

Realizing Carbon-Neutral Factories

## Promoting Monozukuri without CO2

DENSO aims to maximize the value of "green" to achieve carbon neutrality in its production activities by 2035. CO<sub>2</sub> recycling technologies will play a key role in reaching this aim. To that end, DENSO has developed the CO<sub>2</sub> Circulation Plant for reusing the CO<sub>2</sub> that is emitted within the manufacturing process of its products. Going forward, DENSO will promote new technological development geared toward realizing the practical application of this plant in an effort to be a leading company in terms of CO<sub>2</sub> capture and reuse.

Future We Can Achieve	<b>Realizing</b> <i>Monozukuri</i> without CO <sub>2</sub> to Turn the Manufacturing Industries around the World Green To realize carbon neutrality in its frontline <i>Monozukuri</i> (manufacturing) activities, DENSO will refine its CO <sub>2</sub> recycling technologies through the development of the CO <sub>2</sub> Circulation Plant. In this way, DENSO will lead the industry in the pursuit of carbon neutrality.
Strengths We Can Leverage	Leveraging the Wide Range of Technologies Cultivated through Our Monozukuri Activities DENSO is drawing on the technologies cultivated through its business activities, including technolo- gies to purify exhaust gas from cars, technologies that manage car heat, and system management technologies, as core technologies for the capture of CO <sub>2</sub> .

## Developing the CO<sub>2</sub> Circulation Plant

In 2020, DENSO announced its goal to realize carbon neutrality within its production activities by 2035. To accomplish this goal, we are promoting a broad range of initiatives in the domains of "mobility products," "*Monozukuri*," and "energy use." As part of these efforts, we are currently focusing our attention on the CO<sub>2</sub> Circulation Plant development project.

To pursue our goal of attaining carbon neutrality in the *Monozukuri* domain, we are first placing emphasis on "promoting the shift to energyconserving and electrified production facilities" and "transitioning to renewable energy for the energy we use." However, facilities such as furnaces, for which electrification is not possible and renewable energy is difficult to use, emit CO<sub>2</sub> regardless, and the key to addressing this issue is the CO<sub>2</sub> Circulation Plant.

The CO<sub>2</sub> Circulation Plant is a facility that captures CO<sub>2</sub> from the exhaust created during the production process at our plants and combines it with hydrogen ( $H_2$ ) to synthesize methane gas (CH4). This methane gas can be used as fuel for the plant.

At typical production facilities in the manufacturing industry, there is still not a compact solution that can efficiently capture CO<sub>2</sub>. For that reason, we promoted the CO<sub>2</sub> Circulation Plant development project based on our desire to actively pursue an action plan to become carbon neutral by 2035, without waiting around for technology to improve via the efforts of external parties. In July 2020, we were able to create a plant that achieved CO<sub>2</sub> circulation.

#### Leveraging Our Car-related Technologies as the Core of Our CO<sub>2</sub> Capture Technologies

We are currently aiming to achieve the practical application of sustainable CO<sub>2</sub> circulation plants, and have commenced technological development to resolve the issues of compactness and efficiency.

The key to making these plants more compact is the development of new materials. At DENSO, we are moving forward with R&D activities to find ways to capture CO<sub>2</sub> without using heat. CO<sub>2</sub> adsorbent materials are necessary for accomplishing this task. As adsorbent materials become more efficient, we will be able to reduce the size of the CO<sub>2</sub> capture device, thereby making the overall facility more compact. DENSO possesses technologies that can adsorb NOx and other harmful substances by a catalyst, and these technologies were cultivated in the development of after-treatment systems for car exhaust gas. By applying these technologies to enhance the efficiency of adsorption materials, we are working to develop adsorption materials that boast an adsorption rate which is 10 times higher than conventional materials.



quipment within the CO<sub>2</sub> Circulation Plant



The CO<sub>2</sub> Circulation Plant was built adjacent to the Anjo Plant in Aichi Prefecture. The plant was completed through joint technological development with Toyota Central R&D Labs., Inc.

We can also use our long-cultivated technologies to enhance the efficiency of CO<sub>2</sub> circulation plants. In order to enhance efficiency, there is a need to effectively capture the disposed heat within the plant and reuse it as energy. This is an area where we can openly leverage our strengths in car heat management. In addition, systems management technologies are one of our specialties as a systems supplier. By managing CO<sub>2</sub> circulation, which involves linkages between multiple pieces of equipment, we can produce optimal results from an overlooking perspective. DENSO is putting the numerous technologies it has refined over the years to use in the development of plants that can resolve environmental

### **OVOICE**

#### If We Don't Do It, Who Else Is Going To?

At the moment, the  $CO_2$  Circulation Plant is still a prototype. By actually undertaking this development project ourselves, we were able to see where to make improvements in order to realize the introduction of  $CO_2$  circulation plants. To achieve the population of these plants, we first need to make improvements on a consistent basis in order to prove with confidence that the practical application of these plants is in fact feasible. Going beyond that, we need to show that these plants can work in any environment by introducing them in DENSO plants around the world. If we can accomplish these tasks, I am sure that these plants will be adopted around the world. Also, establishing frameworks for  $CO_2$  circulation are not something we can fully achieve on our own. For that reason, we hope to team up with a wide range of partners. With the hope that young people, who will lead the next generation, can live in a healthy, more pleasant world, we will continue to move forward with this project with a strong sense of responsibility. issues. By continuing to enhance our technological capabilities going forward, we will lead the way with carbon neutrality throughout the industry.



Environment Neutral Systems Development Division From left: Masayuki Suzuki, Youhei Morimoto, and Shinya Sakaguchi

Striving to Realize a Safe and Secure Mobility Society

### Initiatives toward Traffic Accident Elimination and "Advanced Drive" Installed with **DENSO Products**

By melding its long-cultivated car electronics technologies with IT technologies, DENSO is seeking to realize a world without traffic accidents. As part of this quest, DENSO is developing and providing a vast array of products that support advanced safety and automated driving.

Future We Can Achieve	Realizing a Society in Which All People Can Move Comfortably and with Peace of Mind with the Aim of Eliminating Traffic Accidents Through the provision of products that enhance vehicle safety performance and give passengers peace of mind, DENSO aims to create a safe and secure mobility society.
Strengths We Can Leverage	Pursuing Wide-Ranging Safety Product Development and Consistent Product Performance throughout Our History Since the 1980s, DENSO has been providing collision safety products and, since the 1990s, has been offering various accident prevention and safety products as well. In addition to the technologies DENSO has amassed through its products, DENSO creates products in reference to the actual safety performance of other products on the market and designs its products to achieve a robust perfor- mance under various environments. By doing so, DENSO is able to realize high-quality, highly reliable product performance.

#### Aspiring for a Society without Traffic Accidents

To date, DENSO has provided anticollision and accident prevention and safety products with the aim of maximizing the value of "peace of mind." By doing so, we have helped minimize injury to passengers and pedestrians during a collision and reduce the number of traffic accidents. Now, we are working to develop various products that support advanced safety and automated driving in an effort to realize a society without traffic accidents. Numerous DENSO products have been adopted in "Advanced Drive," an advanced driver assistance technology installed in the new LEXUS LS and TOYOTA MIRAI.

"Advanced Drive" features an onboard system that can appropriately detect the situation, make decisions, and assist driving under the driver's supervision according to actual traffic conditions on highways and other roadways. It can keep the vehicle in its lane, maintain distance from other vehicles, navigate a lane split, change lanes, and overtake other vehicles

until leaving the roadway for the destination. To realize advanced driver assistance technology, it is essential to enhance the technology's ability to detect the area surrounding the vehicle, identify car position in a highly accurate manner, and process sensor information at extremely fast speeds. DENSO's products are able to realize these functions.

#### Contributing to the Realization of Advanced Driver Assistance Technologies through Our Products

Light detection and ranging (LiDAR) systems detect the shape of the vehicle and the road. LiDAR systems are able to measure the distance and direction of an object by targeting said object with a laser and detecting the reflected light that returns to the receiver. Spatial Information Service ECUs utilize highly precise maps to accurately identify vehicle position at the traffic lane level. They feature a sensor that provides information on the road ahead of the vehicle. In addition, Advanced Drive System

Electronic Control Unit (ADS ECU) and Advanced Drive Extension Electronic Control Unit (ADX ECU) are products that are able to control the vehicle by conducting high-speed processing of information from sensors such as LiDAR and cameras, which monitor the area surrounding the vehicle. ADX ECUs are able to expand functionality and improve performance of advanced driver assistance technologies through the use of Al.

Through the products mentioned above, we are contributing to the realization of advanced driver assistance technologies that give passengers peace of mind and to the enhancement of vehicle safety performance.

### CASE STUDY 3

PROLOGUE

Future We Can

Achieve

Strengths We Can

Leverage

## Providing Peaceful, Comfortable Spaces Realizing Cockpit Displays That Bring New Value to Time on the Road

Cockpit displays have been increasing in size in tandem with the evolution of mobility. Large displays not only enable the driver to concentrate more on driving, they also provide enjoyment to all passengers traveling in the vehicle. DENSO will bring new value to mobility by developing cockpit displays that realize safe and comfortable environments within the vehicle.

#### Realizing Mobility That Inspires by Creating Relaxing Interior Environments That Offer Both Safety and Comfort

By offering large-scale displays that make travel more comfortable and provide information that offers peace of mind, DENSO will transform simple travel space into an environment brimming with vitality. In this way, we will aim to offer mobility experiences unlike any that have existed before.

By repeatedly making hypotheses and conducting verification activities through a development process that embodies DENSO's corporate slogan of "Crafting the Core" and puts the notion of Genchi Genbutsu (the actual place, the actual part) into practice, DENSO is enhancing its ability to recognize issues and accelerating the speed at which it addresses them. Going forward, DENSO will further increase the level of user comfort through critical thinking and thorough action.

#### Realizing Comfortable Interior Environments

DENSO has developed its Pillar-to-Pillar Display, a large-screen display that spans from the driver seat to the passenger seat. The Pillar-to-Pillar Display features performance that places safety first, including preventing the reflection of sunlight, and a design that realizes seamless and curved display. Furthermore, the cost of the Pillar-to-Pillar Display has been kept at a reasonable level, making it possible to install in a wide variety of vehicles. In these ways, the Pillar-to-Pillar Display is a product that has overcome various obstacles within the popularization of large-scale displays.

The mobility of the future will be able to understand the condition of



each passenger and maintain optimal air quality, temperature, and humidity levels. By letting passengers know the secure and comfortable status of the vehicle interior through the use of displays, we can create a relaxing environment for all passengers sharing in the mobility experience together.

#### Promoting a Development Process That Embodies "Crafting the Core"

To embody our brand slogan of "Crafting the Core," DENSO's development process involves pursuing a theory by anticipating what a product would look like in real life and then creating prototypes in an attempt to realize such a product. The process also involves identifying issues through repeated hypothesizing and verification and then taking steps to resolve these issues. In these ways, DENSO promotes a unique development process that involves implementing critical thinking and thorough action at the same time. We are able to ascertain issues at

#### Promoting Frontline Development with Thorough User-Oriented Ways of Thinking

an early stage through a repeated trial-and-error process, which helps us maintain a clear focus on resolving such issues. This in turn gives rise to fresh ideas. Through this development process, we are ultimately able to discover and introduce products that are truly useful to people.

Going forward, we will continue to refine our development cycle driven by UX (User Experience) by thinking in a human-centric manner and developing products based on actual experiences, and not while we are on our computers or at our desks.



Please click here to watch a video introducing our cockpit displays. . https://youtu.be/4PHYVAuu\_ds



Please see the "Stories" section of our corporate website for more on DENSO's various efforts for the future. https://www.denso.com/global/ n/news/stories/



# Foundation for **Creating New Value**

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## 1: Research and Development

By accurately ascertaining social needs, DENSO has created competitive products with a commitment to world-firsts. In our R&D activities, which have been the starting point for the value creation that allows us to create such products, we are planning technologies in a wide range of fields with a focus on five to 20 years in the future and strengthening our R&D structure. Additionally, to create optimal products in each region, enhance the appeal of mobility, and contribute to the future mobility society, we operate technical centers and laboratories around the world. By combining the knowledge of DENSO on a global scale, we will work to create the future mobility society.

The Key to Our Strengths

Foresight		
Commitment to	$\sim$	C

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#### Creating Over 130 World-First Products

world-firsts

We have established "contributing to a better world by creating value together with a vision for the future" as the DENSO Philosophy. By keenly ascertaining social changes, we have been engaging in product development with a commitment to world-firsts since our establishment. We have created over 130 world-first products, including gas injection heat pump systems, common rail systems, millimeter-wave radar, and ejectors, which have provided us with a driving force for growth.

### **Global Development** Network

#### **Technical Centers in Seven** Regions throughout the World and Laboratories in Epicenters of Innovation

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

#### Establishing Global R&D Tokyo-Haneda as a New Base for R&D

In July 2020, we established Global R&D Tokyo-Haneda in Haneda Innovation City to serve as a new base for conducting R&D activities on automated driving and other technologies. In addition to an office for planning and developing automated driving technologies, Global R&D Tokyo-Haneda also functions as an automotive service facility for carrying out such work as prototype system installation in vehicles as well as a proving ground to conduct in-vehicle tests. At Global R&D Tokyo-Haneda, we will promote co-creation activities with not only Global R&D Tokyo, established near Shinagawa Station in April 2018, but also our customers and business partners in the Tokyo area. Through such activities, we will seamlessly promote the planning, development, and testing of advanced technologies and mobility systems, thereby setting up an R&D structure that swiftly offers such technologies and systems to the market. Moreover, we aim to realize unprecedented development speed by strengthening open innovation and acquiring outstanding human resources.

Corporate Governance

#### Speed

Advanced Technologies

#### Advanced research with a view to the future

#### Advanced Research That Estimates and Anticipates the Future Mobility Society

Since establishing the Fundamental Research Center in 1991 (renamed the Advanced Technology Research Laboratories in 2017), we have been carrying out research and development for over 30 years with a focus on five to 20 years in the future in an effort to develop and popularize techniques that will comprehensively resolve social issues.

We position materials technology, which creates new functional materials, advanced Monozukuri (manufacturing) skills, which underpin DENSO's value creation, and Al technologies, which are essential to automated driving, as core technologies and are conducting advanced research in a wide range of fields aimed at realizing the practical application of such technologies.

#### Enhancing Our Strengths



Proving ground at Global R&D Tokyo-Haneda



## 2: Monozukuri

Since its inception, DENSO's Monozukuri (manufacturing) has thoroughly integrated in-house technologies. Through Monozukuri positive steps are taken to design and manufacture equipment, production lines, materials, and processing methods. This enables us to provide society with the world's most advanced groundbreaking technologies and products conceived by our R&D team. 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) price. A DANTOTSU plant is at such a high level that it cannot be compared to other plants.

#### Technological Capabilities

World-leading production engineering

#### Production Structure That Enables Mass Production of World-First and World-Only Products

DENSO leverages world-class micro-processing, paying attention to detail down to the 1/1000mm, 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 (manufacturing) perspective by designing and manufacturing its own equipment and production lines.

### The Key to Our Strengths Analytical Capabilities

Factory-IoT that leverages the knowledge of people to the greatest extent possible

#### Working to Improve Productivity That Connects People and Factories Globally

We take our abundance of data on people, products and facilities and convert it into valuable information, such as information on signs of equipment flaws and information that contributes to expert know-how. We offer such information to people that desire it at the times they need it and in a format that they prefer. By doing so, we are accelerating activities aimed at making improvements and contributing to the growth of people. We aim to form global linkages between our 130 plants in an effort to improve productivity on a Groupwide basis.

### Frontline Capabilities

Excellent Factory (EF) activities that realize growth for both factories and people

#### **Promoting EF Activities Focused** on Eliminating Product Defects and Lost Operational Time

Our plant general managers lead the way with EF activities in which all factory workers participate. By focusing on making improvements to areas that are easily overlooked and establishing production lines that create high-quality products, EF activities make it easy to identify issues within our factories. Through the continued efforts of all employees to address issues when they do occur, EF activities cultivate human resources that are dedicated to making improvements and also help us realize a global-leading level of competitiveness

#### Enhancing Our Strengths

#### Reinforcing Our Global Production Structure for Products Powered by Electricity

DENSO is implementing a broad range of initiatives to reinforce its production structure in the electrification domain. As part of these initiatives, we established the Electrification Innovation Center (EIC) at our Anjo Plant in June 2020. At the EIC, we are accelerating our electrification-related product development by comprehensively promoting everything from advanced technological development, prototyping, and verification through to the establishment and stabilization of mass production lines.

In April 2020, following the decision to consolidate the electronic component business of Toyota Motor Corporation within DENSO, we took over the electronic component production operations being conducted at Toyota's Hirose Plant, thereby relaunching the plant as the DENSO Hirose Plant. Going forward, alongside the Anjo Plant, we will position the Hirose Plant as our global mother factory in the electrification domain and will work to further reinforce our production structure. In this way, we will establish robust development and production processes and roll out superior production lines at our manufacturing bases in each country and region. Also, in fiscal 2021, we produced approximately 2.4 million inverters, one of our products powered by electricity. In fiscal 2022, we plan to produce roughly 3.6 million inverters and are steadily moving forward with efforts to bolster our production capacity. Going forward, in conjunction with the progressing shift to electrification, we will further reinforce our production structure at our manufacturing bases around the world, with the aim of producing roughly 8.0 million inverters in fiscal 2026.

Global Production Bases for Products Powered by Electricity



Production base Production consideration area

## 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 (manufacturing). We are also globally promoting a broad range of initiatives to develop leaders who can take charge of new businesses and oversee the future of DENSO so that we can continue to achieve continuous growth going forward.

### The Key to Our Strengths

Diversity

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**DENSO Spirit** 

The Spirit of Our Founding

#### Boldly Taking On New Challenges No Matter What the Circumstances

The DENSO Spirit is one of foresight, credibility, and collaboration. It also establishes a culture of values and beliefs that DENSO has cultivated since its establishment in 1949. Accordingly, the DENSO Spirit is shared among all employees. As an action guideline that provides the driving force for contributing to the mobility society and the lifestyles of people as well as the source of our competitiveness, the DENSO Spirit permeates the actions of the approximately 170,000 DENSO Group employees around the world. Guided by this spirit, we are using the passion and ambition of all our employees as the driving force for implementing our day-to-day work procedures and accelerating innovation amid this period of dramatic change.

#### DENSO Spirit: 🕮 P.1

For details on the DENSO Spirittps://www.denso.com/global/en/ out-us/corporate-info/philosophy

#### Enhancing Our Strengths

#### Acquiring Numerous Medals at the WorldSkills Competition

At the 45th WorldSkills Competition, held in Kazan, Russia at the end of August 2019, 20 of DENSO Group technicians (11 from Japan, three from Thailand, two from Indonesia, two from Vietnam, and two from Mexico) competed in 10 events, winning a total of six medals (one gold, two silver, and three bronze). Our aim of competing in this competition is not only to achieve outstanding results but also to refine the mental, physical, and technical capabilities of our young technicians with high potential through specialized training for the competition. In turn, we hope to have these technicians pass down their skills to the next generation. Since competing in the 20th WorldSkills Competition in 1971, which marked the first time we participated in this event, we have continued to send technicians to compete in the event each year it is held. Going forward, we will continue to nurture young technicians and work to pass on skills through our participation in the WorldSkills Competition.

#### Global human resource development

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

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In 2016, DENSO introduced a global common personnel management system targeting the members of senior management at its headquarters and at each Group company. This system incorporates a "Global Individual Grade" that focuses on the individual capabilities of senior management members. By using a common grading tool to evaluate and promote its senior staff, DENSO allows its personnel around the world to develop their careers on a global scale. Through this system, DENSO aims to further develop its global business by recruiting employees with a diverse range of values and abilities.

### Skills

#### Cultivation of young technicians

#### Nurturing Advanced Technicians as the Key to Corporate Growth

To nurture advanced engineers and technicians DENSO has been operating 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 and overseas offices. Many young technicians who participated in our educational systems have gone on to become WorldSkills Competition medalists who compete at the world's highest level.

Total Number of Medals Earned at the WorldSkills Competition (As of August 31, 2019)



### TOPICS



Aiming for Further Evolution by Demonstrating and Combining Our Three Strengths Leveraging DENSO's Comprehensive Capabilities toward Inverters That Support the Electrification of Mobility

DENSO has created a wide variety of value for realizing a comfortable mobility society by leveraging its three long-cultivated strengths of R&D, Monozukuri, and Hitozukuri.

Inverters, which support the electrification of mobility, are a prime example of DENSO's comprehensive capabilities that are realized through the demonstration and combination of the three respective strengths mentioned above.

#### Understanding Inverters' Prominent Role in the Electrification of Society Going Forward

An inverter is a power converter device that converts direct current power from the battery to alternating current power and supplies that power to the motor for operation. The popularization of xEVs is an essential element in realizing the electrification of the mobility society, and inverters support the driving power of xEVs. Accordingly, enhancing the performance of inverters is the most important issue for car manufacturers. One difficult aspect of addressing this issue is cooling the inverter. Inverters take in an electric current at a high voltage from the battery, and as such the semiconductor device that controls the inverter generates a high level of heat as the current passes through. Figuring out how to keep the semiconductor device cool is the key to realizing smaller xEVs with higher output as well as lowering their overall cost to help promote their widespread adoption.



#### Enhancing Our R&D Capabilities—Making the Impossible Possible

DENSO's history of inverter development dates back to 1992, with the establishment of the EV Project Room. The purpose of this office was to respond to Toyota Motor Corporation's new policies for EV development, and through this office, DENSO was tasked for the first time ever to develop an inverter for the TOYOTA RAV4EV. Throughout the course of this development project, we held numerous conversations with OEMs regarding topics such as product sharing with a view toward future business expansion. In addition, this project led to a number of our products being adopted by other



Structure for cooling both sides of the inverter

companies. In these ways, the project helped us amass experience that has been indispensable to the HEV development we have promoted since then

In 2002, Toyota announced its plan to develop 300,000 HEVs, and DENSO was placed in charge of developing inverters with three times the level of output without increasing their size. Based on common thinking at the time, this seemed to be an impossible task, and the development team was faced with the problem of how to efficiently cool the heat generated from the semiconductor device due to the high electrical current. Amid examinations on how to move forward with development. we came up with the idea of cooling both sides of the semiconductor device, instead of just one side as we had conventionally done. To do so, we made use of the heat converting technologies that we had cultivated through the development of radiators. As a result, we were able to realize small, highly efficient inverters. This kind of groundbreaking, differentiated technology was created from combining the wisdom we have gained as a comprehensive automotive component manufacturer that possesses various component technologies.

#### Evolving Our Monozukuri Activities through On-Site Observation and Swift Decision-Making

In 2004, due to the rise in inverter production volume at Toyota, DENSO began to conduct inverter production activities inhouse. In 2007, we began to develop original DENSO inverters following the adoption of the previously mentioned inverters

with dual-side cooling. As these inverters made use of a new structure, we were pressed with establishing unique production technologies. Our strong desire to not allow for even one defective inverter helped inspire the departments involved in the development of these technologies. With this inspiration, these departments worked to eliminate problems by conducting over 200 on-site observations and making swift decisions. As a result of these efforts, we were able to establish unique production technologies with a commitment to quality and build a foundation for manufacturing inverters.



Front lines of inverter production

#### Strengthening Our Hitozukuri Capabilities-Making All Things Possible

The capabilities of our human resources are what underpins our R&D and Monozukuri (manufacturing) capabilities. To accelerate the development and production of inverters, we are working to cultivate personnel in the inverter department at the Anio Plant, which serves as our headquarters for the production of products powered by electricity. To date, the Anjo Plant has produced a large number of Monozukuri professionals, and these professionals have helped nurture the next generation of human resources who will work on the front lines. However, due to such factors as the progression of automation at our facilities, there has been fewer opportunities to spend time training voung employees on the actual front lines of production. To remedy this situation, we launched the MIRAI-JUKU (Training Room for producing future trainers of manufacturing skills) at the Anjo Plant in 2011 and subsequently began managerial training with the aim of developing personnel who can teach future employees. Continuing on from this effort, we launched the GI-SHIN-DEN DOJO (Training DOJO for teaching

#### Reflecting on the Beginning of Our R&D Activities toward Electrification

In 1950, directly after World War II, it was difficult to procure gasoline in Japan. In response to this, we developed the BEV "DENSO-GO," designing and manufacturing many of the driving power components in-house. A total of approximately 50 "DENSO-GO" vehicles were sold. The development of this vehicle marks the beginning of our product development geared toward xEVs, which we continue to pursue today.

