

## Road Map for Our 2030 Vision

The DENSO Philosophy provides the foundation for drawing the outline of the Company's management policies, and sustainability management acts as the core mechanism 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 for 2030. In addition, to provide a medium-term milestone on the way toward achievement of this policy, we have established the Mid-term Policy for 2025. In parallel with the long-term policy, we are moving forward with Strategies for "Green" and "Peace of Mind" as medium- to long-term strategies for the furtherance of measures focused on the long-term policy's goal of maximizing the value of green and peace of mind.

### Growth Indicators to Realize the Long-term Policy for 2030 and Social Issues We Aim to Resolve

To realize its Long-term Policy for 2030, DENSO is working to achieve business growth 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 set individual SDGs that they can work toward through their job and are working on a daily basis to do so.

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

2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035

### Sustainability Management

#### 2 Mid-term Policy for 2025

Path for achieving goals in fiscal 2026 that will help us realize the Long-term Policy for 2030

Aim to become a company indispensable to society by creating new value

Growth Indicators (Fiscal 2026)

ROE: **10% or higher**

Operating margin: **10%**

#### 3 Strategies for "Green" and "Peace of Mind"

Medium- to long-term strategies for further maximizing the value of green and peace of mind

Fiscal 2026 targets in the environment and peace of mind domain

Help realize a carbon-neutral society

**Green**  
Total CO<sub>2</sub> emissions of plants (versus FY2021): **Carbon neutral** (use of carbon credits)  
Electrification domain revenue: **¥1 trillion**

Become a leading company in the provision of peace of mind to society

**Peace of Mind**  
ADAS domain revenue: **¥500.0 billion**

#### Long-term Policy for 2030

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

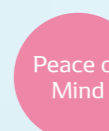
**Inspiring**

Making a difference

Contribute to happiness for everyone through inspiring value-added offerings



Fiscal 2036 objective  
**Carbon-neutral Monozukuri**  
(without use of carbon credits)



Elimination of traffic accident fatalities

#### 1 Materiality

Important issues for achieving the Long-term Policy for 2030

Green | Peace of Mind | Corporate Foundation

Awareness of the projected business environment of 2030 used to formulate the Long-term Policy for 2030

#### SDGs We Aim to Achieve through Our Business Activities

Main targets to be achieved using our products and services



# Awareness of Business Environment

Amid the ever-increasing global population, 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 values are diversifying and these issues are becoming increasingly more complex as a result of the digitalization of society and the advancements in intelligent robotics, a change in outlooks since the COVID-19 pandemic, and rising geopolitical risks. Further, the mobility field faces numerous tasks, such as achieving carbon neutrality, reducing traffic accidents, and easing traffic congestion. In tandem with the evolution of the IoT and AI, advances are being made in implementing new solutions that help accomplish these tasks, including vehicle electrification, automated driving, and connected driving.

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.

## Forecasts of Future Society

### Politics

- Tightening supply-demand situation for energy across the globe and the 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
  - Restrictions on power generated from fossil fuels and internal combustion engines .....①
- Establishment of laws to control adverse impacts on the environment and human rights throughout the entire supply chain .....①②
- Intensifying division and confrontation due to differences in political structures (trade, technologies, human rights, etc.) .....④
- Rising geopolitical risks .....②③④

### Economy

- Declining economies in advanced countries, rise in prominence of emerging countries, and global multi-polarization .....②③④
- Rise in nationalism due to growing regional disparities .....③④
- Establishment of economic blocs advantageous to individual countries and ongoing regional optimization .....④
- Expansion of ESG investment and acceleration of divestment .....①②

### Society

- Threat to the sustainability of society due to the rapid increase in population, with the global population exceeding 8.5 billion .....①②③④
- Aging populations around the world, declining workforces, acceleration of growth in life expectancies .....②③④
- Urbanization in emerging countries, acceleration of urban regeneration due to the shift to smart and compact devices, and an increase in logistics volumes .....③④
- Consumption behavior becoming more ethical and experience-based with the shift to the sharing economy .....①②
- Progression in the transition to labor offered by AI and robotics, changes in work ethic and available free time .....②
- Change in value systems related to social distancing and mobility .....②

### Technology

- Integration of digital and physical domains due to the proliferation of IoT-related technologies (communications and other devices) .....②
- Productivity enhancement and value chain integration through the use of big data .....②
- Transition from the development phase to the phase of AI and quantum computer utilization and the versatile implementation of AI in manufacturing, finance, and services .....②
- Accelerating shift to non-contact and full automation in various industries as a result of the COVID-19 pandemic .....②

## Keywords for Social Changes by 2030

- 1 Shift toward a carbon-free society and a circular economy**  
Changes in the powertrain mix (electrified vehicles, internal combustion engine vehicles), energy savings, renewable energy, and resource recycling
- 2 Diversification of people's values and consumption behavior**  
Diversifying consumption behavior and value systems  
Evolution of IT communications × Automobiles
- 3 Emergence of social issues**  
Aging populations, depopulation, overcrowding, and congestion
- 4 Structural changes and instability within the international community**  
Political conflicts and geopolitical risks  
Growth of new emerging markets

## Risks and Opportunities

### 1 Shift toward a carbon-free society and a circular economy

- |                      |   |
|----------------------|---|
| <b>Risks</b>         | <ul style="list-style-type: none"> <li>• Tightening and acceleration of environmental regulations on the automotive industry</li> <li>• Introduction and expansion of environmental taxation by the governments in each country and region</li> <li>• Increasing demand for the transition to carbon neutrality within the product production process</li> </ul>  |
| <b>Opportunities</b> | <ul style="list-style-type: none"> <li>• Increasing needs for systems to respond to electrification and alternative fuel (e-fuel, hydrogen fuel, and biofuel)</li> <li>• Heightened expectations for new technologies that contribute to carbon neutrality and resource recycling (capture, storage, and reuse of CO<sub>2</sub> and traceability, etc.)</li> <li>• Growing demand for highly efficient production technologies that achieve solid energy-saving effects</li> </ul> |

### 2 Diversification of people's values and consumption behavior

- |                      |   |
|----------------------|---|
| <b>Risks</b>         | <ul style="list-style-type: none"> <li>• Reduction in transportation as the customs of the new normal era become commonplace</li> <li>• Intensifying competition due to the increasing entry of IT companies in the automotive industry in response to the digitization of cars</li> </ul>  |
| <b>Opportunities</b> | <ul style="list-style-type: none"> <li>• Heightened awareness of "peace of mind," leading to the diversification of technologies related to peace of mind and expansion in value systems (social distancing, privacy, disaster alerts, etc.)</li> <li>• Rising need for added value due to the accelerating shift to digital technologies and IT</li> <li>• Growing awareness of eco-friendly products</li> </ul> |

### 3 Emergence of social issues

- |                      |  |
|----------------------|--|
| <b>Risks</b>         | <ul style="list-style-type: none"> <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> </ul> |
| <b>Opportunities</b> | <ul style="list-style-type: none"> <li>• Expansion of businesses that contribute to the resolution of social issues (growing needs for automated driving, the prevention of traffic accidents, food safety, electrification to address labor shortages, etc.)</li> </ul>                         |

### 4 Structural changes and instability within the international community

- |                      |   |
|----------------------|---|
| <b>Risks</b>         | <ul style="list-style-type: none"> <li>• Revisions to business models (regulation response and supply chains) due to conflicts between countries and regions</li> <li>• Rising threats toward DENSO's business management (military strikes, cyberattacks, etc.)</li> </ul> |
| <b>Opportunities</b> | <ul style="list-style-type: none"> <li>• Progressing expansion of new markets and business partnerships with the aim of resolving social and environmental issues</li> </ul>  |

## Response Measures to Risks and Opportunities

Regarding the risk of climate change, we believe there will be greater opportunities for us to popularize our long-cultivated technologies for fuel efficiency, low exhaust gas, and electrification around the world. Also, particularly in Europe, expectations are increasing with respect to initiatives for the creation of a recycling-based society. Through flexible cooperation and competition 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. At the same time, we will help reduce CO<sub>2</sub> emissions across society through the development of new technologies such as those that capture, store, and reuse CO<sub>2</sub> and the traceability technologies needed for resource recycling. With a view to achieving a carbon-free society and a circular economy, we will also strive to reduce and curtail CO<sub>2</sub> emissions across our supply chain and promote resource recycling.

