Outline of Efforts to Strengthen Financial Capital

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

Characteristics of DENSO’s Financial Capital [Fiscal 2022 results]

<table>
<thead>
<tr>
<th>Equity ratio attributable to owners of the parent company</th>
<th>Dividend on equity (DOE)</th>
<th>Weighted average cost of capital (WACC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>57.8%</td>
<td>3.1%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

KPI Targets for Fiscal 2026

1. **Reinforce profit structure**
   - ROE: 10% or higher
   - Operating margin: 10%
   - R&D expenditure: ¥450.0 billion
   - Capital expenditures: ¥350.0 billion

2. **Reduce low-profit assets**
   - Cash on hand compared with monthly turnover: 1.0 month
   - Further reduction of cross-shareholdings

3. **Improve capital structure**
   - Shareholders’ equity ratio: 50% or more
   - DOE: 3.0% or more
   - Flexible acquisition of treasury stock

Initiatives for Creating Corporate Value

1. **Reinforce profit structure:**
   - ROE = Profit attributable to owners of the parent company / Shareholders’ equity

2. **Reduce low-profit assets:**
   - PL (Profit) = Costs + Profits
   - BS (Balance Sheet) = Liabilities + Shareholders’ equity

3. **Improve capital structure:**
   - Leverage loans, diversify fund procurement, renew policy for shareholder returns

4. **Engage in dialogue with markets:**
Message from the Chief Financial Officer
Enhancing Our Ability to Continuously Create Corporate Value through Successful Implementation of Financial Strategies

Yasuhiro Matsui
Chief Financial Officer (CFO)
Member of the Board of Directors,
Senior Executive Officer

Pursuit of Growth and Corporate Value Creation

In fiscal 2022, consolidated revenue rose 11.7% year on year, to a new record high of ¥5,515.5 billion, and operating profit was up 120.8%, to ¥342.2 billion. Factors behind this strong performance included the recovery of sales from the impacts of the COVID-19 pandemic, the benefits of sales promotions for electricity and ADAS products, and profit improvement achievements through efforts to reform our profit structure advanced under “Reborn2.0.” These factors outweighed the detractions from adverse operating environment trends including a drop in automobile production in the wake of global semiconductor shortages and higher prices for electronic and other components, logistics, materials, and energy.

We expect to continue to face a challenging operating environment in fiscal 2023 in the midst of semiconductor shortages and inflation. Regardless of these challenges, we will operate our business in a lean and flexible manner. This will be accomplished by continuing to develop and promote appealing products while seeking to improve profitability through the enhancement of the robust corporate constitution fostered under Reborn2.1. Another measure to this end will be to bolster our responsiveness to changes in the operating environment, which we will talk about a little later on.

Moreover, DENSO has set the new Mid-term Policy for 2025, which defines goals to be accomplished by fiscal 2026. This policy clarifies our intent to take on an extensive reorganization of our business portfolio. Through this reorganization, we will seek to solidify earnings foundations in order to achieve return on equity (ROE) of 10% or higher and an operating margin of 10% in fiscal 2026. To accomplish these targets, we launched a new financial strategy in fiscal 2022 that emphasizes managing capital costs to maximum ROE through corporate value creation (the creation and expansion of genuine equity spread). In fiscal 2022, ROE was 6.4%, up 3 percentage points year on year. As of July 29, 2022, we expect this figure to rise to 8.6% in fiscal 2023, an amount that will surpass cost of shareholders’ equity. I feel that the frameworks for continuously generating value at DENSO are taking shape. Accordingly, we will continue to move forward with the four pillars of our new financial strategy—(1) reinforce profit structure, (2) reduce low-profit assets, (3) improve capital structure, and (4) engage in dialogue with markets—in order to ensure we accomplish the targets of the Mid-term Policy for 2025. I would now like to explain some of the concrete initiatives we are implementing toward this end and the progress of these initiatives.

1. Reinforce Profit Structure—Acceleration of Business Operation Focusing on Expansion and Reinforcement through Entrenchment of ROIC-Minded Management

(1) ROIC-Minded Management for Heightening Corporate Value

A. Start of ROIC-Minded Management

DENSO has introduced ROE among the key performance indicators (KPIs) for which it has set targets alongside prior financial KPIs like revenue and operating profit. This move was made to accommodate a KPI toward management emphasizing capital cost and corporate value under the new financial strategy launched in fiscal 2022 and to respond to changes in the operating environment and in the expectation of stakeholders.

The target for ROE has been set at 10% or higher to facilitate the creation and expansion of genuine equity spread. Considerations for setting this target included the fact that the Company’s cost of shareholders’ equity is currently around 7% and that the minimum level expected by the market is indicated in documents like the Ito Report 2.0, i.e., 8%.

To expand genuine equity spread, we will be taking advantage of our leverage to accomplish objectives like improving our capital structures and enhancing new shareholder return policies. At the same time, however, we realize that there is a need to heighten the competitiveness of our business in a manner that is not overly dependent on leverage if we are to continue creating value. Based on this belief, we commenced a full-fledged management approach that is mindful of return on invested capital (ROIC) in fiscal 2022.

With a focus on the management KPI of ROIC, we will aspire to make management decisions for expanding growth businesses, de-emphasizing mature businesses, and exploring new businesses to achieve continuous increases in corporate value.

B. Entrenchment of ROIC-Minded Management

At DENSO, ROIC is more than an enterprise management KPI; it is a tool for promoting changes in the behavior of employees. We began rolling out an “ROIC tree” in fiscal 2022 that allows employees to clearly see the connection between management KPIs and their individual improvement activities. In addition, our in-house publications are regularly used to provide information, on a global basis, on the relationship between the improvement activities of individual employees and divisions and the enhancement of ROIC. Through these efforts, we are constantly working to foster awareness of ROIC.

In addition to such ongoing communication and awareness-raising activities by corporate divisions, we are also bolstering education for business planning departments and accelerating activities for conveying our ROIC-minded management via planning departments through the formulation and implementation of ROIC improvement initiatives based on the characteristics of the given business.

Furthermore, ROIC was introduced to complement operating improvements in corporate value, a restricted stock compensation plan was implemented in fiscal 2021. The addition of ROIC as an indicator for calculating compensation is expected to strengthen the commitment to short-term results of senior management and to heighten their desire to increase ROIC and create value.

In this manner, we are advancing activities targeting everyone, from regular employees to senior management, in order to further entrench the practice of truly ROIC-minded management for improving value.