Overview by Product

Corporate Governance

manufacturing skills and philosophy) in 2015. Through these organizations, we have been working to reinforce our foundation for educational activities, including for the transmission of core skills and basic safety training. From 2019, we have been incorporating human resource development activities within the inverter department at the Anjo Plant in order to further reinforce and enhance our structure as "One Anjo." Going forward, we will accelerate coordinated efforts to enhance and reinforce educational environments with the aim of nurturing employees that can play an active role on a global scale and pass on their skills to future generations.

#### System Development Capabilities Created from the Combination of Our Three Strengths

As mentioned previously, DENSO has overcome a wide range of issues by combining its strengths in R&D, Monozukuri, and Hitozukuri. One of the most significant accomplishments of combining these three strengths has been the creation of our system development capabilities.

Among the various vehicle-based systems are electric powertrain systems, which comprise ECUs, inverters, motor generators, and batteries. To improve the environmental performance of xEVs by ensuring these electric powertrain systems operate without issue, all the components of these systems need to be controlled in a highly precise manner. DENSO's system development capabilities involve having a thorough understanding of how each hardware component in a vehicle is used and being able to incorporate that knowledge into individual designs of each component so that the required level of performance and reliability can be realized as a whole. Together with various OEMs, including Toyota, we have promoted a shift to the inhouse development and production of not only hardware but also ECUs and other control components to implement optimized, coordinated system control. In this way, we have realized the necessary level of vehicle performance.

As we expand into the focus fields of automated driving and connected driving, we will work to comprehensively enhance our system development capabilities for all types of vehiclebased systems. Additionally, we will eventually expand our business domains to go beyond the framework of mobility and form connections between cars and society. As we do so, we will continue to create and evolve new value with a view to realizing a carbon-neutral society.



BEV "DENSO-GO"

CSwO Message

DENSO's Software Strategy

### Creating and Providing New Value by Forming Connections across **Business Domains**

Shinnosuke Hayashi Chief Software Officer (CSwO), Senior Executive Officer

Technological innovations that support the progression of CASE (connected driving, autonomous, shared, electric) have been accelerating, and these innovations have continued to fuel the evolution of cars into a more advanced and intelligent form of mobility. DENSO will strive to realize the future mobility society while understanding its role of forming connections aimed at creating new purposes and value for cars.

We have continued to create advanced, high-value-added systems and products by forming connections between the different technologies we possess in the fields of mechanical parts, electronics, and software. While doing so, we have cultivated the ability to build optimal architecture and combine and install different kinds of technologies based on a deep understanding of customer needs. This ability represents one of our major strengths. Drawing on this strength, we will form connections between the various systems within cars in order to create and provide value across various business domains. Additionally, we will work to connect cars with society as a whole through the use of connected driving technologies, taking on the challenge of creating new value that allows us to fulfill our Great Cause of realizing "green" and "peace of mind."

Furthermore, from the perspective of the overall mobility society, it is important that we form connections with new partners across the automotive industry and outside of the industry. For example, we will focus our attention on establishing a foundation for industrywide standards in fields that require collaboration that goes beyond the boundaries of corporations, such as the establishment of security technologies. By leading the activities of standards organizations and proposing genuine solutions to various issues based on the trust-based relationships we have built with

manufacturers around the world, we will promote the establishment of a foundation for industrywide standards, thereby contributing to the overall automotive industry.

In order to properly fulfill our role of forming connections, we are promoting reforms from the perspectives of our personnel and organization.

From the perspective of personnel, in January 2021 we established and began the operation of a recurrent training program for software-related personnel. Highly motivated technicians with advanced skills are the driving force behind enhancing the value of software. To that end, we are working through this program to define skills shared across the DENSO Group, establish various kinds of educational curriculum, and put in place certification programs. In these ways, we will encourage our employees to actively refine their own skills by creating environments that provide employees with greater opportunities to play an active role.

From an organizational perspective, we are taking steps to strengthen cross-organizational functions aiming for the full-scale establishment of multi-domain and software businesses. In June 2021, we centralized software departments and personnel in each business unit within a multidomain, cross-sectional organization, thereby establishing the Electronics Platform & Software Function Unit. Furthermore, we are strengthening our network of technologies and personnel at Group companies that specialize in the software domain. Through these efforts, we will enhance our software capabilities on a Groupwide basis.

While working to strengthen our businesses in the software domain and maintaining an awareness of our role of forming connections, we will strive to realize the future mobility society.

CEO

Characteristics of DENSO's Manufacturing Capital (Fiscal 2021 results)

Capital expenditures ¥374.3 billion

#### Outline of Efforts to Strengthen Manufacturing Capital

DENSO is committed to thoroughly integrating its in-house technologies and has established manufacturing bases that bring together its unique production technologies to create high added value (Monozukuri, P. 46). Through such efforts, we have been strengthening our manufacturing capital so that we can provide competitive products on a global basis. We are also building a global production structure to enhance the satisfaction of customers in all areas of operations in terms of quality, cost, and delivery (QCD). At the same time, we are striving to reduce our environmental burden within our business activities through the pursuit of world-leading environmental efficiency and high productivity. In these ways, we are working to evolve our manufacturing bases. In addition, we improved productivity by 30% in fiscal 2021 (compared with fiscal 2016) through the introduction of Factory-IoT (F-IoT), thereby achieving the KPI target we adopted for manufacturing capital.



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PROLOGUE

Manufacturing Capital

## Strengthening Our Capitals

## Manufacturing Capital

### 40% reduction

#### **Global Production Structure That Achieves** Outstanding, Low-Carbon QCD

Guided by the basic principle of manufacturing products in close proximity to our customers, we have built a highly competitive production structure in North America, Europe, China, greater Asia (including India), and Japan. In addition, we are working to establish a streamlined global production structure that promotes the effective utilization of production resources and minimizes energy waste with the aim of realizing ecofriendly Monozukuri (manufacturing). Furthermore, to win out against the global competition, at our manufacturing bases around the world we aim to achieve leading levels of QCD in each region and realize Monozukuri that can withstand change. Based on this aim, we are proceeding with the creation of a robust manufacturing foundation through steady technological innovation and Excellent Factory (EF) activities in which all employees participate. Additionally, we are introducing F-IoT in order to share information on the conditions and improvement measures at each plant in real time, enhance improvement synergies on a global scale, and accelerate the speed at which improvement measures are carried out. In this manner, we aspire to create plants that leverage the knowledge of people to the greatest extent possible.

#### Striving to Realize Carbon-Neutral Factories

DENSO aims to realize carbon-neutral Monozukuri by 2035. To that end, at its factories around the world, DENSO is making use of renewable energy and solar power generation, implementing rigorous energy-saving activities, utilizing low-carbon materials, equipment, and production processes, and accelerating the introduction of F-IoT. In addition, the Company is developing renewable energy storage technologies, technologies to convert CO<sub>2</sub> into energy, and resource recycling technologies. DENSO is also working to popularize these technologies within society. Through these efforts, DENSO aims to contribute to the realization of a carbon-neutral society.

		DENSO Integrate Foundation for Crea	•				CONTENTS	PROLOGUE	CEO MESSAGE	DENSO's Value Creation Story
Manufacturing Capital	Financial Capital	Human Capital	Intellectual Capital	Social and Relationship Capital	Natural Capital					
	F	inancial	l Capit	al			(	CFO Messa	ige	
	Characterist	ics of DENSO's Financia	al Capital (Fiscal 2021 r	esults)		_		DENSO's Finar	ncial Strategy	
Equity ratio attrib of the parer	nt company	DOE (dividend		Weighted averag (WA	ICC)		Ì	Executine Aimed at	g a New	
57.	5%	5.0	<b>)</b> %	6	3%			Thoroby		

#### Outline of Efforts to Strengthen Financial Capital

In fiscal 2022, DENSO will implement management with an awareness of capital costs as it works to create corporate value under a renewed financial strategy. Under this new strategy, DENSO targets ROE of 10% or higher by fiscal 2026 with a view to expanding its equity spread (ROE - Cost of shareholders' equity) over the medium to long term. To that end, DENSO will pursue the following four initiatives for creating corporate value: (1) reinforce profit structure, (2) reduce low-profit assets, (3) improve capital structure, and (4) engage in dialogue with markets.



Initiatives for Creating Corporate Value



2 Reduce low-profit assets: Reduce cash on hand and cross-shareholdings

ment, renew policy for shareholder returns 4 Engage in dialogue with markets

## ncial Strategy rporate Value, Thereby Making Sustainable Growth More Achievable

Yasushi Matsui

Chief Financial Officer (CFO) Director, Senior Executive Officer

#### Strive to Continuously Create Corporate Value under an Uncertain Business Environment

As for our consolidated performance in fiscal 2021, revenue declined 4.2% year on year, to ¥4,936.7 billion, due to the significant decline in car sales resulting from the COVID-19 pandemic, followed by shortages in semiconductors and other materials. On the other hand, operating profit rose 153.9%, to ¥155.1 billion, owing to accelerated efforts to reform our profit structure, such as reducing fixed costs and enhancing R&D efficiency through the introduction of development tools.

In fiscal 2022, the business environment remains uncertain due to the concern of a prolonged shortage of semiconductors around the world and other factors. To accelerate the shift to a more robust corporate structure so that we can continue to create corporate value even under this kind of turbulent business environment, we will promote growth investments and efforts to thoroughly cut fixed costs in a well-balanced manner.

DENSO has remained ahead of the curve with promoting R&D and investment activities toward electrification. As a result, we are currently in a phase where our investments have peaked out and we are already seeing the major impact of rationalization. Products powered by electricity, such as inverters and other electric drive systems, power supplies, controls, and thermal management systems, have not only underpinned the Company's revenue and profits but also helped to contribute to the environment. Following the market-wide progression of electrification, we will take steps to enhance our product lineup to cover everything from lightweight vehicles, which need to be smaller in size and low cost, through to commercial vehicles and agricultural equipment, which require high levels of output. In addition, for advanced driver assistance systems (ADAS), while our product lineup already comprises accident prevention and safety products, driver assistance, parking assistance, and automated driving, we will promote product development so that we can respond to an even greater



number of accident scenarios. At the same time, in tandem with evolving ADAS, we will expand products that can be retrofitted in vehicles already sold or owned, thereby contributing to the elimination of traffic accidents.

In fiscal 2022, we renewed our financial strategy with the aim of adopting the creation of corporate value as a medium- to long-term target. The most important point of this new financial strategy is to "implement management with an awareness of corporate value creation (genuine equity spread creation and expansion)." As a specific objective of this target, we aim to achieve ROE of 10% or higher by fiscal 2026. Breaking down ROE, we have established financial targets for (1) reinforcing profit structure, (2) reducing low-profit assets, and (3) improving capital structure, and we will seek to improve ROE by achieving these targets. Furthermore, by stepping up efforts to (4) engage in dialogue with markets, we will strive for a genuine expansion in equity spread over the medium to long term. Below, I will provide an explanation on each of these four initiatives.

#### Reinforce Profit Structure: Working to Promote **ROIC-Focused Management and Strengthening** Our Commitment to Profitability

#### Introducing ROIC

With the aim of enhancing our corporate value in a sustainable manner, we introduced ROIC on a full-scale basis in fiscal 2021. In addition to revenue and profits, we are working to maintain an awareness of capital efficiency and capital cost and enhance our ROIC, which serves as the competitive edge of our businesses. By doing so, we will enhance corporate value in a manner that is not overly dependent on financial leverage. Specifically, in order to concentrate management resources in business where we can expect to secure profits in the future, we determine the allocation of our investment budget based on ROIC and growth potential of an investment. In addition, for individual capital expenditures and M&A, our general rule is to target projects with an internal rate of return (IRR) that surpasses

DENSO Integrated Report 2021 Foundation for Creating New Value

the hurdle rate we have established based on the Company's weighted average cost of capital (WACC) (the hurdle rate is set at a minimum of 10%, taking into account risk factors such as the country of investment and liquidity).

#### Reshuffling Our Business Portfolio

In fiscal 2022, we introduced a new framework for reshuffling our business portfolio on a regular basis. Through this framework, we evaluate the 85 product lineups we possess on the three criteria of (1) contribution to our management philosophy (green and peace of mind), (2) profitability (ROIC), and (3) growth potential, and hold discussion on the positioning and direction of each product lineup accordingly.

We view the "resolution of social issues through our businesses" as the bedrock of our management. We therefore believe that, if a project does not align with our management philosophy, it will not lead to sustainable corporate value creation. For example, products related to internal-combustion engines (ICEs) have served as a core business that underpinned our growth and profits to date. However, giving consideration to environmental impact, we have started to promote a business shift focusing on

expanding into new markets, such as hydrogen fuel and fuel cells, where we can leverage the core technologies cultivated in our ICE-related businesses (the chart at the bottom of the page shows an example of how we evaluate a product's environmental impact and profitability and leverage that evaluation in efforts to reshuffle our portfolio).

We use "DENSO-style ROIC," which focuses on the assets and profits that directly relate to our business activities, as a basic measurement of profitability. In the event a business does not exceed our hurdle rate and is not expected to grow, we hold discussion on specific measures under the pretext of reducing the scale of the business or withdrawing from it entirely. Through these discussions, we review our business portfolio on a continuous basis without constraining ourselves to the notion of self-sufficiency. In addition, if we were, for example, to transfer a business, we would target the best possible offer for this business that would allow us to fulfill our responsibility of supplying our customers based on our mission as a company, which obligates us to supply our customers and greater society with the crucial social infrastructure that is mobility.





#### Example of Reshuffling Our Business Portfolio



In addition to improving profitability by expanding businesses focused on CASE and reducing businesses focused on ICEs, we will work to create new markets that contribute to carbon neutrality.



By expanding businesses in new mobility domains and businesses that utilize renewable energy, we will strive to achieve a portfolio that strikes a perfect balance between our management philosophy and profits.

#### Directing Management Resources toward Strategic Investments

The management resources we create by reducing the size of maturing businesses will be directed toward the expansion of growth businesses and the execution of strategic growth investments, including M&A.

We have already commenced a bold shift of management resources from ICE-related businesses to businesses in the CASE domain, and this has included a shift of personnel through recurrent training, which is a type of refresher training. In addition to this shift, we will promote "ambidextrous management" by actively exploring new businesses in fields where we can help resolve social issues while closely ascertaining potential risks. In particular, new mobility domains, such as electric aircraft, and businesses that utilize renewable energy, which help to realize carbon neutrality, are two fields in which we can not only leverage our core technologies and resolve social issues going forward but also anticipate contributions to profits. To augment areas in which we are lacking as a company, we will continue to invest in start-ups with the aim of acquiring technologies and business know-how. We will also continue to pursue investments to increase business





ROIC Tree Showing Relationship between Management KPIs and Individual Activities



partnerships similar to the capital alliance we entered into with Certhon Group in fiscal 2021 for the purpose of strengthening our non-automotive businesses. Furthermore, setting our sights on disruptive growth, we will continuously examine M&A and alliances including capital alliances with leading players in various industries.

#### Utilizing ROIC for Internal Management

We utilize ROIC as a tool for encouraging all employees to change their behavior. We have rolled out an "ROIC tree" that allows employees to clearly see the connection between management KPIs and their individual improvement activities. In our in-house publications, we introduce on a global basis the relationship between the improvement activities of individual employees and divisions and the enhancement of ROIC. Through these means, we are working to foster a desire for improvement and promote an ROIC-focused approach to work.

By consistently promoting management decision-making, such as reshuffling our portfolio, and genuine improvement activities, such as changing the behavior of our employees, we will implement ROIC-focused management going forward.

es	Invest	Create new markets and value • Expanding into new markets and leveraging our technologies • Launching businesses that utilize renewable energy		Contribution to
	Expand	Lead industry through business expansion • Expanding sales and promoting global rollouts • Improving profitability (software reforms)	X	management philosophy (eliminating CO <sub>2</sub> emissions and traffic
1	Reduce	<ul> <li>Improve ROIC through restructuring</li> <li>Promoting restructuring across the entire industry</li> <li>Promoting the creation of cash cows by curtailing investment</li> </ul>		accidents)

#### Examples of Activities to Enhance ROIC

#### Reduce Low-Profit Assets: Enhancing Asset Efficiency by Ascertaining Asset Profitability and Making Further Reductions in Assets

To enhance our asset efficiency, we are taking steps to reduce cash on hand and cross-shareholdings.

We are working to decrease cash on hand by minimizing the funds needed for business operation and by reducing uneven asset distribution by region through the introduction of the Global Cash Management System (GCMS). Aside from the funds that were amassed temporarily to respond to emergencies, we have thus far been accomplishing our target of 1.2 months in terms of cash on hand relative to monthly turnover. By continuing to secure an ample borrowing limit and smoothly circulating funds throughout the Group, we strive to achieve our new target of 1.1 months, thereby making further reductions to cash on hand.

For cross-shareholdings, we have decided to widen the scope of our reduction consideration to include not only shares held in domestic listed companies but also shares held in overseas listed companies as well as in our subsidiaries. By doing so, we are promoting reductions that exceed the requirements of Japan's Corporate Governance Code. In addition, in the event we invest in a non-listed company, such as a joint venture or other type of start-up company, we examine exit strategies in advance in light of the future possibility that such a company may become listed. In these ways, not only are we reducing our existing cross-shareholdings, we are also curtailing newly held crossshareholdings to a greater extent than necessary. Going forward, we will continue to undertake these kinds of proactive efforts in order to improve our level of corporate governance.

#### Cross-Shareholdings



#### Improve Capital Structure: Transitioning to a More Balanced Capital Structure through Loan Utilization and Shareholder Returns

We will strive to secure a balance between a sufficient level of soundness and efficiency as we work to improve our capital structure through loan utilization and shareholder returns. Our KPI target of a shareholders' equity ratio of 50% or more represents a sufficient level for maintaining a credit rating that will allow us to procure funds even if we were to record the largest possible loss we could anticipate during an economic crisis, which was statistically calculated by using past profit and loss fluctuation rates and adjusting these rates to account for potential downturns.

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For loan utilization, to prepare for future large-scale investments, we are working to diversify our fund procurement methods by making use of not only bank loans but also bond markets in Japan and overseas. We will seek to curtail capital increases and boost capital efficiency by maintaining our current high level of financial soundness and proactively utilizing loans.

Regarding our shareholder return policy, we will aim to realize shareholder returns that exceed cost of shareholders' capital over the long term in order to build and maintain trust-based relationships with our investors. To that end, under our new financial strategy, we will work to increase both dividends (income gain) and share price (capital gain).

With dividends, we will renew our approach to shift from our conventional "dividend payout ratio," which is based on the profits of a single fiscal year, to "dividend on equity," which is based on shareholders' equity. Through this new approach, we will be able to carry out shareholder returns in a manner that is more long-term and stable.

Furthermore, after forecasting our future capital structure based on long-term business plans, we will flexibly acquire treasury stock taking into account the realization of a targeted shareholders' equity ratio and the status of our market share price. In fiscal 2022, as we announced on July 30, 2021, we have decided to acquire treasury stock at an unprecedented scale, of up to ¥100.0 billion, and are currently proceeding with the purchase of these shares. Going forward, we will provide stable, long-term shareholder returns to our investors as we strive to improve our capital structure.



Shareholders' equity (left axis) + Shareholders' equity ratio (right axis)

#### Status of Long-Term Credit Rating

Credit rating
AA+
A+
A2

	1 year		3 years		5 years		10 years	
Investment period	Cumulative / Annual rate	Cumulative	Annual rate	Cumulative	Annual rate	Cumulative	Annual rate	
DENSO	114.5%	33.5%	10.1%	77.2%	12.1%	206.6%	11.9%	
TOPIX	42.1%	22.1%	6.9%	62.3%	10.2%	179.4%	10.8%	
TOPIX (Transportation equipment)	48.2%	12.6%	4.0%	38.7%	6.8%	146.4%	9.4%	





Dividend (left axis) Treasury stock (left axis) + DOE (right axis)

#### Engage in Dialogue with Markets: Strengthening Timely, Appropriate IR Activities including in New Fields (ESG and Carbon Neutral-related Fields)

Through the promotion of investor relations (IR) activities in accordance with the Corporate Governance Code, we are working to enhance efforts by our corporate officers to communicate information and promote dialogue with investors and analysts in a timely and appropriate manner. By doing so, we aim to reduce information gaps with capital markets in our efforts to enhance our corporate value (expand our equity spread).

In fiscal 2021, we were able to engage in dialogue with institutional investors approximately 500 times, even amid restrictions on movement stemming from the COVID-19 pandemic, by making use of online meetings and other means. "DENSO DIALOG DAY 2021," held online in May 2021, was attended by an even greater number of people than in previous years, thereby allowing us to expand our investor base.

Additionally, for the content of the information we communicate, not only do we strive to ensure the accuracy of information on such matters as our financial results and business environment conditions, we also are accelerating IR activities and approaches from the perspective of ESG (environment, society, and governance). ESG investment has become mainstream within capital markets. For many years, we have adopted "green" and "peace of mind" as themes of our Long-term Policy and have been working to pursue these themes with the aim of realizing a sustainable society. For "green," we established the DENSO Eco Vision in fiscal 2001 and, guided by this vision, we have been steadily promoting a shift toward electrification and developing environmental technologies on an ongoing basis. For "peace of mind," we have been developing and expanding safety products that aim to eliminate traffic accidents, promoting Monozukuri (manufacturing) activities that go beyond the mobility domain, and pursuing businesses that help offer peace of mind to all working people and expand their potential in fields such as logistics and agriculture. As the commitment to carbon neutrality has become a particularly significant topic within capital markets, we announced our ambition to become carbon neutral by fiscal 2036 without making use of carbon credits. Our responsibility as corporate officers is to communicate these kinds of activities to our stakeholders in a consistent and sincere manner

Going forward, we will seek to promote constructive dialogue with capital markets and expand the scope and substance of the information we communicate. At the same time, we will relay the opinions we receive through these activities internally and leverage them to promote better decision-making that is not constricted by in-house logic as well as to enhance the quality of our management.

#### Closing

With a view to creating corporate value, we will realize sustainable business growth through the steady achievement of our KPIs. Our share price as of August 2021 was at a record-high level, and I believe this demonstrates how the reforms we have been pursuing, including the renewal of our financial strategy, have matched the expectations of our investors. The business environment continues to be unpredictable due to the negative impact of the COVID-19 pandemic on global economic activities. Given these difficult circumstances, it is now more important than ever to communicate information and engage in dialogue in a way that deepens our investors' understanding of DENSO's businesses. Going forward, while tackling challenging trends such as the transformation of mobility and the progress of CASE following the rapid evolution of IoT and AI, we will continue to work toward the realization of our management philosophy, which is to resolve social issues through our businesses, as we strive to make contributions to our investors and all of our stakeholders. We ask that you look forward in anticipation as we pursue these endeavors.

## Human Capital

Characteristics of DENSO's Human Capital (Fiscal 2021 results)

Human Capital

53%

#### Outline of Efforts to Strengthen Human Capital

Manufacturing Capital

At DENSO, we believe that corporate growth is achieved when each of our employees leverages his or her abilities to the greatest extent possible and leads an active and fulfilling lifestyle. Presently, we are dedicated to pursuing diversity, which supports our global business development. To that end, we are moving forward with a wide range of efforts further empowering our diverse group of employees, including strengthening the recruitment of and promoting an active role for women as well as promoting the employment of people with disabilities. In addition, to ensure that our employees pursue their work with a high level of motivation, we are endeavoring to ensure the mental and physical health of our employees and establish a safe and secure workplace in which they can carry out their duties with a sense of fulfillment. We are also encouraging our employees to pursue healthy lifestyles.

#### Promoting Diversity and Inclusion Basic Approach

DENSO's philosophy is to contribute to a better world by creating value together, and that is why we incorporate social issues and needs in our business direction and strategy. We believe that companies should exist to help build a better future for all people, so we are united in the global vision of achieving carbon neutrality by 2035 and realizing mobility technologies and solutions that provide greater peace of mind.

To do this, we need innovation and creativity. And innovation and creativity are nurtured in an inclusive environment where everyone feels welcomed, valued, respected, and heard. When we have open and sincere communication—talking and actively listening—we can safely share our diverse ideas, experiences, and dreams. We can also work together to bring these dreams to life. That is the essence of Diversity and Inclusion (D&I). Through the promotion of D&I, DENSO can inspire and make a difference in the world.

