



Growth Strategy

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Sustainability Management

Accelerating Efforts toward Sustainability Management

One of the ideals of the DENSO Creed 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. Furthermore, we have established the DENSO Group Sustainability Policy to ensure that all DENSO employees act appropriately as members of a global organization and in accordance with the DENSO Creed and DENSO Philosophy throughout the interactions they have with our stakeholders and with society as a whole.

Long-term Policy for 2030

In the promotion of sustainability management, DENSO has formulated the Long-term Policy for 2030, 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 fundamental areas of focus, we have adopted the theme of "inspiring" and are

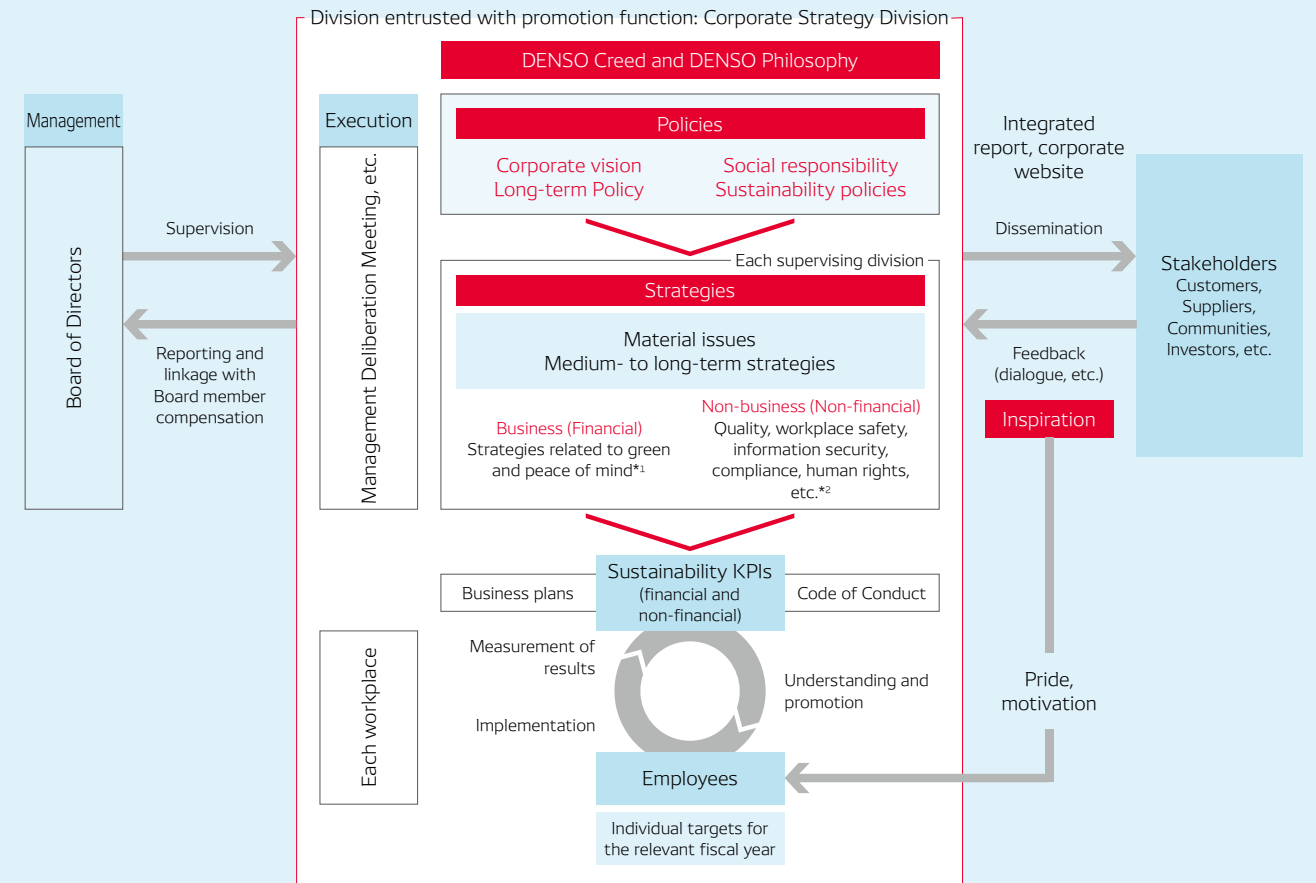
working to create new value for society that can inspire our diverse stakeholders.

Promotion Structure for Sustainability Management

DENSO has appointed members of the Board and senior executive officers as the personnel in charge of sustainability management and has entrusted the promotion function for Companywide sustainability management to the Corporate Strategy Division. This division is involved in such efforts as drafting policies and action plans related to sustainability, providing follow-up support for the sustainability activities of each division, and engaging in internal and external communication.

Furthermore, matters such as the direction of sustainability management and the status of Companywide sustainability activities are reported to and deliberated on by the Company's formal committees (such as the Management Deliberation Meeting) and overseen by the Board of Directors. In addition, the divisions in charge of individual sustainability themes promote activities to address these themes in collaboration with relevant divisions and after deliberation on said themes by each expert committee.

Promotion Structure and Division for DENSO's Sustainability Management



*1 Strategies deliberated on by the Management Strategy Meeting and the Management Deliberation Meeting (see page 101)

*2 With committees in charge of these themes, such as the Quality Assurance Meeting and the Companywide Safety, Health, and Environment Committee serving as the secretariat, initiatives to address these themes are deliberated on by the Company's formal committees.

Please see this URL to view the DENSO Group Sustainability Policy.
<https://www.denso.com/global/en/-/media/global/about-us/sustainability/management/management-doc-sustainability-policy-en.pdf>



Aims and Road Map for 2030

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, which serves as our vision for 2030. The Company also established material issues (Materiality) and various strategies as a path for realizing its Long-term Policy for 2030. Through these efforts, DENSO is implementing sustainability management.

Recently, we integrated our Long-term Plan for 2025, our Mid-term Policy for 2021, and the three strategies we are promoting under Reborn21 into the new Mid-term Policy for 2025. By promoting this policy alongside our strategies related to green and peace of mind, we will aim to realize our Long-term Policy for 2030.

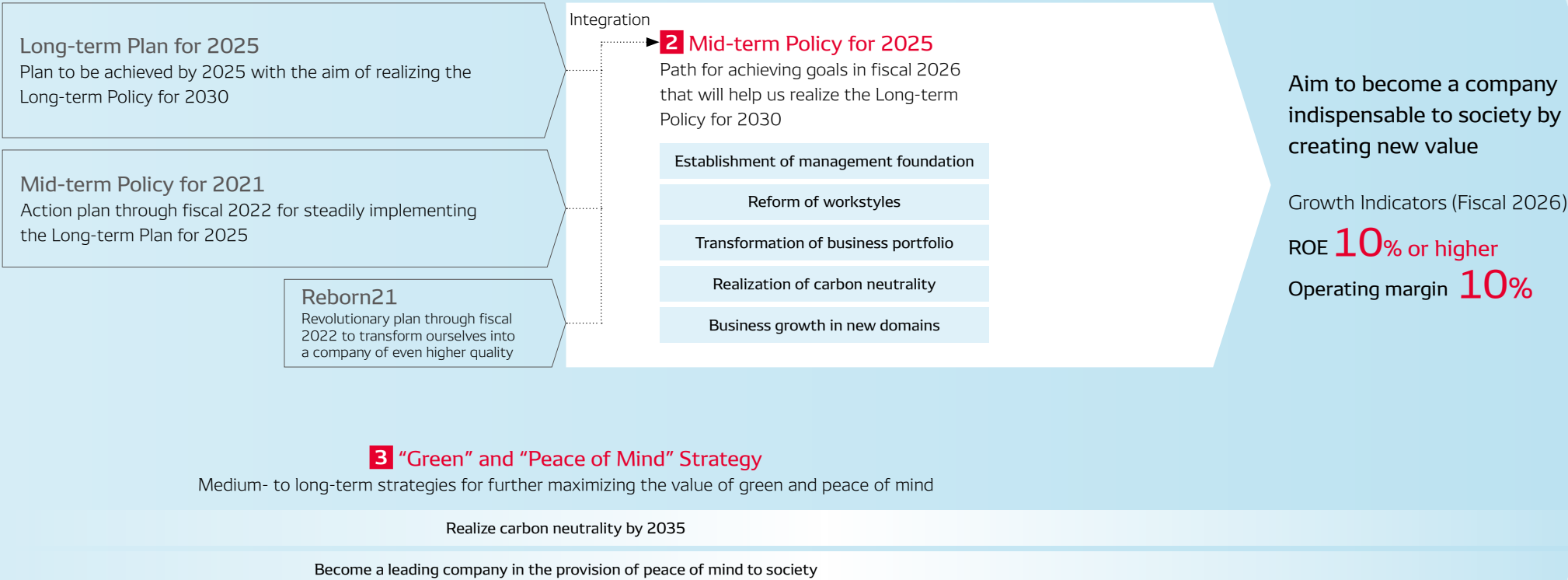
Growth Indicators to Realize the Long-term Policy for 2030 and Social Issues We Aim to Resolve

To realize its Long-term Policy for 2030, DENSO is working to achieve 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.