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 *Monozukuri* (manufacturing) capabilities. By doing so, we will invigorate our development activities in new domains with a sense of speed.

Alongside the proliferation of material goods, social issues such as aging societies, the depopulation of rural areas, overcrowding of urban areas, and traffic congestion have become more severe. To resolve these issues, we will accelerate the development of technologies that help prevent accidents and eliminate traffic congestion. By leveraging the know-how we have cultivated through our *Monozukuri* activities, including in-vehicle, automation, and IoT know-how, we will strive to constantly develop technologies and create businesses in the non-automotive domain that help keep people safe and work to expand these technologies and businesses across the globe.

Against the backdrop of differences between political structures, the international community is becoming increasingly confrontational and factionalized in various fields, and we forecast that this will bring about dramatic change in our operating environment and increase business risks. To achieve stable business management under these circumstances, we are strengthening our governance and risk management systems so that we can respond flexibly to changes and risks.

## Key Initiatives for DENSO

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

The rapid changes in society that will occur going forward, such as changing values and behavior, 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 better 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 leverage the technologies we have cultivated through automotive products, system development, and *Monozukuri* to offer peace of mind and safety not just in the mobility domain but to all people in society. By doing so, we will continue to create new value.



### Reinforcing the Corporate Foundation That Underpins Our Value Creation

To flexibly resolve social issues, which are becoming more complex and diverse, we need to strengthen our risk management and other governance frameworks with the goal of minimizing the impacts of risk. It is also important that we cultivate professional human resources and establish a vibrant organizational culture. In these ways, we will support the creation of high-quality value at faster speeds by reinforcing our management foundation.



# 1 Materiality

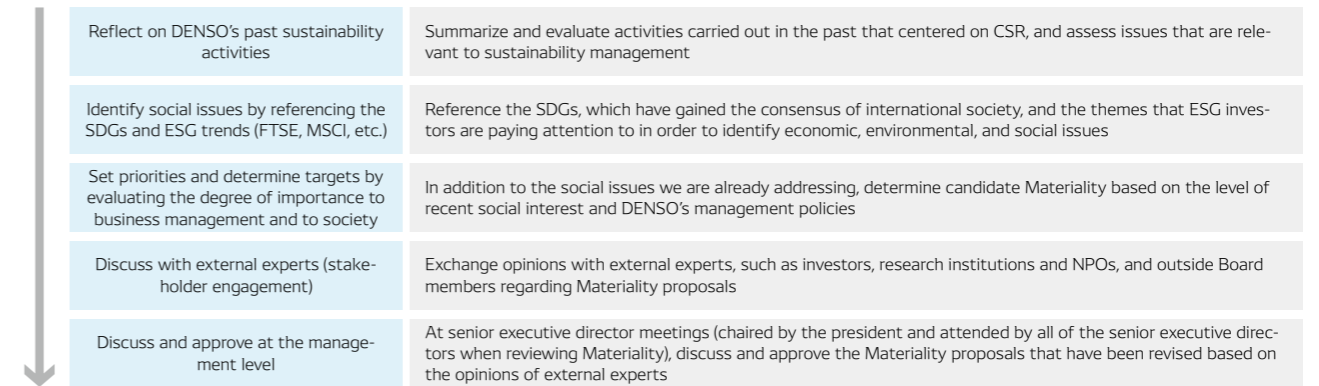
We have determined material issues (Materiality) to be addressed in order to achieve our Long-term Policy for 2030 and are accelerating sustainability management in an effort to resolve these issues. Among our social forecasts based on our awareness of the projected business environment of 2030 as well as the various social issues that are present today, including those highlighted in the SDGs, we have adopted the three themes of “green,” “peace of mind,” and “corporate foundation” as 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 Policy for 2030 and resolve social issues going forward.

## Materiality

DENSO has selected important issues from among the various issues society faces within the three areas of “green,” “peace of mind,” and “inspiring” declared under DENSO’s Long-term Policy for 2030.

## Process for Determining Materiality

In fiscal 2019, DENSO identified its material issues (Materiality) by evaluating the importance of issues to society as well as their importance to business management, by receiving opinions and advice from third parties, and by implementing an approval process at the senior management level. In light of changes in social conditions, in our strategies, and in other internal and external factors, we will check for changes in the importance of our Materiality as appropriate.



## Materiality KPIs

We establish KPIs for each of the identified material issues (Materiality), incorporate them into Company targets, and follow up on and discuss their status at the Management Deliberation Meeting and the Board of Directors’ meeting. Furthermore, the level of achievement for some KPIs is evaluated as a calculation index for executive compensation. [□□P.104-106](#)