#### Global D&I Initiatives

D&I themes are different by each country and culture; therefore DENSO promotes activities that are suitable for each region. For example, in Vietnam, Malaysia, Indonesia, the Philippines, number of women work at pregnant womer



and Thailand, where a large Installation of production line adapted for

our production sites, production lines adapted for pregnant women have been installed, enabling them to work while sitting down. By doing so, DENSO has created an environment where

women at production sites can work energetically without experiencing stress during pregnancy, and these efforts also include supportive care for breastfeeding mothers. In North America, we hold an internal event during Pride Month in June every year to eliminate unconscious bias toward sexual minorities

0.84% (non-consolidated)

DENSO's Initiatives in Japan (Promoting Women's Participation and Employment of People with Disabilities) Our goal is to empower our employees to work energetically at all levels without distinction of gender. To do this, we set goals (KPIs) for recruitment, development, compatibility with life events, and promotions. From fiscal 2022, we have established targets for the number of women in management positions in technical fields, and we will focus on cultivating women leaders going forward.



ties in 1978, DENSO has actively worked to expand employment opportunities for people with disabilities. In 1984, we established DENSO Taiyo Co., Ltd., a special purpose subsidiary that primarily hires people with physical disabilities. This company is engaged in the production of such products as vehicle instrument clusters and smart keys. In 2016, we established the special purpose subsidiary DENSO Blossom Co., Ltd. This company offers employment opportunities to people with mental illnesses and intellectual disabilities and is engaged primarily in clerical work. As of April 2021, we employ 856 people with disabilities on a Groupwide basis that includes our head office and these two subsidiaries.

#### Health and Productivity Management\*1

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

DENSO positions promoting the health of its employees as an important management task, and announced its Health Declaration\*<sup>2</sup> in September 2016. At the same time,

to encourage activities that promote employee health and raise the level of health awareness in the workplace, DENSO is working to enhance its health-related initiatives from the perspective of both physical and mental health.

Also, to promote health management at each Group company in Japan and overseas, we formulated the DENSO Group Health and Productivity Management Basic Principles in February 2019. By sharing these principles globally and implementing health management activities based on the conditions at each company and in each country, we will improve the health awareness (health literacy) of each employee and establish a more comfortable working environment across the entire Group.

As a result of such efforts, DENSO was included in the Superior Health & Productivity Companies (the White 500) Program,\*3 which is promoted by the Ministry of Economy, Trade and Industry (METI) and the Nippon Kenko Kaiqi (Japan Health Council), for the fifth year in a row, since 2017. In addition, 37 domestic Group companies have also been included in the White 500 Program. Going forward, we will continue to value the health of our employees on a global scale and work to create office environments in which they can work energetically and with peace of mind.



- \*1 "Health and productivity management" is a registered trademark of the NPO Kenko Keiei Kenkyukai
- \*2 To read the entire DENSO Health Declaration, please refer to the
- "Sustainability Information" section of the Company's corporate website. \*3 The 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
- Click here for details on DENSO's initiatives toward health management and organizational structure. https://www.denso.com/olobal/en/about-us/sus society/health/



Nurturing Personnel That Can Handle Change and Fostering a Corporate Culture of Continuous Learning and Pursuit of Challenges

Personnel shortages in software fields are occurring across the entire industrial world due to the acceleration of digital transformation (DX). Under these circumstances, we are introducing new systems to help employees develop their careers

Career Innovation Program



and encourage them to become software technicians, with a focus on strengthening our response to CASE, a new trend within the automotive industry.

These systems include the Career Innovation Program, which supports the career development of software technologies, and the Career Transfer Program, which supports the process for transferring from a technical position to a software position. Through these two programs, we will strengthen our software development structure.

#### Career Innovation Program

We have defined the necessary role of a software technician in software development and created a skills map that visualizes technical expertise and the required skill levels for fulfilling this role. Based on this map, our software technicians draw out their future vision for themselves and work to enhance their skills and build their careers accordingly.

The Career Innovation Program is designed to support our software technicians throughout this process. The program seeks to have participants acquire the necessary knowledge, gain opportunities to grow and play an active role, improve skills through actual frontline work, and receive certification from various certification programs. In addition, the program aims to keep this kind of career development cycle in motion on a continuous basis

Also, the Career Innovation Program centralizes human resource information and makes it more accessible so that it can be used in efforts to optimize individual career development and our software development structure.

#### Career Transfer Program

The Career Transfer Program is a framework for supporting the transition of employees to new areas of activity through a sixmonth course involving the acquisition of software knowledge and practical experience. In addition to acquiring software knowledge, the Career Transfer Program provides an environment of multifaceted support to enhance the motivation of transferring employees and address any concerns they may have. This support includes meeting with career counselors and advisers, OJT trainers, and mentors. Through this program, we are promoting the transition to a career in software in a manner that caters closely to each participant. In addition, this program aims to turn out approximately 1,000 software engineers by 2026 (record as of fiscal 2021: 16).

Through these programs, we will strive to foster a corporate culture in which each employee can demonstrate career ownership and take on the challenge of developing and reestablishing their careers. At the same time, we will establish an environment where employees can play a lively and active role and realize personal growth.

Acquiring practical skills Framework for improving practical ability (buddy system, project implementation)

#### Gaining opportunities to play an active role Framework for optimal personnel allocation

(assignment operational role)

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	DENSO Integrated Report 2021 Foundation for Creating New Value				CONTENTS	PROLOGUE	CEO MESSAGE	DENSO's Value Creation Story	Growth Strategy	Foundation for Creating New Value	Overview by Product	Corporate Governance	Corporate Data	
Manufacturing Capital	Financial Capital	Human Capital	Intellectual Capital	Social and Relationship Capital Natur	al Capital		Manufacturing Capital	Financial Capit	al Human	Capital Intel	lectual Capital Soci	al and Relationship Capital	Natural Capital	
Intellectual Capital					Social and Relationship Capital									
Characteristics of DENSO's Intellectual Capital (Fiscal 2021 results)						Characteristics of DENSO's Social and Relationship Capital (Fiscal 2021 results)								
R&D expenditure (ratio to revenue) Number of patent applications filed Number of patents held Approx. 4,300 Approx. 41,500				Number of suppliersLocal procurement rateNumber of dialogues with institutional investors (total number of companies)Approx. 6,450Approx. 80%Approx. 500										
Outline of Efforts to Strengthen Intellectual companies in other industries based on IP collaboration and (3)							-							

#### Outline of Efforts to Strengthen Intellectual Capital

To realize its Long-term Policy for 2030, DENSO is promoting its intellectual property (IP) strategy in unison with its business strategies. In particular, in the four focus fields established under the Long-term Plan for 2025 of electrification, advanced safety and automated driving, connected driving, and non-automotive businesses (factory automation and AgTech), we are focusing on building a patent portfolio and promoting IP activities related to open innovation. We are also supporting efforts to expand our businesses and achieve sustainable growth by strategically utilizing the patents that we have acquired. Additionally, with a view to fiscal 2026, we aim to keep R&D expenditure at around ¥450.0 billion by enhancing software development efficiency and promoting digitization, while improving output.

KPI Target Annual R&D expenditure Fiscal 2026: ¥450.0 billion

#### Promotion of IP Strategy

Added value for automobiles is beginning to shift toward the CASE domain. Under these circumstances, DENSO is promoting three main initiatives in order to win out against the competition, which now includes not only major players from the automotive industry but also ICT companies and start-ups. These initiatives are (1) sharpen our competitive edge in the automotive industry by leveraging our IP rights, (2) create partnerships with



companies in other industries based on IP collaboration, and (3) promote the external procurement of IP (promptly acquire the necessary IP). Guided by these three initiatives, we will realize an advantageous business ecosystem through the utilization of IP. Also, we will increase the percentage of patent applications for technologies that relate to our four focus fields as we work to underpin the sustainable growth of the Company going forward.

#### Strengthening Our 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 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, we hold the Global IP Conference on a regular basis, which aims to resolve Groupwide and local issues pertaining to IP management and enhance our governance in all regions of operation.

#### Results of IP Activities in Fiscal 2021

DENSO invests around 9% of its revenue in R&D activities and, as a result, has steadily secured patents around the globe. In 2020, DENSO was ranked third in the automotive industry, including car manufacturers, for the number of newly registered patents in Japan, and seventh in the United States.



### Outline of Efforts to Strengthen Social and Relationship Capital

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. DENSO also clarifies its

### Efforts to Encourage Dialogue with Stakeholders

Stakeholders	Efforts to encourage dialogue	Fiscal 2021 results	
Customers	Customer Consultation Center We provide the feedback we receive from customers via the Customer Consultation Center to relevant departments, which we then use to offer even better products and services.	Approx. 3,800 inquiries related to products	
Shareholders and Investors	Ordinary General Meeting of Shareholders At the Ordinary General Meeting of Shareholders, the chairman of the Board provides a report on the Company's future initiatives and answers questions from the shareholders, in addition to performing other duties. Dialogue with Investors We hold dialogues with investors through briefings on results and future strategies, individual interviews and teleconferences, overseas road shows, and other means.	Approx. 500 dialogues with institutional investors (total number of companies)	
Local Communities	Community Service Day DENSO has designated a day ("Community Service Day") for employees to give back to their local communities. For Community Service Day, our employees carry out unique social contri- bution activities. Corporate Sports We offer encouragement to our employees through sports activities. At the same time, we value the connections we make with local communities through sports	Approx. 13,400 Community Service Day participants (employees)	

Note: To prevent the spread of COVID-19, the "Supplier Appreciation Meeting" (an opportunity to deepen exchanges with suppliers by providing information on procurement policies and the initiatives of each business) and the "Global Conference" (an opportunity to bring together executives and leaders from around the world to discuss the realization of our Long-term Policy and the implementation of long-term strategies) were canceled in fiscal 2021.

#### Promotion of Sustainability Together with Our Suppliers

Guided by the basic policies of open and fair business practices and responsible procurement activities, DENSO promotes sustainability together with its suppliers around the world in order to continue to fulfill its social responsibilities within the supply chain on a Groupwide basis.

#### Promotion of Sustainability Based on the Supplier Sustainability Guidelines

DENSO has determined the Supplier Sustainability Guidelines and shares these guidelines with its roughly 6,450 suppliers, requesting that they carry out procurement in line with the contents of these guidelines. We also regularly ask our suppliers

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. By doing so, DENSO strives to reflect stakeholder opinions and the needs of society in its corporate activities



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PROLOGUE

Manufacturing Capital

Natural Capital

Characteristics of DENSO's Natural Capital (Fiscal 2021 results)

CO₂ emissions per unit 40% reduction

#### Outline of Efforts to Strengthen Natural Capital

DENSO's business activities have a close relationship with natural capital, including through the utilization of industrial water and the use of mineral resources as raw materials for its products. Accordingly, the deterioration of natural capital has an enormous impact on our business activities. Also, we believe we can make further contributions to resolving the globally shared issue of global warming by refining our long-cultivated environmental technologies.

Assessing natural capital from the perspectives of both risks and opportunities, we are promoting environmental management under which we aim to conserve the global environment and create economic value by enhancing the efficiency of natural capital and reducing our environmental burden.

#### Promoting Environmental Activities in Accordance with Our Eco Vision

We have established Eco Vision 2025 as an action plan for the period up to 2025, a year that marks the midway point for realizing sustainable communities and society by 2050. Under this vision, we have established the three targets of "Energy 1/2," "Clean × 2," and "Green × 2," collectively referred to as "Target 3." These targets are to be achieved by fiscal 2026.

To realize "Target 3" in the respective phases or products, factories, associates, and management, we are promoting 10 specific actions, collectively referred to as "Action 10."

Please refer to the following URL for more information on DENSO's Eco Vision. https://www.denso.com/global/en/csr/environment-report. management/ecovision/ecovision/

### Minimum CO<sub>2</sub> Monozukuri

In the production field, we are working proactively to reduce CO<sub>2</sub> emissions, promoting the development of technologies for the production process, and thoroughly implementing energysaving activities with the participation of all employees. Additionally, we are implementing Just-in-Time (JIT) activities that aim for the utilization and supply of just the right amount of energy at the necessary time. We are also utilizing cogeneration systems that utilize city gas, which produces only a small amount of CO<sub>2</sub>, as fuel power for generation and that make use of waste heat. Moving forward, aiming for the even higher target of making our plants completely carbon neutral, we will accelerate the transition to renewable energy, including the purchase of electricity derived from renewable energy sources and the introduction of self-power generation via solar panels, while keeping in mind economic rationality.

to assess their own CSR practices through self-diagnostic sheets. When necessary, DENSO employees responsible for CSR procurement visit suppliers to conduct assessments, hold dialogues, and recommend improvements. When beginning transactions with a new supplier, we conclude a basic transaction contract that addresses issues such as compliance, environmental conservation, and occupational safety.

#### Thorough Implementation of Green Procurement According to the Green Procurement Guidelines

In the environment field, DENSO has formulated the DENSO Group's Green Procurement Guidelines based on the Group's basic environmental policy, Eco Vision. These guidelines cover such matters as managing and reducing materials with high environmental burden and establishing environmental management systems. We ask that our suppliers engage in green procurement and management based on these guidelines.

#### Undertaking Initiatives toward Respecting Human Rights

DENSO views respect for human rights as a crucial theme that must be considered when pursuing its business activities. To that end, DENSO has established respect for human rights as one of its material issues within the promotion of sustainable management, and is undertaking efforts toward respecting human rights accordingly.

#### Clarifying Our Policies on Respecting Human Rights

Based on various international standards, such as the United Nations Universal Declaration of Human Rights and the United Nations Guiding Principles on Business and Human Rights, the DENSO Group Sustainability Policy clearly prohibits discrimination and harassment based on race, gender, age, nationality, religion, disability, injury or illness, or sexual orientation, in addition to child labor, forced labor, or any other form of labor in violation of human rights, as well as actions pertaining to such labor. DENSO is working to share and thoroughly enforce this policy on a Groupwide basis.

#### Promoting Employee Education and Enlightenment

In addition to stipulating respect for human rights in its Code of Conduct for DENSO Group Associates, DENSO promotes the implementation of actions based on respect for human rights with activities such as the training and development of employees at all Group companies.

DENSO CORPORATION's education programs by grade (for corporate officers, new employees, and newly appointed management, etc.) incorporate human rights educational content. In addition, the Company is promoting enlightenment activities such as an online compliance test that targets all employees, including those at domestic Group companies, and contains questions related to human rights.

#### Promoting Initiatives to Respect Human Rights within the Supply Chain

Initiatives for respecting human rights are essential to promote not only on a Companywide basis but also throughout the

entire supply chain. To that extent, DENSO promotes various initiatives together with its suppliers to ensure that there are no infringements on human rights occurring nor activities that could lead to the infringement of human rights. For example, we have incorporated items related to respecting human rights within the Supplier Sustainability Guidelines and encourage our suppliers to conduct self-checks on a regular basis using our supplier self-diagnostic sheets. We also engage in dialogue with our suppliers to request that they make improvements should any issue arise.

In addition, we recognize the responsible procurement of mineral resources and raw materials as an important issue within the supply chain. As a specific effort to address this issue, we have formulated a Companywide policy to respond to the issue of conflict minerals and request that our suppliers engage in the responsible procurement of mineral resources and raw materials. At the same time, with the cooperation of our suppliers, we conduct a survey on conflict minerals once a year.

Also, the need for rare-earth minerals and rare metals is rising due to the acceleration of electrification, which is occurring against the backdrop of efforts to realize carbon neutrality. This trend has the potential to increase the scale of mineral resources and raw materials that present human rights risks. Accordingly, we periodically review the minerals that we target under our risk management efforts and examine ways to respond as a company. Through efforts such as these, we will avoid the use of minerals with risk concerns throughout the supply chain together with our suppliers.

#### Future Initiatives

Against the backdrop of the COVID-19 pandemic, initiatives to respect human rights within business activities have become increasingly more important. For that reason, DENSO believes that it must promote initiatives toward human rights to a greater degree than ever before. While taking into account the opinions of external stakeholders, DENSO will examine the formulation of human rights policies and the implementation of human rights due diligence going forward.





2,347<sub>kW (non-consolidated)</sub>

\* FEMS: Factory Energy Management System, an energy management system that supports the efficient use of energy in buildings

#### Initiatives toward Water Risks

In recent years, in addition to the prevention of water contamination and other pollution, a variety of water problems including droughts and floods are intensifying, resulting in stronger demand for efforts to counter water risks. For this reason, DENSO has identified water risks. Based on evaluations that take into account regional characteristics (locational factors), we promote the reduction of these risks by strengthening relevant efforts to respond to water risks and sharing case studies of such measures. We also ensure emergency water resources in accordance with regional needs and actively promote rainwater usage. Furthermore, we are undertaking efforts to address water risks in our supply chain based on our understanding of current conditions.

#### Case Study: JIT 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 separates 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.

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CEO PROLOGUE MESSAGE DENSO's Value Growth Strategy Creation Story

Efforts to Maximize the Value of "Green"

Amid the pressing crisis of climate change, DENSO is exploring the ideal vision for a sustainable mobility society and is accelerating its sustainability management with a view to maximizing the value of "green," which is a target adopted under its Long-term Policy. In 2019, we pledged our support for the Task Force on Climate-related Financial Disclosures (TCFD). Since doing so, we have been carrying out a scenario analysis regarding the impact of climate change on our businesses and the opportunities and risks related to this impact. We have also been examining ways to reflect the results of this analysis in our business strategies. Through these efforts, we have been working to commercialize businesses focused on "green" and pursue avenues that will lead to sustainable business growth. In this section, we introduce the status of the initiatives we are promoting in accordance with the TCFD.

#### Scenario Analysis of Business Opportunities and Risks

To understand the impact of climate change on our businesses and to identify climate-related opportunities and risks, we referenced the external scenarios of the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) and used them as benchmarks for our scenario analysis. Also, while confirming the scenario analysis for the automotive industry, we compared and contrasted this analysis with our awareness of the business environment existing under the Company's Long-term Plan to hypothesize comprehensive scenarios. Upon doing so, we were able to identify climaterelated opportunities and risks by analyzing the differences between our Long-term Plan and these scenarios.

#### Hypothesizing Scenarios

To correspond to the two axes of transition risks and physical risks, we established three classifications for scenarios: "stagnant," "promotional," and "ambitious." Transition risks in this table are based on the Current Policies Scenario (CPS), the Stated Policies Scenario (STEPS), and the Sustainable Development Scenario (SDS), hypothesized by the IEA (referencing World Energy Outlook 2019). The physical risks are based

on the RCP8.5, RCP6.0, and RCP2.6 scenarios put forth by the IPCC (referencing IPCC Fifth Assessment Report).

Scenario for the Commercialization of Electrification as Stated by the IEA (under the assumption of an average temperature increase of 2°C)

Projected sales volume of passenger vehicles (millions of vehicles)



Gasoline vehicles (G)

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

		Stagnant (decelerating global warming countermeasures)	Promotional (promoting global warming countermeasures at a steady pace)	Ambitious (accelerating global warming countermeasures)		
Transition risks	Hypothesized scenarios	CPS	STEPS	SDS		
	Status of hypothesized global warming progression	Uninterrupted trend of rising CO <sub>2</sub> Temperature increase of over 2°C	Current CO <sub>2</sub> levels maintained Temperature increase of over 2°C	CO <sub>2</sub> increases curtailed Temperature increase of less than 1.5°C		
	Quantitative business- related indicators	CO <sub>2</sub> emissions 47 Gt (by 2050)	CO <sub>2</sub> emissions 36 Gt (by 2050)	CO₂ emissions 25 Gt (by 2030) → 10 Gt (by 2050)		
		EU carbon tax US\$38/t-CO₂ (by 2040)	EU carbon tax US\$43/t-CO2 (by 2040)	EU carbon tax US\$140/t-CO <sub>2</sub> (by 2040)		
		Crude oil US\$134 per barrel (by 2040)	Crude oil US\$103 per barrel (by 2040)	Crude oil US\$59 per barrel (by 2040)		
		No progress with the introduction of renewable energy	Ratio of renewable energy 23% (2030) → 29% (2050)	Ratio of renewable energy 30% (2030) $\rightarrow$ 61% (2050)		
		Slight increase in ratio of BEVs among new vehicles from the 2018 level of 2%	BEVs comprising 15% of new vehicles (2030) $\rightarrow$ 27% (2050)	BEVs comprising 47% of new vehicles (2030) $\rightarrow$ 72% (2050)		
Physical risks	Hypothesized scenarios	RCP8.5	RCP6.0	RCP2.6		
		Damage from meteorological disasters	Damage not as significant as RCP8.5 but	Damage remains at its current level but		
	Qualitative business- related indicators	Damage from rising sea levels	expected to be more significant than its current level	potential for significant impact during transition period		
		Damage due to deteriorating ecosystems				
		Damage from food and water shortages				

#### Analysis of Climate-related Opportunities and Risks

We performed an analysis on the differences between our awareness of the business environment, which forms the basis of the Long-term Plan, and the circumstances under the scenarios on the left. Items expected to have a significant impact on our businesses were identified as key items. As a result, for key items related to transition risks, we identified the inability to respond to fuel efficiency regulations and increasing electrification with our current products as a risk, and innovative technologies as an area where we can create opportunities. For physical risks, the risk of revenue declines due to suspended plant operations following meteorological disasters was identified as a key item.

	Key items	Major potential financial impact	Timeframe / Level of impact	Response
	New controls and regulations placed on our existing products and services       Declines in revenue due to the impact of regulations on fuel efficiency and exhaust gas         We expect to see even tighter regulations on fuel efficiency (lower CO₂ emissions [upper limit] to roughly 1/3 between 2018 to 2030) as well as acceleration in the transition to electric vehicles (going from comprising 2% of all vehicles in 2018 to 47% of all vehicles in 2030). Inability to respond to these changes would result in downward pressure on revenue totaling approximately ¥200.0 billion by 2025.			Increase driving distance through development of energy-saving technologies for products powered by electricity, etc.
Major risks	Increase in negative feedback from our stakeholders	Refusal to invest and share price declines due to insufficient response to the need for environmental information disclosure Our management may be impacted by a refusal of stakeholders to invest in the Company, and declines in the share price may result from a perceived lack of information disclosure and reluctance to respond to the increasing level of information disclosure require- ments of stakeholders, especially investors.	Long-term / Relatively high	<ul> <li>Establish a structure for gathering and managing information through collaboration between the Sustainable Environment Strategy Department of the Safety, Health &amp; Environment Division and other relevant divisions. Enhance the content of disclosed information and strengthen communication with stakeholders</li> <li>Prepare for the acquisition of third-party certifica- tion in order to enhance the reliability of our information</li> </ul>
	Increased severity and occurrence of abnormal weather such as typhoons and floods	Decline in revenue due to suspended plant operations and supply chain disruptions We anticipate downward pressure on revenue totaling approxi- mately ¥90.0 billion in the event our plant operations are sus- pended in Japan and Asia (where we conduct 66% of our overall production), where the possibility of floods occurring is high.	Long-term / Relatively high	<ul> <li>Construct plants equipped with measures to mitigate weather disasters</li> <li>Ensure multiple suppliers for components and other materials</li> <li>Develop platforms that connect our plants across the globe and establish a global production struc- ture that can immediately respond to changing production needs</li> </ul>
	Utilization of more effective produc- tion and logistics processes	Reduced energy costs at plants If we are able to achieve our target under Eco Vision 2025 of reducing the amount of energy used per unit by half compared with fiscal 2013, we could achieve a CO <sub>2</sub> emissions reduction of 1.73 million tons per year. This, combined with our energy-saving activi- ties, would likely reduce energy costs by approximately ¥60.0 billion.	Medium- term / Relatively high	Continue to engage in energy-saving activities and promote the development of energy-saving produc- tion technologies with the aim of further enhancing production efficiency
Major opportunities	Development of new products and services through R&D and techno- logical innovation	<ul> <li>Increase in revenue due to higher demand for xEVs</li> <li>Increase in number of xEVs in each country against the backdrop of the trend toward carbon neutrality. Rising demand for technologies such as heat pumps that improve the heat efficiency of xEVs</li> <li>Forecast of a positive boost to revenue totaling nearly ¥500.0 billion in 2025 resulting from the response to electrification, thermal products related to electrification</li> <li>Further creation of opportunities through the development of engine control systems and other technologies to respond to alternative fuel (e-fuel, hydrogen fuel, etc.)</li> </ul>	Medium- term /High	<ul> <li>Accelerate the development of driving, power supply, and control technologies for electrification as well as technologies for heat pump systems and thermal systems</li> <li>Develop engine control systems and other tech- nologies that respond to alternative fuel</li> </ul>
	Diversification of business activities	Increase in revenue following higher demand for decarboniza- tion technologies • Creation of opportunities using technologies that contribute to carbon neutrality, which were cultivated in the automotive domain, including agricultural, logistics, FA, and CO₂ adsorption businesses • Forecast of ¥300.0 billion in revenue in the agricultural, logistics, and FA domains in 2030	Long-term / Medium	Accelerate the development of sensor, control, robot, and bio-related technologies to create agricultural production technologies and technologies for adsorbing CO <sub>2</sub> , among others. Also, develop new businesses and create sales channels for such technologies through proactive business alliances

#### Impact on Management Strategy

Through the aforementioned analysis, we gained an understanding regarding the trend of carbon neutrality's impact on our product development and production activities. Based on this understanding and guided by the DENSO Revolution Plan "Reborn21," we defined "aiming to achieve carbon neutrality in the manufacturing industry" as the Great Cause of our environmental activities and expanded our business domains to include "society," alongside Monozukuri (manufacturing) and Mobility. Furthermore, we aim to achieve carbon-neutral electricity by 2025 and carbon-neutral gas by 2035. In the Safety, Health & Environment Division, we have already launched an expert team to promote carbon neutrality. We also established the new Environment Neutral Systems Development Division and the FC System Business Development Division. Through these organizations, we will aim to realize carbon-neutral manufacturing, encompassing carbon neutrality not only in the products we provide but also in the production activities at our plants.