(2) Business Portfolio Reorganization for Boosting Earnings and Exercising Philosophy

A. Pursuit of Sustainable Growth by Resolving Social Issues through Business

We view the “resolution of social issues through our businesses” as the bedrock of our management. With this as our foundation, we are pursuing our ultimate goal of “zero” in the fields of “green” and “peace of mind,” by which we mean zero CO₂ emissions and zero fatalities from traffic accidents. Through our pursuit of this goal, we hope to inspire our stakeholders and thereby achieve ongoing improvements to our competitiveness. In the current uncertain operating environment, DENSO intends to reorganize its portfolio to facilitate efforts to exercise its philosophy, accelerate its growth, and boost profitability in terms of ROIC. This is the approach we will take to continuously grow our value by protecting the environment, contributing to peace of mind, and inspiring stakeholders.

B. Growth in the Electrification and Advanced Safety Areas of the CASE Domain

In the CASE domain (connected driving, autonomous driving, sharing, and electrification), DENSO prides itself on its role in and capacity for shaping the industry. We are particularly capable when it comes to the areas of electrification and advanced safety.

The global trend toward electrification is accelerating amid rising environmental awareness. DENSO built development and production systems in this area ahead of its competitors, and these systems have supported our progress in selling our products to overseas and other customers. In fiscal 2023, our wheel inverter-equipped drive module was adopted, for the first time, for use in a customer’s product through Blu: Nexus Corporation. This development allowed us to achieve an aggregate total of 20 million inverters sold, a feat never before seen among our competitors.

As for the field of advanced safety, we commenced mass production of Global Safety Package 3 in fiscal 2022 amid the rising needs for safety and peace of mind in mobility. This trend is evident among the growing social issues pertaining to increases in the number of accidents by senior citizens and ever more serious traffic congestion in urban areas.
Global Safety Package 3 is equipped with state-of-the-art technologies that contribute to “peace of mind” value by helping realize freedom in mobility with zero traffic accident fatalities through an increasing range of applicability to accidents. In addition, this product helps make equipment smaller and reduce costs, thereby contributing to profits by supporting business growth and increases in earnings power. Going forward, we will continue to pursue growth in these fields in order to maximize the value we provide in line with the principles of green and peace of mind.

C. Strategy Positioning Semiconductors as Key Growth Devices
A sharp increase in semiconductor demand has been seen in recent years, resulting in supply instability. However, this situation has not changed the fact that semiconductors are key devices to the automotive industry, meaning that the evolution of semiconductor technologies and the reliability of semiconductor supplies will be imperative to the population of vehicles that contribute to green and peace of mind value. For this reason, DENSO is bolstering areas in the chain spanning from advanced technology development through to production systems that are easily overlooked, with a goal of contributing to the entire industry.

The development of advanced technologies in this area is being spearheaded by RBG subsidiary MIRRE Technologies Corporation. For production and supply, we have partnered with United Semiconductor Japan Co., Ltd., to develop a system capable of high-performance, high-efficiency production of Japan’s first 300 mm wafer power semiconductor devices. In addition, we commenced investment in Japan Advanced Semiconductor Manufacturing, a subsidiary of Taiwan Semiconductor Manufacturing Company, Ltd., to construct a system for the stable supply of these devices. DENSO has continued to make contributions to the environmental performance of automobiles with its semiconductor technologies, as seen in the use of its power module equipped with a next-generation SiC device in the Toyota MIRAI. Together with our partners, we are committed to the ongoing reinforcement of development, mass production, and other systems.

D. De-Emphasis and Discontinuation of Businesses
The reorganization of our business portfolio will require us to de-emphasize or discontinue certain businesses. When we think about the trust-based relationships we have built with customers thus far, it becomes easy to adopt a negative opinion of such undertakings, which can make it difficult for us to move forward.

However, it is important for us to take a forward-looking perspective toward the de-emphasis and discontinuation of businesses if we are to exercise our philosophy and achieve sustainable growth. For this reason, we began undertaking business transfers in fiscal 2022 with a sense of conviction while actively working to gain the understanding of customers.

For example, we reached an agreement to transfer our fuel pump business to Asian Industry Co., Ltd., in January 2022. Discussions with customers took place from the early stages of this business transfer to ensure that we did not betray the expectations of customers or of society through this move. Another such undertaking was the transfer of our type III alternator business to Chengdu Huachuan Electric Parts Co., Ltd. in this manner, we are making steady progress in de-emphasizing and discontinuing businesses.

Moreover, in fiscal 2023, we transferred some of the products from businesses designated to be de-emphasized or discontinued to the Powertrain Systems Business Group, an organization that has been playing a central role in these activities with regard to internal combustion engine products. This reorganization has allowed us to expedite decisions and better gain customer understanding in relation to the de-emphasis and discontinuation of businesses under the guidance of a single organization.

We are also taking a committed approach toward consolidating regional production subsidiaries to optimize production and supply systems from a medium- to long-term perspective, a part of the de-emphasis and discontinuation of businesses. This commitment drives us forward in restructuring activities.

Looking ahead, the reorganization of our business portfolio, including reorganizing subsidiaries and transferring and withdrawing from businesses through coordination with partners, will be advanced with decisive speed.

E. Creation of New Value
We are currently in a highly volatile operating environment that is presenting a plethora of new social issues. DENSO seeks to take preemptive action for contributing to the resolution of these social issues. To guide us in this undertaking, we have formulated theories regarding the social issues that will emerge in 2035 based on megatrends projected leading up to 2050. These theories are shaping our efforts to explore new businesses based on our desire to contribute to the resolution of such social issues through activities in our business domains and through the use of our core competencies.

In the past, we have applied the strengths fostered over our long history in the automotive business to non-automotive businesses, such as factor automation and AgTech, to expand our business domains. Continuing this trend, we launched businesses in new fields in fiscal 2023 to broaden the scope of areas in which we contribute beyond automobiles to include mobility, Monozukuri (manufacturing), and society.

One concrete example of our advancements in the new field of mobility can be seen in the adoption of a product that we jointly developed with U.S. aircraft manufacturer Honeywell International Inc. for use in the all-electric vertical take-off and landing (eVTOL) aircraft of the German-based company Lilium GmbH. This decision was made in fiscal 2023. Electric aircraft are gaining attention as a new mobility option for addressing social issues related to urban traffic congestion and the related CO2 emissions as well as for providing transportation services in isolated areas. These vehicles are congruent with DENSO’s principles of “green” and “peace of mind.” Accordingly, we are accelerating development to assist in the production of electric aircraft for practical application.

Other initiatives include collaborating with partners to utilize the data acquired from DENSO drive recorders for the development of services that detect signs of dangers and help prevent accidents. We thereby look to provide a new form of peace of mind value.