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

Sustainability Management



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



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 robotics, the impacts of the COVID-19 pandemic, and rising geopolitical risks. Furthermore, in the mobility domain, measures are being taken to address a number of issues, such as efforts toward achieving carbon neutrality, reducing traffic accidents, and easing traffic congestion. These issues, coupled with the proliferation of IoT and AI, have led to advancements in 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 <ul style="list-style-type: none">• Tightening supply-demand situation for energy across the globe and the shift from low carbon to carbon free<ul style="list-style-type: none">Acceleration of international cooperation to respond to climate change in light of the urgent need to address global warming①Necessity of promoting renewable energy and a hydrogen-based society①Restrictions on power generated from fossil fuels and internal combustion engines①• Establishment of laws to control adverse impacts on the environment and human rights throughout the entire supply chain①②• Intensifying confrontation due to differences in political structures (trade, technologies, human rights, etc.)④• Rising geopolitical risks②③④
Economy <ul style="list-style-type: none">• Declining economies in advanced countries, rise in prominence of emerging countries, and global multi-polarization②③④• Rise in nationalism due to growing regional disparities③④• Establishment of economic blocs advantageous to individual countries and ongoing regional optimization④• Expansion of ESG investment and acceleration of divestment①②
Society <ul style="list-style-type: none">• Threat to the sustainability of society due to the rapid increase in population, with the global population exceeding 8 billion①②③④• Aging populations around the world, declining workforce, acceleration of growth in life expectancies②③④• Urbanization in emerging countries, acceleration of urban regeneration due to the shift to smart and compact devices③④• Consumption behavior becoming more ethical and experience-based with the shift to the sharing economy①②• Progression in the transition to labor offered by AI and robotics, changes in work ethic and available free time②• Change in value systems related to social distancing and mobility②
Technology <ul style="list-style-type: none">• 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 data②• Transition from the development phase to the phase of AI and quantum computer utilization and the versatile implementation of AI in manufacturing, finance, and services②• Accelerating shift to non-contact and full automation in various industries as a result of the COVID-19 pandemic②
<div>Keywords for Social Changes by 2030</div> <div><div>① Shift toward a recycling-oriented, carbon-free society</div><div>Changes in the powertrain mix (electrified vehicles, internal combustion engine vehicles)</div></div> <div><div>② Diversification of people's values and consumption behavior</div><div>Diversifying consumption behavior and value systems Evolution of IT communications × Automobiles</div></div> <div><div>③ Emergence of social issues</div><div>Aging population, depopulation, overcrowding, and congestion</div></div> <div><div>④ Structural changes and instability within the international community</div><div>Political conflicts and geopolitical risks Growth of new emerging markets</div></div>

Risks and Opportunities	Response Measures to Risks and Opportunities
① Shift toward a recycling-oriented, carbon-free society <div><div>Risks<ul style="list-style-type: none">• Tightening and acceleration of environmental regulations on the automotive industry• Introduction and expansion of environmental taxation by the governments in each country and region• Increasing demand for the transition to carbon neutrality within the product production process</div><div>Opportunities<ul style="list-style-type: none">• Increasing needs for systems to respond to electrification and alternative fuel (e-fuel, hydrogen fuel, and biofuel)• Heightened expectations for new technologies that contribute to carbon neutrality (CO₂ capture, storage, reuse, etc.)• Growing demand for highly efficient production technologies that achieve solid energy-saving effects</div></div>	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. Through flexible cooperation and competition with other companies, we aim to accelerate the development of technologies for reducing CO ₂ emissions and realize the stable supply of such technologies on a global scale. At the same time, we will help reduce CO ₂ emissions across society through the development of new technologies such as those that capture, store, and reuse CO ₂ . We will also strive to reduce and curtail CO ₂ emissions from our business activities, including in our manufacturing activities and across our supply chain, with a view to achieving a carbon-free society.
② Diversification of people's values and consumption behavior <div><div>Risks<ul style="list-style-type: none">• Reduction in transportation as the customs in the new normal era become commonplace• Intensifying competition due to the increasing entry of IT companies in the automotive industry in response to the digitization of cars</div><div>Opportunities<ul style="list-style-type: none">• 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.)• Rising need for added value due to the accelerating shift to digital technologies and IT• Growing awareness of eco-friendly products</div></div>	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.
③ Emergence of social issues <div><div>Risks<ul style="list-style-type: none">• 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.)</div><div>Opportunities<ul style="list-style-type: none">• 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.)</div></div>	Alongside the commercialization of products such as household appliances and automobiles, 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 <i>Monozukuri</i> 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.
④ Structural changes and instability within the international community <div><div>Risks<ul style="list-style-type: none">• Revisions to business models (regulation response and supply chains) due to conflicts between countries and regions• Rising threats toward DENSO's business management (military strikes, cyberattacks, etc.)</div><div>Opportunities<ul style="list-style-type: none">• Progressing expansion of new markets and business partnerships with the aim of resolving social and environmental issues</div></div>	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.

Social Changes as of 2030 and Key Initiatives for DENSO

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 work to gain an accurate understanding of the outlook for the CASE revolution and changes in the mobility society, and thoroughly examine whether or not these changes will have an impact on the key initiatives of DENSO.

Key Initiatives for DENSO
<div><div>Maximizing the Value of "Green" and "Peace of Mind" to Be Inspiring</div><div>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 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 <i>Monozukuri</i> 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 that inspires society.</div><div></div></div> <div><div>Reinforcing the Corporate Foundation That Underpins Our Value Creation</div><div>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 higher quality value at faster speeds by reinforcing our management foundation.</div><div></div></div>

1 Materiality

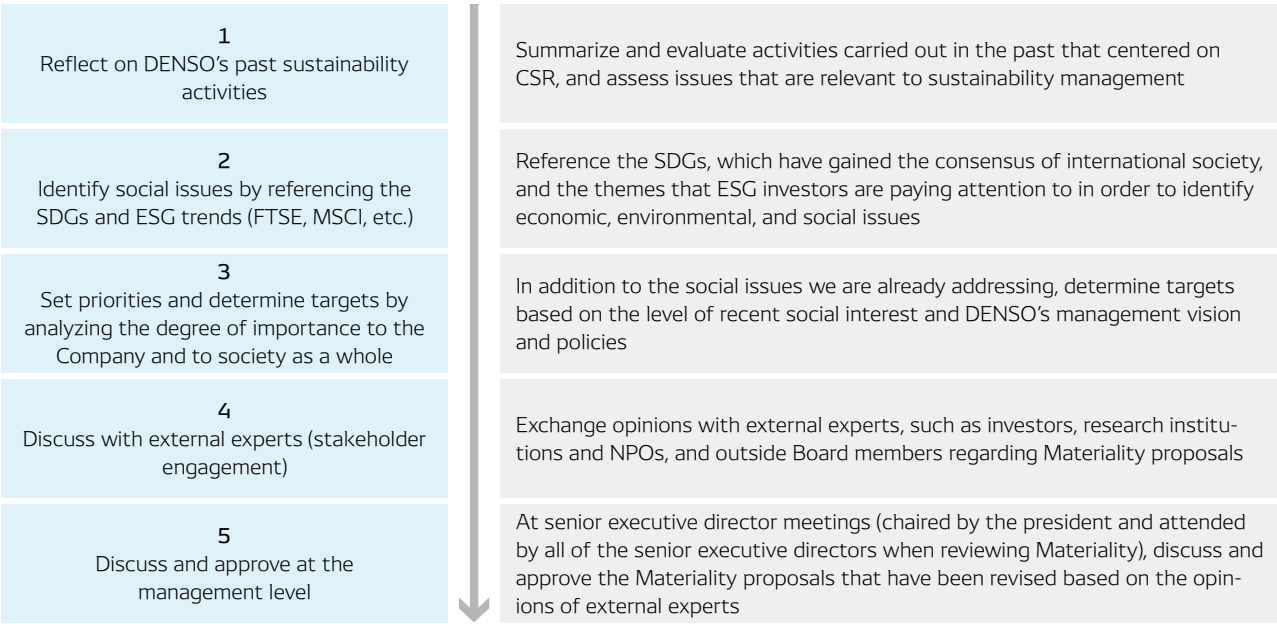
We have determined material issues (Materiality) to be addressed in order to achieve our Long-term Policy for 2030 and are accelerating sustainability management in an effort to resolve these issues. Among our social forecasts based on our awareness of the projected business environment of 2030 as well 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