#### Impact on Financial Planning

Against the backdrop of the carbon neutrality trend, it is crucial that we further strengthen the development of products powered by electricity and transition to products such as hydrogen fuel and biofuel that respond to alternative fuel needs and further strengthen our products powered by electricity. To that end, we have reflected an increase in R&D costs within our financial planning in response to costs related to electrification, which will follow the expansion of products powered by electricity, and products that respond to alternative fuel needs. Furthermore, we have reflected purchasing costs of CO<sub>2</sub> offsets and renewable energy with a view to realizing carbon-neutral Monozukuri (manufacturing). These purchasing costs have been secured within the budget for fiscal 2022, and we have already begun to undertake the purchasing process.



PROLOGUE

CEO

#### Governance

DENSO views environmental issues, including climate change, as one of the highest priority issues (Materiality) in the promotion of its sustainability management. Accordingly, DENSO has established KPIs for these issues and is working to achieve them through its business activities. DENSO has established the Companywide Safety, Health, and Environment Committee as an organization for deliberating and determining important items related to climate change. This committee is chaired by a representative director, who also serves as a senior executive officer, and meets twice a year. At these meetings, members discuss and decide upon important items in the promotion of environmental management, such as formulating medium- to long-term targets and executing investment related to energy conservation. Items that the Companywide Safety, Health, and Environment Committee deems to have a significant impact on the Company's businesses (environmental vision, medium-term management strategies, large-scale investments, etc.) are then deliberated on by the Board of Directors. Serving under the Companywide Safety, Health, and Environment Committee are environment committees in each business group and at each Group company in Japan, as well as environment committees in each region of operation overseas. These committees are chaired respectively by a managing officer. Furthermore, DENSO has established energy, logistics, green products, and production environment subcommittees. By clarifying the scope of responsibility for each subcommittee, the Company is promoting activities related to safety, health, and the environment in an efficient and highly focused manner.

Also, the Companywide Safety, Health, and Environment Committee will examine and implement the necessary procedures for sharing environmental issues such as those identified based on the results of scenario analysis. Upon doing so, these issues will be reflected in DENSO's Companywide business plans, which will be executed accordingly.

#### **Risk Management**

Amid the rapidly occurring changes in the business environment, DENSO is striving to ascertain the constantly diversifying risks and implementing risk management from the perspectives of minimizing damage and ensuring business continuity. Climate-related risks are reported to the Companywide Safety, Health, and Environment Committee, which identifies key items and clarifies the Company's response. We recognize climaterelated risks (physical risks) as one of the major risks facing DENSO. Based on this awareness, we are strengthening our response to these risks on a Groupwide basis

ning Our Risk Prevention and Measures and Formulating BCPs: DP.9

For details on Eco Vision ttps://www.denso.com/globa en/csr/environment-report. management/ecovision/ ecovision/#/MOVIE/

Action Plan



Foundation for Creating New Value

Indicators and Targets

(compared with fiscal 2013)

(compared with fiscal 2004)

 $^{\star}$  Limited to CO\_2 from energy sources

tally hazardous substances: Zero, etc.

(Seventh Phase)

To realize its eco visions, DENSO formulates environmental

steps to confirm the level of achievement for each target.

action plans every five years, which lay out specific targets and

plans, and takes action accordingly. At the same time, we take

Main KPIs (2025) of the Current Environmental Action Plan

CO<sub>2</sub> emissions per unit\* following production activities: 50%

· Instances of legal nonconformance in terms of environmen-

In addition to the above plans, for reducing CO<sub>2</sub> emissions from

our production activities, we are promoting activities related to

carbon-neutral Monozukuri (manufacturing) that aim to achieve

carbon-neutral electricity by 2025 and carbon-neutral gas by

DENSO Revolution Plan "Reborn21." Additionally, for mobility

products, we are working to reduce CO<sub>2</sub> emissions to the great-

est extent possible by promoting the development of electrifi-

working to achieve negative CO<sub>2</sub> emissions through the estab-

Through these efforts, we will aim to achieve carbon neutrality.

Going forward, we will make efforts to thoroughly examine

and conduct more precise analysis regarding the quantitative

financial impact of key risk items on our businesses as well as

specific risks and opportunities facing our businesses. We will

then work to reflect the results of these efforts within our

business strategies and action plans.

2035, guided by our carbon-neutral strategy based on the

cation technologies for all aspects of mobility. We are also

lishment of technologies to capture, recycle, and reuse CO<sub>2</sub>.

reduction (non-consolidated/each Group company)

• Waste per unit: Maintain at 50% (non-consolidated)



For details on DENSO's environmental performance data https://www.denso.com/global/ en/about-us/sustainability/ library/environment-data/



Strengthening Our Organizational Capabilities

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

### Five Pillars of Management Reform

### Enhancement of Vehicle Perspective and Streamlining of Technological Development

To develop increasingly more complex systems more efficiently, we must pursue development that focuses on total optimization from the perspective of vehicle-based systems. To that end, DENSO has streamlined its technological development for ECUs, semiconductors, sensors, and motors, which provide the key for achieving differentiation, through the pursuit of organizational reforms. By doing so, we aim to accelerate Companywide efforts to realize growth in new mobility domains and enhance profitability in existing automotive businesses. In addition, at MIRISE Technologies, a joint venture with Toyota Motor Corporation, we are developing highly competitive, next-generation semiconductors by drawing on the perspectives of both mobility and automotive components. Going forward, we will leverage the perspectives gained through collaboration with Toyota Group companies within our own technological development activities.

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

To develop competitive products that meet customer needs, we have established advanced R&D teams at epicenters of innovation around the world. Through these teams, we are collaborating with a wide range of partners. In addition, at our laboratories across the globe, we have set up structures that allow us to engage in development on a 24-hour basis. We are also actively promoting the development of advanced technologies, such as level 4 automated driving and solid oxide fuel cells (SOFC). In Europe and the Americas, we have strengthened our ability to act as a technical liaison and are participating in activities to discover new technologies, create new markets, and establish rules and regulations. Moving ahead, we will promote open innovation in collaboration with industrial, government, and academic institutions and take steps to reflect such innovation within our medium- to long-term strategies.

### Business Unit Evolution and Smaller but Stronger Headquarters

We are promoting reforms to our business portfolio utilizing ROIC with the aim of establishing a structure for realizing genuine contributions to the fields of "green" and "peace of mind." We are also accelerating the speed of our decision-making and business execution by delegating authority and responsibility to business units in such ways as raising transaction amount-based authority delegation standards and simplifying performance follow-up procedures. At divisions within our head office, we are reviewing the allocation of human resources through such means as enhancing expertise and minimizing administrative tasks. With these kinds of reforms, we will exponentially increase the speed of our management and create new value.

### Global Management with Optimal Use of Group and Regional Power

We have appointed regional business managers to lead our businesses in each region of operation. Together with the regional CEO, these managers help establish structures for drafting and executing business strategies and plans in an effort to promote management with a sense of speed. Additionally, we are working to optimize our approach of allowing regional personnel to lead our regional businesses by revising our personnel structure and consolidating various functions. Going forward, we will go beyond the promotion of PDCA cycles within each region, taking steps to establish a structure for information dissemination and strategy formulation that leverages local strengths through the roles that involve research and providing suggestions.

### 5 Ways of Working with Tremendous Speed and Efficiency

To enhance productivity and realize work-life balance for our employees, we are working to enhance the quality and efficiency of our operations by maximizing the value creation capabilities of our employees through the promotion of diverse workstyles, such as teleworking, and the utilization of DX. In these ways, we aim to become a company with incomparable frontline capabilities and where employees can work with passion and a smile.







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## Business Portfolio and Value Creation

DENSO operates seven core businesses in a broad range of domains, centered on automotive-related fields. The Company has established a business portfolio for creating new value that can address the future needs of the mobility society. Through this portfolio, DENSO strives to maximize value in its seven core businesses so that it can enhance the potential of the mobility society. Going forward, DENSO will take steps to reshuffle its business portfolio in order to realize sustainable growth under a rapidly changing business environment.

#### Business Composition and Focus Fields

In its automotive businesses, DENSO supplies an extensive lineup of products and systems as a Tier 1 supplier that is trusted by car manufacturers around the globe. We operate a total of five automotive businesses, starting with the Electrification Systems Business, which provides the key for the shift to electrification. In addition, we operate the Powertrain Systems Business, which can manufacture powertrains for all types of vehicles, and the Thermal Systems Business that manufactures such products as in-vehicle air-conditioning systems, for which we boast the No. 1 global share. We also operate the Mobility Systems and Sensor Systems & Semiconductors businesses, which will be crucial for mobilityrelated development in the future. These five businesses contribute to development in three of our focus fields: electrification, advanced safety and automated driving, and connected driving.

Segment		Contribution to Long-term Policy (value of green and peace of mind)	Revenue Ratio by Product	Relevant F	iocus Fields	Relevant SDGs	
	Flast-ifection Systems	Green	19.4%	Electrification	Advanced Safety and Automated Driving	7 EXTERNET	
Automotive businesses	Electrification Systems	Peace of Mind	19.4%	Connected Driving	Non-Automotive Businesses (FA and AgTech)	13 reas	
	Powertrain Systems	Green	22.5%	Electrification	Advanced Safety and Automated Driving	9 мененикан Эмененикан 12 мененикан мене	
		Peace of Mind	22.5%	Connected Driving	Non-Automotive Businesses (FA and AgTech)	13 eex ()	
	Thermal Systems	Green	23.6%	Electrification	Advanced Safety and Automated Driving	7 вынание (13 клиж (13 клиж)	
		Peace of Mind	23.0%	Connected Driving	Non-Automotive Businesses (FA and AgTech)	17 nitestat	
	Mobility Systems	Green	21.9%	Electrification	Advanced Safety and Automated Driving	P enternante P	
		Peace of Mind	21.5%	Connected Driving	Non-Automotive Businesses (FA and AgTech)	17 notectar 17 notectar 17 notectar	
	Sensor Systems & Semiconductors	Green	2.0%	Electrification	Advanced Safety and Automated Driving	Procession Proces	
		Peace of Mind	3.0%	Connected Driving	Non-Automotive Businesses (FA and AgTech)	13 area	
itomotive bus	Industrial Solutions	Green	2.2%	Electrification	Advanced Safety and Automated Driving	2 100 17 ret trades 8 total total of the trades 8 total total of the trades	
	Food Value Chain	Peace of Mind	3.3%	Connected Driving	Non-Automotive Businesses (FA and AgTech)		

Furthermore, in our non-automotive businesses, we leverage the technologies cultivated in our automotive businesses to contribute to the field of factory automation (FA) and AgTech. Four Focus Fields: DP.20-21

#### Value Creation in Our Businesses

In each of our seven core businesses, we contribute to development in our four focus fields and work to maximize the value of "green" and "peace of mind," which are adopted as part of our Long-term Policy. In addition, through our business activities, we will work to achieve the targets of the SDGs and create new value for the future mobility society.
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DENSO Integrated Report 2021 Overview by Product

## **ELECTRIFICATION SYSTEMS**

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

To deliver electrification systems for vehicles that are eco-friendly and enable even more comfortable travel, we have built up a solid track record with the development of electrification technologies, realizing high performance, compactness, and fuel efficiency for the major products needed for HEVs. Going forward, we will leverage our expansive business domains to form linkages between various in-vehicle systems and products in an effort to efficiently manage energy within vehicles. In this manner, we will further improve fuel efficiency and contribute to the conservation of energy.



Jiro Ebihara

## **Relevant Focus Fields**





Peace of Mind

Green





Business Activities	<ul> <li>supply and starting system</li> <li>Development and manufact (ECUs)</li> <li>Development and manufact</li> </ul>	cture of HEV and BEV drive sy n parts such as alternators and cture of electric power steerin cture of various kinds of small ors, engine control motors, and	d starters g motors, control brake mot motor system products, suc	ors, and electric control units
Strengths	combustion engine startin	ical know-how across a broad g systems and power charging bility to draw on know-how an pment.	g products to products powe	ered by electricity such as
	Power control unit	Motor generator	Battery ECU	Lithium-ion battery pack
Main Products				
	Electric power steering motor	Control brakes (motor: ECU)	Windshield wiper system	Power window regulator moto

Efforts toward Quality

Based on the high-quality mass production technologies that it has cultivated through the development of products for internal combustion engines, the Electrification Systems Business Group has worked with its customers to develop and enhance technologies for electrification products as well. As the features needed for xEVs continue to diversify, we will work to further refine quality to ensure the safety and security of our customers through such means as optimizing quality assurance in terms of how our components are used from the perspectives of systems and vehicles.



Head of Business Group

Growth Targets	As the leading supplier of energy management s control over driving, turning, and stopping, we w tions, including not only automobiles but also air for products powered by electricity.
Profitability	Supported by the revenue generated by product will establish and leverage key technologies that to enhance our product lineup. Also, in anticipati have established five production bases around the range of mobility.
Differentiation	Utilizing in-house semiconductor manufacturing boosting the competitiveness of our products in motors that help improve the fuel economy of ve characteristics of automobiles. Using the techno whole, from components to systems.
Organizational Capabilities	In 2018, we integrated the small motor business business (internal organization). In 2019, we com in China to expand on these efforts. Furthermore business of Toyota Motor Corporation into DENS

## Fiscal 2021 Results

**Business Strategy** 

### Increase in Revenue as a Result of the Hirose Plant Integration Despite Decreased Production Caused by COVID-19

products that offer high added value.

In fiscal 2021, revenue in the Electrification Systems Business Group increased 6.8% (7.2% on an actual basis that excludes foreign exchange rates and other factors) year on year, to ¥958.7 billion. Despite a significant decrease in revenue, particularly in the first half due to the impact of the COVID-19 pandemic and other factors, the year-on-year increase in revenue resulted from not only a recovery in production by Toyota Motor Corporation and other car manufacturers but also a recovery in revenue in the second half, as the effects of the Hirose Plant integration helped boost sales of power control units (PCUs).

Revenue (Billions of yen)	
FY2021	958.7
FY2020	897.4

## Progress of Business Strategies

Strengthening Our Production and Development Foundation with the Aim of Popularizing xEVs

Environmental regulations are tightening around the world and the shift toward electrification continues to progress. Amid these circumstances, we established BluE Nexus Corporation, a joint venture that develops and sells driving module packages, in April 2019. In April 2020, we integrated the core electronic component business of Toyota Motor Corporation into DENSO. In June of the same year, we also established the Electrification Innovation Center (EIC) at our Anjo Plant to serve as the headquarters for our electrification operations. In these ways, we worked to reinforce our development foundation for electrification. Additionally, in fiscal 2021, we took steps to reinforce our production foundation for electrification across the globe. These included the establishment of a new electrification plant by Tianjin DENSO Engine Electrical Products Co., Ltd. in China, which adds to our existing electrification plant in the region, and the launch of a new manufacturing line for products

systems for xEVs and electric drive systems that allow for superior vill promote the electrification of a diverse range of mobility soluircraft, with the aim of realizing annual revenue growth of over 20%

cts for HEVs, which we have cultivated over the past 20 years, we at can be applied to a wide range of mobility domains while working tion of the continued global increase in the number of xEVs, we the world, thereby globally promoting the electrification of a diverse

a technologies and sophisticated winding technologies, we are n such ways as developing small, high-performance inverters and vehicles. In addition, we have extremely thorough knowledge of the ologies we possess, we will improve the value of vehicles as a

s (formerly ASMO Co., Ltd.) with the steering and braking systems nmenced collaboration with AISIN CORPORATION and a company re, from April 2020 we integrated the core electronic component business of Toyota Motor Corporation into DENSO and commenced operations of this business at our Hirose Plant. In these ways, we have put in place a structure for promoting the development of sophisticated system

> powered by electricity at DENSO Manufacturing Tennessee, Inc. in North America. Meanwhile, since 2019, we have been pursuing efforts toward electric propulsion systems for aircraft together with Honeywell International Inc., and we have recently entered into a long-term agreement with Honeywell focused on these systems. We have also been undertaking projects in the urban air mobility field, including air taxis and delivery vehicles. Going forward, we will apply our electrification technologies and production technologies for high-quality products, which we have long cultivated in the automobile industry, to the field of air mobility. At the same time, we will work to utilize the technologies we have refined in the aircraft business for use in the automobile industry. In these ways, we will contribute to the global environment through a broad range of mobility solutions.

### Resolving Social Issues through Our Businesses Developing CO<sub>2</sub> Circulation Plants to Achieve Carbon Neutrality in the Manufacturing Industry

With the aim of realizing net zero CO<sub>2</sub> emissions from factories, we established a CO<sub>2</sub> Circulation Plant,\* which serves as a testing facility for the capture and recycling of CO<sub>2</sub>, on the premises of the Anjo Plant's EIC in July 2020 and subsequently commenced verification tests. The CO<sub>2</sub> Circulation Plant is designed to capture CO<sub>2</sub> primarily generated by the plant and recycle it as an energy source for the facility and other uses. In the process, the plant synthesizes methane, which is made from CO<sub>2</sub> emitted by gas-fueled equipment, and hydrogen, which is produced by



renewable electricity, and reuses it as a source of energy. The CO<sub>2</sub> circulation facilitated by the demonstration equipment will be applied not only to production facilities of DENSO but also to manufacturing sites around the world to achieve carbon neutrality.

\* The technology used in this project was developed jointly with Toyota Central R&D Labs., Inc.

DENSO Integrated Report 2021 Overview by Product

## **POWERTRAIN SYSTEMS**

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

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



Head of Business Group

## **Relevant Focus Fields**



Contribution to Long-term Policy (value of green and peace of mind)

Peace of Mind

Green

**Relevant SDGs** 



Business Activities	combustion to intake and Development and manufa	cture of gasoline and diesel en exhaust cture of engine-related produc products for drive systems, su	ts, such as variable cam tin	ning (VCT) systems and
Strengths	are active across a broad i	ystems, we maintain and comp range of business domains rela Iso able to manufacture produ	ited to powertrains, extendi	ing from gasoline and diesel
	Gasoline direct injector	High pressure pump	VCT	Exhaust gas sensor
Main Products		1		
	\$r			
	Common rail systems	Spark plug	Ignition coil	

Efforts toward Ouality

We have positioned the restoration of our quality as our top priority issue and are working to build a corporate structure that prevents our products from causing quality-related issues in the market. To that end, in specialized divisions, we have gathered together human resources who can handle guality in a comprehensive manner, covering everything from systems to components. These divisions engage in efforts that span from investigating the true causes of quality-related issues to reproducing problems to determine a resolution. To respond to tightening regulations on fuel performance and exhaust gas as well as the increasing complexity of environmental stress, these divisions will accelerate and improve the accuracy of quality verification measures through digital engineering and model-based development and virtual vehicle evaluations.

	<b>C</b>
Business	Strategy
Dusiness	Juaceyy

Growth Targets	In addition to our regular efforts to improve the e the popularization of xEVs through compatible te consideration of the changes to the environment Through these efforts, we will supply products th mind, thereby stabilizing our business operations. which include taking steps to reduce CO <sub>2</sub> emissio servation and creation), to accommodate a carbon
Profitability	We will carry out portfolio reshuffling by developin trification era and by making adjustments to our p organizational structure and reduce quality-related
Differentiation	We will provide products that customers can use system development, <i>Monozukuri</i> (manufacturing
Organizational Capabilities	In terms of our product design operations, we wil promotion of DX and work to share best practice we will aim to further improve production efficien

## Fiscal 2021 Results

### Decrease in Revenue Due to Market Slowdowns Caused by COVID-19

In fiscal 2021, revenue in the Powertrain Systems Business fell 46.6% in the first quarter year on year. Although a recovery was seen from the second quarter on, revenue for the full year declined 9.3% (8.3% on an actual basis that excludes foreign exchange rates and other factors), to ¥1,108.8 billion.

Revenue (Billions of yen)	
FY2021	1,108.8
FY2020	1,222.0

## Progress of Business Strategies

### Narrowing Down Development Themes and Accelerating **Development Process Reforms**

We will work to prioritize development themes from the perspective of contributing to electrification and reducing carbon from internal combustion engines as well as pursuing joint development with automobile OEMs. In these ways, we will make it possible to respond to a wide range of vehicles and regulations using the smallest product lineup possible.

In terms of the development process, we have established the Core & Customization Strategy for our products, under which we are working to establish rigorous standards for ensuring consistent quality. Additionally, we have been making full use of digital engineering and promoting the automation of routine tasks, thereby significantly reducing the workload involved in application design.

Going forward, we will draw on the resources generated through these efforts to transition into "green" and "peace of mind" domains both inside and outside the Powertrain Systems Business Group and accelerate and enhance the efficiency of our management.

## Resolving Social Issues through Our Businesses Realizing Fuel-Efficient Gasoline Systems through Combustion and Exhaust Gas Aftertreatment Technologies

	Using lean combustion to
Combustion	realize leading-class fuel
technologies	efficiency (Powertrain
	Systems Business)



efficiency of internal combustion engines, which help contribute to echnology, we will further enhance the quality of our products in in which they are used, including the diversification of fuel. nat customers can use over a long period of time with peace of . In addition, we are proceeding with renovations to our plants, ons from our Monozukuri (manufacturing) activities (energy conon-neutral society in the future.

ng products for internal combustion engines that cater to the elecproduct lineups. We will also take steps to reduce the size of our ed costs. In these ways, we will improve our earnings structure.

over a long period of time with peace of mind through our g), and robust design capabilities.

Il make more efficient use of our existing data assets through the es across the Group. For our Monozukuri (manufacturing) activities, ncy by reforming production processes through the use of F-IoT.

In order to realize lean combustion, we developed combustion technologies that adjust the position and amount of microscopic fuel sprayed in a highly precise manner with the aim of forming a greater concentration of fuel closer to the spark plug at the time of ignition, a process referred to as "ignition assistance." Through these technologies, we were able to reduce discrepancies in fuel injector performance to increase the precision of fuel spray formation. The technologies made this achievement by reducing variations in nozzle design by 40% and detecting and studying the drive signal.

Exhaust gas aftertreatment technologies

Using a Lean Nitrogen Trap (LNT) catalyst to precisely control and purify NOx emitted during lean combustion

Our exhaust gas aftertreatment technologies are able to both maintain a high level of NOx absorption performance (low exhaust) and reduce the frequency of purge control to maintain catalyst performance. This has been achieved by using a highprecision NOx sensor, which can detect both NOx and the air-fuel ratio, to thoroughly manage the amount of NOx absorption inside the LNT.



DENSO Integrated Report 2021 Overview by Product

## THERMAL SYSTEMS

## Contributing to a more pleasant society for the earth and its people through eco-friendly heat management technologies and comfortable vehicle interiors

With the arrival of a carbon-free society and the CASE generation, the automotive industry is undergoing a paradigm shift. Amid this shift, the Thermal Systems Business Group is working to leverage its strengths as a leading-global air-conditioning systems supplier to the greatest extent possible to help create the society of the future through heat management systems, which resolve issues related to xEVs, and products that improve air quality, which create comfortable vehicle interiors.