In today’s volatile environment, it is important that we do not become complacent with simply improving existing businesses. Rather, we must promote "ambitious"
Accordingly, we are introducing digital technologies and include electrification, advanced safety and automated driving. In this manner, we are pursuing “Management by Decision-making” in order to swiftly respond to the changing operating environment due to semiconductor shortages, logistics disruptions, and other detractions. In the face of this adversity, we have committed to ensure secure stable supplies in order to maintain the inventories necessary for responding flexibly to fluctuations in demand. As a result, inventories amounted to ¥1 trillion on March 31, 2022. When the current extreme circumstances have dissipated, we will define target levels for different types of inventories through global coordination among domestic and overseas bases in order to swiftly optimize inventory levels. For this purpose, we will track temporary inventories, strategic inventories, and standard inventories. Temporary inventories refer to those held in response to logistics disruptions and other operating environment factors. Strategic inventories are those traditionally held to hedge against natural disaster risks and against tight supply–demand balances for electronic components and other items. Standard inventories are those held for use in production activities under normal circumstances. By sharing issues and directives for optimizing the levels of those inventories on a Company-wide basis, we aim to maintain an up-to-date understanding of inventory conditions and cultivate an awareness of issues.

In regard to production and development, the range of fields to which we need to allocate resources is broadening to include electrification, advanced safety and automated driving, connected driving, and non-automotive businesses. Accordingly, we are introducing digital technologies and automation tools and taking other steps to heighten development efficiency in order to make the best possible use of our resources.

### C. Enhancement of Responsiveness to Change

Expenses in fiscal 2023 are expected to be roughly three times higher than the amount of fiscal 2022. This increase in costs will be the result of repeated hikes to the prices of semiconductors, soaring logistics costs, and rises in energy costs due to the war in Ukraine. Combating this rapid deterioration of our operating environment will require us to enhance our responsiveness to change.

To this end, we are working to reduce expenses and to transfer costs to customers. For example, we are using AI-powered tracking technologies to bolster management of signs of abnormality in maritime transportation and to thereby increase the accuracy of our arrival estimates so that we can refrain from using high-cost air transportation as much as possible. At the same time, we are engaging in earnest discussion with customers to gain their understanding as we ask to transfer costs to transaction prices with them in order to overcome this crisis facing the entire industry.

### 2. Reduce Low-Profit Assets—Improvement of Asset Efficiency by Determining Ideal Asset Levels

DENSO seeks to utilize its asset portfolio with the greatest levels of efficiency by determining the necessary levels of certain types of assets in order to downsize asset amounts.

#### (1) Optimization of Cash on Hand

We have been working to optimize cash on hand by minimizing the funds needed for business operation (standard business funds) and reducing unseen asset distribution by region through the use of the Global Cash Management System (GCMS). DENSO has set a cash on hand target of 1.1 times the amount of monthly revenue for the total of standard business funds and rainy-day funds for emergency circumstances. We have more or less been able to maintain fund levels that match this target. Going forward, we will target cash on hand of 1.0 times the amount of monthly revenue in order to bolster efficiency even as we seek to grow.

#### (2) Curtailment of Cross-Shareholdings

We have decided to widen the scope of cross-shareholdings for which we are examining possible curtailing to include not only shares held by the Company but also those of subsidiaries. By doing so, we are promoting reductions that exceed the requirements of Japan’s Corporate Governance Code (in Fiscal 2022, we sold approximately ¥56.6 billion worth of holdings by the Company through total or partial sale of holdings of nine companies. As a result, the total number of cross-shareholdings came to 24, a reduction from 44 on April 1, 2019, three years ago. Going forward, we will continue to curtail such holdings so that the cash generated through the sales of cross-shareholdings can be used to invest in creating corporate value as dictated by growth strategies.

#### (3) Optimization of Inventories

Since the start of the COVID-19 pandemic, we have faced an opaque operating environment due to semiconductor shortages, logistics disruptions, and other detractions. In the face of this adversity, we have endeavored to secure stable supplies in order to maintain the inventories necessary for responding flexibly to fluctuations in demand. As a result, inventories amounted to ¥1 trillion on March 31, 2022. When the current extreme circumstances have dissipated, we will define target levels for different types of inventories through global coordination among domestic and overseas bases in order to swiftly optimize inventory levels. For this purpose, we will track temporary inventories, strategic inventories, and standard inventories. Temporary inventories refer to those held in response to logistics disruptions and other operating environment factors. Strategic inventories are those traditionally held to hedge against natural disaster risks and against tight supply–demand balances for electronic components and other items. Standard inventories are those held for use in production activities under normal circumstances. By sharing issues and directives for optimizing the levels of those inventories on a Company-wide basis, we aim to maintain an up-to-date understanding of inventory conditions and cultivate an awareness of issues.

In this manner, we will seek to overcome adversity through concerted efforts based on careful analysis in order to further cement our operating foundations.

### 3. Improve Capital Structure—Pursuit of Targeted Capital Structure by Bolstering Funding Platform and Issuing Proactive Shareholder Returns

We look to reduce capital costs while maintaining a balance between safety and efficiency and to utilize borrowings, diversify funding sources, and issue proactive shareholder returns in order to create corporate value.

#### (1) Utilization of Borrowings and Diversification of Funding Sources

DENSO prepares for future large-scale investments by diversifying funding sources through the utilization of borrowings from banks and domestic and overseas corporate bonds, among other sources.
policies, and we have thus doubled the amount of share
take returns from fiscal 2022. 
looking ahead, we will continue to issue proactive share
take returns through stable, long-term dividends and flexi-
bility and effective treasury stock acquisitions in order to
improve our capital structure and subsequently our corpo-
rate value.
4. Engage in Dialogue with Markets—
Accelerating Dialogue through Increased
Communication Regarding Non-Financial Capital
Through its investor relations activities, DENSO is commu-
icating information to investors and analysts in a timely
and appropriate manner and advancing a dialogue through
efforts by corporate officers. By doing so, we aim to reduce
information gaps with capital markets in our efforts to
enhance our corporate value.
In fiscal 2022, we arranged online meetings with an
aggregate total of 1,000 companies, roughly double the
number from fiscal 2021, amid the significant restrictions
on communication with investors imposed by the COVID-
19 pandemic. In addition, we held DENSO DIALOG DAY
2022, the silver award in the 2023 WICI Japan Integrated
Report Award program. This just one of several honors bestowed upon this
report, which have given us numerous opportunities to use
our integrated report as a communication tool. Meanwhile,
the semiconductor business briefing arranged in fiscal
2022 was incredibly well received. In winter, we are plan-
ning to hold DENSO DIALOG DAY 2022. Through such
activities, we will continue to gather input from the market
for use in heightening the quality of management.
Closing
A glance at the global market will reveal a state of turmoil, the
likes of which is rarely seen, spreading across the entire indus-
tory. Factors contributing to this turmoil include semiconductor
shortages, logistics disruptions, and inflation. Personally, I
believe that this turmoil presents a significant opportunity for
DENSO to change. This is why it is so important for us to take
a proactive approach in faithfully implementing the financial
strategy I have spoken of. I would like to promise our success in
realizing the DENSO Philosophy of “Contributing to a better
world”.