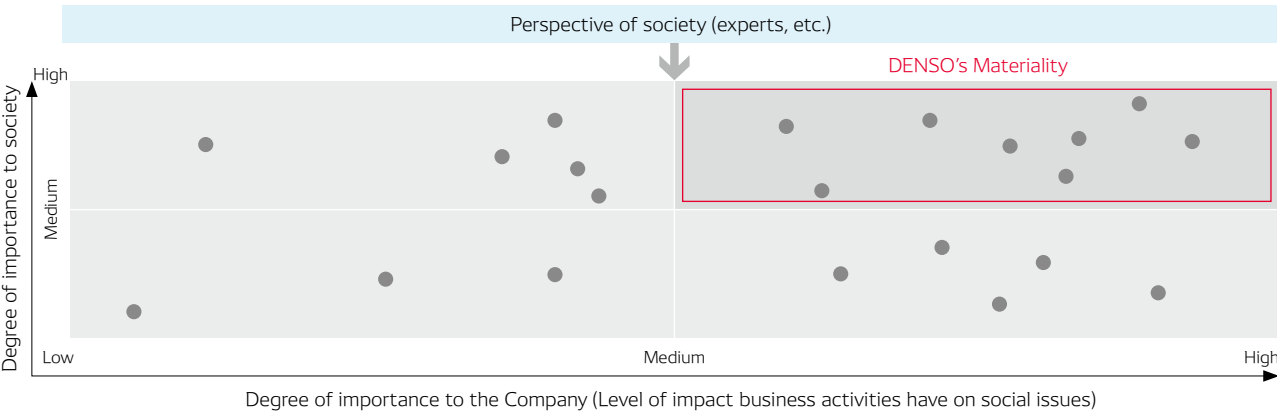
DENSO has selected important issues from among the various issues society faces within the three areas of “green,” “peace of mind,” and “inspiring” declared under DENSO’s Long-term Policy for 2030.

Process for Determining Materiality

DENSO evaluates the importance of each issue to society and their importance to management and selects their material significance (Materiality) through an approval process at the management level while receiving opinions and advice from third parties.







Plotting of Social Issues



Materiality KPIs

We establish KPIs for each of the identified material issues (Materiality), incorporate them into Company targets, and follow up on and discuss 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. [P104-106](#)

	Materiality	Vision	KPIs (fiscal 2023)	KPIs (fiscal 2026)	Related SDGs
Green	Prevention of global warming ㊦	Contribute to an eco-friendly and sustainable society by reducing environmental burden and realizing highly efficient mobility	• Reduce CO ₂ emissions from plants by 25% compared with fiscal 2021 (including carbon credit use) • Popularize products in the electrification domain and achieve sales of ¥760.0 billion	• Reduce CO ₂ emissions from plants by 100% compared with fiscal 2021 (achieve carbon neutrality through energy conservation and carbon-neutral electricity and through carbon-neutral gas using carbon credits) • Popularize products in the electrification domain and achieve sales of ¥1 trillion	
	Prevention of air pollution / Reduction of environmental burden ㊦	• Reduce our CO ₂ emissions from our factories to zero • Contribute to the electrification of automobiles and reduce our CO ₂ emissions to the greatest extent possible			
	Effective utilization of resources ㊦	• Contribute to realizing a carbon-neutral society through technologies that capture, store, and reuse CO ₂			
	Conservation of water resources	• Reduce environmentally harmful substances, emissions, and waste to help permanently preserve the global environment			
Peace of Mind	Reduction of traffic accidents ㊦	• Popularize safe products in order to eliminate fatalities due to traffic accidents	• Popularize safety products and achieve sales of ¥428.0 billion in the ADAS domain	• Popularize safety products and achieve sales of ¥500.0 billion in the ADAS domain	
	Provision of flexible and comfortable movement ㊦	• Address the need for ensuring a safe air environment and provide comfortable spaces • Support working people by offering technologies that help resolve the issues associated with a declining workforce			
	Provision of safe and secure products ㊦	• Provide high-quality safety products that satisfy and gain the trust of customers			
	Response to decrease in birthrate and aging population ㊦				
Corporate Foundation	Compliance	• Ensure that each employee acts in a fair, honest, and ethical manner while complying with laws and regulations in each country and region	Zero serious violations of laws	Zero serious violations of laws	
	Information security ㊦	• Provide safe and reliable products to customers, protect information assets, and prepare for cybersecurity risks that the “connected society” faces	Zero serious incidents	Zero serious incidents	
	Diversity and inclusion	• 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	• Local employees in leadership roles at overseas bases: 20 • Number of women in management positions at DENSO CORPORATION: 145 in business fields and 145 in technical fields	• Local employees in leadership roles at overseas bases: Over 20 • Number of women in management positions at DENSO CORPORATION: 200 in business fields and 200 in technical fields	
	Healthy and safe working environment	• Respect the rights of all our stakeholders, including our employees and people throughout our supply chain, in our business activities • Pursue business activities that take into account environmental issues, human rights issues, and compliance together with our suppliers	• Employee Lifestyle Score* ¹ at DENSO CORPORATION: 77 points • Safety mark* ² : 50.0 marks at DENSO CORPORATION; 36.0 marks at domestic Group companies; and 48.5 marks at overseas Group companies	• Employee Lifestyle Score* ¹ at DENSO CORPORATION: Over 77 points • Currently considering targets that incorporate improvements to the scores for safety marks on the left	
	Workstyle reform / Job satisfaction enhancement		• Rate of positive response to work engagement at DENSO CORPORATION: 72%	• Rate of positive response to work engagement at DENSO CORPORATION: 78%	
	Protection of human rights / Sustainable procurement		• Attendance rate for human rights education for newly appointed managers and new employees at DENSO CORPORATION: 100%	• Currently considering targets in addition to those on the left	
	Corporate governance	DENSO will support the above targets for Materiality and progress to a more effective governance system as 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 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 mark: Scoring depending on scale and type of accident. The lower the number the better the score

Results of the Long-term Plan for 2025 and Mid-term Policy for 2021

In 2017, we formulated the Long-term Plan for 2025 (with fiscal 2026 as the year of achieving these goals) as a pathway to reaching our Long-term Policy for 2030. Additionally, we have established the Mid-term Policy for 2021 (with fiscal 2022 as the year for achieving these goals) as a three-year action plan for steadily advancing the Long-term Plan for 2025. By undertaking these initiatives, we aim to contribute to a sustainable society and enhance corporate value. The results of these initiatives are as follows.

Relationship between Mid-term Policy for 2021 and Reborn21

Since fiscal 2019, we have been steadily implementing an action plan based on the Mid-term Policy for 2021, but factors such as the COVID-19 pandemic in fiscal 2020 and quality-related issues on an unprecedented scale have shaken the foundation of DENSO. Accordingly, the Mid-term Policy for 2021 has been replaced by a new set of targets framed as Reborn21, a reform plan aimed to transform the Company into a “high-quality DENSO,” which reflects the progress made and the latest business environment.

Growth of the Four Focus Fields

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

Electrification	<ul style="list-style-type: none">Cumulative Electrification Group's R&D investments from fiscal 2019 to fiscal 2022: Approximately ¥200.0 billionEstablishment of BluE Nexus Corporation, a joint venture company for the sale and development of the drive module to popularize electrificationCreation of the ELEXCORE brand, an electrification product lineDevelopment and market launch of the world's highest level of heat management systems	<p>Number of inverters produced</p> <p>Fiscal 2019 (excluding the Hirose Plant)</p> <p>Approximately 0.8 million inverters</p> <p>+290%</p> <p>Approximately 3.1 million inverters</p>
Advanced Safety and Automated Driving	<ul style="list-style-type: none">Cumulative AD & ADAS Business Unit's R&D investments from fiscal 2019 to fiscal 2022: Approximately ¥245.0 billionEstablishment of joint venture J-QuAD DYNAMICS Inc. for development of integrated control systemsExpansion of retrofitted products for already-sold vehicles, such as acceleration control devices for when drivers accidentally step on the gas pedalDevelopment and market launch of Global Safety Package 3 (GSP3), an active safety system product	<p>Number of millimeter-wave radar sensors produced</p> <p>Fiscal 2022</p> <p>Approximately 8.3 million sensors</p> <p>+100%</p> <p>Fiscal 2019</p> <p>Approximately 4.1 million sensors</p> <p>Number of vision sensors produced</p> <p>Fiscal 2022</p> <p>Approximately 6.2 million sensors</p> <p>+90%</p> <p>Fiscal 2019</p> <p>Approximately 3.3 million sensors</p>
Connected Driving	<ul style="list-style-type: none">Subsidiary acquisition of DENSO TEN Limited (formerly FUJITSU TEN) to reinforce competitiveness in the connected domainDevelopment and market launch of cloud-based taxi dispatch systemDevelopment and market launch of an accident prevention support system that utilizes data from drive recordersAcceleration of technology development through investment in Uber ATG and other venturesDevelopment of digital key systems for mobility service providers and commercialization in North America	
Non-Automotive Businesses (FA and AgTech)	<ul style="list-style-type: none">Declaration of ¥300.0 billion in sales by 2030Development and market launch of D Series process rationalization solutionDevelopment and market launch of D-mobico compact mobile refrigerator in collaboration with Yamato Transport Co., Ltd.Development of traceability system that utilizes QR codes and blockchain technology	

Reinforcement of Profitability for Existing Businesses

Creation of a Perfect Earnings Base to Support Future Growth

- Reinforcement of our ability to respond to changes in demand: Enhance productivity through introduction of F-IoT, reorganize global production and supply system, etc.
- Reduction of fixed costs: Reorganize and aggregate shared service companies, make R&D in the software domain more efficient, etc.