Head of Business Group

## **Relevant Focus Fields** Green

Non-Automotive Businesses (FA and AgTech)

Contribution to Long-term Policy (value of green and peace of mind)

Peace of Mind





Business Activities		on of air-conditioning systems for fortable interiors, and cooling syst	cars and buses, which form the basis of heat man- tems such as radiators
Strengths	Ability to develop heat ma systems and radiators, as		in the thermal domain, such as car air-conditioning s for xEVs that leverage these technologies, such as
Main Products	HVAC units	Condensers	Radiators
		2.2 2.2 Constanting	
	Bus air-conditioners	Inverter cooling/battery cooling systems	

Efforts toward Quality

Reinforcing business operations that prioritize safety and quality, we are promoting the creation of a business culture that fully adheres to the simple concept that "protecting quality is a given." In addition, we are working to establish digital systems that use model-based development (MBD) technologies to evaluate products from the design state in order to enhance design quality. We are also promoting the digital transformation (DX) of our quality foundation by linking our frontline manufacturing operations with Factory-IoT (F-IoT). In these ways, we will establish an even stronger quality foundation on a global basis.

## **Business Strategy**

We will maintain our business foundation by refining systems and radiators, which have supported the between the realization of a carbon-free society a ucts with new value (heat management systems a "green" and "peace of mind."
Through the introduction of world-first technolog unique value for vehicles while enhancing our prot our core product lineups through efforts to achiev lio, which we have pursued throughout the COVIE
In the electrification domain, we will leverage our a system supplier to provide not only our convent control heat in various electrification devices such facing these vehicles. Through such efforts, we w friendly and comfortable. We will also develop air- ors and work to integrate these products into the the No. 1 share in the global market. By doing so,
We will carry out a full-scale shift from our core p structural reforms to help us achieve our strategie basis and utilizing business alliances.

## Fiscal 2021 Results

### Decrease in Revenue Due to Market Slowdowns Caused by COVID-19

In fiscal 2021, revenue in the Thermal Systems Business declined 9.2% (8.0% on an actual basis that excludes foreign exchange rates and other factors) year on year, to ¥1,163.0 billion, due to the impact of the COVID-19 pandemic.

Revenue (Billions of yen)



## Resolving Social Issues through Our Businesses Evolving Our Car Air-Conditioning Systems to Contribute to "Green" and "Peace of Mind"

We are working to evolve our car air-conditioners from systems with basic functions, such as cooling and heating, to systems that also offer environmental performance and comfort, thereby resolving social issues.



xEVs provide the key to realizing a carbon-free society, but extending the driving distance of xEVs has been an issue that has stood in the way of their popularization. One factor that hinders the driving distance of xEVs is the consumption of electricity to heat their interiors. To resolve this issue, we offer heat pump systems that greatly improve the driving distance of xEVs. This is done by using outside air as a source for heating the interior of these vehicles, which in turn reduces electricity consumption. Furthermore, we offer heat management systems that make use of heat pumps to efficiently requlate the temperature of the entire vehicle to help extend the lifespan of the battery. Through these products, we are contributing to the popularization of xEVs. Also, to address the need for clean air, which has become an even greater issue due to the COVID-19 pandemic, we are developing products that remove PM2.5 and other particles using filters as well as sensing technologies that monitor air quality. In these ways, we are creating comfortable vehicle interiors through temperature control and air quality maintenance.

ng the competitiveness of our core products such as air-conditioning e business to date. In addition, we will aim to strike a balance and stable business growth by developing and introducing prodand air-quality products) that will help us realize the principles of

gies and market-first products that offer new value, we create fitability. We are also strengthening the cost competitiveness of eve a slim operating structure and transform our business portfo-ID-19 pandemic.

long-cultivated heat management technologies and strengths as tional in-vehicle air-conditioning systems but also products that h as batteries and PCUs, thereby resolving the various issues vill accelerate the popularization of xEVs that are both eco--quality products that pursue safe and comfortable vehicle interie systems of our air-conditioning products, for which we boast , we will achieve differentiation for our existing products.

products to products that offer new value. We will also undertake ies through such means as strengthening collaboration on a global

## **Progress of Business Strategies**

Making Progress with the Introduction of Heat Pump Systems and Air-Quality Products into the Market

We are working to expand the global sales of heat pump systems installed in xEVs in Japan and overseas, including in the new Lexus NX and Nissan Ariya, which will be launched in fiscal 2022. In the future, we will expand our technological devel-



Heat pump system (in-vehicle renderina)

opment from heat management to energy management as we work to maximize the environmental performance of xEVs. For air-quality products, we developed the air purifier Puremie, which visualizes in-vehicle air quality to respond to the rapidly growing need for clean air due to the COVID-19 pandemic, and we successfully introduced it into the market within the short period of only five months. Puremie has been adopted by the New Normal Taxis introduced by Nihon Kotsu Co., Ltd. In addition, we commenced sales of Puremie for buses and taxis nationwide in February 2021. Puremie has already earned a high level of praise from the market, such as being included in the list of new technologies for daily life, compiled by Japan's Cabinet Office. Going forward, the Thermal Systems Business Group will help realize a sustainable society by providing products with environmental performance and creating safe, comfortable vehicle interiors.



## MOBILITY SYSTEMS

DENSO Integrated Report 2021

Overview by Product

## Realizing a society in which all people can move comfortably and with peace of mind (Quality of Mobility)

By combining advancements from the perspective of integrated systems, including sensors, semiconductors, ECUs, platforms, and software, and developments from the perspective of vehicles and end-users, we are building systems to link cars with greater society and provide optimized controls as we aim to help realize a safe, secure, and eco-friendly mobility society amid the diverse kinds of mobility available today.



Hirotsugu Takeuchi Head of Business Group

## **Relevant Focus Fields**

Non-Automotive Businesses (FA and AgTech)

Contribution to Long-term Policy (value of green and peace of mind)

> Green Peace of Mind



**Relevant SDGs** 

Business Activities	<ul> <li>Development and manufachead-up displays (HUDs), and Development and manufactelectronic toll collection (ET</li> <li>Development and manufacter products, such as vision sensors and ECUs for airba</li> <li>Development and manufacter products for airba</li> </ul>	ture of cockpit products such as hind center information displays aure of connected driving products a C) on-board devices, and road-to-vecture of automated driving (AD) and nsors, millimeter-wave radar senso gs, and driver status monitors (DSM ture of electronic products, includin	d platforms that support all aspects uman-machine interface (HMI) contra- and services, including telematics con thicle and vehicle-to-vehicle communi advanced driver assistance system ( s, sonar sensors, AD electronic contra As) ng powertrain ECUs and body ECUs eleration control devices for when dr	ol units, meters, trol units (TCUs), cation devices (ADAS)-related rol units (ECUs),
Strengths	Ability to undertake the de	velopment of products that draw o with outstanding levels of reliabili	nition, HMI, connected driving, and p n the competitive strengths of these cy and security by melding the unique	technologies
Main Products	Vision sensors Vision sensors	Willimeter-wave radar sensorsDescriptionDescriptionFull graphic meter	Fowertrain ECUs         TCUs	

**Ffforts** toward Quality

Software development for in-vehicle products is becoming more expansive, sophisticated, and complex following the advancement of the CASE revolution. Under these circumstances, we aim to realize a more robust quality control structure by leveraging synergies within the Mobility Systems Business Group, which has streamlined our electronics and software development functions. Based on an approach that prioritizes safety and quality above all else, we will prevent the recurrence of quality-related issues while considering the perspectives of our customers.

**Business Strategy** 

Growth Targets	To eliminate traffic accidents and realize carbon n will help drive DENSO's growth by expanding our domain and new domains that connect in-car and
Profitability	To address the increase in the size of systems as we by this expansion, we will work to enhance our deve through user experiences and promoting a shift to o
Differentiation	We possess system development capabilities tha optimal combination of mechanical parts, electro large-scale, cross-domain systems going forward.
Organizational Capabilities	To respond to the rapid evolution of the mobility technologies and actively pursue alliances with op and talent. In these ways, we will further strength capabilities.

### Fiscal 2021 Results

Decrease in Revenue Due to Market Slowdowns Caused by COVID-19

In fiscal 2021, revenue in the Mobility Systems Business fell 2.9% (2.0% on an actual basis that excludes foreign exchange rates and other factors) year on year, to ¥1,080.8 billion, despite a recovery from the substantial decrease in car sales in the first quarter due to market slowdowns caused by the COVID-19 pandemic.

Revenue (Billions of yen) 1,080.8 1.112.6

## Progress of Business Strategies

## Promoting Organizational Reforms to Respond to the Progression of CASE

In January 2021, we changed our name from the Mobility Electronics Business Group to the Mobility Systems Business Group. This move was made to better clarify that we are the organization supervising the development of computing systems for mobility, amid the evolution of automobiles from simply a means of transportation to a form of mobility. At the same time, we integrated the Connected Systems Business Development Division into our business group with the aim of achieving business growth and enhancing profits in the connected domain. We also established the new Information and Communications Technology Business Unit.

## Enhancing Products That Support Safe and Secure Mobility

With a view to achieving our growth targets, in fiscal 2021 we developed products that contribute to advanced driving assistance technologies, which offer peace of mind to passengers and enhance the safety performance of vehicles. These products have been installed in the new Lexus LS and the new Toyota Mirai fuel-cell vehicle, which were both launched in April 2021. In addition, with higher expectations regarding the safety equipment of vehicles that have already been sold, our retrofitted acceleration control devices for when drivers accidently step on the gas pedal were adopted in the brand-name products of five automobile manufacturers in fiscal 2021.

neutrality as a Tier 1 systems supplier to the mobility society, we business in not only the in-car domain but also the out-car d out-car domains.

vell as the increase in work hours to develop software brought about elopment efficiency by further improving the value of our products digital platforms. By doing so, we will boost our profitability.

hat can maximize the overall value of our systems through the onics, and software. Leveraging these capabilities, we will realize

society, we will carry out a full-scale in-house shift toward these optimal partners in an effort to secure the necessary technologies hen our cross-domain system and software development

### Resolving Social Issues through Our Businesses

Contributing to Enhanced Vehicle Safety Performance through Advanced Driver Assistance Technologies

Our newly developed products include LiDAR for detecting the shapes of surrounding vehicles and roads; a Locator Telescopic Camera that uses two types of cameras to detect the environment ahead of the vehicle; a Spatial Information Service Electronic Control Unit (SIS ECU) for accurately



identifying the position of the vehicle itself; and an Advanced Drive System Electronic Control Unit (ADS ECU) and Advanced Drive Extension Electronic Control Unit (ADX ECU) for high-speed processing of information delivered by these products. The SIS ECU, ADS ECU, and ADX ECU also support over-the-air software updates, which expand the functionality and improve the performance of vehicles after they have been sold to users.

These newly developed products have been adopted as part of Advanced Drive, an advanced driver assistance technology featured in the new Lexus LS and Toyota Mirai, which were both launched in April 2021. Advanced Drive assists drivers when driving on an expressway or other motor-vehicle-only roadway and features an on-board system that appropriately detects the situation, makes decisions, and assists driving under the driver's supervision according to actual traffic conditions. It can keep the vehicle in its lane, maintain the distance from other vehicles, navigate a lane split, change lanes, and pass other vehicles. To realize this kind of driver assistance technology, it is essential to improve the vehicle peripheral sensing performance, specify vehicle location in a highly accurate manner, and process sensor information at high speeds, which is exactly what these newly developed products are able to do. Through these products, we will contribute to advanced driver assistance technologies that offer peace of mind to passengers and enhance the safety performance of vehicles.



DENSO Integrated Report 2021 Overview by Product

## SENSOR SYSTEMS & SEMICONDUCTORS

## Leading the industry with semiconductor and sensing technologies with a view to realizing an eco-friendly, comfortable, and safe mobility society

We will streamline and thoroughly enhance our technological development of semiconductors (brain) and sensors (eyes) across all our major businesses in an effort to support innovation in automobiles. In addition, through the development of electronic elemental technologies that offer value optimized for the new mobility society, we will realize carbon neutrality and contribute to the realization of a society in which people can move safely and with peace of mind.



Hiroyuki Ina Head of Sensor Systems Business Unit & Semiconductors Business Unit

## **Relevant Focus Fields**

Non-Automotive Businesses (FA and AgTech)

Contribution to Long-term Policy (value of green and peace of mind)

Peace of Mind

Green



**Relevant SDGs** 

Business Activities	Development and manufacture of microelectronic devices, such as in-vehicle power semiconductors, semiconductor sensors, and integrated circuits (ICs).					
Strengths	<ul> <li>Extensive product lineup that spans technologies</li> <li>Advanced technological strengths ca</li> <li>Development capabilities in the vertic compact system products</li> </ul>	Ipable of in-house semiconductor ma	nufacturing			
	* DENSO proprietary integrated semiconductor de	evelopment, from semiconductors to ECUs and	d actuators			
Main Products	Power cards	Semiconductor sensors	Application-specific integrated circuit (ASIC)			

Efforts toward Quality

To respond to the recent quality-related issue and the rapid expansion of the electrification domain, we are taking steps to ascertain quality-related risks that cannot be understood based on a product's required specifications alone by working to better understand the environment in which customers use our products and giving greater consideration than ever before to customer perspectives. We are also reflecting what we have learned through this effort within our product design and manufacturing processes. By minimizing quality-related risks to the greatest extent possible in this manner, all of us in the Sensor Systems & Semiconductors Business Group are working diligently to restore DENSO quality under a "Customer First" approach.

## **Business Strategy**

Growth Targets	We will promote businesses related to electrificati businesses, we will develop products that anticipa Furthermore, we will thoroughly enhance the com which provide us with the source for realizing diffe growth and establish a competitive position in the
Profitability	Rather than promote development for each vehicl (core domains) and variation development (custom development efforts and expand our product line.
Differentiation	To respond to the evolution of systems, we will he conductors and deliver technologies and products large. To that end, we will continue to create elem ductor development process, that will serve as the
Organizational Capabilities	We will dramatically improve development process

## Fiscal 2021 Results

### Increase in Revenue Primarily from Sensors for xEVs Despite the Impact of COVID-19

Revenue in the Sensor Systems & Semiconductors Business Group increased 6.8% (6.9% on an actual basis that excludes foreign exchange rates and other factors) year on year, to ¥148.6 billion. This was the result of a recovery centered on sensors for Toyota xEVs starting from the third guarter, which helped offset the impact of market slowdowns caused by the COVID-19 pandemic.

Revenue (Billions of yen)				
FY2021	148.6			
FY2020	139.2			

## **Progress of Business Strategies**

## Strengthening the Electrification Domain from All Angles to Achieve Carbon Neutrality

We are promoting development in the electrification domain on an ongoing basis with the aim of achieving carbon neutrality. In the sensor business, we changed the name of the Sensor Business Unit to the Sensing System Business Unit in April 2021 in order to better align our focus with systems and our customers. With this new business unit, we are working to meet diverse customer needs by strengthening internal and external collaboration and expanding the scope of our sensing technologies. In the semiconductor business, to respond to the rapid expansion of the electrification domain, we are enhancing our development efficiency through DX efforts, which include promoting advanced modelbased development, and taking steps to generate resources. We are also moving forward with the development of next-generation power cards and application-specific integrated circuits (ASICs).

Furthermore, to address recent concerns over semiconductor shortages and respond to the natural disaster that struck a plant of one of our business partners, we have expanded our scope of responsibility so that we can better serve as the "home base" for in-vehicle semiconductors of the Toyota Group. We have also been promoting activities to provide emergency assistance and strengthening our BCP\* and disaster-preparation efforts, taking into account the entire supply chain. In these ways, we are continuing to fulfill our responsibility as a supplier.

\* BCPs: Business continuity plans. 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 promptly restore operations.

tion, advanced safety, and automated driving. To support such bate the needs of car manufacturers and the automobile market. npetitiveness of our semiconductor and sensing technologies, ferentiation. Through these efforts, we will realize sustainable ne in-car electronics field.

cle on an individual basis, we will clarify standardized platforms mized domains). By doing so, we will increase the efficiency of our ups.

help customers realize their aspirations through value-added semits that can be put to use in various systems and in society at nental technologies, starting with technologies for the semiconne source of our differentiation.

sses, enhance efficiency, and accelerate management.

## Resolving Social Issues through Our Businesses Promoting the Mass Production of Silicon Carbide Power Semiconductors for FCEVs

For many years, we have been pursuing the development of silicon carbide (SiC) power semiconductors, a key device for accelerating electrification. In 2018, we developed an in-vehicle SiC diode that was adopted in fuel-cell buses. Building on from that success, we recently developed and mass-produced a new in-vehicle SiC transistor that offers both the reliability and high performance needed under challenging in-vehicle



conditions by utilizing DENSO's unique structure and processing techniques, which incorporate trench gate\*1 MOSFET\*2 construction. With the development of this transistor, we have been able to create a new model of booster power module equipped with SiC diodes and transistors. This new model is about 30% smaller in volume and achieves roughly 70% less power loss compared with a conventional product that makes use of Si. helping to reduce the size of the booster power module and improve vehicle fuel efficiency. It has also been adopted in Toyota's new Mirai model. Going forward, we will expand the application of this technology to other xEVs as we strive to contribute to the realization of a carbon-free society.

\*1 Trench gate: A type of semiconductor structure in which trenches are carved into the wafer structure and gate electrodes are embedded in these trenches \*2 MOSFET: Metal-Oxide-Semiconductor Field-Effect Transistor



SiC power semiconductor wafer







Booster power module

Trench gate structure

DENSO's Value CEO CONTENTS PROLOGUE Growth Strategy MESSAGE Creation Story

DENSO Integrated Report 2021 Overview by Product

## INDUSTRIAL SOLUTIONS

## Enhancing the productivity of the Monozukuri (manufacturing) industry and improving quality of life

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



Head of Industrial Solutions Business Unit

## **Relevant Focus Fields**

Contribution to Long-term Policy (value of green and peace of mind)

Peace of Mind

Green

**Relevant SDGs** 



Business Activities	and industrial-use robots ■ Development and manuf ment and recognition sol	; acture of equipment for use by societ	xemplified by our automated equipment, modules, cy, including handy terminals and QR and RFID pay- ding access management systems, automated ystems, etc.)
Strengths	70 years since the Comp	5,	have served as DENSO's competitive edge over the uality, highly durable production assets such as the 80 factories across the globe
	Automated modules	Vertical articulated robots	Collaborative robots
Main Products	<b>6</b> 3		
	loT data servers	Barcode and 2D code handy terminals	QR solution services

Efforts toward Quality

In the automotive component business, DENSO has worked to establish the optimal quality assurance structure in accordance with the evolution of technology. Through this structure, DENSO has taken steps to create products that place top priority on safety. Going forward, we will make proposals for devices and solutions that leverage the quality and safety initiatives we have thoroughly refined through our on-site Monozukuri (manufacturing) operations at our 130 factories across the globe. With these proposals, we will make contributions to the overall Monozukuri industry.

	Growth Targets	In addition to lean automation, we will commercia establish it as a business pillar in the non-mobility	
-	Profitability	Throughout society, we provide flexible, waste- Monozukuri experience and techniques. In accor process and module rather than by individual ec further business expansion.	
	Differentiation	By melding the core technologies that we have desensor verification systems, and QR codes, with t cultivated as an FA "user" (DENSO CORPORATION through the unique perspectives of two DENSO coperations of our customers.	
	Organizational Capabilities	We established the new Industrial Solutions Busin Engineering divisions, which handle production ma FA Business Unit. This new business group will ac scale with the aim of realizing its mission of achie	

## **Progress of Business Strategies**

## Enhancing the Productivity of the Monozukuri (Manufacturing) Industry through FA System Products

In addition to labor shortages due to the declining birthrate and aging population and environmental issues such as CO<sub>2</sub> emissions from factories, the manufacturing industry is approaching a paradigm shift, which includes the need to respond to variable-type, variable-volume production to overcome the hardships of the so-called VUCA (volatility, uncertainty, complexity and ambiguity) era.

Under these circumstances, we developed the D Series process rationalization solution to serve as a set of new solutions for areas that involve a great deal of labor, including assembly, inspection, and distribution. Through the D Series, we have worked to refine our factories.

Additionally, with the aim of making our knowledge in and approach to Monozukuri more widely known, we opened the DENSO Lean Automation School in fiscal 2022. By communicating our approach to automation, which involves not simply the automation of processes but rather automation with the goal of optimizing the very way we make things, to an even larger audience, we will widen the scope of the manufacturing automation market and expand our business in that market. At the same time, we will help evolve Monozukuri into an industry where people can play an active, fulfilling, and dignified role.



D Series process rationalization solution

ialize eco-friendly *Monozukuri* (manufacturing) in an effort to tv field.

liminating lean automation created from our long-cultivated dance with customers' needs, we provide solution packages by uipment in a wide range of domains. By doing so, we aim to realize

developed as an FA "manufacturer" (Denso Wave), including robots, the automated technologies and improvement know-how we have N), we will provide FA system products that can only be proposed companies. These FA system products will cater to the frontline

iness Group by integrating the Machinery & Tools and Parts naterial supply and component manufacturing functions, with the ccelerate the popularization of its solutions on an even greater eving "green" and "peace of mind."

## Resolving Social Issues through Our Businesses

Controlling the Operation of Platform Doors with a New QR Code to Improve Safety at Train Stations

To help prevent accidents involving passengers falling from train station platforms, which have become a social issue, we developed an automatic opening and closing control system for platform doors that makes use of a new OR code.



On urban train lines, where the train lines of multiple railway operators are interconnected, it is necessary to control the opening and closing of only certain platform doors. Conventional opening and closing of platform doors performed by a human operator has become increasingly less common due to issues such as the 15-second loss in transportation capacity at each station as well as instances where the operator forgets to close the door.

With this newly developed control system, we integrated our automated recognition technologies and placement detection technologies, making it possible to accurately and flexibly control the opening and closing of platform doors in a manner that is not affected by weather or lighting. In addition, since the system's new QR code can be introduced simply by affixing it on train doors and without the need for expensive train modifications, there is a growing number of railway operators adopting this system across the Kanto, Kansai, and Chubu regions.

Going forward, we will continue to expand our business and contribute to society by developing new services in areas other than railway that leverage the unlimited potential of OR codes.



System for controlling the operation of platform doors

O Opening O Cle

DENSO's Value CEO CONTENTS PROLOGUE Growth Strategy MESSAGE Creation Story

DENSO Integrated Report 2021 Overview by Product

## FOOD VALUE CHAIN

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

Food is essential to human life. Together with our business partners, we will integrate the technologies for industrialization that we have cultivated in our automotive businesses, with a focus on the entire food value chain. While doing so, we will provide solutions that cater to each region of the world.



Head of Food Value Chain Business Development Division

Relevant Focus Fields	Contribution to Long-term Policy (value of green and peace of mind)		
Electrification			
Advanced Safety and Automated Driving	Green	Peace of Mind	
	Green	reace of Millio	

m Policy **Relevant SDGs** of mind)



Business Activities	<ul> <li>Manufacture and sale of turnkey solutions* for horticultural facilities (consulting and cloud services related to greenhouse materials, devices, and cultivation) as well as the provision of after-sales services</li> <li>Manufacture and sale of in-vehicle refrigeration units and compact mobile refrigeration units as well as the provision of after-sales services</li> </ul>
	* A lineup of products and services combined in an optimized way to enable all people involved in agriculture to produce crops in a stable manner
Strengths	<ul> <li>Proposal of optimal horticultural facility-related product combinations that integrate cutting-edge technologies from Europe and other regions advanced in agriculture to address the individual needs and issues facing agricultural producers</li> <li>Provision of high-quality cold chain products that meet a broad range of needs related to food delivery</li> </ul>
Main Products	Horticultural facility-related products (from left: products for large and medium-sized greenhouses and horticultural facilities as well as systems for controlling the environment of greenhouses in Japan)       Image: Controlling the environment of greenhouses in Japan)
	In-vehicle refrigeration units Compact mobile refrigeration units

Efforts toward Quality

We will realize optimized levels of quality and service in the field of horticultural facilities, drawing on the quality control methods that we have cultivated for many years in our automotive businesses. In addition, with the aim of ensuring the stable supply of safe food throughout the entire food value chain, we will collaborate with other companies within all processes from food production through to distribution and consumption to establish the necessary quality control methods for maximizing the value we offer to customers.

## **Business Strategy**

	Growth Targets	In the field of agriculture, we will work to expand glo with advanced technologies from Europe. We will al that cater to diverse market needs in the logistics fi ernment, and academia to provide solutions that of through the combination of widely used technologi
	Profitability	Together with Certhon Group, in which we investe on a global basis. In addition, we will work with Ya nesses that make use of such technologies as our duced into the market.
	Differentiation	Together with our partners in industry, governmen resolve issues and address needs by accurately as focus on the entire supply chain.
	Organizational Capabilities	We will build a sales structure in Japan and overse lished in May 2020. We will also accelerate the con nologies together with Certhon Group. Additionall distribution by establishing a structure for the dev partners in industry, government, and academia.