Human Capital

Outline of Efforts to Strengthen Human Capital
At DENSO, we believe that the ability of our employees and teams to turn ideas into reality are what enables us to deliver new social value and bring happiness to people and society as a whole. In fiscal 2022, we formulated and rolled out “PROGRESS, a vision and action plan for our people and our organization,” with the aim of becoming a “group of professionals with the ability to turn ideas into reality.” In addition, under the Mid-term Policy for 2025, we stated that the promotion of people and the organi-
zation is the prerequisite for us to realize the goals of the policy. As our business structure changes significantly and with the heightened social expectations of
DENSO, we will be pushing forward with efforts to enable our diverse group of employ-
ees to envision their dreams and make them a reality while also striving to maintain
and enhance their level of engagement with their work and the organization.

Aiming to Be a Group of Professionals with the Ability to Turn Ideas into Reality
The ability to turn ideas into businesses, which helps create
businesses that properly ascertain social trends, and the ability
to realize mass production, which helps us deliver products and ser-
VICES of the highest quality to customers around the world, are
two abilities that are crucial to the growth of DENSO and its
employees. To that end, under “PROGRESS,” the vision and action
plan for our people and organization, we have re-envisioned our
human resource policies and management based on the four pillars of “Design,” “Develop,” “Drive,” and “Diversity & Digital,” and are stepping up our support for our employees, who con-
tinue to take on the challenge of change.

Examples of Initiatives under PROGRESS

| Design: Career | In-house job offer program, recurrent education programs on software |
| Develop: Learn and grow | Global leadership development programs |
| Drive Evaluation and treatment | Evaluation system based on role and results |
| Diversity & Digital: Workstyles and culture | Measures to enhance employee engagement |

Business Portfolio Transition and Career Innovation
To realize the DENSO Philosophy of “Contributing to a better
world by creating value together with a vision for the future,”
we are working on an organization-wide basis to enhance the
mobility of our thousands of personnel across focus areas,
including promoting the job transition from internal combustion
domains to electrification domains and the transition from
hardware to software. At the same time, we are bolstering ini-
tiatives toward career innovation to ensure that each employee

KPI Targets for Fiscal 2026

| Rate of affirmative responses in employee engagement survey | 78% |
| Number of women in management positions | 73% |
| Business fields: 130 | Technical fields: 132 |

Characteristics of DENSO’s Human Capital

| Number of employees applying for new in-house job offers | 73% |
| Rate of affirmative responses in employee engagement survey | 70% |
| Number of women in management positions | 70% |
| Business fields: 130 | Technical fields: 132 |

Examples of Initiatives under PROGRESS

| Design: Career | In-house job offer program, recurrent education programs on software |
| Develop: Learn and grow | Global leadership development programs |
| Drive Evaluation and treatment | Evaluation system based on role and results |
| Diversity & Digital: Workstyles and culture | Measures to enhance employee engagement |
can become a professional with the ability to turn ideas into reality and pave the way in an era of dramatic change. For the software domain, which is particularly important, we provide the “sommelier certification program,” which objectively identifies the skills possessed by our software engineers, as well as recurrent education programs on software, which help employees who have achieved software engineer position acquire the necessary knowledge and skills. Lasting for a period of six months, these recurrent education programs focus on building skills that are indispensable knowledge on software and help them make entries into new domains through hands-on experience. In addition to passing on skills, we have in place structures for integrated training that provides employees with career counseling and advice, on-the-job training, and mentorship. In these ways, we encourage hundreds of employees a year to transition to software positions while providing them with support tailored to their individual needs. Additionally, to facilitate the swift allocation of personnel in focus fields and support independent career development, we enhanced our in-house job offer system in fiscal 2022. To date, we have had 73 employees seek new challenges by applying for the approximately 80 posts available through the system (new business development, DX promotion, etc.). To increase the number of employees who wish to take on new challenges and continue to set new records for themselves, it is necessary for each individual to first have a thorough understanding of the company’s policies and then develop their career independently by enquiring what they wish to achieve and increasing their number of capabilities. Accordingly, to support employees in their work-life balance and personal growth, we are working to strengthen support measures such as improving career design and career training between supervisors and employees and enhancing career consultation centers.

Initiatives to Enhance Employee Engagement

A high level of work engagement is needed for each employee to continue to grow, take on challenges, and produce results. To achieve such engagement, a workplace that facilitates good communication is indispensable. At DENSO CORPORATION, we carry out an employee engagement survey every year, targeting our roughly 45,000 employees belonging to approximately 2,500 workplaces. This survey classifies workplaces into 11 types based on an analysis of various aspects, including the individual employee’s desire to grow on their own volition, the level of support from supervisors, and workplace culture. The results for each individual workplace are disclosed to the employees working in that workplace in an effort to create even better working environments through communication between employees. In addition, for managers, who play a key role in creating positive workplace environments, we provide lectures by experts and training in dialogue skills, thereby enhancing their ability to manage a diverse pool of personnel as one team. In the engagement survey conducted in fiscal 2022, the rate of affirmative responses was 70% (up four points over the previous fiscal year). From fiscal 2023, we will continue to strive to achieve and improve this rate as part of our management indices and reinforce efforts to realize improvement.

Promotion of Diversity and Inclusion

An environment of co-creation where employees freely and openly exchange ideas is a source for innovation, and promoting diversity and inclusion is crucial to creating such an environment. At DENSO, we are promoting initiatives on a global scale to realize a working environment and an organizational culture that enables an active and fulfilling role for diverse human resources in terms of gender, gender identity, sexual orientation, age, race, nationality, religion, and disabilities as well as in terms of unseen differences such as experience and value systems.

Non-Japanese Employees

Since establishing a sales office in the United States in 1966, DENSO has continued to expand its business overseas for more than 50 years. At the moment, we carry out our business activities at 135 overseas locations together with our approximately 170,000 employees. To continue our global business expansion, we are placing emphasis on systematically cultivating local leaders who can oversee the future of DENSO and drive new business creation. In our talent management activities, which we conduct through collaboration between the head office and our overseas bases, we are working to promptly discover outstanding personnel and provide them with support for growth through such initiatives as the Global Leadership Development Program (total of roughly 250 participants since 2009), which seeks to cultivate global leaders for the next generation.

Promoting the Active Role of Women

With the aim of enabling our employees to work with enthusiasm in any position regardless of gender, we have formulated KPIs for every phase of employees’ careers, including joining a company, encountering major life events, and being promoted, and are promoting activities to achieve these KPIs accordingly. In fiscal 2022, we adopted targets to increase the number of women who can work at the same level and advance their careers in production fields as well. Guided by these targets, we have been promoting such efforts as discussions with female employees who serve as role models for other women and diversity training for the supervisors of female employees. In addition, as a global initiative, we held events for the first time on International Women’s Day, such as lectures and panel discussions in Japan, North America, Europe, and India, in an effort to further foster a sense of solidarity.