Technology Development for Achieving Overwhelming Competitiveness

Aggregate technology development for ECUs, semiconductors, sensors, and motors for achieving overwhelming competitiveness of components and systems (Please see the next page for details.)

Five Pillars of Management Reform

To achieve the Long-term Policy for 2030, 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 has been working to realize significant change in its management structure to enhance its organizational capabilities and compete in a challenging business environment.

○: Achieved; △: In progress

Five Pillars of Management Reform	Results and Examples	Evaluation
1. Enhancement of Vehicle Perspective and Streamlining of Technological Development Aim <ul style="list-style-type: none">Enhancement of vehicle perspective through projects across businesses and functionsAggregation and reinforcement of technology development for ECUs, semiconductors, sensors, and motors	<ul style="list-style-type: none">Development of cross-sectional organization that creates value across vehicles (Energy Management Group and Advanced Device Group)Intensification of operations from component sales through to cross-domain development and customer approachReinforcement of development capabilities as a result of synergy through collaboration with the Toyota Group	○
2. Advanced R&D Function to Realize Agile Development Globally Aim <ul style="list-style-type: none">Administration of laboratories around the world by headquartersPromotion of agile development and industry-academia-government network	<ul style="list-style-type: none">Promotion of alliances and establishment of laboratories around the worldParticipation in rulemaking through technical liaison activities, mainly in Europe and the AmericasLaunch of GIC* to discuss technology topics, led by the headquarters in each region, promoting global hypotheses, strategy creation, and pursuit of advanced technologies <p>* GIC: Global Intelligence Consolidation</p>	○
3. Business Unit Evolution and Smaller but Stronger Headquarters Aim <ul style="list-style-type: none">Realization of value creation and provision of professional services through minimization of management operations in functional departmentsDecision to stop and exponentially increase management speed in operating departments	<ul style="list-style-type: none">Promotion of de-emphasis and discontinuation* activities through formulation of a business portfolio that utilizes DENSO's unique style of ROICTransfer of responsibility and authority to operating departments through increase in transaction amount-based authority delegation standards and simplification of performance follow-up proceduresReview of human resource allocation through methods including increase in efficiency through enhancement of expertise in functional departments and DX to implement a shift of power to operating departments <p>* De-emphasis and discontinuation: Closing and reduction of specific businesses and products (including transfer of businesses) based on business portfolio strategies</p>	○
4. Global Management with Optimal Use of Group and Regional Power Aim <ul style="list-style-type: none">Autonomous rotation of the PDCA cycle with a timely understanding of conditions in each regionLeading of headquarters in each region for the role of sensors	<ul style="list-style-type: none">Establishment of an information sharing and strategy creation system that utilizes the strengths of the region through the roles of research and suggestion, not only through PDCA within the regionDetermination of local business managers to lead the operations in each region, leading of strategy formulation and implementation together with regional CEOsReview of resource relocation and consolidation of functions led by local regionsActive participation by overseas human resources through promotion of diversity and inclusion	○
5. Ways of Working with Tremendous Speed and Efficiency Aim <ul style="list-style-type: none">Creation of world-ranked IT infrastructureEngagement in drawing out individual capabilities and creating new value through DX	<ul style="list-style-type: none">Creation of human resource portfolio strategies that realize business portfolio reformsSteady promotion of DX at all officesComplete introduction of DX at all plants, to 500 lines at DENSO CORPORATION plants and expansion to Group companies in Japan and overseas from fiscal 2023	△

Results of Strategies and Initiatives Going Forward

Initiatives for reform have been progressing smoothly. Based on internal reviews, we have reflected the following key initiatives in the Mid-term Policy for 2025.

Initiatives Going Forward	<ul style="list-style-type: none">Reassessment of DENSO vision and strategies through conceptualization of world views in 2035 and backcastingClarification of areas to be addressed as new businesses in the expanding business domainRealization and acceleration of implementing human resource portfolio that achieves business portfolio reformCreation of a workplace that enables full demonstration of individual capabilities for 170,000 employees, with a focus on the shift to DX at all plants
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Results of DENSO Revolution Plan “Reborn21”

Since fiscal 2020, DENSO’s operating environment has continued to undergo dramatic changes. These changes have included the impacts of the COVID-19 pandemic, which caused a massive decline in sales. In addition, we saw the occurrence of a quality-related issue, which shook the foundation of our management. In response to these developments, we have been working to restore our quality, which is the foundation of our business and trust, and to 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. With these aims, we formulated the DENSO Revolution Plan “Reborn21.” In the two-year period leading up to March 31, 2022, we have sought to transform ourselves into a company with even higher value so that DENSO is poised to cut a fresh start. Specific successes of our initiatives can be found below.

O: Achieved; △: In progress

Quality	Taking a humble approach toward thoroughly reinforcing the three pillars that form the basis of our recommitment to quality	
Goal	Complete measures, ensure improvements in quality, and recover trust from customers	
	Successes and Initiative Examples	Evaluation
Reinforce our fundamental technologies	• Establishment of development and quality assurance systems for individual fundamental technologies to make steady progress in the development of new fundamental technologies	O
Create excellent working environments that ensure open communication	• Cultivation of a culture in which quality nonconformities and issues are quickly communicated to relevant parties to facilitate swift responses • Entrenchment of well-grounded action directed by division leadership through quality control teams	O
Adopt a humble stance	• Fostering of recognition of compliance as a fundamental principle and of related culture • Reduction of error in growing volume of software development processes through digital transformation	O
Strategy	Committing to the principles of “green” and “peace of mind” in business	
Goal	Formulate long-term scenarios for maximizing environmental performance and peace of mind, move forward with development of concrete technologies, and advance product deployment plans	
	Successes and Initiative Examples	Evaluation
Green	• Commencement of annual tracking of key performance indicators related to business continuity and CO ₂ emissions (mobility products) • Formulation of CO ₂ emissions reduction plan leading up to 2025 and establishment of renewable energy and credit acquisition policies (<i>Monozukuri</i>) • Examination of potential alliances with multiple companies and industries to advance commercialization of initiatives (energy use)	O
Peace of mind	• Promotion of Global Safety Package 3 (GSP3) sales, expansion of post-installation products, and planning of next-generation products and related business strategies (safety) • Swift launch of Premie in-vehicle air purifiers (comfort) • Acquisition of multiple orders centered on solutions that respond to customer needs (support for working people)	O
Business practices	Providing customers with the best possible products and services faster than any other company	
Goal	Transform employee awareness and work processes to promote adherence to proper work processes founded on digital technologies and Core & Customization Strategy* ¹ at all workplaces	
	Successes and Initiative Examples	Evaluation
Core & Customization Strategy	• Development of business portfolio strategy for achieving growth based on both “green” and “peace of mind” principles and Core & Customization Strategy • Improvement of quality control and sales promotion efficiency for growth field products based on Core & Customization Strategy • Commencement of de-emphasis and discontinuation of designated products* ² with fulfillment of supply obligations to customers as top priority	O
Digitalization	• Promotion of accurate communications based on data and cultivation of culture of utilizing digital technologies to facilitate proper work processes • Linkage of unconnected company data and automation and mechanization of processes previously performed by hand • Laying of groundwork for adopting higher-value processes through digitalization and process reforms	O

*1 Strategy of planning standard (core) specifications that benefit all customers and customizable specifications for matching specific customer needs to swiftly supply products and services
*2 Businesses and products designated for de-emphasis or discontinuation (including through business transfer) based on business portfolio strategies