## Progress of Business Strategies

## Developing a Compact Mobile Refrigeration Unit Together with Yamato Transport

We have developed the compact mobile refrigeration unit D-mobico together with Yamato Transport and intend to begin the sale of this unit through DENSO Solution Japan Corporation. Yamato Transport has been using D-mobico in its delivery trucks since February 2021.

Following the recent expansion in the e-commerce market, there has been a growing need to deliver products at a controlled temperature, such as food and pharmaceuticals. Meanwhile, many delivery vehicles are unrefrigerated and require dry ice to move cold products, and this has led to the need for more efficient and sustainable delivery methods.

The newly developed D-mobico provides a solution to this issue. Being a compact, lightweight, and portable refrigerator, D-mobico can flexibly handle a variety of deliveries, as the shape and dimensions of its insulation box can be adjusted according to the intended use and cargo volume. Powered by a mobile battery, D-mobico does not require dry ice, nor does it draw energy from the vehicle's engine, to refrigerate its freight. This helps reduce CO<sub>2</sub> emissions and improves the delivery vehicle's fuel efficiency. Going forward, D-mobico will support the electrification of delivery vehicles with internal combustion engines.



lobally by integrating DENSO's technologies for industrialization also introduce newly developed compact mobile refrigeration units field. Furthermore, we will work with our partners in industry, govffer new value across the entire food supply chain by utilizing data gies such as QR codes and radio frequency identification (RFID).

ed in March 2020, we will expand the turnkey solution business 'amato Transport Co., Ltd. to develop cold chain solution busiur compact mobile refrigeration units, which were recently intro-

ent, and academia, we will develop and introduce solutions that scertaining the diverse food logistics field of the future with a

seas centered on DENSO AgriTech Solutions, Inc., which we estabonstruction of a framework for joint development of future techally, we will lead the way with innovation in the field of food evelopment of solutions that leverage DX in collaboration with our

## Resolving Social Issues through Our Businesses Creating Models for Horticultural Facilities That Resolve Issues in Food Distribution

As a means for resolving global social issues such as ensuring a stable food supply and addressing the declining agricultural workforce, we are striving to realize "smart agriculture," where humans and machines work together, through the utilization of robotic technologies and ICT.



At AgriD Inc., which was established with Asai Nursery, Inc. in 2018, we commenced the mass production and sale of tomatoes in March 2020. In addition, we are developing and working to verify such technologies as industrial process design and on-site management systems, automated harvesting systems, and automated transport systems, with the aim of realizing their practical application by fiscal 2023.

Through these efforts, not only are we pursuing high levels of productivity, we are also reducing the amount of heavy labor done by people. By doing so, we are realizing work environments that make it easier for women, the elderly, and people with disabilities. In this manner, we will help resolve the social issues of a declining agricultural workforce going forward.



Automated harvesting vstems

Automated transport

## Corporate Governance

## Basic Stance

DENSO recognizes the establishment of corporate governance as a priority initiative for achieving sustainable long-term increases in corporate performance in a fast-changing global market. Based on its Basic Policies on Corporate Governance, DENSO has adopted a corporate auditor system under which it has established the General Meeting of Shareholders, Board of Directors, Audit & Supervisory Board, and Accounting Auditors as statutory bodies. In addition to these legal functions, the Company has established various governance-related frameworks. At the same time, the Company provides information regarding its business conditions to its shareholders and other investors on an ongoing basis, thereby implementing sound, efficient, and transparent management.



Change in Corpora	2015	2016	2017	2018	2019	2020	2021	(Fiscal year 2022
	2015	2016	2017	2018	2019	2020	2021	2022
Number of officers	52	50	51	53	56	28	27	25
Number of members of the Board	14	13	13	9	7	8	8	8
Number of outside directors	2	2	2	2	2	3	3	3
Number of female directors						1	1	1
Number of Audit & Supervisory Board nembers	5	5	5	5	5	4	4	4
Number of outside Audit & Supervisory Board members	3	3	3	3	3	2	2	2
Number of female Audit & Supervisory Board members						1	1	1
Basic Policies on		June 2015						
Corporate Governance		Formulated						
	June 2014					April 2019	January 2021	·
	Board, who are responsible for management (decision-making and supervision), and senior executive directors (newly established position) and executive directors, who are responsible for the execution of business operations       "established position"         • Appointed outside directors       "established position"       "established position"					Changed title of "senior executive director" to "senior executive officer" Changed title of "executive director" to "executive officer"	<ul> <li>Integrated the position executive fellow, and s role of senior director</li> </ul>	
			June 2016			January 2020	March 2021	
Separation of manage- ment and execution		and Compensation Advisory     dent outside di       Council, comprising independent     as the chair of       outside directors, as an ad-hoc     Officer Nomina       committee that corresponds to the     and Compensation			Appointed indepen- dent outside director as the chair of the Officer Nomination and Compensation Advisory Council	<ul> <li>Changed the name of the Officer Nomination and Compensation Advisory Council to the Executive Nomination and Remuneration Council, adopting a new structure under which independent outside directors make up the majority and an independent outside director serves as chair</li> </ul>		
			April 2017			January 2021		
			<ul> <li>Reduced the number of appointed members of the Board</li> <li>Changed the timing of appointment of officers from the date of the General Meeting of Shareholders in June to April, which is the beginning of the fiscal year</li> </ul>			appointment of officers eneral Meeting of o April, which is the	executive officers and senior directors to	

une	2016	

ure	re (Fiscal year)							
17	2018	2019	2020	2021	2022			
51	53	56	28	27	25			
3	9	7	8	8	8			
2	2	2	3	3	3			
			1	1	1			
5	5	5	4	4	4			
3	3	3	2	2	2			
			1	1	1			
			April 2019	January 2021				
es between members of the management (decision-making ecutive directors (newly trive directors, who are f business operations			Changed title of "senior executive director" to "senior executive officer" Changed title of "executive director" to "executive officer"	<ul> <li>Integrated the positions of executive officer, executive fellow, and senior director into the role of senior director</li> </ul>				
2016			January 2020	March 2021				
Compe Icil, co de dir nittee inatio	d the Officer ensation Advi mprising inde ectors, as an that corresp n Committee tion Committe	sory ependent ad-hoc onds to the and the	<ul> <li>Appointed indepen- dent outside director as the chair of the Officer Nomination and Compensation Advisory Council</li> </ul>	<ul> <li>Changed the name of the Officer Nomination and Compensation Advisory Council to the Executive Nomination and Remuneration Council, adopting a new structure under which independent outside directors make up the majority and an independent outside director serves as chair</li> </ul>				
	April 2017			January 2021				
	the Board • Changed t from the d Shareholde	he timing of a ate of the Ge	appointed members of appointment of officers eneral Meeting of April, which is the year	Changed the appointm executive officers and January in conjunction our Companywide orga structure	senior directors to with the changes to			



# **Corporate** Governance

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## Efforts to Improve Corporate Governance

DENSO is working to evolve its corporate governance to realize sustainable increases in corporate value even amid a dramatically changing world. To that end, in addition to strengthening discussion on Companywide strategies, we have been appointing officers with a higher awareness of gender distinction and internationality while working to reduce the number of our overall officers. In January 2021, we took steps to make our organization more flexible by revising our corporate officer system (integrating the executive officer, executive fellow, and senior director positions into one senior director position). In these ways, we have been working to accelerate the speed of management decision-making and business execution.

Going forward, we will continue to implement sound, efficient, and transparent management including through the significant reduction of cross-shareholdings.

## Corporate Governance System -

Corporate Governance System and Principal Organizations DENSO has adopted a corporate auditor system under which it has established the General Meeting of Shareholders, Board of Directors, Audit & Supervisory Board, and Accounting Auditors as statutory bodies. 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 officers, 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 officers 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.

## 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.

#### Board of Directors

The Board of Directors resolves matters stipulated by laws and regulations, as well as matters of importance to the Company's decision-making. Where possible, the Board delegates authority to those in charge of business execution. This approach simultaneously accelerates execution and enables the Board to spend more time deliberating on management policies and strategies.

The Board of Directors meets once a month, in principle, and is composed of 12 members: eight directors (including three outside directors), two inside Audit & Supervisory Board members, and two outside Audit & Supervisory Board members. With respect to the independence of outside directors and outside Audit & Supervisory Board members, the Company has selected a total of five independent officers (three outside directors and two outside Audit & Supervisory Board members) based on the assumption that they fulfill the independence criteria stipulated by the Financial Instruments and Exchange Act.

Resolutions must be approved by a majority of the members present at a Board of Directors' meeting, and the meeting itself must be attended by a majority of directors. We have been enhancing our support structure for the outside directors to ensure the productive and efficient operation of the Board of Directors when making resolutions.

### Results of Board Meetings Held in Fiscal 2021

Number of meetings held 13

Attendance rate	Directors: 99% Audit & Supervisory Board members: 100%



### Overview of Deliberating Bodies on Business Execution

	Deliberating Bodies		
	Management Strategy Meeting	Management Deliberation Meeting	
Chairperson	President	President	
Composition	President, the heads of each business group and functional depart- ment, general managers, and Audit & Supervisory Board members	President, the heads of each business group and functional depart- ment, general managers, and Audit & Supervisory Board members	
Purpose	Hold strategic discussions from a medium- to long-term perspec- tive, focused on businesses, functions, and regions	C- Deliberate on important items related to the Company's overall management, starting with the agenda items at meetings of the Board of Directors. In addition, sharing important information reg ing business management and promptly utilizing such informatio facilitate swift business execution	
Number of meetings	34	32	

#### Support Structure for Outside Officers

When holding Board meetings, we provide outside directors and outside Audit & Supervisory Board members with explanations on important agenda items before the meetings with the aim of ensuring access to information between the inside and outside officers and maximizing the performance of our outside officers. In this way, we make concerted efforts to ensure the efficient operation of Board meetings. Furthermore, the senior executive officers provide preliminary explanations to the outside officers on a regular basis so that the outside officers can deepen their understanding regarding the details of our businesses.

In addition, we have established the Audit & Supervisory Board Office as an organization dedicated to supporting the Audit & Supervisory Board members in conducting their duties. The office reports the condition of audits at meetings of the Audit & Supervisory Board. Additionally, we hold meetings twice a year between the Audit & Supervisory Board members and the outside directors to exchange opinions, in addition to regular meetings of the Independent Officer Meeting. Through these means, we are striving to actively provide information to our outside officers as well as invigorate communication between them.

#### Structure for Business Execution

DENSO CORPORATION separates the functions of the Board of Directors, which conducts management oversight, and the executive directors, who handle business execution.

As bodies for deliberating important matters pertaining to business execution, the Company has established the Management Strategy Meeting and the Management Deliberation Meeting. These two bodies, together with the Board of Directors, are positioned as executive committees.

#### Management Oversight Function

Two inside Audit & Supervisory Board members and two outside Audit & Supervisory Board members with dedicated staff

Issues	
Enhancement of discussion and communication • Deepening discussion between Board members • Increasing opportunities for communication outside of Board meetings	Examine medium- Create op and outs
Role and responsibilities of the Board of Directors • Establishing the rule that medium- to long-term policies should be decided by the Board of Directors	<ul> <li>Clarify th and imple</li> </ul>
Operation of the Board of Directors • Invigorating the free exchange of opinions • Enhancing the exchange of opinions during meetings held online • Providing on-the-day explanations focused on the main points of the meeting	<ul> <li>Establish pating via</li> <li>Simplify of discussio</li> </ul>
Support for outside officers • Enhancing the understanding of DENSO's businesses through on-site observation • Sharing internal discussion processes before meetings • Sharing information on monthly business status, etc.	<ul> <li>Restart a</li> <li>Provide b</li> <li>Deliberat</li> <li>Distribute</li> <li>complem</li> </ul>

are responsible for monitoring the execution of duties by directors as well as the business operations and financial conditions of the Group.

In accordance with in-house regulations, the Internal Audit Department conducts internal audits on the legality, validity, and efficiency of the Company's operations. Based on the issues pointed out in these audits, each department of the Company is working to establish and subsequently enhance operational control and management systems. Audit & Supervisory Board members attend important meetings including meetings of the Board of Directors and audit directors' execution of their business duties through the exchange of information with the Internal Audit Department and Internal Control Department, as well as with the Accounting Auditors, thereby fulfilling their management oversight function.

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

DENSO has all Board members take a survey involving an evaluation of the operation of the Board of Directors, the agenda items discussed, the process for making resolutions, and support for outside officers. The Company also holds interviews with the inside officers with the aim of obtaining the frank opinions of Board members regarding issues and areas of improvement. The results of these surveys and interviews are discussed by the outside officers at meetings of the Independent Officer Meeting.

The issues and areas for improvement identified through these surveys and interviews are reported to the Board of Directors and shared between all members who attend Board meetings. By doing so, these surveys and interviews help enhance the effectiveness of the Board of Directors. The issues and measures for improvement for fiscal 2021, identified through these surveys and interviews, are as follows.

#### Measures for Improvement

the possibility of holding off-site meetings as a means to deepen discussion on to long-term strategies and DENSO's Great Cause as a compar pportunities for the exchange of opinions between the president, inside directors, ide directors

he positioning of reporting/decision-making of medium- to long-term strategies lement decisions by the Board of Directors

n an environment in which it is easy to exchange opinions freely, even when particiia the internet on-the-day explanations and allocate ample time for opinion exchanges and

and enhance on-site tours and inspections (examine the utilization of the internet) beforehand explanations of the discussion process at the Managemen tion Meeting, etc

te materials used at meetings of the Management Deliberation Meeting and nent such materials with beforehand explanations

### Approach to Balance and Diversity among Directors and Audit & Supervisory Board Members

The Board of Directors consists of members who are familiar with the management of each business and its pressing issues. The composition of the Board strikes a strong balance between expertise, experience, skills, and global perspectives, including those of the outside directors. For the Audit & Supervisory

Board, the Company selects persons who possess knowledge related to not only business management but also finance, accounting, and law. In this way, the Company aims to achieve a balance between diverse opinions and secure the necessary level of expertise to ensure that the Board of Directors functions properly.

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

Policy	Without consideration of gender or age, nominate directors and Audit & Supervisory Board members with an emphasis on diversity, including gender a internationality, and from the viewpoint of striking a balance between experience, skills, and expertise so as to promote accurate and swift decision-making.	
Procedures	1 The president and relevant directors listen to opinions based on various perspectives and select suitable candidates to serve as a member of the Board of Directors, comprehensively taking into account their background, personality, insight, and other factors. The Executive Nomination and Remuneration Council, which is chaired by an independent outside director and also has a majority of independent outside directors serving as its members, then holds debate on these candidates and lists the candidates for selection for the current fiscal year.	

2 • Directors are selected based on an informal resolution by the Board of Directors and deliberation at the General Meeting of Shareholders. Audit & Supervisory Board members are selected based on an informal resolution by the Board of Directors and deliberation at the General Meeting of Shareholders, with the consent of the Audit & Supervisory Board.

### Outside Directors and Outside Audit & Supervisory Board Members

Outside Directors	Reason for Appointment	Attendance at Meetings of the Board of Directors (Fiscal 2021)
George Olcott* George Olcott has managerial experience at foreign capital companies, including his experience as the head of the Tokyo Branch of a U.Kbased investment advisory company. He currently serves as a Guest Professor at Keio University, Faculty of Business and Commerce, specializing in human resource development and corporate governance in global management. Since assuming the position of Outside Director of the Company in June 2014, he has contributed to the improvement of the Company's corporate value from the perspective of global management. The Company appointed him as an Outside Director in the expectation that he will continue to provide insight that will be reflected in the Company's management.		13/13
Shigeki Kushida*	Shigeki Kushida has the experience of having led diverse activities toward the development and stability of the Japanese economy at Japan's central bank, which serves as the center of the Japanese economy, by filling the posts of Director-General and Executive Director of the Bank of Japan. He currently serves as Director, Representative Executive Officer & President at Japan Securities Finance Co., Ltd. The Company has appointed him as an Outside Director in the expectation that he will continue to apply his broad expertise in the global monetary economy in the Company's management.	13/13
Yuko Mitsuya*	Yuko Mitsuya has an abundance of experience and knowledge in many fields, having long been in management at several corporations and associations and filling the posts of officer and committee member at several sports associations. She currently serves in such positions as Outside Director, The Fukui Bank, Ltd.; Outside Director (Audit and Supervisory Committee Member), ENEOS Holdings, Inc.; and President, Japan Basketball Association. The Company has appointed her as an Outside Director in the expectation that she will continue to apply her abundance of corporate management-related expertise in the Company's management.	13/13
Outside Audit & Supervisory Board Members	Reason for Appointment	Attendance at Meetings of the Board of Directors and Audit & Supervisory Board (Fiscal 2021)
Yasuko Goto*	Yasuko Goto serves as a director and audit & supervisory committee member at Kyushu Railway Company. She has a broad range of experience as an administrator for the Ministry of Land, Infrastructure, Transport and Tourism as well as the vice governor of Yamagata Prefecture, the head of the JNTO New York Office, and the managing director of Kyushu Railway Company. She also has abundant insight on finance, accounting, and legal compliance as she currently serves in such roles as director and audit & supervisory committee member at Kyushu Railway Company and external audit & supervisory committee member at Shiseido Company, Limited. The Company has appointed her as an outside Audit & Supervisory Board member in the expectation that she will leverage her extensive experience and insight in the Company's auditing activities.	
Haruo Kitamura*	Haruo Kitamura serves as chief of Kitamura Certified Public Accountant Office. He has vast experience in corporate management at many corporations in addition to his extensive career and considerable knowledge as a certified public accountant. The Company has appointed him as an outside Audit & Supervisory Board member in the expectation that he will leverage his deep insight related to accounting and his years of experience in corporate management in the Company's auditing activities.	(Board of Directors) 13/13 (Audit & Supervisory Board) 15/15

\* 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, they must possess a wealth of

## Executive Compensation

Compensation System

In fiscal 2021, we introduced a restricted stock compensation plan for eligible directors, which is designed to have the eligible directors further share value with the shareholders and to

experience and knowledge in specialized areas such as corporate management, law, accounting, and finance and are required to be able to proactively make proposals, suggestions, and give opinions about management issues. The Company declares that five outside officers who meet the qualifications for independent director and Audit & Supervisory Board member are independent officers.

provide them with more incentives to enhance corporate value over the medium to long term. With the addition of this plan, our new system for the compensation of directors (excluding nonexecutive directors and outside directors; hereinafter, "eligible

directors") consists of basic compensation (fixed amount), a bonus (short-term incentive), and share-based compensation (medium- to long-term incentive). The ratios of basic compensation, bonus, and share-based compensation are set at roughly 60%, 30%, and 10%, respectively. Also, we will continue to monitor the impact of introducing share-based compensation and will consider increasing the ratio of share-based compensation accordingly.

Also, we do not have a system in place for retirement benefits and stock options.

#### (a) Determination policy and determination process

Regarding the policy on determining remuneration for directors (hereinafter, "determination policy"), the Company's Board of Directors adopts resolutions based on the content of deliberations by the Executive Nomination and Remuneration Council, which comprises a majority of independent outside directors.

The Company's compensation system for directors is designed to:

- · Facilitate initiatives to achieve medium- to long-term enhancement of corporate value and management from the perspective of shareholders
- Incentivize eligible directors to enhance business performance by linking the Company's performance with individual performance

The Company's compensation system for eligible directors consists of basic compensation and bonuses, which serve as a short-term incentive, as well as a restricted stock compensation plan, introduced in fiscal 2021, which serves as a medium- to long-term incentive.

Compensation payable to non-executive directors and outside directors comprises only basic compensation (fixed amount) to ensure independence from management.

#### Director Compensation System



## Compensation of Directors and Audit & Supervisory Board Members

Position	Total Compensation (¥ million)	Total Compensation by Type (¥ million)			Directors / Audit & Supervisory Board Members
	_	Basic	Bonus	Share-based compensation	
Directors (excluding outside directors)	360	256	90	14	6
Audit & Supervisory Board members excluding outside Audit & Supervisory Board members)	83	83	_	_	2
Outside directors	68	68	_		5

Note: The amounts above include the remuneration paid to Shoji Tsuzuki, who retired from the post of director at the conclusion of the 97th Ordinary General Meeting of Shareholders held on June 19, 2020.

Compensation payable to Audit & Supervisory Board members also comprises only basic compensation (fixed amount) based on the fact that their role includes the implementation of legal compliance audits.

Regarding compensation payable to directors, in accordance with the resolution adopted by the 97th Ordinary General Meeting of Shareholders held on June 19, 2020, the maximum amount of basic compensation is set at ¥1.0 billion (including compensation for outside directors of up to ¥150 million) and the maximum amount of share-based compensation is set at ¥200 million per year.

In accordance with the resolution adopted by the 91st Ordinary General Meeting of Shareholders held on June 19, 2014, the maximum amount of compensation payable to Audit & Supervisory Board members is set at ¥15 million per month.

The amount of compensation payable to directors and the compensation system itself are determined by the Executive Nomination and Remuneration Council, which is chaired by an independent outside director and whose majority consists of independent outside directors, from the viewpoint of ensuring objectivity, fairness, and transparency. The council comprises five members: Independent Outside Director Shigeki Kushida (chair), Independent Outside Director George Olcott, Independent Outside Director Yuko Mitsuya, Representative Director Koji Arima, and Audit & Supervisory Board Member Shingo Kuwamura.

The Board of Directors has adopted a resolution to entrust the determination of the total amount of compensation for the relevant fiscal year and the determination of the amount of compensation for each director to the Executive Nomination and Remuneration Council. The Executive Nomination and Remuneration Council deliberates on the officer compensation system and determines the amount of compensation for each

director in consideration of such factors as the Company's business results and the responsibilities and performance of said director.

Compensation for Audit & Supervisory Board members is determined through consultation by the Audit & Supervisory Board in consideration of the maximum amount of compensation payable stipulated by the resolution adopted by the General Meeting of Shareholders.

At the meetings of the Executive Nomination and Remuneration Council held in July and October 2020 and in February and April 2021, discussions were held on determining the amount of compensation for fiscal 2021.

Compensation payable to directors was determined with the consent of all members of the Executive Nomination and Remuneration Council.

The Board of Directors deems the details of determination to be in line with the determination policy due to the fact that the amount of compensation for each director was determined by the Executive Nomination and Remuneration Council, whose majority consists of independent outside directors.

## Main topics discussed by the Executive Nomination and Remuneration Council

Policy for and approach to the officer compensation system

• Level of compensation according to role and responsibilities

- Evaluation of performance indicators for fiscal 2021
- Evaluation of the assessment of individual performance
- Determination of the amount of compensation for each director

## (b) Determination method for each type of compensation

The level of compensation for directors and Audit & Supervisory Board members is determined each year after confirming its appropriateness by referring to levels of executive compensation paid by major manufacturers that are similar in size, industry, and business format to the Company according to data of an executive compensation survey conducted by an external research agency. Each type of compensation for eligible directors is outlined below.

## i) Basic compensation

Paid as monthly fixed compensation according to officer role

As of April 2021, the amount of basic compensation is determined in reflection of an individual performance assessment, which evaluates the performance and achievements of each officer.

## ii) Bonus

A bonus is paid based on the "bonus table" determined according to the degree of achievement of consolidated operating profit for the relevant fiscal year for which the reference amount of ¥320.0 billion was set in 2012. This amount was set as the amount of consolidated operating profit necessary for the Company's sustainable growth. The bonus is also paid based on an individual performance assessment, which evaluates the performance and achievements of each officer.

The "bonus table" is set in a manner such that if the degree of achievement of consolidated operating profit is 200% compared with the reference amount, the standard annual personal income will be roughly in the top 35% of the market, and if the degree of achievement of consolidated operating profit is 50% compared with the reference amount, the standard annual personal income will be roughly in the bottom 25% of the market. Consolidated operating profit for the fiscal year under review was ¥155.1 billion.

## iii) Share-based compensation

The Board of Directors has adopted a resolution on sharebased compensation in consideration of the maximum amount of share-based compensation payable (up to ¥200 million per year) determined by the 97th Ordinary General Meeting of Shareholders held on June 19, 2020. The main details of the share-based compensation are as follows.