Materiality	Vision	KPIs	Fiscal 2023		Fiscal 2024	Fiscal 2026	Related SDGs
			Targets	Results	Targets	Targets	
Green	Prevention of global warming ①	Contribute to an eco-friendly and sustainable society by reducing environmental burden and realizing highly efficient mobility	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions from plants (compared with fiscal 2021) (including carbon credit use)</li> <li>25% reduction</li> <li>26% reduction</li> <li>50% reduction</li> </ul>	<ul style="list-style-type: none"> <li>Popularization of products in the electrification domain</li> <li>Electrification domain revenue</li> <li>¥760.0 billion</li> <li>¥680.0 billion</li> <li>¥840.0 billion</li> <li>¥1 trillion</li> </ul>	<ul style="list-style-type: none"> <li>100% reduction (implementation of energy-saving measures and introduction of renewable energy for electricity, implementation of energy-saving measures for gas, and use of carbon credits to realize carbon neutrality)</li> </ul>		
	Prevention of air pollution / Reduction of environmental burden ①	<ul style="list-style-type: none"> <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 capture, store, and reuse CO<sub>2</sub></li> </ul>					
	Effective utilization of resources ①	<ul style="list-style-type: none"> <li>Reduce environmentally harmful substances, emissions, and waste to help permanently preserve the global environment</li> </ul>					
	Conservation of water resources						
Peace of Mind	Reduction of traffic accidents ①	<ul style="list-style-type: none"> <li>Popularize safe products in order to eliminate fatalities due to 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 issues associated with a declining workforce</li> <li>Provide high-quality safety products that satisfy and gain the trust of customers</li> </ul>	<ul style="list-style-type: none"> <li>Popularization of safety products</li> <li>ADAS domain revenue</li> <li>¥428.0 billion</li> <li>¥391.0 billion</li> <li>¥435.0 billion</li> <li>¥500.0 billion</li> </ul>				
	Provision of flexible and comfortable movement ①						
	Provision of safe and secure products ①						
Response to decrease in birthrate and aging population ①							
Corporate Foundation	Compliance	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Serious violations of laws</li> <li>None</li> <li>None</li> <li>None</li> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Serious incidents</li> <li>None</li> <li>None</li> <li>None</li> <li>None</li> </ul>			
	Information security ①	<ul style="list-style-type: none"> <li>Provide safe and reliable products to customers, protect information assets, and prepare for cybersecurity risks that the “connected society” faces</li> </ul>	<ul style="list-style-type: none"> <li>Local employees promoted to leadership roles at overseas bases</li> <li>20 employees</li> <li>20 employees</li> <li>21 employees</li> <li>20 employees or more</li> </ul>				
	Diversity and inclusion	<ul style="list-style-type: none"> <li>Promote the development of people, organizations, and the working environment to encourage our employees to maximize their abilities and work with enthusiasm and peace of mind</li> </ul>	<ul style="list-style-type: none"> <li>Number of women in management positions at DENSO CORPORATION</li> <li>145 in business fields and 145 in technical fields</li> <li>139 in business fields and 136 in technical fields</li> <li>160 in business fields and 146 in technical fields</li> <li>200 in business fields and 200 in technical fields</li> </ul>				
	Healthy and safe working environment	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Employee Lifestyle Score*1 at DENSO CORPORATION</li> <li>77 points</li> <li>74.5 points</li> <li>77 points</li> <li>Over 77 points</li> </ul>				
	Workstyle reform / Job satisfaction enhancement		<ul style="list-style-type: none"> <li>Safety points*2 (Lower is better)</li> <li>Non-consolidated: 50.0 points</li> <li>Domestic Group: 36.0 points</li> <li>Overseas Group: 48.5 points</li> <li>Non-consolidated: 23.0 points</li> <li>Domestic Group: 46.0 points</li> <li>Overseas Group: 24.5 points</li> <li>Non-consolidated: 45.0 points</li> <li>Domestic Group: 31.5 points</li> <li>Overseas Group: 44.5 points</li> </ul>				
	Protection of human rights / Sustainable procurement		<ul style="list-style-type: none"> <li>Percentage of affirmative responses with respect to engagement (non-consolidated)</li> <li>72%</li> <li>73%</li> <li>74%</li> <li>78%</li> </ul>				
	Corporate governance	DENSO will support the above targets for Materiality and progress to a more effective governance system as	<ul style="list-style-type: none"> <li>Percentage of employees receiving human rights training (non-consolidated)</li> <li>100% (new hires and new managers)</li> <li>100% (new hires and new managers)</li> <li>100% (expansion to include production line managers and domestic Group companies)</li> <li>100%</li> </ul>				
			necessary based on factors such as social trends, changes to the external environment, and DENSO’s corporate culture.				

① Targets that can be achieved using our products and services

\*1 Employee Lifestyle Score: Original health management indicator that provides a score for the lifestyle habits of each individual employee using data obtained from health exams

\*2 Safety points: Scoring depending on scale and type of accident. The lower the number the better the score

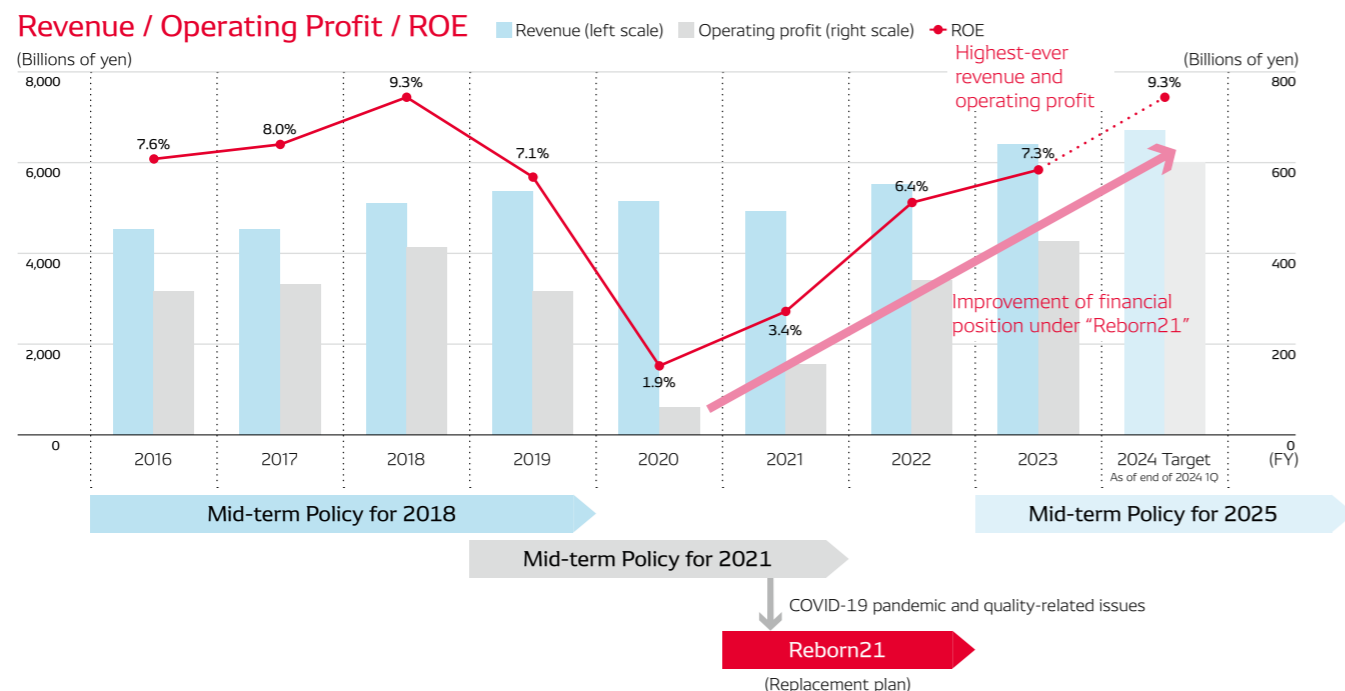
Note: The main reasons for the non-achievement of fiscal 2023 KPI targets are as follows.

(1) Electrification domain and popularization of safety products: Low level of vehicle production due to a shortage of semiconductors and a lockdown in China (However, vehicle production increased year on year.)

(2) Safety points (domestic Group companies): Reliance on personnel to ensure safety is a factor. Priority activities to reassess and reduce risks of personnel-dependent work are currently underway.

## Recent Forward-Looking Initiatives and Their Achievements

In accordance with the philosophy of sustainability management, DENSO has kept its focus firmly on the future and continuously developed strategies aimed at both addressing social issues and enhancing corporate value. In fiscal 2019, we began steadily implementing an action plan based on the Mid-term Policy for 2021. In fiscal 2020, however, our foundations were shaken by the COVID-19 pandemic and quality-related issues on an unprecedented scale. In response, DENSO replaced the policy with "Reborn21," a plan aimed at reflecting the latest business conditions and transforming the Company into a "high-quality DENSO." Under this new plan, we rebuilt our management foundations, and the benefits of these efforts are steadily emerging. For example, we posted record revenue and operating profit in fiscal 2023.