O: Achieved; △: In progress

Personnel and organization that can respond to change	Achieving a balance between the growth and happiness of all employees and efforts for enhancing our organizational capabilities to realize our strategies	
Goal	• Improve engagement through reforms to employee awareness and behavior aimed at transforming business • Enhance organizational capabilities through recruitment, positioning, and cultivation of human resources based on a clear definition of the skills and number of human resources needed to enact business strategies	
	Successes and Initiative Examples	Evaluation
	• Achievement of 70% rate of positive responses on employee engagement surveys (year-on-year improvement of 4 percentage points) • Optimal allocation of human resources based on human resource portfolio strategy, implementation of recurrent training programs for software engineers, and deployment of human resource development strategies targeting growth in focus areas • Internal deployment of new PROGRESS vision for human resources and organizations and start of employee awareness raising regarding three-year road map Measures: Acceleration of activities based on road map for realizing new vision targeting completion by March 31, 2024; bolstering of staff in priority areas, such as electrification, through recruitment, optimal positioning, and development of human resources	△
	Human Capital, Message from the Chief Human Resources Officer P65–67	
Finance	Establishing a structure resilient to change	
Goal	Lower the break-even point to 70% or less by drastically improving efficiency via business portfolio and work process reforms for realizing principles of “green” and “peace of mind”	
	Successes and Initiative Examples	Evaluation
	• Reduction of the break-even point by 6 percentage points by cutting approximately ¥91.0 billion worth of costs over two years • Break-even point of 74% on March 31, 2022, despite deterioration of operating environment Measures: Launch of the Response Capabilities Enhancement Project in fiscal 2023 to reform cost structures and allow for more flexible responses to operating environment deterioration in order to lower the break-even point to 70% or less; reduction of costs and transfer of costs to customers in order to overcome challenging operating environment in fiscal 2023	△
	Financial Capital, Message from the Chief Financial Officer P57–64	

Message from an Executive Vice President

Creation of New Value Based on Principles of “Green” and “Peace of Mind”

The founding spirit of “provide quality products and services” forms the basis for DENSO’s quality philosophy. Despite the commitment to quality this indicates, a major quality-related issue occurred as a result of our prioritizing quantitative indicators like sales and profit. Recommitting ourselves to quality, we enacted the DENSO Revolution Plan “Reborn21,” based on which we are reforming our awareness and behavior in line with DENSO’s principles of “green” and “peace of mind.” Through this plan, we are dedicated to achieving results that are apparent in the defined indicators by thoroughly examining our philosophy and approach toward quality, incorporating initiatives for addressing social issues into our strategies while achieving business sustainability, and popularizing DENSO’s products and services.

Specific benefits of our activities in this regard include the start of business portfolio reorganizations based on our philosophy and the entrenchment of comprehensive planning for defining conditions for customers and practices using the latest digital tools to improve quality. These advancements were achieved through a concerted effort to reform our corporate culture. As a result, we have seen improvements in the quality of delivered and on-market products, which has led to our receiving quality awards from companies around the world. In terms of finances, these improvements have lowered our break-even point.

When it comes to creating value that inspires customers and society, nothing is more important than our people. I therefore hope to contribute to customers and society by making sure that DENSO is always a company at which employees can use their time to help shape a more exciting future for society and utilize their innovative ideas and refined sensibilities.

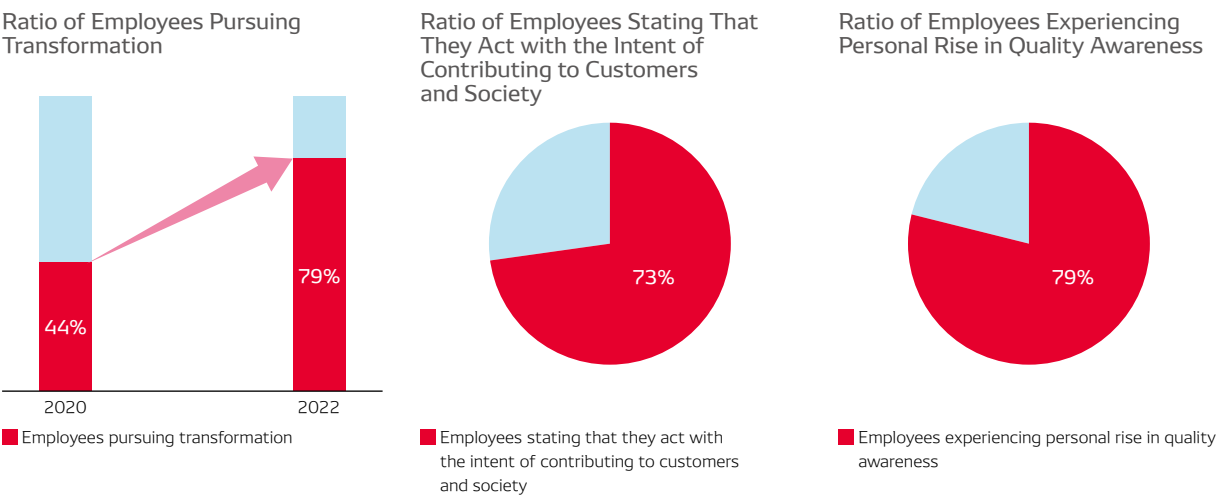


Yukihiro Shinohara*
Executive Vice President, Representative Member of the Board

* Oversaw and promoted reforms to employee awareness and the corporate constitution as Chief Corporate Revolution Officer over the period from June 2020 to March 2022

Raising of Employee Awareness

The Company's employee surveys are used as a means of guiding changes seen in awareness among employees as a result of initiatives under "Reborn21." The 2022 survey revealed a change in employee behavior with regard to quality awareness along with a progressive individual-level shift toward work attitudes that are more conducive to transforming DENSO into a company with even higher value.



Examples of Global Initiatives

Restarting as a Hub for CASE—Promoting Quality Enhancements, Factory Reforms, and DX & Organizational Integration
DENSO Manufacturing Tennessee, Inc. (DMTN), our largest manufacturing base in the United States, launched the Reborn21 Project Team, which promotes activities focusing on 1) reestablishing quality foundation, 2) implementing swift factory reforms, and 3) promoting DX and organizational integration. With regard to quality, the Reborn21 Project Team created open working environments that incorporate real associates' voices and feedback. In addition, the team enacted rigorous countermeasures to prevent defective products from reaching the customer. For factory reforms, the team was able to launch 35 new production lines for CASE products over a three-year period through the swift reorganization of DMTN's production structure. In terms of the integration of DX and organizations, the team integrated the organizations of individual business units and factories into one Companywide organization and reduced duplicate functions and repetitive work processes through the expansion of DX. As a result of the Reborn21 Project Team's activities, which brought together all DMTN associates, DMTN was able to improve competitiveness through fixed cost reduction and a break-even point of 2.7%. Through the promotion of Reborn21, DMTN was able to restart itself as a North American hub for CASE that can respond to the needs of customers and society and pursue the ideals of "green" and "peace of mind."

Promoting the Bok Noi Dai Mai (Let Me Hear Your Voice) Project*—Collecting Over 80,000 Proposals for Improvements

Our Thai manufacturing base, SIAM DENSO MANUFACTURING CO., LTD. (SDM), has been promoting improvement efforts to realize a more flexible and robust operating structure. With a focus on changes in the future business environment, such as the decline in production of internal combustion engines, these efforts have aimed to transform SDM into a company that can generate profits even if production volumes fluctuate. As the COVID-19 pandemic began to hit Thailand in 2020, SDM saw the changes amid the pandemic as a unique opportunity to accelerate its improvement efforts and thereby launched the Bok Noi Dai Mai project in April 2020, which involved the participation of all employees in improvement activities. Under the Bok Noi Dai Mai project, SDM formed numerous teams that brought people together from various workplaces, and these teams came up with ideas for improvements one after the other by leveraging the individual expertise of each team member. In only two months upon its launch, the project was able to collect over 80,000 proposals for improvements.

The activities of the Bok Noi Dai Mai project helped foster an awareness among SDM employees that they are the ones who can make their workplace better. As a result, SDM was able to realize structural reforms with cost benefits, including the reduction of ordinary fixed costs, totaling roughly ¥1.0 billion.

* The Bok Noi Dai Mai project was named after a hit song of the same title by the Thai female star singer NANTHIDA, who was popular in the 1990s.



Business Portfolio Transformation for Realizing Principles of Green and Peace of Mind

Optimization of Business Portfolio

In fiscal 2022, DENSO began conducting business portfolio optimization initiatives for maximizing the value of "green" and "peace of mind." As one facet of these initiatives, we have been concentrating management resource allocations more on fields that contribute to earnings and to the exercise of management philosophy in order to better focus on the use of internal resources. As a result, some businesses have been designated for de-emphasis or discontinuation. However, we also recognize that we have a responsibility to supply our customers, and it is therefore important to take a multifaceted approach toward examining how best to de-emphasize or discontinue designated businesses.