Eligible persons	Directors of the Company (excluding non-executive directors and outside directors)	
Total amount of share-based compensation	Up to ¥200 million per year	
Amount of share-based compensation for each director	Determined each year considering factors such as the Company's business results and the responsibilities and achieve- ments of the director	
Class of shares to be allocated and method of allotment	Issue or disposal of shares of common stock (those with restrictions on transfer under the Allotment Agreement)	
Total number of shares to be allocated	Up to a total of 100,000 shares per year to eligible directors	
Amount to be paid	Determined by the Board of Directors based on the closing price of shares of common stock of the Company on the Tokyo Stock Exchange on the business day immediately preceding the date of each resolution of the Board of Directors, within a range that is not particularly advantageous to eligible directors	
Transfer restriction period	During the period predetermined by the Board of Directors, ranging from three years to 30 years from the allotment date. Under the Allotment Agreement, eligible directors must not dispose of the shares of the Company's common stock by transferring or creating a security right on the shares allotted or by other measures.	
Condition 1 for removal of transfer restrictions	Restrictions will be removed regarding the expiration of the transfer restriction period. However, the restrictions will also be removed in the event that the eligible director leaves the position due to the expiration of their term of office, their death, or other justifiable reason.	
Condition 2 for removal of transfer restrictions	If a proposal for restructuring the Company—such as a merger agreement whereby the Company will be an absorbed company to the merger, or a share exchange agreement or share transfer plan whereby the Company will become a wholly owned subsidiary of another party—is approved by the Company's General Meeting of Shareholders (or by the Company's Board of Directors if such organizational restructuring does not require approval of the General Meeting of Shareholders) during the transfer restriction period, the Company shall remove, based on a resolution of the Board of Directors, the transfer restriction of the allotted shares at a date prior to the effective date of the organizational restructuring. The number of such allotted shares subject to removal of the transfer restruction shall be reasonably determined in light of the period from the start date of the transfer restructuring.	
Acquisition by the Company without consideration	The Company will be able to acquire all allotted shares without consideration in the event of violations of laws and regulations, or other reasons specified by the Board of Directors, during the transfer restriction period.	

## Strategic Shareholdings -

### Basic Stance

To maintain and improve corporate value over the long term in a fast-changing global market, it is essential that we collaborate with outside parties, including promoting joint technological development with various other companies and maintaining and strengthening relationships with business partners. To that end, we hold the number of strategic shareholdings necessary for our business strategies.

### Details of Examination to Determine the Appropriateness of Strategic Shareholdings

Every year, the Board of Directors comprehensively determines the appropriateness of cross-shareholdings by examining the management significance of holding each individual stock, including in terms of promoting joint development and strengthening business collaboration, as well as whether the return on holding said stock (dividend payments, increased share prices, relevant business profit, etc.) is greater than the Company's weighted average cost of capital. The Company

### Shares Held for Purposes Other Than Pure Investments

Number of stocks lance sheet amounts

	Balance sheet amounts		
		Stocks for which the number of shares increased during the fiscal year under review	Stocks for which the number of shares decreased during the fiscal year under review
Unlisted shares	81 stocks ¥36,960 million (year-on-year change: ¥751 million)	3 stocks ¥2,357 million	7 stocks ¥1,813 million
Shares other than unlisted shares	29 stocks ¥721,652 million (year-on-year change: ¥335,325 million)		9 stocks ¥24,406 million

Note: The increase in stocks for which the number of shares rose is due to the acquisition of shares necessary for business strategies toward realizing the Group's sustainable growth.

## Establishing and Strengthening 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.

DENSO Basic Policies for Internal Control: https://www.denso.com/global/en/-/media/global/aboutus/sustainability/governance/management/management/ doc-internal-control-policy-2019-en.pdf



### Internal Reporting System

In accordance with the circumstances in each region of operation, the DENSO Group has set up internal reporting systems at its regional headquarters and 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-toface interaction. takes steps to reduce the number of cross-shareholdings in the event that the continued holding of such shares is no longer deemed rational through the above process.

## Standard for Exercising Voting Rights

DENSO believes that its investee companies should engage in management that emphasizes improving shareholder interest over the medium to long term, rather than pursuing shareholder returns only in the short term. Giving first and foremost priority to our investee companies that contribute to our profits, we exercise voting rights in an effort to help our investee companies realize sustainable growth and improve their corporate value over the medium to long term.

We comprehensively consider the merits of each item under examination regarding the exercising of votes based on our established internal guidelines. When necessary, we hold dialogues with our investee companies regarding the content of our proposals.

For example, at DENSO CORPORATION, we have established a Business Ethics Hotline that allows anonymous reporting; is independent from the normal chain of command; and is administered by outside attorneys and the Risk Management Promotion Department in accordance with Japan's Whistleblower Protection Act. This hotline can be used by all persons working at DENSO CORPORATION, including employees, temporary employees, and employees contracted from other companies, in addition to principal suppliers (300 companies). In fiscal 2021, the hotline received 74 consultations and reports regarding matters such as employment, labor, work environment, information management, business transactions, and accounting, all of which were addressed appropriately after staff investigated the situation and confirmed the facts.

Number of consulta-	Fiscal 2019	Fiscal 2020	Fiscal 2021
tions and reports received	89	130	74

## George Olcott Outside Director

Mr. Olcott has been serving as an outside

director at the Company since 2014.

He also teaches as a quest professor at Keio University, Faculty of Business and

Commerce.

## Outside Director

Mr. Kushida has been serving as an outside director at the Company since 2019. He also serves as president and representa tive executive officer at Japan Securities Finance Co., Ltd., and has experience work-

## What is your evaluation of DENSO's current corporate governance structure?

Kushida: I feel that DENSO is a company that has closely observed global trends, such as the revision to the Corporate Governance Code, and has taken steps to reinforce its governance in anticipation of such trends. The broad range of corporate organizational structures stipulated under the Companies Act are simply just that, structures, and this is why we are seeing various rules being added to the code that do not actually have a relationship with one particular structure. What is important with regard to corporate governance is not "structure" but rather "substance." Or, in other words, how an individual corporation endeavors to enhance its corporate governance. From this perspective, I personally feel that DENSO has made consistent, earnest efforts to enhance the substance of its governance.

Mitsuya: In the sports world, there is actually a "Governance Code for National Sport Federation Members," which calls for the establishment of targets for increasing the percentage of external members and women executives belonging to national sports federations. It truly depends on the organization whether to adopt an approach that prioritizes structure or one that prioritizes substance.

With that said, I believe that DENSO is a company that has intrinsically developed a motivation to strengthen its corporate governance. This means that DENSO views strengthening governance as a means to hedge risks and achieve sustainable growth. I therefore have a positive outlook regarding DENSO's level of commitment to governance. Olcott: I am now in my eighth year of serving as an outside director. At the time I was appointed to this position, I was one of the Company's first two independent outside directors. During the past seven years, governance at DENSO has undergone dramatic change. A good example of this is succession planning. Established in 2016, the Officer Nomination and Compensation Advisory Council (hereinafter, the former advisory council) is where we have spent the last two to three years identifying potential successors to the CEO and engaging in thorough debate as to career path and development for the candidates we identified. In these and other ways, I believe that DENSO is in the process of modernizing its approach to governance.

DENSO Integrated Report 2021 Corporate Governance





**Dialogue** with the Outside Directors

Establishing a More Effective Governance Structure to Enhance Corporate Value with a Focus on the **Turbulent Times Ahead** 

Japanese companies' corporate governance is being strengthened with the revision of Japan's Corporate Governance Code in June 2021, among other factors. We asked DENSO's three outside directors, who lead the way with the Company's governance reforms, to discuss these developments from their independent perspective.

Overview by Product

Corporate Governance

## Shiqeki Kushida

ing at the Bank of Japan.

## Yuko Mitsuya

Outside Director

Ms. Mitsuya has been serving as an outside director at the Company since 2019. She also serves as representative director of SORA Corporation and has a long history in the sports world.

Kushida: The former advisory council was reestablished as the Executive Nomination and Remuneration Council in 2021. Although the name of this body has changed, I have yet to see a substantial revision to its structure. The former advisory council was quite exceptional in terms of its advanced nature, and I believe its name was changed to better reflect this nature externally.

Mitsuya: Mr. Kushida has served as the chair of the former advisory council since fiscal 2020, helping to facilitate meaningful discussion. I believe the reestablishment of this council was due to the fact that it does not simply function as an advisory body to the Board of Directors. Rather, both in name and practice, the Executive Nomination and Remuneration Council is entrusted with actual decision-making. I view this as a significant step forward, as it showcases how DENSO gives priority to the judgment of its outside directors.

## What do you perceive to be issues for DENSO pertaining to corporate governance going forward?

Kushida: The original purpose of governance is to determine the future design of a company itself. I believe there is still capacity for the Board of Directors to hold deeper discussion on this matter.

Without a doubt, DENSO's strengths lie within the technological capabilities of its core businesses, and internal members of these businesses are naturally the ones who understand these strengths the most. When an issue is discovered, DENSO's dedication and ability to enact a swift, comprehensive response, almost instantaneously, from the top down is extremely impressive, as demonstrated by "Reborn21."

However, the situation surrounding the automotive industry is changing at an extraordinary rate. As no one is truly able to predict the future, DENSO cannot necessarily guarantee its own future as a company by simply building upon its existing technologies. For that reason, DENSO must be aware of elements other than technology and make use of external screening functions.

Mitsuya: Even during the COVID-19 pandemic and amid semiconductor shortages, which has been occurring since the fall of 2020, I have been extremely impressed with DENSO's

ability to manage the crisis as well as the speed of the Company's initial actions to respond to the states of emergency. However, there are no guarantees that relying on past successes will allow DENSO to endure this once-in-a-century paradigm shift. With this being the case, it is even more important for the Board of Directors to tackle external uncertainties head-on and deepen discussion accordingly. **Olcott:** While discussions around the fast-approaching CASE era have greatly increased over the past year, it is still imperative that the Board engage in broader conversations, focusing on how the automotive industry will look 10 years from now, the kind of competitive environment we will be operating in, the emergence of new competitors, as well as the resources the Company will need to survive and prosper in this different world. To preserve its competitive edge over the medium to long term, I believe DENSO needs to flexibly pursue partnerships with overseas companies as appropriate.

Moreover, regarding plans for developing future leaders, the skill set required for the Company's CEO in 10 years hence will not necessarily be the same as the one needed today. DENSO must therefore abandon the notion that a successor candidate should come from the group of Japanese male employees that joined the Company directly on graduation, which has formed the core management group hitherto. Mitsuya: While I personally do not believe that DENSO must change its current structure no matter what, it certainly would benefit the Company to hold discussions on further increasing the percentage of external members belonging to the Executive Nomination and Remuneration Council and the Board of Directors.

Olcott: I have been an outside director at listed Japanese companies since 2008. Over this time, I have witnessed the governance of Japanese companies undergo remarkable change. Today, corporate governance rules in Japan have converged considerably with those of the United Kingdom. Going forward, I believe Japanese companies will inevitably place more emphasis on incorporating outside members and perspectives, and therefore, DENSO should proceed with pertinent discussion today to prepare for this development in the future.

## How do you evaluate DENSO's new strategies concerning "green" and "peace of mind"?

Kushida: Firstly, with regard to "green," the automotive industry has traditionally maintained a high level of awareness regarding the need to reduce CO<sub>2</sub> emissions. However, since the announcement of the 2050 Carbon Neutral Declaration by the Japanese government, there has been even greater impetus to promote initiatives aimed at reducing CO<sub>2</sub> emissions. DENSO's recently established strategy for achieving carbon neutrality by 2035 serves as an extremely ambitious target. In light of this target, the Company needs to make various preparations in order to ensure the success of this strategy. Without an incentive system that goes beyond short-term economic logic, efforts toward achieving this strategy—which will require a substantial cost to

implement—will never fully get off the ground. DENSO will formulate more specific efforts toward achieving its carbonneutral strategy going forward, and it is our job as outside directors to thoroughly ascertain the effectiveness and consistency of such efforts. I believe the establishment of this strategy has provided us, as outside directors, with an important set of standards for evaluating DENSO's management. Olcott: The Company's conversations on carbon neutrality have in fact been developing over a period of many years. DENSO has been formulating business division-specific targets for reducing CO<sub>2</sub> emissions and been taking action accordingly. Recently, in its strategic thinking on the Company's business portfolio and capital allocation, the impact of changes in the portfolio on carbon emissions has become an important factor, not just the impact on the bottom line.

Mitsuya: For a Monozukuri (manufacturing) company like DENSO, discussions on how to utilize green energy and other eco-friendly technologies are unavoidable. At the moment, thermal power is essentially one of Japan's only sources of stable energy. For that reason, even if the development of electrified vehicles is prioritized, the environmental impact of producing the energy required to move these vehicles cannot be ignored. Determining how we should tackle this issue within this small island country is an extremely challenging task. Olcott: That being said, if DENSO is too inward-looking and focuses only on the domestic market, we will not be able to establish DENSO's—and, for that matter, Toyota's—technologies as global standards. Recently, DENSO has entered into an alliance with the U.S.-based Honeywell International, developing electric propulsion units to meet new aerospace needs. DENSO also boasts globally competitive technologies in the field of agriculture. Going forward, I believe DENSO must accelerate its global expansion by continuing to explore collaboration with optimal partners around the world.

Next, in regard to "peace of mind," DENSO has an extremely high level of prowess in terms of image recognition and other technologies. The Company is also able to offer competitive products in fields related to "peace of mind." However, DENSO's software development capabilities are still lacking, compared to its leading position in hardware. This will limit its abilities to play a leading role in developing key technologies in such areas as "connected" driving, where cloud engineering capabilities are so important. The lack of software engineering capabilities in areas such as cloud is an issue that generally affects all Japanese companies. In that sense, this is not a problem that can be resolved by the efforts of DENSO and the Toyota Group alone. Kushida: That is correct. Even with the technological capabilities of individual corporations, Japan will begin to fall behind in its response to this issue without government policies to provide support to these corporations. For automated driving in particular, it is relatively more difficult to collect and accumulate actual data from cars driving on public roads in Japan than it is overseas. If DENSO focuses its efforts overseas from the initial stages of developing a technology, it may very well lead to achieving the practical application of that technology in a shorter timeframe. In the generation to come,





it will become even more important for DENSO to cultivate integrated capabilities that are separate from its existing automotive technologies, including through the selection of optimal partners, as Mr. Olcott mentioned. Mitsuya: Although the DENSO-style approach of requiring the best possible quality within the software domain is admirable, in order to increase development speed, there are likely cases where it is best to discover bugs as you develop software and then fine-tune the software while making revisions after the fact. I feel that collaborating with exceptional startup companies will provide DENSO with a breakthrough for realizing such an approach to software development.

## In closing, could you please tell us how you aspire to enhance DENSO's corporate value in the future?

Kushida: From an overall perspective, DENSO is a company that adopts an extremely forward approach in addressing governance-related issues. I will work to further my understanding of DENSO's governance-related initiatives while providing a perspective that differs from that of officers in charge of business execution. I also aim to serve as a checkpoint for monitoring the progress of initiatives. In these ways, I hope to play a significant role in helping DENSO achieve sustainable growth in a rapidly changing business environment.

**Olcott:** The role of the outside director is not to formulate or execute corporate strategy. Rather, his or her role is to oversee the decision-making process at the Board. Our role is to agree upon DENSO's overall corporate mission and vision in order to ensure that the strategy to meet the Company's medium- to long-term goals is rational and achievable and that the Company has the resources to deliver the strategy, as well as to hold management accountable for achieving those goals. In order to do this, we need to understand the

competitive and technological environment that the Company operates in, and what that environment is likely to look like in the medium to long term. Consistency between this vision of the future and the Company's strategy will enable us to confirm that the Company will remain competitive, enhance corporate value, and be able to deliver the returns that are expected of its stakeholders, especially the shareholders.

DENSO's head office is located in the city of Kariya in Aichi Prefecture. At the General Meeting of Shareholders, you can feel the extraordinary level of local support DENSO receives from its shareholders, exemplifying the intimate links the Company has with the local community. Furthermore, DENSO's management maintains a close relationship with its employees, and they are extremely open in their communication with us. Building on its close relationship with local society and employees, I hope to assist DENSO, using my outsider's perspective, to continue to build links with shareholders and other important stakeholders.

Mitsuya: Being the frontrunner of the industrial world, the automotive industry is the one in which you can clearly see how quickly changes manifest themselves in these modern times. Automobiles were first developed in the second half of the 19th century. Comparing the circumstances then to those of today, you can gain a sense that we are in a completely different world. Moreover, the changes that will occur in the next 10 years will likely rival the changes that have occurred over the past 100. Giving consideration to this idea, there is a possibility that the work we engage in today may not even exist in five years' time. The outside directors, in addition to the Company's management, must understand this point and possess a sense of urgency. To that end, I will work to provide DENSO's management with more objective perspectives while maintaining a global awareness and external network from the independent standpoint of an outside director.

## Directors and Audit & Supervisory Board Members

(As of June 22, 2021)



## Representative Director, President & CEO Koji Arima (Date of birth: February 23, 1958)

Director

Kenichiro Ito

(Date of birth: October 1, 1962)

2019 Senior Executive Officer

Member of the Board

Akio Toyoda

George Olcott (Date of birth: May 7, 1955)

DENSO CORPORATION

2021 Director and Senior Executive Officer (current position)

(Date of birth: May 3, 1956) 1984 Joined Toyota Motor Corporation

2000 Member of the Board of Directors,

Outside Director Independent Officer

S.G. Warburg Securities London

Japan UBS Brinson 2000 Managing Director, Equity Capital Market,

1986 Joined S.G. Warburg & Co., Ltd.
1991 Director, S.G. Warburg & Co., Ltd.
1993 Executive Director, Equity Capital Market Group,

UBS Warburg Tokyo 2001 Judge Business School, University of Cambridge 2005 FME Teaching Fellow, Judge Business School,

1997 Head of Tokyo Branch, SBC Warburg
 1998 Vice President, LTCB-UBS-Brinson Asset Management
 1999 President, UBS Asset Management (Japan) President,

Toyota Motor Corporation 2002 Managing Director, Toyota Motor Corporation 2003 Senior Managing Director, Toyota Motor Corporation 2005 Executive Vice President, Toyota Motor Corporation

1985 Joined DENSO CORPORATION 2012 Executive Director, DENSO CORPORATION



- 2015 President & CEO, DENSO
- CORPORATION (current position)



## Representative Director Yukihiro Shinohara (Date of birth: March 9, 1960) Lucte or Dirth: March 9, 1960) 1982 Joined DENSO CORPORATION 2011 Executive Director, DENSO CORPORATION 2018 Senior Executive Director, DENSO CORPORATION 2019 Senior Executive Officer

- 2019 Senior Executive Officer, DENSO CORPORATION 2021 Representative Director and Senior Executive Officer, DENSO CORPORATION
  - (current position)



#### Yasushi Matsui (Date of birth: July 3, 1964) 1987 Joined DENSO CORPORATION 2014 Executive Director, DENSO CORPORATION 2019 Senior Executive Officer, DENSO CORPORATION

2021 Director and Senior Executive Officer, DENSO CORPORATION (current position)

## 2005 Outside Member of the Audit & Supervisory Board, Koyo Seiko Co., Ltd. (currently JTEKT CORPORATION)

- Koyo Seiko Co, Ltd. (Currently J EKI CORPORTION) 2006 Outside Audit & Supervisory Board Member, TOYOTA BOSHOKU CORPORATION 2009 President, Toyota Motor Corporation (current position) 2018 Chairman, Japan Automobile Manufacturers Association, bec. (current position) Inc. (current position)
- 2019 Director, Member of the Board, DENSO CORPORATION (current position)

## 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 Director, Member of the Board, DENSO CORPORATION
- (current position)
- 2015 Outside Director, The Dai-ichi Life Insurance Company, Limited
- 2016 Outside Director, BlueOptima Limited (current position) 2016 Outside Director, Dai-ichi Life Holdings, Inc.
- (current position)
- 2020 Outside Director, Kirin Holdings Company, Limited (current position)

## Outside Director Independent Officer Shiqeki Kushida

University of Cambridge 2008 Senior Fellow, Judge Business School, University of Cambridge

- (Date of birth: June 8, 1958)
- 1981 Joined Bank of Japan 2004 Branch Manager, Kochi Branch, Bank of Japan 2009 Director-General, Personnel and Corporate Affairs
- Department, Bank of Japan 2010 Director-General, Planning Department, Bank of Japan 2011 Branch Manager, Nagoya Branch, Bank of Japan

## Outside Director Independent Officer

- Yuko Mitsuya (Date of birth: July 29, 1958) 1981 Joined Hitachi, Ltd. 2007 Representative Director, PSY-fa Co., Ltd. 2014 Outside Audit & Supervisory Board Member
- ASICS Corporation 2015 Outside Director, Fujita Kanko Inc. 2015 Outside Director, Paloma Co., Ltd.

- 2013 Executive Director, Bank of Japan Entrusted Branch Manager, Nagoya Branch and Osaka Branch, Bank of Japan 2017 Senior Advisor, American Family life Assurance Company
- (currently Aflac Life Insurance Japan Ltd.)
- 2019 Director, Representative Executive Officer & President, Japan Securities Finance Co., Ltd. (current position) 2019 Director, Member of the Board,
- DENSO CORPORATION (current position)

2016 President, Japan Basketball Association (current position) 2018 Representative Director, SORA Corporation

- (current position) 2018 Outside Director and Audit and Supervisory Committee
- Member, JXTG Holdings, Inc. (current position) (currently ENEOS Holdings, Inc.) (current position) 2019 Director, Member of the Board, DENSO CORPORATION (current position)

## Audit & Supervisory Board Members



Shingo Kuwamura (Date of birth: August 16, 1959)

- 1982 Joined DENSO CORPORATION 2009 Executive Director, DENSO CORPORATION 2017 Senior Executive Director, DENSO CORPORATION 2019 Senior Executive Officer, DENSO CORPORATION 2021 Standing Audit & Supervisory Board Member
- (current position)





- IDBC Joined the Ministry of Transport
   IDBC Joined the Ministry of Transport
   Head, New York Office, Japan National Tourism Organization
   Stoce Governor, Yamagata Prefecture
   Director, Regional Transport Bureau Shinetsu Regions, Ministry of Land.
  - Transport and Tourism (MLIT) President, Policy Research Institute Transport and Tourism, MLIT 2013





2005 Outside Director, Sumisho Grainger C (currently MonotaRO Co., Ltd.) (curre 2006 Supervisory Director, MID REIT, Inc. (c Japan Metropolitan Fund Investment (current position)

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

Koji Arima	Excellent management prowess and leadersh
Yukihiro Shinohara	Knowledge gained through an abundance of Companywide projects
Kenichiro Ito	Knowledge gained through experience in cor
Yasushi Matsui	Knowledge gained through wide-ranging exp
Akio Toyoda	Abundant experience and extensive insight a
George Olcott	Relevant expertise as well as abundant exper
Shigeki Kushida	Wealth of experience leading activities that of on the global monetary economy
Yuko Mitsuya	Abundant experience in corporate managemember at several sports associations
Shingo Kuwamura	Broad expertise in the management of overs
Motomi Niwa	Managerial experience at overseas subsidiary ating departments
Yasuko Goto	Broad range of experience in administrative a finance, accounting, and compliance
Haruo Kitamura	High level of insight related to accounting as management



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

2018 Standing Audit & Supervisory Board Member DENSO CORPORATION (current position

Outside Audit & Supervisory Board Member Independent Officer

:	2015	Managing Director, Deputy General Manager of Railway Operations Headquarters and General Manager of Tourism Business Headquarters, Kyushu Railway Company
1	2017	Managing Director in charge of Finance Department,
		Kyushu Railway Company
of Hokuriku and	2018	Director, Audit & Supervisory Committee Member,
nfrastructure,		Kyushu Railway Company
	2019	External Audit & Supervisory Committee Member,
for Land, Infrastructure,		Shiseido Company, Limited (current position)
	2019	Outside Audit & Supervisory Board Member,
		DENSO CORPORATION (current position)

	2009	Outside Corporate Auditor, Yamaha Corporation
eishi Kyodo Jimusho	2010	Outside Director, Yamaha Corporation
	2015	Outside Corporate Auditor, ASMO Co., Ltd.
ountant		(currently DENSO CORPORATION)
ountant Office	2015	Outside Corporate Auditor, LEGAL CORPORATION (currently LeTech CORPORATION) (current position)
	2016	Outside Corporate Auditor, Toyo Aluminium K.K.
Co., Ltd.		(current position)
ent position)	2019	Outside Audit & Supervisory Board Member,
(currently		DENSO CORPORATION (current position)
nt Corporation)		

ship

experience in business operations and experience in promoting

prporate and regional management

perience in functional and operating departments

as a leader of the automotive industry

erience and deep insight related to corporate management

developed and stabilized the Japanese economy and extensive insight

nent and many other fields, including as an officer and committee

seas and domestic subsidiaries as well as in manufacturing departments

ry and extensive expertise gained from positions in functional and oper-

and corporate management as well as in-depth audit knowledge in

s a certified public accountant and vast experience in corporate

## **Risk Management**

## **Basic Stance**

To minimize the impact of constantly diversifying risks, DENSO is working to expand and strengthen its risk management structure. Specifically, we have divided matters that have the potential to damage our businesses into "risks," which refer to circumstances where such matters have yet to manifest, and "crises," which refer to states of emergency where such matters have manifested. Based on these classifications, we are focusing our efforts on implementing preventive measures, which stop risks before they occur, and swift and accurate initial-response and recovery measures, which minimize damage in the event a crisis occurs. Recently, DENSO has been facing a variety of risks the likes of

which it had previously never experienced. Since 2019, we have been dealing with the fallout from the quality-related issue, which has impacted the trust our customers place in us and has shaken our management foundation. Additionally, risks stemming from the external environment, such as the COVID-19 pandemic, tight supply-demand for production materials, and cyber terrorism, have had a major impact on our business activities.