	Mid-term Policy for 2018 (FY2016 to FY2019)	"Reborn21" (FY2021 to FY2022)
<b>Tasks</b>	Strengthen the foundations for taking on new challenges and realize steady growth Establish foundations for long-term growth by investing upfront in the green and peace of mind and safety fields in preparation for expansion of the CASE vehicle field, by expanding overseas, aftermarket, and new businesses in line with growth in emerging countries, and by strengthening global development and increasing <i>Monozukuri</i> efficiency	Transform the Company into a "high-quality DENSO" Respond to shaken management foundations and changes in the business environment in the wake of the COVID-19 pandemic and quality-related issues on an unprecedented scale by rebuilding management foundations through the restoration of quality and transformation that gives the Company a lean, resilient corporate structure
<b>Main achievements</b>	<b>Green and peace of mind</b> <ul style="list-style-type: none"> <li>Launched Global Safety Package, our first active safety system</li> <li>Established Electrification Systems Business Group for vehicle electrification</li> </ul> <b>Aftermarket and new businesses</b> <ul style="list-style-type: none"> <li>Formulated and promoted a growth scenario by positioning factory automation (FA) and the agricultural field as new business mainstays</li> </ul> <b>Overseas</b> <ul style="list-style-type: none"> <li>Introduced a uniform human resource system worldwide</li> <li>Increased development personnel in the vehicle electrification, advanced driver assistance systems (ADAS), and software fields</li> <li>Established <i>DANTOTSU</i>* plants in Japan and advanced their establishment overseas</li> </ul>	<b>Quality</b> <ul style="list-style-type: none"> <li>Reinforced our fundamental technologies, created excellent working environments that ensure open communication, and adopted a humble stance</li> </ul> <b>Business</b> <ul style="list-style-type: none"> <li>Accelerated business portfolio reweighting in accordance with the green and peace of mind principles</li> </ul> <b>Our people and organization</b> <ul style="list-style-type: none"> <li>Improved employee engagement and introduced PROGRESS as a new vision for our people and organization</li> </ul> <b>Finance</b> <ul style="list-style-type: none"> <li>Reduced costs by ¥91 billion over two years and improved the break-even point by 6 percentage points</li> </ul>
<b>Remaining tasks</b>	<ul style="list-style-type: none"> <li>Strengthen ability to propose system solutions that reflect the increasing complexity of automobiles</li> <li>Establish a business model for mobility services</li> <li>Establish <i>DANTOTSU</i> plants overseas</li> </ul>	<ul style="list-style-type: none"> <li>Promote human resource portfolio transformation (human capital [P24-27])</li> <li>Increase adaptability to inflation and other changes in the environment (financial capital [P66-73])</li> </ul>

\* A plant operating at such a high level that it cannot be compared to other plants

## 2 Mid-term Policy for 2025

Building on the management foundations laid by "Reborn21," in fiscal 2023 we formulated the Mid-term Policy for 2025 with a view to fully embracing the DENSO Culture developed since our founding while giving concrete form to the Long-term Policy for 2030 slogan: Bringing hope for the future for our planet, society, and all people. The Mid-term Policy for 2025 sets forth a road map and goals for the initiatives we will focus on and the corporate profile we will achieve by 2025.

<b>Prerequisites for Realizing the Goals of the Mid-term Policy for 2025</b>	We aim to continue to be an organization of people who can think and act in an independent and self-reliant manner. Accordingly, we are prioritizing investment in human resources and strongly promoting <i>Hitozukuri</i> , which nurtures professionals with the ability to turn ideas into reality, and diversity and inclusion. Through such efforts we are working to establish a vibrant organization that is able to flexibly adapt to change.
--	--

### Aims

Green	Lead the industry by realizing an environmentally neutral manufacturing industry, thereby creating a sustainable society	Mobility products	FY2036 target 50% reduction (versus FY2021) Base value: CO <sub>2</sub> emissions from mobility products in fiscal 2021
		Energy use	
Peace of Mind	Realize a society without fatalities from traffic accidents	<i>Monozukuri</i>	FY2036 target Carbon neutral (Carbon neutral, including the use of carbon credits, by FY2026)
		Safety	Eliminate fatalities from traffic accidents
New Businesses	Create new value by providing solutions that resolve social issues	Comfort	FY2026 target Provide spaces with AQI* of less than 50
			Expand business and resolve issues in the domains of mobility, industry, and society

\* Air Quality Index (AQI): An index that determines air quality levels based on six atmospheric pollutants with the aim of curtailing harmful substances in the air

### Important Milestones for Realizing Our Aims (Fiscal 2026)

ROE: <b>10% or higher</b> Operating margin: <b>10%</b> Revenue: <b>¥6.7 trillion</b>
Electrification domain revenue: <b>¥1 trillion</b> ADAS domain revenue: <b>¥500.0 billion</b>

### FY2024 Targets

ROE: <b>9.3%*</b> Operating margin: <b>9.0%*</b> Revenue: <b>¥6.7 trillion*</b>
Electrification domain revenue: <b>¥840 billion</b> ADAS domain revenue: <b>¥435 billion</b>
<small>* As of the end of the first quarter of fiscal 2024</small>

### FY2023 Results

ROE: <b>7.3%</b> Operating margin: <b>6.7%</b> Revenue: <b>¥6.4 trillion</b>
Electrification domain revenue: <b>¥680 billion</b> ADAS domain revenue: <b>¥391 billion</b>

## Five Pillars of Global Management

Aiming to realize the target profile set out in the Mid-term Policy for 2025, DENSO's global workforce of approximately 170,000 employees will focus their efforts on the following five pillars of global management.

### 1. Realization of Sustainability Management

#### Establish a Solid, Unshakable Business Foundation

Financial Capital, Risk Management [P.66-73, 114-116](#)

	Initiatives	Progress and Strategy Going Forward
<b>Safety and Quality</b>	Establish a sound safety and quality foundation that meets the expectations of society and earns the trust of our customers	<b>Progress</b> <ul style="list-style-type: none"> <li>Generally achieved KPI by returning to the philosophy of total quality management and by strengthening management foundations</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Advance the establishment of capabilities in anticipation of changes in the mobility society and customer needs</li> </ul>
<b>Risk Management</b>	Fulfill social responsibility by enhancing and implementing risk management initiatives so that we are able to immediately respond to changes in the external environment	<b>Progress</b> <ul style="list-style-type: none"> <li>Clarified rules for responding to emergencies and completed introduction of predictive management for all risk items</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Map and monitor risks in new business fields and geopolitical risks and build readiness for evolving risks</li> </ul>
<b>Earnings</b>	Establish a robust earnings structure by promoting reforms to our business portfolio	<b>Progress</b> <ul style="list-style-type: none"> <li>Accelerated reweighting toward a business portfolio that simultaneously realizes profitability and our fundamental principles by realizing growth in priority fields, including growth in sales of electric vehicle components and advanced safety products, and by de-emphasizing and discontinuing internal combustion engine products, including the disposal of internal combustion product businesses</li> <li>Reflected material cost hikes in prices upon obtaining the agreement of customers and suppliers; currently collaborating with industry bodies to create rules aimed at reforming business practices in the industry</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Continue to promote activities with a view to business disposal; at the same time, in growth businesses determine the five priority fields for alliances (vehicle electrification, ADAS, semiconductors, new businesses, and software) and then forge ahead on a Companywide cross-divisional basis</li> </ul>

### 2. High Aspirations and Meticulous Work

#### Transform Workstyles through Digitalization with the Aim of Realizing World-First and World-Best Offerings

Manufacturing Capital, Intellectual Capital [P.78-88](#)