Transfer of Type III Alternator Business

A step ahead of Companywide reforms, the Electric Components Business Unit, which is heavily impacted by the electrification trend, decided to transfer its type III alternator business. Demand for type III alternators remains strong, largely among customers in the agricultural and construction equipment fields. Nevertheless, the decision to transfer these operations was made to address supply inconsistencies stemming from equipment aging and to strengthen our stance toward electrification. These operations were transferred to Chengdu Huachuan Electric Parts Co., Ltd., a partner with promising growth prospects, as seen in its proactive investment in automation equipment. We have judged that this partner is capable of carrying on DENSO's quality and service traditions and thereby contributing to customers.

Process of Business Transfer

A major factor behind the decision to transfer the type III alternator business was the idea that it would be beneficial for customers, Chengdu Huachuan Electric Parts, suppliers, and DENSO. However, these benefits hinge on the ability to supply customers with type III alternators of the

same high quality that they expect. When DENSO transfers production operations, it is standard for the Company to dispatch employees to the site of the transfer in order to confirm the new production operations first hand. Examinations of the possibility of transferring this business came into full swing around the time of the COVID-19 pandemic. Chengdu Huachuan Electric Parts has a different corporate culture, not to mention operates in a different language, than DENSO. We therefore arranged more than 100 online meetings with this company, using diagrams, photographs, and videos to explain DENSO's quality traditions and ensure that they could supply customers with products of equivalent quality. During this process, we emphasized the importance of gaining the understanding of Chengdu Huachuan Electric Parts based on their perspective. The ongoing process of communication, designed to translate our experience and insight into words and explain the reasoning behind our designs, processes, and inspections, finally came to fruition in January 2022, when we were able to conclude a contract with Chengdu Huachuan Electric Parts for the transfer of one of our businesses. In fact, the type III alternator business was our first successful business transfer, and we are dedicated to building upon this success to accelerate Companywide business portfolio optimization efforts.

- DENSO**
Shift necessary resources to growth fields
- Chengdu Huachuan Electric Parts**
Acquire product and manufacturing expertise and sales channels
- Customers**
Continue to receive reliable supplies of products
- Suppliers**
Support new businesses

Message from an Employee

Conveyance of DENSO's Commitment to Quality

This unprecedented business transfer was undertaken by a team of both new and veteran employees. We were thus able to utilize the proactive efforts of new employees as well as the experience, insight, and personal connections that veteran employees possess in the areas of design, production technologies, and quality assurance. Moreover, the team was rather small, allowing for swift decision-making. After the transfer, the type III alternators ceased to be DENSO brand products, but customers continued to use them nonetheless. This project was advanced with a sense of dedication to fulfilling our responsibilities toward the customers that have continued to trust DENSO over the years. Ensuring that this undertaking was beneficial to customers, Chengdu Huachuan Electric Parts, suppliers, and DENSO was no easy task, but I am confident that our efforts will contribute to the development of customers and of Chengdu Huachuan Electric Parts while also providing a good example to be followed by the people who are in charge of DENSO's next business transfer.



Hitoshi Irie
Electric Components Reform Driving Department, Electric Components Business Unit

2 Mid-term Policy for 2025

After implementing various strategies and rebuilding our corporate foundation through efforts such as “Reborn21,” we find ourselves at a new starting line. From fiscal 2023, we will aim to become a company that is indispensable to society while cherishing the DENSO Culture that we have cultivated since our founding. To that end, we will strive to resolve social issues by creating value that is uniquely DENSO and in turn realizing business growth. To serve as a guideline for our 170,000 employees to achieve these aims, we have established the new Mid-term Policy for 2025.

Prerequisites for Realizing the Goals of the Mid-term Policy for 2025

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 *Hitozukuri*, 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.

Five Pillars of Global Management

1. Establish a Solid, Unshakable Business Foundation Financial Capital, Risk Management P57–64, 114–115

Main Initiatives to Realize This Goal

Safety and Quality	Establish a sound safety and quality foundation that meets the expectations of society and earns the trust of our customers
Risk Management	Fulfill social responsibility by enhancing and implementing risk management initiatives so that we are able to immediately respond to changes in the external environment
Earnings	Establish a robust earnings structure by promoting reforms to our business portfolio

2. Transform Workstyles through Digitalization with the Aim of Realizing World-First and World-Best Offerings Manufacturing Capital, Intellectual Capital P68–71

Main Initiatives to Realize This Goal

1	Swiftly provide our stakeholders with the best possible value and experiences by maximizing our performance through the Core & Customization Strategy and data utilization
2	Pursue competitive reorganization of production structure, implement digital-twin technologies, and promote automation, thereby transforming the landscape of our plants around the globe

3. Transform Business Structure by Achieving Growth and Promoting De-emphasis and Discontinuation in Collaboration with the Industry and Our Business Partners

Manufacturing Capital, Intellectual Capital, and Overview by Product P57–64, 70–71, 81–97

Main Initiatives to Realize This Goal

1	Rebuild core businesses and transition business portfolio toward BEV products
2	Accelerate efforts to de-emphasize and discontinue internal combustion technology and commercialize new energy businesses, thereby contributing to the realization of the DENSO Philosophy (carbon neutrality)
3	Promptly establish a structure for electrification that enables a flexible response to diversifying customers’ needs and realize steady sales expansion and growth
4	Fully strengthen electronic and software technologies in an effort to contribute to the ideals of green and peace of mind and realize business growth

4. Lead the Industry in Becoming Carbon Neutral Strategies for Green and Peace of Mind P50–55

Main Initiatives to Realize This Goal

1	Transition to globally competitive, carbon-neutral plants through the utilization of innovative energy-saving technologies
2	Realize stable long-term procurement of renewable energy at a low cost
3	Develop energy businesses together with robust business partners

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

Materiality, Intellectual Capital P40–41, 70–71

Main Initiatives to Realize This Goal

1	Promote the development and practical application of cutting-edge technologies that underpin the digital-twin society
2	Create new value by further refining and combining our technologies while establishing growth scenarios based on popularizing our technologies throughout society
3	Establish efficient and flexible workstyles that cater to new business models and establish non-financial KPIs

Aim

By promoting efforts toward the five pillars of global management through the collective wisdom and strengths of our 170,000 employees around the world, we have established various aims for DENSO going forward.

Green	Lead the industry by realizing an environmentally neutral manufacturing industry, thereby creating a sustainable society		Carbon neutral by 2035 Products: 50% reduction in CO₂ emissions compared with fiscal 2021 Energy use: 50% reduction in CO₂ emissions compared with fiscal 2021 Base value: CO ₂ emissions from mobility products in fiscal 2021
			Carbon neutral without the use of carbon credits by 2035 (Carbon neutral with the use of carbon credits by 2025)
Peace of Mind	Safety	Realize a society without fatalities from traffic accidents	Eliminate fatalities from traffic accidents
	Comfort	Realize safe and secure air quality	Provide spaces with AQI* of less than 50 by 2025
New Businesses	Create new value by providing solutions that resolve social issues		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: 10% or higher	Operating margin: 10%	Revenue: ¥6.7 trillion
Revenue in the electrification domain: ¥1 trillion		
Revenue in the ADAS domain: ¥500.0 billion		

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 2035

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,” 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 at our plants

We will reduce CO₂ 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 at our plants, without the use of carbon credits, by capturing the CO₂ emitted in the production process and reusing it as energy.

Specific Initiatives	Target for 2035
<ul style="list-style-type: none">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 structureSeek to achieve carbon neutrality in 2025 by offsetting the CO₂ emitted from electricity-derived energy through the procurement of renewable energy and offsetting the CO₂ emitted from gas-derived energy through the use of carbon creditsRealize carbon neutrality at our plants by 2035 and work to expand and support activities geared toward carbon neutrality throughout the supply chain	Achievement of complete carbon neutrality at our plants
	Current level of achievement
	CO ₂ from plants: 1.91 million tons (5% reduction globally compared with fiscal 2021*) * Adjusted to pre-pandemic levels

Mobility Products

Aim: Contribute to the electrification of cars to reduce CO₂ 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 CO₂ emissions in all facets of mobility.