Mid-career Hires

DENSO has been promoting mid-career hires in order to increase diversity of experience and acquire knowledge that the Company has been lacking. New mid-career hires account for around 25% of the total number of employees we hire for regular positions. To date, mid-career hires have been active in a wide variety of domains of their choosing, from mobility fields to advanced research and new business development. Recently, the number of mid-career hires working in the electrification domain has been increasing. Given this trend, we have in place various types of support to help mid-career hires overcome any mental or physical anxieties, including helping them establish a personnel network through introductory training and providing them with a consultation center.

Mid-career hires

DENSO is entering the period of its second founding in which it is taking on such challenges as creating value in the CASE era and realizing carbon neutrality. Being able to continue to deliver new value to our customers and contribute to society going forward will depend on several factors. These include how we will increase the number of employees with diverse thoughts and ideas and how we will empower such employees so that they can work with enthusiasm. These also include the kind of steps we will take to further enhance employee well-being. In that regard, it is now more important than ever that we maintain a free and open corporate culture and share the DENSO Spirit with all of our diverse employees.

A Word from a Participant in the Recurrent Education Program on Software

Before participating in the recurrent education program, I was in charge of developing vehicle drive motors, and I had barely any knowledge of software or relevant work experience. Although I did feel a bit uneasy about taking on new challenges in a new area, I decided to join the program based on my desire to learn new skills and enhance my own capabilities. The recurrent education program provided extremely comprehensive content and support, covering everything from basic skills to actual research based on the role I would play in a software division. I was able to progress through the program while gradually gaining an understanding of various software-related aspects, which I thoroughly enjoyed. Software technology is evolving on a daily basis. For that reason, rather than being content with learning one or two new skills, I intend to actively acquire new skills on my own and study new developments on an ongoing basis.

Message from the Chief Human Resources Officer

Enhancing Corporate Value by Promoting a Free and Open Corporate Culture and the DENSO Spirit

Kenichiro Ito
Chief Human Resources Officer (CHRO)
Member of the Board of Directors, Senior Executive Officer

Since its founding, DENSO has always promoted management that valued people. Management that values people helps improve the well-being of each employee and leads to the provision of new value that satisfies the customer. The first step in achieving such management is ensuring that employees can work in good health and with peace of mind. The next step is enabling employees to work with enthusiasm in an environment that facilitates good communication. In addition, it is also important to have each employee act on behalf of the customer and society and be able to express themselves freely.

Recently, we launched PROGRESS, a vision and action plan for our people and our organization, with a view to enhancing employee well-being. Under PROGRESS, we have declared our intention to reform various personnel systems so that we can become a group of professionals who take action and implement concrete measures to bring happiness to people and society and who are able to envision their dreams and make them a reality. In this integrated report, I have the privilege of reporting the essence of such initiatives.

The driving forces for realizing the goals of PROGRESS are a free and open corporate culture and the DENSO Spirit, which serves as a guideline for the actions of our employees. If we can embody the DENSO Spirit within a culture where there is little distance between employees and executives and supervisors and their subordinates and where employees can exchange their honest opinions based on respect for one another, then we can truly invigorate our people and our organization.
Manufacturing Capital

Outline of Efforts to Strengthen Manufacturing Capital

With a focus on the progress of the CASE revolution, DENSO is building a global production structure to enable the satisfaction of customers in all areas of operations in terms of quality, cost, and delivery (QCD). At the same time, we are striving to reduce our environmental burden by conducting production activities with a commitment to world-leading environmental efficiency and high productivity. In these ways, we are working to evolve our manufacturing bases. Furthermore, as part of our efforts to establish DENSO-style digital twin plants, we will strive to evolve our plants by combining our conventional strengths of creativity, which is realized through the collective knowledge and efforts of our employees, and the strength of scientific, logical analysis capabilities based on data, and leveraging them to a greater extent than ever before.

Outline of Efforts to Realize Carbon Neutrality

To that end, DENSO established the in-house Carbon Neutral Foundation for Creating New Value in 2013, non-consolidated) that we can respond to fluctuations in production, such as rapid increases or decreases, ensure quality and CO2 traceability, and restore plant operations swiftly and more accurately in the event risks such as a natural disaster or plant fire occurs. In 2022, we will introduce testing environments at our headquarters based on the concept of realizing this kind of digital-twin plant. We will also conduct various development and verification activities with the aim of rolling out digital-twin plants on a Companywide basis from 2025 onward.

Message from the Chief Monozukuri Officer

Creating DENSO-style Next-generation Plants That Deliver New Monozukuri Value

Katsuhisa Shimokawa
Chief Monozukuri Officer (CMzO), Senior Executive Officer

DENSO has pursued efforts toward Monozukuri with a focus on high levels of productivity and quality. However, the Monozukuri environment is now entering into a period of uncertainty the likes of which we have never seen before due to such trends as digital transformation (DX), carbon neutrality, labor shortages, and the need to respond to various risks. Through our DENSO-style digital-twin plants, we aim to deliver quality products to our customers at even greater speeds. We also aim to resolve social issues with a focus on a new generation of people who are digitally savvy. Typical digital-twin plants gather plant-related information using IoT and other digital technologies to realize physical plants in virtual spaces with the aim of guiding and operating the plant based on optimized production data gained through simulations, without relying on the wisdom, intuition, and knowledge of people. In contrast to this, our DENSO-style digital-twin plants focus on people playing the leading role. At our digital-twin plants, we aim to accomplish three major goals.

The first goal we aim to achieve is realizing plants that can flexibly respond to change and operate with outstanding lead times. At our digital-twin plants, we will compile all digital data related to the entire production process, from preparation for production to the implementation of mass production, on an information platform. In addition, we will make thorough use of information on similar production lines that have existed in the past and actual production performance data acquired via F-IoT. By doing so, we will be able to rapidly accelerate the speed at which we conduct such actions as launching new production lines and making changes to the production process.

The second goal is creating plants where employees can work creatively and with excitement. To that end, we will ensure that work previously handled by people to robotics, machines, and AI and encourage our employees to focus on the kind of added value that only humans can provide (working with inspiration and creativity). Digital-twin plants afforded us the opportunity to use digital environments to experiment with aspects that we could not test easily in the real world due to safety and quality-related reasons. While borrowing the strength of digital technologies, we will work to create environments in which we can swiftly carry out a wide range of trial-and-error experiments. By doing so, we aim to create plants where millennials and Generation Z employees, who are digital natives and represent the core of society, can work creatively with excitement.