	Initiatives	Progress and Strategy Going Forward
<b>1</b>	Swiftly provide our stakeholders with the best possible value and experiences by maximizing our performance through the Core & Customization Strategy and data utilization	<b>Progress</b> <ul style="list-style-type: none"> <li>Conducted prior development with customers from the product concept stage; currently incorporating customer needs into product concepts and growing sales</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Meet diversifying needs by reinforcing the product lineup through identification of DENSO's core technology fields and customized technology fields and strengthen sales expansion strategies by product</li> </ul>
<b>2</b>	Pursue competitive reorganization of production structure, implement digital-twin technologies, and promote automation, thereby transforming the landscape of our plants around the globe	<b>Progress</b> <ul style="list-style-type: none"> <li>In light of business portfolio transformation, currently implementing competitive reorganization, including consolidation and elimination of bases</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Realize next-generation plants by establishing and advancing a development road map, and develop and implement general-purpose production systems</li> </ul>

### 3. Business Portfolio Transformation

#### Transform Business Structure by Achieving Growth and Promoting De-Emphasis and Discontinuation in Collaboration with the Industry and Our Business Partners

Overview by Product, Financial Capital, and Intellectual Capital [P.48-65, 66-73, 80-88](#)

	Initiatives	Progress and Strategy Going Forward
<b>1</b>	Rebuild core businesses and transition business portfolio toward BEV products	<b>Progress</b> <ul style="list-style-type: none"> <li>Made steady progress in growing sales to Japan-based and overseas customers—which was reflected in contributions to electrification domain revenue from inverters, thermal management products, power supply systems, and other products—by strengthening development and production capabilities (FY2023 result: ¥680 billion)</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Realize further sales expansion in the vehicle electrification field and other growth fields; advance fundamental reform of the earnings structures of core businesses by accelerating the de-emphasis and discontinuation of internal combustion engine products, including the disposal of businesses and production reorganization on a global scale</li> </ul>

	Initiatives	Progress and Strategy Going Forward
<b>2</b>	Accelerate efforts to de-emphasize and discontinue internal combustion technology and commercialize new energy businesses, thereby contributing to carbon neutrality	<b>Progress</b> <ul style="list-style-type: none"> <li>Prepared scenarios for de-emphasizing and discontinuing internal combustion engine products in collaboration with customers and supply chain companies and disposed of five businesses* (As of the end of September 2023)</li> <li>Began verification of green hydrogen production and in-plant hydrogen utilization at DENSO FUKUSHIMA CORPORATION</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Accelerate the de-emphasis and discontinuation of internal combustion engine products by globally reorganizing production and disposing of businesses</li> <li>Plan to extend the scope of new energy businesses' verification activities beyond plants to include automobiles</li> <li>* Including basic agreements on beginning consideration of business disposal</li> </ul>
<b>3</b>	Promptly establish a structure for electrification that enables a flexible response to diversifying customers' needs and realize steady sales expansion and growth	<b>Progress</b> <ul style="list-style-type: none"> <li>Unified teams from the Electrification Systems Business Group and the Powertrain Systems Business Group in order to increase systems development and sales activities based on customer priorities</li> <li>Developed an inverter that incorporates SiC power semiconductors; incorporated this inverter into the eAxle of the new-model RZ, the first dedicated BEV LEXUS</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Increase our ability to meet diversifying customer needs by improving the competitiveness of various products and by offering systems solutions based on an extensive product lineup that includes thermal management systems</li> </ul>
<b>4</b>	Fully strengthen electronic and software technologies in an effort to contribute to the ideals of green and peace of mind and realize business growth	<b>Progress</b> <ul style="list-style-type: none"> <li>Currently expanding ECU sales by utilizing our expertise in electronics technologies for all aspects of automobiles to focus on specific customer needs and co-create electronic platforms accordingly</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Accelerate business growth by further expanding sales and globally strengthening software development competitiveness</li> </ul>

### 4. Realization of Carbon Neutrality

#### Lead the Industry in Becoming Carbon Neutral

Strategies for "Green" and "Peace of Mind" [P.42-47](#)

	Initiatives	Progress and Strategy Going Forward
<b>1</b>	Transition to globally competitive, carbon-neutral plants through the utilization of innovative energy-saving technologies	<b>Progress</b> <ul style="list-style-type: none"> <li>Invested globally in energy-saving measures and private power generation through the use of solar panels and other methods based on a policy of simultaneously realizing carbon neutrality and economy</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Advance the medium- to long-term development of carbon-neutral <i>Monozukuri</i> technologies, including technologies for materials and manufacturing methods</li> </ul>
<b>2</b>	Realize stable long-term procurement of renewable energy at a low cost	<b>Progress</b> <ul style="list-style-type: none"> <li>Introduced renewable energy to production bases in Japan (Anjo, Nishio, Hirose, and Fukushima) and all production sites in Europe (23% of power from renewable energy)</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Follow medium-term procurement plans and policies and analyze market prices with a view to selecting bases where the introduction of renewable energy will achieve optimal economy and then advance the introduction of renewable energy accordingly</li> </ul>
<b>3</b>	Develop energy businesses together with robust business partners	<b>Progress</b> <ul style="list-style-type: none"> <li>Concluded an agreement on a basic plan for utilizing the Green Innovation Fund and conducting demonstration tests with customers in relation to CO<sub>2</sub> capture and hydrogen businesses</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Conduct verification tests with customers to build know-how, alliances, and a supply chain and pursue early commercialization in cooperation with the government</li> </ul>

### 5. Creation of New Value

#### Achieve Business Growth through the Provision of Products and Solutions in New Fields

Materiality, Intellectual Capital [P.36-37, 80-88](#)

	Initiatives	Progress and Strategy Going Forward
<b>1</b>	Promote the development and practical application of cutting-edge technologies that underpin the digital-twin society	<b>Progress</b> <ul style="list-style-type: none"> <li>Prepared a hypothesis on 2035 social issues based on 2050 megatrends with the aim of taking pre-emptive action regarding dramatic changes in the business environment and possible social issues; focused on five trends from the perspective of ways in which DENSO can help address social issues based on its business fields and strengths</li> <li>Established the Social Innovation Business Development Function Unit, an organization tasked with realizing business growth based on the five trends</li> </ul> <b>Strategy going forward</b> <ul style="list-style-type: none"> <li>Identify fields for the creation of businesses and establish new ways of working that align with business formats in order to extend our business field from mobility to society as a whole and contribute to a society that promotes a cycle of well-being</li> </ul>
<b>2</b>	Create new value by further refining and combining our technologies while establishing growth scenarios based on popularizing our technologies throughout society	
<b>3</b>	Establish efficient and flexible workstyles that cater to new business models and establish non-financial KPIs	

### 3 Strategies for “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.” To that end, we have established medium- to long-term targets to accelerate the maximization of value in these fields and are promoting the following specific initiatives in order to achieve these targets.

#### Aiming to Become Carbon Neutral by Fiscal 2036

We aim to realize carbon neutrality within our *Monozukuri* activities in the not-too-distant future of fiscal 2036 by further promoting the environmental efforts in which we have engaged thus far. To make this ambition a reality, we are pursuing efforts in the three fields of “*Monozukuri* (manufacturing),” “mobility products,” and “energy use,” while making use of the Green Innovation Fund\* and other frameworks.