Specific Initiatives	Target for 2025
<ul style="list-style-type: none">Centered on driving systems and thermal systems, promote farsighted technological development in all facets of mobility, from HEVs, BEVs, and FCEVs through to eVTOL (all-electric vertical take-off and landing) aircraft, thereby realizing energy management that connects cars and other forms of mobility with societyApply electrification technologies to the new field of air mobility. At the same time, return the high-output, high-efficiency, and ultra-lightweight technologies acquired through this effort to the automotive industry	Revenue from electrification domain ¥1 trillion
	Current level of achievement
	Revenue from electrification domain ¥580.0 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 on a global basis. By doing so, we will help realize an energy-recycling society.

Specific Initiatives	Target for 2035
<ul style="list-style-type: none">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 introductionRealize technologies that can reuse energy by capturing CO₂ emitted from industry and CO₂ in the atmosphere at the necessary locations, then solidifying said CO₂ and converting it into resources, thereby reducing CO₂ emissions in society as a whole	Revenue from commercialization of renewable energy ¥300.0 billion
	Current level of achievement
	Selected as a Green Innovation Fund project (Large-scale verification test of CO ₂ capture technologies)



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

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

Elimination of Fatalities from Traffic Accidents

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 fatalities from 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 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 working to realize attractively priced safety products and enhance our lineup of retrofitted products.

Specific Initiatives	Target for 2025
<ul style="list-style-type: none">Respond to various accident situations and strive to prevent accidents through not only 360-degree sensing but also in-vehicle sensing and vehicle–infrastructure linkagesFully leverage AI technologies to predict “unseeable danger” and provide such information to the driver, thereby ensuring the driver avoids hazardous situationsIn 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	Revenue from the ADAS domain ¥500.0 billion
	Current level of achievement
	Revenue from the ADAS domain ¥360.0 billion

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 four environments within vehicles: temperature, sound, air, and visibility.

Specific Initiatives	Target for 2025
<ul style="list-style-type: none">Innovate purification and sensing technologies to eliminate viruses and visualize toxic substances, thereby realizing safe and secure air qualityRefine technologies to create and expand comfortable interiors in passenger vehicles and public transportation vehicles	Popularize in-vehicle general-purpose products
	Current level of achievement
	Investment in Japanese market for commercial products

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 2030
<ul style="list-style-type: none">In the agricultural field, contribute to the stable and secure supply of food by resolving issues throughout the food value chainIn the logistics field, provide ultra-high-quality comprehensive solutions that cover everything from frame-work improvement through to the rationalization of entire factoriesFor 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	Revenue from the agricultural, logistics, and plant operations/FA fields ¥300.0 billion
	Current level of achievement
	Gradual progress in business expansion

Overview by Product (Industrial Solutions, Food Value Chain) □ P.94–97

Main Results of Our Strategies Related to Green and Peace of Mind in Fiscal 2022 and Beyond

Since our founding, we have been working to maximize the value of green and peace of mind, and efforts to do so have been further accelerated under “Reborn21.” In this section, we look back on the steady results we achieved with our initiatives over the course of fiscal 2022.



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



2021

2022

Green

We are striving to reduce CO₂ from our *Monozukuri* activities and develop and popularize mobility products that contribute to the electrification of automobiles.

Monozukuri

Commencement of Verification Test for CO₂ Circulation Plant

With the aim of achieving net-zero emissions from our plants, we commenced verification tests for a CO₂ circulation plant, which is a facility designed to capture and recycle CO₂.



Mobility Products

Alliance with Honeywell

Together with Honeywell International Inc., we are promoting the development of electric propulsion systems for aircraft. Through this joint development, we will work to apply DENSO's electrification technologies in the field of air mobility.



Mobility Products

Bolstering of Production Structure for Products Powered by Electricity

We started to manufacture inverters in 2005, and since then, our inverters have been praised by our customers for their quality, stability, and high level of performance. As of December 2021, we have produced a cumulative total of 20 million inverters on a global scale. To further promote the global shift to electrification in the future, we are working to bolster our production structure for inverters in Japan, China, and North America. Going forward, we will establish manufacturing lines in such regions as Europe and India with the aim of producing 1.2 million inverters a year starting from 2025.

Monozukuri

Receipt of Energy Conservation Grand Prize Award for 12 Consecutive Years

We received the Energy Conservation Center Chairman's Prize in the Examples of Energy Conservation Division of the Energy Conservation Center, Japan (ECCJ)'s Award Program, in recognition of our efforts to reduce the amount of steam used to heat pure water for the cleaning of semiconductors through the reuse of plant waste heat.



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 production of power semiconductors that are needed for electric vehicles (EVs). Through this collaboration, we will realize the stable procurement of semiconductors, which in turn will help accelerate the transition to electrification.

Mobility Products

Adoption of DENSO Electrification Components in the Toyota bZ4X and Other Vehicles

We have developed new products that help enhance the practicality of EVs in such ways as increasing driving distance, shortening charging time, and extending battery life. These new products have been adopted in the Toyota bZ4X and other vehicles.

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.

Creation of Comfortable Spaces

Development of Puremie Air Purifier That Realizes Safe In-Vehicle Environment

Our newly developed air purifier Puremie eliminates viruses in the air environment and visualizes air purity status through an air cleaning device, which is equipped with a high-performance filter, and a monitor that measures air purity. In this way, Puremie offers passengers peace of mind with regard to in-vehicle air quality.



Air purifier



Air quality monitor

Support for Working People

Development of the Compact Mobile Refrigerator D-mobico

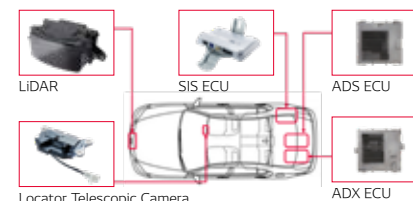
Together with Yamato Transport Co., Ltd., we have developed D-mobico, a compact, lightweight and portable refrigerator. D-mobico is able to flexibly respond to various transport needs and helps improve the fuel performance and reduce the CO₂ emissions of delivery vehicles.



Elimination of Fatalities from Traffic Accidents

Development of Products for the Advanced Driver Assistance Technology Advanced Drive

We have developed safety products that realize advanced driver assistance features, which help give passengers peace of mind and enhance the safety performance of vehicles. These products have been adopted in the all-new Toyota MIRAI.



Elimination of Fatalities from Traffic Accidents

Enhancing Performance and Expanding Functionality of the World's Smallest Stereo Vision Sensor

Compact stereo vision sensors help enhance the safety of lightweight vehicles. To that end, we have developed the world's smallest stereo vision sensor and have successfully enhanced the sensor's performance and expanded its functionality while still keeping it available at a low price.



Elimination of Fatalities from Traffic Accidents

Development of the Global Safety Package 3 Product for Accident Prevention and Safety Systems

We have developed Global Safety Package 3 (GSP3), which improves the safety of vehicles by giving them high sensing capability of their surroundings. We developed this product with the aim of expanding the settings in which accident prevention and driver assistance systems are used and of realizing a compact safety product that can be offered at a low price.

Support for Working People

Promotion of DX in the Healthcare Industry with the Aim of Improving the Quality of Medical Treatment

By utilizing OPeLiNK®, a platform developed by DENSO to integrate information from surgery equipment, we are participating in a platform business that promotes the digital transformation (DX) of medical education and hospital operations.

Management Foundation

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

Selection as a Green Innovation Fund Project

Among the technologies we are developing to realize carbon neutrality, technologies being developed under the themes of “motor systems for mobility,” “CO₂ separation and capture,” and “next-generation power semiconductors” have been selected as Green Innovation Fund projects.

Issuance of Sustainability Bonds for the First Time

We issued sustainability bonds for the first time in order to strengthen our sustainability management. The funds raised through these bonds will be allocated to various investments in electrification, advanced safety, and automated driving.

Agreement on the Transfer of DENSO's Fuel Pump Module Business to Aisan

DENSO has agreed to transfer its fuel pump module business to Aisan Industry Co., Ltd., with a view to enhancing the competitiveness of both companies in the powertrain domain.

Transfer of Type III Alternator Business to Chengdu Huachuan Electric Parts

By transferring the type III alternator business to Chengdu Huachuan Electric Parts Co., Ltd., we aim to continue to fulfill our responsibility of supplying our customers. At the same time, we will promote the reshuffling of our business portfolio through collaboration with our business partners.