The third goal is realizing plants that connect us with our customers and suppliers and provide a sense of trust and peace of mind. Rather than having our plants simply be contained within DENSO, we will seek to link digital data from our plants with data from our customers and data across the supply chain, including that of our suppliers, so that we can respond to fluctuations in production, such as rapid increases or decreases, ensure quality and CO2 traceability, and restore plant operations swiftly and more accurately in the event risks such as a natural disaster or plant fire occurs. In 2022, we will introduce testing environments at our headquarters based on the concept of realizing this kind of digital-twin plant. We will also conduct various development and verification activities with the aim of rolling out digital-twin plants on a Companywide basis from 2025 onward.

Initiatives to Realize Carbon Neutrality in Our Monozukuri Activities

DENSO aims to realize carbon-neutral production by 2035. To that end, DENSO established the in-house Carbon Neutral Project Team in 2021, under which we will promote initiatives to conserve, create, and reuse energy in its Monozukuri activities. As an energy-saving initiative, we are striving to visualize energy conservation, create, and reuse energy in its Monozukuri activities. In these ways, we will steadily push forward with efforts to realize our goal of carbon neutrality.

Global Production and Supply Structure

Guided by the basic principle of manufacturing products in close proximity to our customers, we have built a highly competitive production structure in North America, Europe, China, greater Asia (including India, and Japan). At our manufacturing bases around the world, we aim to achieve leading levels of QCD in each region and realize Monozukuri that can withstand change. In order to restructure our business portfolio to accommodate the progression of CASE, realize carbon neutrality, and deliver products to our customers in a stable manner even while facing various supply risks, we are clarifying the role that each region and plant needs to play and striving to build a robust global production and supply structure that fully leverages DENSO-style Monozukuri know-how and production assets across the global supply chain, including our suppliers.

Characteristics of DENSO’s Manufacturing Capital (Fiscal 2022 results)

- Capital expenditure: ¥353.9 billion
- Planned investment in efforts to reduce CO2 emissions: ¥48 billion (fiscal 2022–2025)
- CO2 emissions per unit: 48% reduction (compared with fiscal 2013, non-consolidated)

With regard to our fiscal 2025 target of achieving a 50% reduction compared with fiscal 2013, we have realized a 46% reduction as of fiscal 2022.

Initiatives to Realize Carbon Neutrality in Our Monozukuri Activities

DENSO aims to realize carbon-neutral production by 2035. To that end, DENSO established the in-house Carbon Neutral Project Team in 2021, under which we will promote initiatives to conserve, create, and reuse energy in its Monozukuri activities. As an energy-saving initiative, we are striving to visualize energy use through F-IoT and reduce the wasteful use of energy during production. In addition, we are developing eco-friendly facilities and manufacturing methods that help us conserve energy. We are also promoting the use of materials and manufacturing methods that do not require heat by considering the idea of carbon neutrality from the stage of product development. As part of our efforts to create energy, we have designated the Anju Plant, Hirose Plant, Nishio Plant, and DENSO FUKUSHIMA CORPORATION as model plants at which we will commence a wide array of verification tests for creating, storing, and reusing energy within our Monozukuri activities. In these ways, we will steadily push forward with efforts to realize our goal of carbon neutrality.

DENSO-style Digital-twin Plants

To create even better products and production lines, we have worked to create a robust manufacturing foundation through Excellent Factory (EF) activities in which all employees participate on a daily basis. In the same manner as these EF activities, the DENSO-style digital-twin plants that we are currently promoting revolve around people in the leading role. With such plants, we are promoting further improvements led voluntarily by personnel on the front lines by weaving together the inspiration and creativity that occurs on site with various data related to production. By doing so, we are working to evolve our on-site manufacturing operations on a daily basis. The data we accumulate through these efforts is not only put to use within our plants but also linked with data from the engineering chain for product, process, and equipment design and data from the supply chain, including data from materials and components suppliers and data from our customers. By linking such data, we are able to enhance the speed and flexibility throughout the process from development to production. Going forward, we will define the concept of digital twin plants through in-house verification tests with the aim of rolling out the concept across the DENSO Group and among our suppliers.

Outline of Efforts to Strengthen Manufacturing Capital

With a focus on the progress of the CASE revolution, DENSO is building a global production structure to enhance the satisfaction of customers in all areas of operations in terms of quality, cost, and delivery (QCD). At the same time, we are striving to reduce our environmental burden by conducting production activities with a commitment to world-leading environmental efficiency and high productivity. In these ways, we are working to evolve our manufacturing bases. Furthermore, as part of our efforts to establish DENSO-style digital twin plants, we will strive to evolve our plants by combining our conventional strengths of creativity, which is realized through the collective knowledge and efforts of our employees, and the strength of scientific, logical analysis capabilities based on data, and leveraging them to a greater extent than ever before.
Outline of Efforts to Strengthen Intellectual Capital

To continue to provide value to society in an era of dramatic change, starting with the progression of CASE, it is imperative that we understand the needs of our customers and take action to meet those needs.

To that end, we are stepping up our R&D activities so that we can refine our strengths in mechanical parts, electronics, and software (which function as the body, nerves, and blood vessels, and brain, respectively) and enhance our ability to combine such strengths in an optimized fashion. At the same time, to bolster development efficiency, we aim to increase our R&D expenditures to around the level of ¥450.0 billion in fiscal 2026.

In addition, implementing an IP strategy in an integrated manner with our business strategy is essential to securing a competitive edge. We will therefore support our business endeavors through the building of an IP portfolio primarily in focus fields and the strengthening of IP activities geared toward open innovation.

Reinforcing Our R&D Activities

Throughout our over 70-year history of product development, we have expanded our R&D domains from mechanical parts to encompass electronics and, more recently, software with a view to maximizing the value of green and peace of mind. By doing so, we have achieved steady business growth. Software development, in particular, accounts for nearly half of our R&D expenses, and, as such, we are pressed with the urgent task of developing personnel who are software engineers by 2025. In addition, with regard to in-vehicle semiconductors, which are playing an increasingly more important role in the fields of electrification and automated driving, we will pursue dynamic development activities by drawing on the strengths that we have cultivated in our own half century of semiconductor research and on our various business alliances.

Additionally, we will work proactively to form even more alliances in our R&D domains from semiconductor and allianceto the Toyota Group as well as collaboration and alliances with business partners.

Balancing Efforts toward Reinforcement with Efforts toward Efficiency

Efficiency is essential in order to gain the best possible results from our limited amount of resources. In terms of businesses nearing the final stage, we are conducting a close examination of projects, including business transfers, and at the moment we aim to reduce the development costs of businesses nearing the final stage by roughly 40% by 2025. In addition, the introduction of D-to-a, a DK tool for proof of concept,* is an example of an important initiative in which we pursue thorough industry-wide collaboration and alliances within the Toyota Group as well as collaboration and alliances with government, and academic institutions and technical liaison.

Promoting Efforts toward Reinforcement with Efforts toward Efficiency

In a high-performance environment recognition sensors with sensing performance. By 2025, we aim to develop compact, high-performance environment recognition sensors with sensing performance. By 2025, we aim to develop compact, high-performance environment recognition sensors.