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

#### Monozukuri (Manufacturing)

**Aim: Realize complete carbon neutrality in our *Monozukuri* activities**

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

Specific Initiatives	Target for Fiscal 2036
<ul style="list-style-type: none"> <li>At our plants, rigorously engage in energy-saving activities and promote the use of renewable energy by promoting in-house power generation through reforms to our production and supply structure</li> <li>Seek to achieve carbon neutrality in fiscal 2026 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</li> <li>Realize carbon neutrality at our plants by fiscal 2036 and work to expand carbon neutrality throughout the supply chain</li> </ul>	Achievement of complete carbon neutrality in our <i>Monozukuri</i> activities  <b>Current Level of Achievement</b> CO <sub>2</sub> emissions (global): 1.41 million t-CO <sub>2</sub> e (Scope 1 and 2)

Note: The above CO<sub>2</sub> emissions figure reflects the utilization of carbon credits. The targets are domestic and overseas production bases (including DENSO Group production companies).

#### Mobility Products

**Aim: Contribute to the electrification of cars to reduce CO<sub>2</sub> emissions to the greatest extent possible**

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

Specific Initiatives	Target for Fiscal 2026
<ul style="list-style-type: none"> <li>Centered on driving systems, such as inverters, and thermal systems, promote farsighted technological development in all facets of mobility, from HEVs, BEVs, and FCEVs through to eVTOL (electric vertical take-off and landing) aircraft, thereby realizing energy management that connects cars and other forms of mobility with society</li> <li>Apply electrification technologies to the new field of air mobility. At the same time, utilize the high-output, high-efficiency, and ultra-lightweight technologies acquired through this effort in the manufacture of automobiles</li> </ul>	Electrification domain revenue ¥1 trillion  <b>Current Level of Achievement</b> Electrification domain revenue ¥680.0 billion

#### Energy Use

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

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

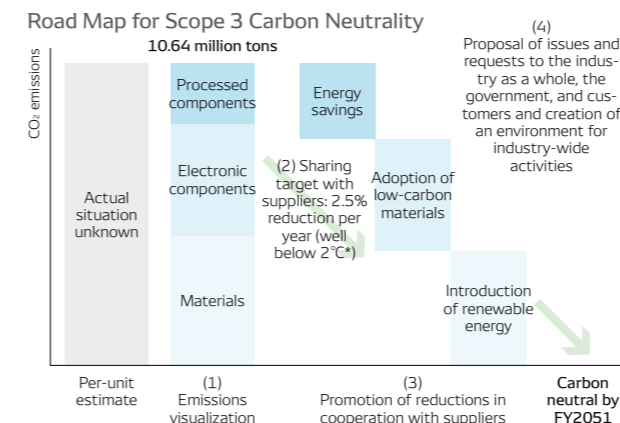
Specific Initiatives	Target for Fiscal 2036
<ul style="list-style-type: none"> <li>Develop and commercialize batteries that store fluctuating or excess renewable electricity, hydrogen manufacturing technologies, and fuel conversion technologies. Make full use of renewable energy and further contribute to its expanded introduction</li> <li>Realize technologies that can reuse energy by capturing CO<sub>2</sub> emitted from industry and CO<sub>2</sub> in the atmosphere at the necessary locations, then solidifying said CO<sub>2</sub> and converting it into resources, thereby reducing CO<sub>2</sub> emissions in society as a whole</li> </ul>	Revenue from commercialization of renewable energy ¥300.0 billion  <b>Current Level of Achievement</b> Accelerated verification tests (CO <sub>2</sub> capture and recycling systems, solid oxide fuel cells, and solid oxide electrolyzer cells)

#### Toward Carbon Neutrality throughout the Value Chain

As the world accelerates decarbonization efforts, DENSO has been boldly tackling environmental issues through initiatives for environmentally friendly *Monozukuri*. Specifically, we have been developing mobility products with excellent fuel and energy-saving technologies, which have been areas of strength since our founding. In fiscal 2022, we declared that our goal was to achieve complete carbon neutrality in *Monozukuri* activities by fiscal 2036. Since then, we have been increasing the pace of efforts to achieve carbon neutrality throughout the entire value chain. For details on this goal, please see “Natural Capital” on [P89-93](#).

#### Scope 3: Upstream (Suppliers)

CO<sub>2</sub> emissions reduction target: 25% by FY2031 (versus FY2021), carbon neutral by FY2051



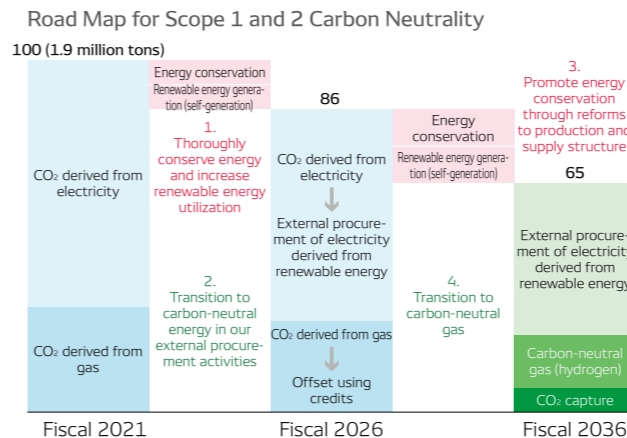
#### Strengthening Collaboration with Suppliers

Having visualized emissions and shared specific CO<sub>2</sub> emissions reduction targets with 360 major suppliers, we are promoting various initiatives for the realization of carbon neutrality. For example, we are sending managers from our facilities’ management-related division to suppliers’ operating bases to analyze and offer recommendations on energy-saving measures, lending suppliers energy measurement equipment, encouraging the active use of aluminum and plastic materials that emit less CO<sub>2</sub>, and promoting the introduction of renewable energy. Moreover, by compiling feedback on the problems and requests of suppliers arising from our support activities and making proposals to industry associations based on this feedback, we are driving the industry-wide establishment of conditions conducive to carbon neutrality and strengthening competitiveness.

\* The target of keeping the rise in temperature well below 2°C, which is a Scope 3 target under the 1.5°C standard

#### Scope 1 and 2: DENSO Plants

CO<sub>2</sub> emissions reduction target: Completely carbon-neutral *Monozukuri* by FY2036



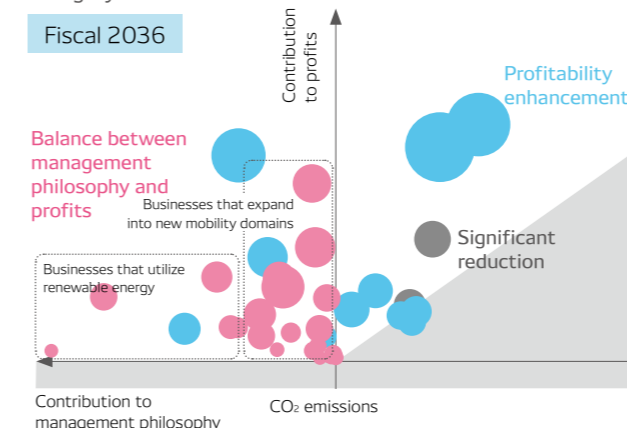
#### Realizing New *Monozukuri* through Unflinching Efforts and Innovative Technologies

DENSO is thoroughly implementing energy-saving activities, which have always been one of its strengths, and securing and utilizing renewable energy sources, including the utilization of carbon credits. In addition, we are developing innovative energy-creating technologies by combining our many different types of manufacturing expertise. At model plants in Japan, we will verify and enhance the leading-edge technologies required for energy creation and then incorporate them into optimal energy creation activities tailored to the energy situations of respective regions. Also, by introducing internal carbon pricing into business feasibility assessments, which serve as an indicator for investment decisions, we are virtually converting CO<sub>2</sub> emissions into losses and reflecting them in these assessments. Consequently, internal carbon pricing is accelerating our investments in energy-saving measures and renewable energy facilities. Further, we achieved carbon neutrality at the Anjo Plant in fiscal 2022 as well as at the Nishio Plant, the Hirose Plant, DENSO FUKUSHIMA CORPORATION, and all DENSO plants in Europe in fiscal 2023.