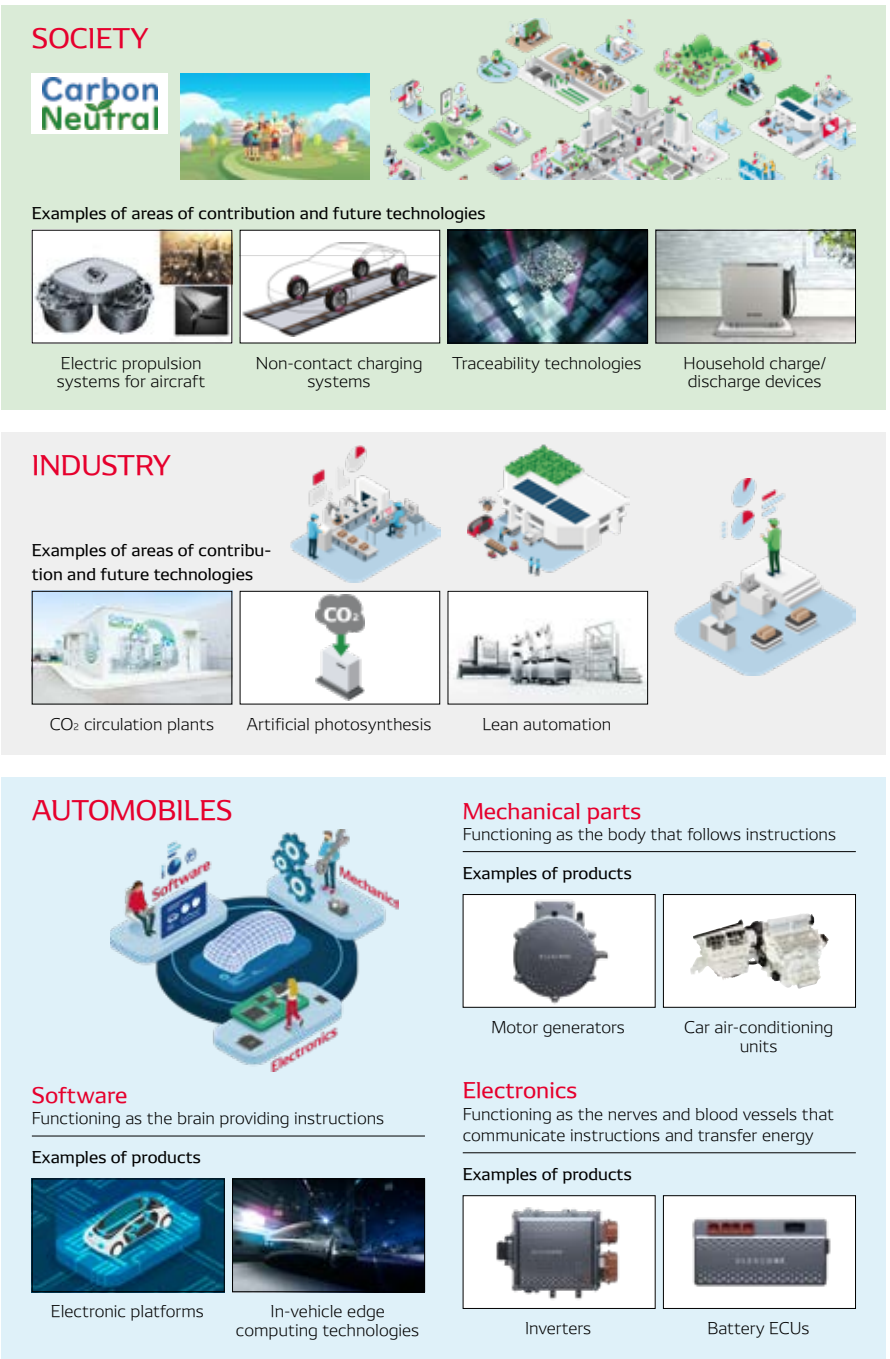
Investment in Semiconductor Manufacturer JASM

We have acquired a minority stake in Japan Advanced Semiconductor Manufacturing, Inc. (JASM), which handles the manufacture of semiconductors. Through this acquisition, we aim to realize the stable procurement of in-vehicle semiconductors over the medium to long term.

TOPIC: Green

Promotion of a Business Model That Contributes to the Carbon Neutrality of Automobiles, Industry, and Society at Large

Amid the rising interest in environmental issues, DENSO is working to not only help create eco-friendly automobiles but also go beyond the framework of automobiles to realize carbon neutrality in the manufacturing industry and in society as a whole, in collaboration with its various partners in the industry. To that end, we need to adopt a bird's-eye view of energy use to ascertain energy usage in individual automobiles, in the industry, and in society at large and implement energy management practices to ensure such energy is used efficiently. We will therefore aim to create businesses that realize carbon neutrality across society by applying, in a greater social context, the automotive and industrial technologies that we have cultivated since our founding.



4. Provide new value through energy management and new businesses that form links between automobiles, industry, and social infrastructure (society), by refining the technologies we have cultivated in automobiles and industry and applying them to social domains

3. Expand carbon-neutral plants, together with our partner companies, through the use of our energy utilization technologies and other measures

2. Realize carbon neutrality at our plants through the utilization of innovative energy-saving technologies and renewable energy and the introduction of green energy

1. Realize optimized energy management for automobiles by leveraging our system-building capabilities based on the three-pronged approach of mechanical parts, electronics, and software

TOPIC: Peace of Mind

Development of Global Safety Package 3 to Further Advance and Popularize Safety Products

To realize a society without fatalities from traffic accidents, which we adopted as part of our strategies related to peace of mind, we need to further advance safety products and equip vehicles with cutting-edge safety technologies. We also need to develop products that are attractive in terms of price so that we can realize the practical application of safety products in an even greater number of vehicles.

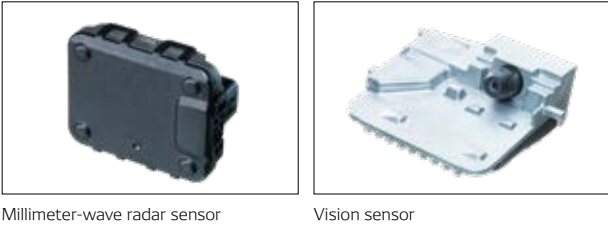
Global Safety Package 3 (GSP3) was developed with the aim of expanding the settings in which accident prevention and driver assistance systems are used and of realizing a compact safety product that can be offered at a low price.

Enhancement of Vehicle Safety Performance

Our Global Safety Package (GSP) combines information from a millimeter-wave radar sensor, which detects the shape of objects on the road, such as vehicles and guard-rails, using radio waves, with information from a vision sensor, which uses a camera to detect the environment ahead of the vehicle, in an optimized manner. By doing so, these systems enable safe driver assistance. The newly developed GSP3 represents the third generation of the GSP series.

The vision sensor used in GSP3 adopts a wide-angle lens and a high-resolution imager. This doubles the area that the sensor is able to detect while maintaining the product size and price through circuit optimization. Additionally, the vision sensor makes use of new awareness logic that enables it to achieve such features as detecting additional objects and recognizing direction.

The millimeter-wave radar sensor makes use of a simple product design, which helps reduce numerous components to one-fifth of the size of conventional components and doubles the range of detection (of oncoming traffic), thereby reducing the overall size of the radar sensor by 43%. Furthermore, the millimeter-wave radar sensor has improved the product's functionality, allowing it to separate two objects and detect them individually based on their difference in speed and thereby enhancing the detection performance to a level where the radar sensor is able to distinguish between pedestrians and bicycles.



As a result of this improved functionality, GSP3 is able to respond to potential accident scenarios, such as errantly turning left or right at intersections or colliding with oncoming traffic, that conventional safety products cannot. In fact, GSP3 is now able to cover approximately 70% of accident scenarios, as opposed to the roughly 40% covered by the previous GSP.

Efforts as a Comprehensive Systems Supplier

As a comprehensive systems supplier that handles everything from hardware to software, we gather together experts in each field of systems we handle to identify issues from their respective perspectives and examine measures to resolve such issues. Through this approach, we were able to successfully develop GSP3.

Going forward, we will promote technological development pertaining to advanced driver support so that we can realize mobility that is safe and free for all people, starting with drivers and pedestrians.

Message from an Employee
Aiming for the Ambitious Target of Eliminating Fatalities from Traffic Accidents

Without the cooperation of relevant parties, including our customers and suppliers, we could not have realized the development of GSP3 on our own. Thanks to the results of all relevant parties working as one team, a vehicle of one of our customers equipped with GSP3 won the five-star rating in the latest Euro NCAP safety testing. This rating demonstrates GSP3's high level of technological capabilities. We will continue to take on the challenge of developing cutting-edge technologies with the aim of delivering an even more comfortable mobility society to our customers around the world and of eliminating fatalities from traffic accidents.



Top left photo insert: Yoshiyuki Kato, AD&ADAS Engineering Division 1
From left: Sho Okabe, AD&ADAS Engineering Division 1; Keisuke Izumi, Hideki Tsukuda, AD&ADAS Engineering Division 2; Hideaki Tanaka, Kohei Yamamoto, AD&ADAS Systems Engineering Division; Shogo Matsunaga, Takumi Uematsu, J-QuAD DYNAMICS