For patent application and management of owned IP, we are working to increase the percentage of IP rights we possess in focus fields while at the same time striving to enhance the efficiency of our patent handling and systems.

In addition to these efforts, we are making progress in the development of tough semiconductors that achieve high performance. We are also working on improving our IP strategy and marketing our intellectual property.

Promote IP Strategies with a Focus on the Progression of CASE

Added value for automobiles is beginning to shift toward the CASE domain. Under these circumstances, DENSO is promoting three main initiatives in order to win out against the competition, which now includes not only major players from the automobile industry but also ICT companies and start-ups. These initiatives include the following:\n
1. Establish a competitive edge both inside and outside the CASE domain: We aim to increase our earned value, which is currently less than 1,000, by using it to cooperate with other companies.
2. Create partnerships with companies in other industries: We aim to establish the CASE domain in the IP industry, in which our company has low stake. By these initiatives, we are realizing a sustainable business ecosystem through the utilization of IP and seeking to enhance our competitiveness and corporate value.

Striving to Ascertain the Changing Times So That We Can Continue to Create New Value

As we enter the period of a once-in-a-century paradigm shift, I believe it is important to once again faithfully practice the DENSO Creed’s ideal of “be pioneering, innovative, and creative,” if we are to overcome this challenging time and lead the industry into the next generation. This ideal is reflected in the Mid-Term Policy for 2025, which sends a message to all employees to “aim for world-first and world-best offerings,” helping them renew their awareness thereof.

Starting with our R&D activities, our intellectual capital has served as a source of DENSO’s competitiveness, and over the past five years we have spent a cumulative total of roughly ¥2.4 trillion on these activities, with a focus on the domains of green and peace of mind. Amid these activities, we have seen the growing importance of not only software technologies but also semiconductors as a foundation for implementing CASE in these domains, and our semiconductor business has shown a high level of interest in semiconductor development. Furthermore, although semiconductors are one form of technology that we need to respond to different challenges regarding the domain or the technology in which they are used. We have diversified our semiconductor business into three areas: microcomputers and software, where we are able to pursue electronics and, more recently, software with a view to maximizing the value of green and peace of mind. Amid these activities, we have been pursuing the full-scale launch of SiC, which contributes to improved energy performance of BEVs. With regard to analog semiconductors, we have been accelerating the development of tough semiconductors that achieve the performance required for in-vehicle environments as well as application-specific integrated circuits, which thoroughly meet the needs of customers. By 2025, we aim to achieve ¥500.0 billion in revenue from internally manufactured semiconductors.

Strategy for Sensors

Strengthening Our “Judgment Capabilities” for Current Trends and “Realization Capabilities” for the Future to Achieve Competitive Strategic Partnerships

For environmental recognition sensors that underpin safety products, we are making active efforts to strengthen collaboration with semiconductor vendors, particularly ones with which we are engaging in strategic partnerships, to accurately communicate the need for in-vehicle sensors and establish win-win relationships in anticipation of rapidly changing technological trends. By doing so, we are pursuing development with development activities. In addition, we are bolstering our planning capabilities for the kinds of semiconductors that will be needed in the future of mobility as well as system-related technological capabilities that will allow us to maximize semiconductor sensor performance. By 2025, we aim to develop compact, high-performance environment recognition sensors with advanced driving assistant features of level three or higher.

Message from the Chief Technology Officer

Promoting Semiconductor Strategies Aimed at Maximizing the Value of Green and Peace of Mind

Yoshifumi Kato
Chief Technology Officer (CTO), Senior Executive Officer

For more details, please see the briefing on our semiconductor strategy.


Please also see our special semiconductor website.

Amid the pressing crisis of climate change, DENSO is exploring the ideal vision for a sustainable mobility society and is accelerating its sustainability management with a view to maximizing the value of “green,” which is a target adopted under its Long-Term Policy for 2030. In 2019, we pledged our support for the Task Force on Climate-related Financial Disclosures (TCFD). Since then, we have been carrying out a scenario analysis regarding the impact of climate change on the business environment, including the risks and opportunities related to this impact. We have also been examining ways to reflect the results of this analysis in our business strategies. Through these efforts, we have been working to pursue avenues that will lead to sustainable business growth. In this section, we introduce the status of the initiatives we are promoting in accordance with the TCFD.

Scenario Analysis of Business Risks and Opportunities
To analyze the impact of climate change on our businesses and to identify climate-related risks and opportunities, we referred to the external scenarios of the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) and used them as benchmarks for our scenario analysis. Furthermore, while confirming the scenario analysis for the automotive industry, we compared and contrasted this analysis with our awareness of the business environment existing under the Company’s medium- to long-term strategies to hypothesize comprehensive scenarios. Upon doing so, we were able to identify climate-related risks and opportunities by analyzing the differences between our medium- to long-term strategies and these scenarios.

Hypothesizing Scenarios
In terms of transition risks, we have defined the Beyond 2 Degrees Scenario (RCP2.6) and the Sustainable Development Scenario (SDS), which are hypothesized by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) as “stagnant” and “promotion” scenarios, respectively. For the scope of these scenarios, we quantified Group CO2 emissions, carbon tax, crude oil prices, renewable energy rate, and the rate of new electrified vehicle (xEV) introduction by 2040 and analyzed risks and opportunities based on the differences between these scenarios and Group strategies.

Analysis of Climate-related Risks and Opportunities
We performed an analysis on the differences between our awareness of the business environment, which forms the basis of our medium- to long-term strategies, and the circumstances under the scenarios above. Items expected to have an impact on our businesses equivalent to over 2% of total sales, or an absolute value of over ¥10 billion in revenue, were identified as key items. The main risks and opportunities identified through this analysis are as follows.

Also, for more details on this analysis and evaluation, please see our answers to the CDP Climate Change Questionnaire.

Efforts to Maximize the Value of “Green”

Promoting Environmental Activities in Accordance with Our Eco Vision
We have established Eco Vision 2025 as an action plan for the period up to 2025, a year that marks the midpoint for realizing sustainable communities and society by 2050. Under this vision, we have established the three targets of “Energy,” “Clean,” and “Green,” collectively referred to as “Target 3,” in order to accelerate a response to issues related to energy, climate change, resources, water, environmentally harmful substances, biodiversity, and co-existence with nature in consideration of the importance these issues have regarding our business activities and of social demands and expectations. We have also established “Action 10,” which we promote in all of our business activities.

Assessing natural capital from the perspectives of both risks and opportunities, we are pursuing environmentally neutral activities from a variety of angles, including enhancing the efficiency of natural capital use and reducing our environmental burden, thereby working to conserve the global environment and create economic value.