#### Scope 3: Downstream (Product Use)

CO<sub>2</sub> emissions reduction target: 25% by FY2031 (versus FY2021)

#### Relationship between CO<sub>2</sub> Emissions and Profits by Product Category



#### Accelerating Business Portfolio Transformation

When analyzing business strategies, the Strategy Deliberation Meeting discusses the positioning of and strategies for each product category based on three decision-making criteria: CO<sub>2</sub> emissions, profitability, and growth potential. As a result of this approach, we are promoting the de-emphasis and discontinuation of internal combustion engine (ICE) products, which entails rightsizing and withdrawing from businesses related to these products, an accompanying shift of resources to battery electric vehicles (BEVs) and other areas of the vehicle electrification field, and a changeover to new businesses, such as those that utilize renewable energy. Thanks to these activities, the growth of revenue from our inverters, heat pumps, and other products in the vehicle electrification field is outpacing market growth. By fiscal 2026, we aim to double revenue from this field compared with that of fiscal 2022, to ¥1 trillion.

Note: Size of circles indicates scale of revenue.  
 ● New businesses  
 ● Growth businesses (CASE)  
 ● Maturing businesses (ICE-related)  
 ■ Domains that produce a deficit when factoring in carbon price



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

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

### Elimination of Traffic Accident Fatalities

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

With the aim of eliminating traffic accident fatalities, we are promoting efforts under a two-pronged approach focused on “depth,” which involves reaching the cutting edge of technology, and “width,” which involves realizing the widespread adoption of safety 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 promoting the further popularization of our safety products by working to realize attractively priced safety products and enhance our lineup of retrofitted products.

Specific Initiatives	Target for Fiscal 2026
<ul style="list-style-type: none"> <li>Respond to various accident situations and strive to prevent accidents through not only 360-degree sensing but also in-vehicle sensing and vehicle–infrastructure linkages</li> <li>Fully leverage AI technologies to predict “unseeable danger” and inform the driver about it, thereby ensuring the driver avoids hazardous situations</li> <li>In tandem with the evaluation of ADAS, expand lineup of 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</li> </ul>	ADAS domain revenue ¥500.0 billion
	<b>Current Level of Achievement</b>
	ADAS domain revenue ¥391.0 billion

Road Map for the Development of ADAS Technologies: Business Analysis (Mobility Electronics) P.51

### Creation of Comfortable Spaces

**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 environment within vehicles.

Specific Initiatives	Target for Fiscal 2026
<ul style="list-style-type: none"> <li>Innovate purification and sensing technologies to eliminate viruses and visualize toxic substances, thereby realizing safe and secure air quality</li> <li>Refine technologies to create and expand comfortable interiors in passenger vehicles and public transportation vehicles</li> </ul>	Popularize in-vehicle general-purpose products
	<b>Current Level of Achievement</b>
	Investment in the market for radiant heaters that efficiently heat passengers’ legs

### Support for Working People

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

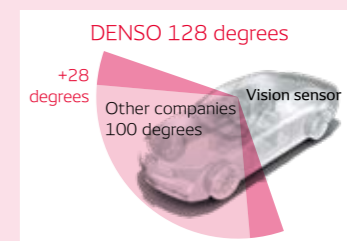
One major social issue is the significant decline in the workforce in various industries. To address this issue, DENSO will draw on the technologies it has cultivated in the mobility domain, such as automation technologies and ICT, to realize a society where all people are supported and can take on new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

Specific Initiatives	Target for Fiscal 2031
<ul style="list-style-type: none"> <li>In the agricultural field, contribute to the stable and secure supply of food by resolving issues throughout the food value chain</li> <li>In the logistics field, provide ultra-high-quality comprehensive solutions that cover everything from framework improvement through to the rationalization of entire factories</li> <li>For plant operations and factory automation (FA), combine core technologies such as robots and sensors with automation technology and improvement know-how in order to provide systems and products catered to the front lines</li> </ul>	Revenue from the agricultural, logistics, and plant operation/FA fields: ¥300.0 billion
	<b>Current Level of Achievement</b>
	Gradual progress in business expansion

Overview by Product (Factory Automation, Social Solutions, and Food Value Chain) P.64–65

### Wider-Angle Vision Sensors for Improved Accident Scenario Coverage Elimination of Traffic Accident Fatalities

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



While a wider angle enables the detection of more objects, it also enables vision sensors to detect objects that may not actually pose any danger. One example would be a scenario in which a bicycle that is about to cross the road is detected, but the bicycle then brakes and stops, meaning that the vehicle will be able to pass by without colliding with the bicycle. In such a scenario, activation of the vehicle’s automatic braking system to avoid a collision could in fact cause another dangerous situation due to the vehicle’s sudden, unexpected stop. Therefore, we have reduced the occurrence of unnecessary vehicle movements by incorporating AI technology to estimate time-series movement and determine whether a collision will actually occur. In this way, DENSO has created vision sensors that simultaneously realize the advantages of wider-angle detection and real-world usability.

Our vision sensors have been incorporated into certain grades of the Subaru Outback (North American specifications) and into the new Subaru Crosstrek (Japanese specifications), both of which were launched in 2022.

### Newly Developed Radiant Heater That Warms Passengers’ Legs Creation of Comfortable Spaces

DENSO’s newly developed radiant heater was incorporated into the Toyota bZ4X, launched in 2022. Our radiant heater has a distinctive safety structure and contributes to passenger comfort and longer driving distances.



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

Moreover, the adoption of a thin film structure for the heater surface enables its temperature to increase to a maximum of 100°C in about one minute, quickly warming occupants’ legs and creating a comfortable environment. In addition, our products are the world’s first heaters with structures that instantly reduce the temperature of the surface to 50°C or lower when anyone comes into contact with it. Heat generation is stopped through the combined use of control technology and surface film with an in-built sensor that detects human contact. Thus, the new product achieves both high temperatures and advanced levels of safety.

### Utilization of ICT during Disasters Support for Working People

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



The app is used by the municipal authority as a communication tool. Benefiting from DENSO’s expertise in the development of car navigation systems and other mobility products, the app features a user-friendly interface that allows anyone to readily understand information issued by the municipal authority. Going forward, we will further enhance the app’s functions to realize efficient disaster countermeasures through the provision of a framework for managing evacuation center supplies and facilitating exchanges of supplies between evacuation centers.

## Main Results of Our Strategies for “Green” and “Peace of Mind” in Fiscal 2023

Since our founding, we have been working to maximize the value of green and peace of mind, and efforts to do so have been steadily accelerating. In this section, we look back on the results we achieved with our initiatives over the course of fiscal 2023. In addition, the following three projects, which are featured in this integrated report, have been selected as Green Innovation Fund projects by the New Energy and Industrial Technology Development Organization (NEDO).