In light of these circumstances, we have once again recognized risk management as an important management issue. Going forward, we will pursue dramatic reforms to our risk management structure in order to strengthen our response capabilities.

our businesses during normal times and measures to minimize

event of a crisis. Depending on the severity and level of urgency

of the situation, we assemble special countermeasure organiza-

In addition, we have created the Crisis Communication

Manual in order to respond promptly and accurately in the

tions to enact an agile response geared toward minimizing

damage during times of emergency.

#### Promotion Structure

DENSO has established the Risk Management Meeting, chaired by the chief risk officer (CRO), who is responsible for Groupwide risk management. The Risk Management Meeting is a Groupwide organization that confirms improvements to the Company's risk management structure and framework and discusses and determines the direction of important risk management activities based on the conditions and trends both inside and outside the Company. Through this organization, we are taking steps to strengthen measures to prevent damage to

#### Risk Management Structure (under normal circumstances)



damage

### 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 identified major risk items related to life, credit, property, and business activities based on frequency of occurrence, level of impact, and the surrounding business environment. 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. In particular, from 2021 DENSO is identifying risks toward which it invests resources to promote countermeasures as "key risk items." The Company has also established plans and targets toward further enhancing its crisis management, and the progress made toward these plans and targets is reported to the Risk Management Meeting. At the same time, DENSO has been incorporating risk management into Companywide targets, and the status of risk management activities is now also confirmed by the Board of Directors.

Additionally, for fiscal 2022 the Company has determined 42 major risk items and 11 key risk items. DENSO revises these major risk and key 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

Also, in 2020 DENSO established the Risk Management Promotion Department, which serves as an independent

organization that oversees the DENSO Group on a crossorganizational basis in order to steadily promote risk management. In 2021, the Company established the Economic Security Department with the aim of strengthening its internal preparedness in response to growing economic security risks, such

as restrictions on transactions between companies stemming

from economic power struggles between nations.

### Risk Map



### Examples of Response to Key Risks Strengthening Our Risk Prevention and Initial-Response Measures and Formulating BCPs\*

Corporations have been facing an increasing number of serious risks recently. For example, in addition to the progression of global warming, there are concerns over the frequent occurrence and greater severity of natural disasters caused by climate change. Furthermore, we are currently seeing a surge in unprecedented risks such as the spread of COVID-19 and rising geopolitical risks.

Under these circumstances, while placing the most importance on protecting people's lives, it is imperative that we are able to swiftly recover our business operations in the event an emergency occurs and take steps to minimize any damage it may cause to our businesses. To that end, we have commenced the formulation of BCPs from the perspective of business continuity management. We are also taking action in such ways as creating emergency situation manuals and promoting countermeasures for minimizing the impact from disasters.

As there are a great deal of risk factors within the supply chain that could cause component supply issues, particularly natural disasters, geopolitical risks, and incidents and other emergencies, it is extremely important that we clarify our methods for responding to these kinds of issues within our supply chain.

#### Measures to Combat Infectious Diseases

In the event there is an outbreak or spread of an infectious disease, we are formulating action plans to ensure that our response headquarters can implement swift and accurate decision-making. These plans work to make such decisionmaking possible by outlining basic policies and response measures based on anticipated damages as well as by clarifying the role of each division. In the case the spread of an infectious disease becomes severe, we will promote measures to combat the spread while placing the utmost priority on ensuring the safety of our employees and their families. At the same time, we will pursue all avenues to implement the best response possible in order to maintain business continuity.

In our response to the COVID-19 pandemic, we promptly established the COVID-19 Response Headquarters, led by the

#### Enhancing Our Response to Quality-related Issues—Building a Robust Foundation of Quality through the Rigorous Enforcement of the "Three Pillars of Recommitment to Quality"

DENSO has long positioned "quality first" as its starting point. However, in 2019 the largest-ever quality-related issue in DENSO's history occurred. Taking this situation extremely seriously, al DENSO employees have recommitted themselves to "DENSO Quality First" with a strong determination and readiness. With this determination and readiness, we adopted and are making Groupwide efforts toward the "three pillars of recommitment to quality," **CR35** which clarify issues from various angles, including technologies, frameworks, management, and corporate culture. Examples of Initiatives

• We conduct cross-organizational, comprehensive inspections of products under development in order to thoroughly uncover potential risks and eliminate technical issues. In addition, we are moving forward with efforts to shore up our fundamental quality technologies in response to future

#### Reinforcing Our Information Security Structure with a Focus on a "Connected Society"

Following the progression of automated driving, IoT, and other innovative technologies, promoting efforts to respond to cyber risks facing cars and production facilities has become an extremely important issue. In addition, with the increase in remote working and online conferences stemming from the COVID-19 pandemic, the threat of information security risks has become increasingly more severe. To that extent, we are developing technologies that protect in-vehicle products, such as advanced driver support and automated driving systems, from cyberattacks to ensure that people can drive cars safely and with peace of mind. We are also establishing a unique framework for ensuring that such technologies are steadily installed in vehicles. Furthermore, we are reinforcing security measures

To that end, in response to the risk of delays or stoppages in the supply of components from suppliers, which could lead to the delay in or suspension of our production activities and the delivery of products to customers, we are striving to enhance our risk resilience by strengthening our initial-response measures. While we have in place certain measures to secure inventories of such materials as semiconductors and resins, in light of the tightening supply-demand of such materials in 2020, we will examine new ways of securing a safe and appropriate level of inventory, based on maintaining the trust-based relationships we have cultivated with our suppliers and customers. This in turn should help us secure a stable supply of materials going forward. Furthermore, rather than pursuing a specified supply framework that is limited to materials from only certain regions, we will examine a standardized supply framework that enables us to receive materials from anywhere across the globe. In these ways, we will establish a stable supply system.

\* BCPs: Business continuity plans. 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 promptly restore operations

CRO, when the virus first started to spread. Prioritizing the safety of our employees and their families, this response headquarters has been examining countermeasures and providing direction on how to prevent the further spread of the virus and minimize its impact on our businesses. At the same time, we have been holding conferences on countermeasures with each regional headquarters in order to collect information on the situation and needs in each country and region of operation in real time. In addition, we are thoroughly reinforcing basic measures to prevent infections while promoting measures such as off-peak commuting and working from home. Going forward, we will continue to collaborate on a global basis in response to this pandemic to ensure we can overcome the crisis it has caused.

- oriented technological domains such as CASE
- To enhance the quality of our software, we are promoting automation and labor-saving activities by introducing tools throughout the entire course of development, from upstream to downstream.
- To further improve our quality assurance systems within each process, we are reconfirming the basics of manufacturing itself and working to thoroughly enhance and fully ensure compliance with operational manuals. We are also promoting activities to enhance the reliability of all processes, which seek to make systematic improvements. At the same time, in the unlikely event that a defective product makes its way through to the customer, we are establishing a route-tracking system to minimize any inconvenience this may cause our customers.

toward internal/external networks, production lines, and other facilities, and stepping up educational activities geared toward improving our employees' information security literacy.

Meanwhile, we expect to accumulate various information assets internally as a result of progress toward a "connected society," and these assets will be used in a large number of company divisions. To ensure that the way we use information assets does not infringe upon the rights and interests of the information provider, we are working to forecast risks from a broad range of perspectives, including contract conditions and adherence to laws and regulations, formulate relevant rules, and establish a structure to appropriately manage and operate these assets.

CEO

MESSAGE

## 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 employees' fair and faithful conduct that embodies the highest ethical standards.

Based on this recognition, in 2006 we adopted the Code of Conduct for DENSO Group Associates, which clearly indicates the standards of conduct for each and every employee. In training and at workplace conferences, we utilize the Code for raising employees' awareness of compliance, 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**

In 1997, DENSO created a Business Ethics and Compliance Committee chaired by a director to provide oversight in that area (currently the Risk Management Meeting). We have also installed committee structures, such as the Compliance Committee, and compliance promotion officers, such as compliance leaders, at the regional headquarters of each region of our collective global base. In doing so, we are building global systems that promote compliance, while at the same time promoting the development of organizational structures that take differing regional characteristics into consideration, introducing and operating reporting systems, and pursuing enlightenment activities.

## **Specific Initiatives**

## Educational and Awareness Activities

DENSO implements various educational and enlightenment activities for employees on an ongoing basis with the aim of enhancing their overall awareness of compliance matters.

In Japan, we carry out educational and enlightenment activities related to compliance, including position-based training, various e-learning programs, and the "Business Ethics Month" (every October). We also roll out similar activities for employees in each region of operations, centered on our regional headquarters.

### Inspection and Improvement of Activities

DENSO 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 when necessary, and steps are taken to prevent a recurrence of the issue.

For example, DENSO CORPORATION holds a sustainability survey every year in order to gain an understanding on the extent to which compliance-related measures have taken hold and on potential compliance risks.

### Response to Antitrust Laws

In February 2010, the U.S.-based subsidiary DENSO International America was investigated by the U.S. Department of Justice. Since then, we have established the Antitrust Laws Compliance Committee, chaired by the representative director. Under the guidance and supervision of this committee, we have endeavored to reinstitute strict compliance with the Antitrust Laws across the entire DENSO Group. These efforts have included ensuring strict adherence to laws and regulations, strengthening education about relevant rules, and conducting more precise audits regarding legal compliance.

### Response to Anti-Bribery Laws

DENSO formulated the "Global Anti-Bribery Policy" to serve as its basic approach to preventing bribery. At the same time, the Company established the Compliance and Anti-Bribery Committee, which is chaired by a relevant Company director. This committee takes the lead and provides supervision on the formulation of bribery prevention rules and the promotion of employee awareness and education measures through e-learning. We also have Sustainability Guidelines for Suppliers in place to prevent bribery between suppliers and third parties. In these ways, we are working to thoroughly prevent bribery throughout the supply chain.

## Response to Tax Compliance

DENSO has established the "Global Tax Policy" to meet its social responsibility through proper tax payment. Under this policy, we actively engage in activities for tax compliance on a Groupwide basis, such as providing training for employees and abiding by rules for cross-border transactions.



https://www.de governance/compliance/

Please visit our corporate website for information on tax governance. https://www.denso.com/gld governance/tax-policy



# Corporate Data

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## Facts & Figures

DENSO Integrated Report 2021

Corporate Data

## Financial Highlights

## Revenue / Operating Profit / Operating Margin



Total Assets / Equity Attributable to Owners of the Parent Company (Billions of yen)

8,000



Total assets Equity attributable to owners of the parent company

## EPS / Cash Dividends per Share / Dividend Payout Ratio



EPS (left scale) Cash dividends per share (left scale) Dividend payout ratio (right scale)

Please see the link below for more financial information. ttps://www.denso.com/global/en/-/media/global/about-us/investors/annual-report/2021/2021-financial-section.pd

Profit Attributable to Owners of the Parent Company





Interest-bearing debt (left scale) EBITDA (left scale) Interest-bearing debt to EBITDA ratio (right scale)

\*1 Interest-bearing debt = Short-term loans and short-term bonds (including longterm loans to be repaid within one year) + Long-term loans and long-term bonds \*2 EBITDA = Operating profit + Depreciation

Amount of Treasury Stock Acquired / Total Dividend Amount / Total Return Ratio (Billions of yen) (%) 120 200 108.5 150 60 100 86.7% 18 19 20 21 (FY)



■ Total dividend amount (left scale) ◆ Total return ratio (right scale)

## Non-Financial Highlights





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



No. of patents held in Japan (left scale) No. of patents held overseas (left scale) • No. of patent applications filed in Japan and overseas (right scale)

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







Ratio of female employees in managerial positions (right scale)

CONTENTS	PROLOGUE	CEO MESSAGE	DENSO's Value Creation Story	Growth Strate

## 10-Year Data

		Japanese	GAAP	IFRS				IFRS			Billions of yen
	(FY)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Financial Data	Revenue Total	3,154.6	3,580.9	4,095.0	4,309.8	4,524.5	4,527.1	5,108.3	5,362.8	5,153.5	4,936.7
	By Region*1 Japan	1,640.0	1,808.9	1,895.5		1,801.5	1,871.8	2,140.7	2,284.2	2,313.0	2,280.7
	North America	504.1	625.0	799.4	942.3	1,081.1	1,050.5	1,122.8	1,182.0	1,145.2	999.9
	Europe	373.2	348.8	470.5	524.8	568.2	550.2	620.2	609.4	548.3	482.3
	Asia	579.8	734.5	855.4	930.8	1,014.7	989.5	1,146.0	1,215.1	1,086.9	1,134.1
	Others	57.6	63.8	74.1	73.5	59.0	65.1	78.5	72.0	60.0	39.8
	By Customer OEM	2,813.5	3,220.0	3,639.5	3,830.7	4,048.2	4,061.8	4,521.4	4,762.3	4,558.7	4,347.0
	Toyota Group	1,549.4	1,832.0	1,995.8	2,007.1	2,047.5	2,075.0	2,300.6	2,484.7	2,456.9	2,499.1
	Ratio of revenue from Toyota Group	1,545.4	1,052.0	1,995.0	2,007.1	2,047.5	2,075.0	2,500.0	2,404.7	2,450.5	2,455.1
	transactions to total revenue	49.1%	51.2%	48.7%	46.6%	45.3%	45.8%	45.0%	46.3%	47.7%	50.6%
	After market and non-automotive	341.1	360.9	455.5	479.1	476.3	465.3	586.9	600.5	594.8	589.7
	Operating Profit	160.7	262.4	371.4	331.4	315.7	330.6	412.7	316.2	61.1	155.1
	Operating Margin	5.1%	7.3%	9.1%	7.7%	7.0%	7.3%	8.1%	5.9%	1.2%	3.1%
	Profit Attributable to Owners of the Parent Company	89.3	181.7	277.2		244.3	257.6	320.6	254.5	68.1	125.1
	Return on Equity (ROE)	4.5%	8.4%	11.5%	8.4%	7.6%	8.0%	9.3%	7.1%	1.9%	3.4%
	Capital Expenditures	179.4	230.6	324.1	354.2	334.1	337.4	347.2	416.8	436.5	374.3
	Depreciation	180.6	181.1	197.2	220.1	236.8	241.1	268.6	287.3	302.1	323.0
	Ratio of Depreciation to Revenue	5.7%	5.1%	4.8%	5.1%	5.2%	5.3%	5.3%	5.4%	5.9%	6.5%
	RED Expenditure	298.4	335.5	368.7	396.4	399.3	409.2		497.4	507.8	492.0
	Ratio of R&D Expenditure to Revenue	9.5%	9.4%	9.0%	9.2%	8.8%	9.0%	8.8%	9.3%	9.9%	10.0%
	Total Dividend Amount	37.1	51.2	83.7	<u></u>	95.3	94.6	101.4	108.9	108.5	108.5
	Amount of Treasury Stock Acquired		27.5			27.7	30.0	26.5		0	0
	Earnings per Share (EPS) (yen)		226.59	348.05		307.19	326.32	410.45	326.47	87.89	161.39
	Cash Dividends per Share (yen)	46	64	105	<u>524.01</u> 	120	120	130	140	140	101.39
	Dividend Payout Ratio	40 41.5%	28.2%	30.2%	34.0%	39.1%	36.8%	31.7%	42.9%	159.3%	86.7%
	Total Return Ratio										
		41.5%	43.3%	30.2%		50.4%	48.4%	39.9%	54.0%	159.3%	86.7%
	Stock Price (yen)	2,765	3,985	4,948	5,483	4,524	4,897	5,820	4,317	3,491	7,347
	Dividend Yield	1.7%	1.6%	2.1%		2.7%	2.5%	2.2%	3.2%	4.0%	1.9%
	Price Earnings Ratio (PER) (times)		17.6	14.2		14.7	15.0	14.2	13.2	39.7	45.5
	Price Book-Value Ratio (PBR) (times)	1.1	1.4	1.5		1.1	1.2	1.3	0.9	0.8	1.5
	Net Cash Provided by Operating Activities (A)	176.7	374.8	471.2		552.9	467.8	558.0	533.5	595.3	437.2
	Net Cash Used in Investing Activities (B)	(271.2)	(269.2)	(376.0)	(111.5)	(544.8)	(108.0)	(529.1)	(514.7)	(447.4)	(395.9)
	Free Cash Flow (A+B)	(94.6)	105.6	95.2	271.7	8.0	359.7	28.9	18.8	147.9	41.3
	Net Cash Provided by (Used in) Financing Activities	78.8	(98.5)	(176.0)	(135.7)	(104.7)	(240.5)	(40.3)	(92.2)	(240.9)	238.7
	Cash and Cash Equivalents at End of Year	665.4	707.3	641.7	792.4	672.5	793.6	783.3	711.6	597.8	897.4
	Cash on Hand	1,022.1	1,095.2	1,034.1	944.0	876.7	858.4	918.3	880.8	711.6	911.7
	Interest-Bearing Debt	523.1	507.5	435.7	447.2	476.6	350.3	473.9	550.2	465.4	864.2
	Equity Attributable to Owners of the Parent Company	2,009.0	2,300.1	2,799.9	3,327.9	3,123.6	3,312.7	3,598.3	3,595.7	3,397.1	3,891.0
	Total Assets	3,607.7	3,979.1	4,642.1	5,283.3	5,042.9	5,150.8	5,764.4	5,792.4	5,651.8	6,767.7
	Ratio of Equity Attributable to Owners of the Parent Company to Total Assets	55.7%	57.8%	60.3%	63.0%	61.9%	64.3%	62.4%	62.1%	60.1%	E7 E0/
	Company to Total Assets	33.7%	57.0%	00.5%	03.0%	01.9%	04.3%	02.4%	02.1%	00.1%	57.5%
Non	Number of Employees	126.020	122.270	120.072	1/2 74/		154.400	160.010	171 000	170.022	160 201
Non- Financial Data	Number of Employees Local	126,036	132,276	139,842	146,714	151,775	154,493	168,813	171,992	170,932	168,391
Tindheldi Data		62,100	67,525	74,289	81,060	85,464	86,892	94,209	95,222	93,343	89,124
	Non-Consolidated	38,323	38,385	38,581		38,489	38,914	39,315	45,304	45,280	46,272
	Ratio of Female Employees (Non-Consolidated)		11.4%	11.6%		12.3%	12.7%	13.1%	13.9%	14.2%	14.6%
	Number of Female Employees in Managerial Positions		30	33	40	46	53	61	86	103	113
	Ratio of Female Employees in Managerial Positions		0.5%	0.5%	0.6%	0.7%	0.8%	0.9%	1.1%	1.3%	1.5%
	Ratio of Local Employees in Leadership Roles at Overseas Bases	26%	30%	31%	33%	33%	33%	28%	32%	30%	30%
	CO <sub>2</sub> Emissions per Unit <sup>*2</sup> (Non-Consolidated) (Index)		100	99	97	88	80	2 <u>0</u> //20 //20 //20 //20 //20 //20 //20 //	<u></u>	63	60
	CO <sub>2</sub> Emissions per Unit <sup>(</sup> ron <sup>2</sup> -Consolidated) (index) CO <sub>2</sub> Emissions per Unit <sup>*2</sup> (Domestic and Overseas Group) (Index)		100	85	<u>97</u> 80	76	73	68	65	60	60
	In-House Power Generation Ratio (Non-Consolidated)* <sup>3</sup>	40.7%	37.5%	34.3%	32.9%	38.0%	43.9%	45.5%	45.6%	46.0%	44.8%
	Amount of renewable energy introduced	40.7%	J1.370	24.2%	32.9%_		43.9%	40.0%	43.0%	40.0%	44.0%
	(non-consolidated) (kW)	_	_	_	_	_	_	_	_	_	2,347
											-,
Exchange Rate		79	83	100	110	120	108	111	111	109	106

\*1 The countries and regions included in "by region" have changed as follows. Fiscal 2012–fiscal 2015: Japan, North America, Europe, Australia, and Others; fiscal 2016 and onward: Japan, North America, Europe, Asia, and Others \*2 Per unit = CO<sub>2</sub> emissions/Revenue (indexed to fiscal 2013 as 100%)

\*3 Ratio of electricity generated through cogeneration to total electricity used

Foundation for Creating New Value

## Billions of yen

## Company Overview and Stock Information

(As of March 31, 2021)

## **Company Profile**

Company Name	DENSO CORPORATION
Established	December 16, 1949
Capital	¥187.5 billion
Head Office	1-1, Showa-cho, Kariya, Aichi 448-8661, Japan
Employees	Consolidated basis: 168,391 Non-consolidated basis: 46,272
Consolidated Subsidiaries	200 (Japan 64, North America 23, Europe 32, Asia 74, Others 7)
Companies Accounted for by the Equity Method	88 (Japan 24, North America 11, Europe 17, Asia 32, Others 4)
Fiscal Year	From April 1 to March 31
Ordinary General Meeting of Shareholders	June
Share Trading Unit	100 shares
Number of Shares Issued	774,900,899 shares (excluding DENSO CORPORATION owning 13,044,052 shares of treasury stock)
Number of Shareholders	68,561 (including DENSO CORPORATION owning treasury stock)
Securities Identification Code	6902
Stock Exchange Listings	Tokyo, Nagoya

	Number of shares held (thousands)	Voting share (%)
Toyota Motor Corporation	188,949	24.38
Toyota Industries Corporation	69,373	8.95
The Master Trust Bank of Japan, Ltd. (Trust Account)	59,882	7.72
Custody Bank of Japan, Ltd. (trust account)	33,787	4.36
Towa Realestate Co., Ltd.	33,309	4.29
Nippon Life Insurance Company (Standing proxy: The Master Trust Bank of Japan, Ltd.)	21,645	2.79
DENSO Employees' Shareholding Association	13,950	1.80
Aisin Seiki Co., Ltd.	12,518	1.61
Custody Bank of Japan, Ltd. (trust account 7)	8,150	1.05
Meiji Yasuda Life Insurance Company	7,967	1.02

Notes: 1. The Company holds treasury stock of 13,044 thousand shares but is excluded from the list of major shareholders above. 2. "Ratio of Voting Rights" is calculated after excluding the treasury stock of 13,044 thousand shares.

3. "Investment in the Company" by Toyota Industries Corporation is stated after excluding the Company's 6,798 thousand shares (ratio of voting rights: 0.87%), which are contributed as a trust asset for employees' retirement benefits by Toyota Industries Corporation. (These shares are registered in the name of "Custody Bank of Japan, Ltd. (Trust Account of Toyota Industries Corporation Employees' Retirement Benefits for the Re-trust by Sumitomo Mitsui Trust Bank, Limited)," and Toyota Industries Corporation reserves the right of instruction in exercising the shares' voting rights.)

4. Aisin Seiki Co., Ltd. changed its trade name to AISIN CORPORATION on April 1, 2021.

Breakdown of Shareholders









## ESG-related External Evaluation

DENSO has received high external evaluation in terms of its ESG initiatives, including being consistently selected for inclusion in indices in Japan and overseas.



2021 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX



FTSE4Good

**FTSE Blossom** 

Japan

VIGEO, EIRIS

Notes: 1. The inclusion of DENSO CORPORATION in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of DENSO CORPORATION by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and

- logos are trademarks or service marks of MSCI or its affiliates. 2. FTSE Russell (the trading name of International Limited and Frank Company) confirms that DENSO CORPORATION has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.
- 3. DENSO has developed a framework for green, social, and sustainability bonds and has received a Second Party Opinion (SPO) from a certification body (Vigeo EIRIS). 4. Evaluations listed are those received as of September 30, 2021.









### Message from the Integrated Report Production Team Thank you for reading Integrated Report 2021. We hope that this report has helped you gain an understanding of the sustainable value creation process that

DENSO has adopted with the aim of maximizing the value of "green" and "peace of mind" in order to advance together with society. In addition to promoting timely and appropriate information disclosure, we will actively engage in dialogue with all those who make use of this report as we work to further enhance our corporate value going forward.

## **DENSO CORPORATION**

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