- Development of manufacturing technology for next-generation power semiconductor devices (for electric vehicles)
- Development of next-generation storage batteries and motors
- Development and verification of technology for the small- and medium-scale separation and capture of CO<sub>2</sub> from plant exhaust gas

For more details, please see the “Newsroom” section of our corporate website.  
<https://www.denso.com/global/en/news/newsroom/>



## Independent Third-Party Verification of Environmental Performance Data

To enhance the reliability of its environmental performance data on greenhouse gas emissions, energy consumption, and other matters, DENSO has received independent third-party verification from SGS Japan Inc. We will continue to improve our environmental performance data by extending the scope of verification activities.

For details, please visit the website below.  
<https://www.denso.com/global/en/about-us/sustainability/environment/verification/>



Note: The verification results included on the above website are for environmental performance data in fiscal 2022. We are currently undergoing an audit for fiscal 2023 (April 1, 2022 to March 31, 2023), and the results of this audit are scheduled to be available on our website around January 2024.

2022

2023

### Green

We are striving to reduce CO<sub>2</sub> emissions from our *Monozukuri* activities and develop and popularize mobility products that contribute to the electrification of automobiles.

Mobility Products

#### First Adoption of a DENSO Electric Motor for Electric Aircraft

For the first time, one of our electric motors has been incorporated into an aircraft. A compact, lightweight, and high-power electric motor jointly developed by DENSO and Honeywell International Inc. has been adopted by Lilium N.V. for its electric aircraft. We will use the launch of this product to begin accelerating our development of products for electric aircraft.



Mobility Products

#### Collaboration with USJC in the Manufacture of Automotive Power Semiconductors

We have agreed to collaborate with United Semiconductor Japan Co., Ltd. (USJC), a subsidiary of global semiconductor foundry United Microelectronics Corporation, in the manufacture of power semiconductors needed for electric vehicles. In May 2023, we began shipping next-generation insulated gate bipolar transistors that are compact and have low loss.

Mobility Products Monozukuri Energy Use

#### Highest Evaluation from CDP

In recognition of outstanding initiatives with respect to climate change and water security as well as in relation to disclosure of these initiatives, DENSO has received an “A List” rating from CDP, the highest rating provided by the international non-profit organization.

Energy Use Mobility Products

#### Trial Introduction of an Energy Management System That Uses BEVs

In collaboration with Chubu Electric Power Company, Incorporated and Chubu Electric Power Miraiz Company, Incorporated, we will conduct the trial introduction of a system that maximizes the convenience of car sharing as well as the effectiveness of BEVs as storage batteries and which enables the sharing of renewable energy within communities.

Mobility Products

#### Development of the First Inverter to Use SiC Power Semiconductors

The first DENSO inverter to use SiC power semiconductors has been integrated into the BluE Nexus eAxle and incorporated into the new LEXUS RZ. By significantly reducing power loss, our highly efficient inverter increases the electric mileage of BEVs, thereby helping to extend their driving distance.

Monozukuri Energy Use

#### Verification Test Aimed at Realizing Hydrogen Local Production for a Local Consumption Model

In partnership with Toyota Motor Corporation, DENSO FUKUSHIMA CORPORATION has begun a verification project for the production of green hydrogen and in-plant hydrogen utilization. Through this project, we aim to build hydrogen local production for a local consumption model and realize a carbon-neutral plant.



Energy Use

#### Joint Technical Verification Using Our CO<sub>2</sub> Capture System

By using its CO<sub>2</sub> capture system to efficiently capture and utilize CO<sub>2</sub>, DENSO will conduct joint technical verification with TAISEI CORPORATION. We will promote installation of the system in buildings, thereby contributing to the realization of a carbon-neutral society.

Monozukuri Energy Use

#### Verification Test of a Plant Energy Management System That Utilizes Solid Oxide Fuel Cells

We will realize a more-efficient energy management system, which meets the power demand of plants by controlling the recharging and discharging of batteries for storing solar-generated power and by controlling the amount of power that our in-house developed solid oxide fuel cells generate.

### Peace of Mind

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

Elimination of Traffic Accident Fatalities

#### Launch of the Obu yuriCargo Project

Through traffic safety initiatives based on driving data and support for maintaining and improving the driving skills of elderly drivers, we aim to help develop towns where safe, unrestricted mobility is available to everyone.

Elimination of Traffic Accident Fatalities

#### Verification Tests of the Utilization of Drive Recorders to Support the Driving Safety of Seniors

In partnership with the Toyota Mobility Foundation, we are conducting verification tests of an AI driving diagnosis system that helps lower the accident risk of seniors by providing advice on safe driving that is based on AI analysis of drive recorder images and other data.

Elimination of Traffic Accident Fatalities

#### Development of Wider-Angle Vision Sensors

DENSO has further widened the detection angle of its vision sensors, which recognize objects in the vicinity of vehicles. Our vision sensors help detect pedestrians and bicycles suddenly emerging from roadsides and have been installed in the new Subaru Crosstrek.



Support for Working People

#### Comprehensive Partnership Agreement with Kumamoto Prefecture in the Fields of Food and Agriculture

We will take advantage of our *Monozukuri* technologies to optimize the food value chain by improving efficiency and adding value in the production and distribution fields.



Creation of Comfortable Spaces

#### Collaboration to Provide Security Monitoring Services for Vehicles

We have begun collaborating with NTT Communications Corporation to provide a vehicle security monitoring service that protects vehicles from the threat of cyberattacks.

Support for Working People

#### Agreement on Collaboration with the City of Kirishima for ICT Utilization during Disasters

By utilizing our Life Vision local information distribution system to establish disaster readiness capabilities, we aim to heighten the efficiency of emergency countermeasures, recovery, and reconstruction in the event of a disaster.

Support for Working People

#### Launch of Mimamori Maintenance Package to Support the Logistics Industry

To help ensure the stable operation of vehicles and alleviate labor shortages in the logistics industry, we will offer a package that comprises maintenance services and D-FAMS, a remote monitoring service for refrigeration equipment. Moreover, by identifying the early signs of abnormalities, our package helps curb CFC emissions through the minimization of refrigerant (CFC substitute) leakages resulting from breakdowns.



### Management Foundation

We are working to bolster our management foundation to underpin efforts to maximize the value of green and peace of mind.

#### Briefing on Semiconductor Strategies

With demand for semiconductors increasing due to the proliferation of CASE vehicles, we presented our strategies for semiconductors in three fields: microcomputers and system-on-a-chip, power and analog, and sensors.

For details, please visit the website below.  
<https://www.denso.com/global/en/news/newsroom/2022/20220601-g01/>



#### Gold Medal at the WorldSkills Competition

Viewing the foundations of *Monozukuri* as being the advanced skills and expertise that enable the realization of technologies, we are focusing efforts on training technicians and passing on skills.

#### IEEE Corporate Innovation Award

In recognition of our development of the QR Code® and our contribution to its global popularization, we received the IEEE Corporate Innovation Award from the Institute of Electrical and Electronics Engineers (IEEE), the world's largest technical professional organization for electrical and electronic engineering.

#### DENSO DIALOG DAY 2022

DENSO announced distinctive initiatives that are focused on five essential elements and aimed at helping realize a society that promotes cycles of well-being. We also announced our corporate value enhancement strategy, which will bolster the corporate foundations that support value creation.

For details, please visit the website below.  
<https://www.denso.com/global/en/news/newsroom/2022/20221216-g01/>