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Case Study: JIT Water Management
We have introduced Just-In-Time (JT) water management, which is a management system that supplies water at the necessary time, in the necessary amount, and to the necessary place through the establishment of a comprehensive management model that covers facilities for water supply to water disposal. Through JIT water management, we are working to ascertain the day water was used, the time it was disposed, the necessary water amount, and the concentration of chemicals introduced in accordance with drainage concentration. Not only does this reduce the amount of water we use, it also helps us minimize the impact of water intake and wastewater on the natural environment and ecosystems.

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Outline of Efforts to Strengthen Natural Capital
DENSO’s business activities have a close relationship with natural capital, including through the utilization of industrial waste and the use of mineral resources as raw materials for its products. Accordingly, maintaining and preserving natural capital is an extremely important social issue for DENSO. In particular, we believe we can help minimize the negative impact of the globally shared issue of climate change on natural capital by not only continuing and enhancing energy-saving activities, in which we as a company excel, but also by further refining and applying our long-standing environmental technologies.

Considering natural capital from the perspectives of both risks and opportunities, we are pursuing environmentally neutral activities from a variety of angles, including enhancing the efficiency of natural capital use and reducing our environmental burden, thereby working to conserve the global environment and create economic value.

Minimum CO₂ Monozukuri
DENSO is promoting the development of technologies for the production process and engaging in energetic environmental activities with the participation of all employees. In addition, we are promoting proactive energy-saving activities to reduce CO₂ emissions, including Just-In-Time (JT) activities that aim at the utilization and supply of just the right amount of energy at the necessary time. Under Eco Vision 2025, we aim to achieve the “energy half” target (reducing CO₂ emissions per unit by half compared with fiscal 2013), and at the moment, we forecast that we will essentially be able to reach this target.

Fiscal 2022 results for CO₂ emissions per unit

DENSO CORPORATION: 521–46% Group: 571–43%
(compared with fiscal 2013)

Going forward, we will continue and enhance energy-saving activities utilizing F-IT and other technologies, and at the same time, we will purchase electricity and gas derived from economically renewable energy resources, introduce self-powering systems, and work to conserve the global environment and create economic value.

Analysis of Climate-related Risks and Opportunities
We performed an analysis on the differences between our awareness of the business environment, which forms the basis of our medium- to long-term strategies, and the circumstances under the scenarios above. Items expected to have an impact on our businesses equivalent to over 2% of total sales, or an absolute value of over ¥10 billion in revenue, were identified as key items. The main risks and opportunities identified through this analysis are as follows.

Also, for more details on this analysis and evaluation, please see our answers to the CDP Climate Change Questionnaire.

Efforts to Maximize the Value of “Green”

Also, with regard to physical risks, we have defined the RCP6.0 and RCP8.5 scenarios of the Fifth Assessment Report of the IPCC as “stagnant” and “gasoline” scenarios, respectively. We visualized aspects such as weather disasters, rising sea levels, deteriorating ecosystems, and water and food shortages in a qualitative manner and analyzed risks and opportunities based on the differences between these scenarios and Group strategies.

Scenario for the Commercialization of Electrification as Stated by the IEA (under the assumption of an average temperature increase of 2°C)
Projected sales volume of passenger vehicles (millions of vehicles)
Impact on Management Strategy

As mentioned previously, based on the results of our analysis, we have come to understand the significant impact that the climate change-related risks and opportunities expected to occur by 2030 will have on our product development and production activities, particularly the trend toward carbon neutrality.

Based on this understanding, we set an ambitious target by 2030 will have on our product development and production activities, particularly the trend toward carbon neutrality.

Based on this understanding, we set an ambitious target by 2030 when we are holding regular discussions on reshuffling our business portfolio based not only on profitability and growth potential but also on CO2 emissions and the reduction of these emissions to achieve carbon neutrality across all of society. Moreover, to promote activities that leverage our CO2 offset certificates and carbon credits.

At the moment, we are currently working to verify energy recycling systems at our four domestic model plants, the Arjo Plant, Hirose Plant, Nishio Plant, and DENSO FUJIKUMA CORPORATION. After completing verification tests at these plants, we will introduce these energy recycling systems at all of our 130 plants around the world and will gradually expand the promotion of energy-saving activities that make use of F-IoT and digital technologies. By doing so, we will aim to become completely carbon neutral at our plants.

Impact on Financial Planning

Against this background, it is crucial that we transition to products such as hydrogen fuel and biofuel that respond to alternative fuel needs and further strengthen our products powered by electricity. Furthermore, in order to realize carbon-neutral Monozukuri, we need to allocate funds to procure electricity derived from renewable energy sources and purchase CO2 offset certificates and carbon credits.

In addition, we have incorporated costs related to measures to address climate change risks (reinforcing buildings and structures), such as flood, fire, and other adverse events.

Examples of Initiatives

Issuing Sustainability Bonds

We issued sustainability bonds in order to accelerate new value creation in the domains of green and waste management (U$500 million). In the green domain, these bonds will be allocated to R&D and capital expenditures for products powered by electricity (BEVs, FCEVs, AVTDs, and electric vertical take-off and landing aircraft) as well as investments toward realizing carbon-neutral Monozukuri (external procurement costs of electricity derived from renewable energy sources, etc.).

Goverance

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

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

Risk Management

Amid the rapidly occurring changes in the business environment, DENSO is striving to ascertain the constantly changing risks and implementing risk management from the perspectives of minimizing damage and ensuring business continuity. Climate change-related risks are reported to the Companywide Safety, Health, and Environment Committee, which identifies key items and clarifies the Company’s response.

Also, we have designated those change-related risks (physical risks) as one of the major risks toward which the Risk Management Meeting should particularly invest resources and promote initiatives. Based on this designation, we are strengthening our response to these risks on a groupwide basis from the perspective of overall risk management (see “Risk Management” on page 110).
### Metrics and Targets

In the light of the progress we have made with activities based on Eco Vision 2025 and of social demands and expectations, in fiscal 2022, we adopted a more ambitious goal of becoming carbon neutral and commenced activities to reach this goal accordingly. We clarified specific targets for this goal in the Mid-term Policy for 2025. At the same time, we incorporated a sustainability ability target pertaining to our material issues into part of our Climate Change-related Targets (Reductions in CO2 emissions).

#### Energy conservation

- **Basic Strategy for Realizing Carbon-neutral Monozukuri**
  - **Domain**
    - Monozukuri: Achieve complete carbon neutrality (including gas)
    - New businesses (energy use): 50% reduction in CO2 compared with fiscal 2021

#### CO2 derived from gas

- **1. Thoroughly conserve energy and increase renewable energy utilization**
- **2. Transition to carbon-neutral energy in our external procurement activities**
- **3. Promote energy conservation through reforms to production and supply structure**
- **4. Transition to carbon-neutral gas**

#### CO2 derived from electricity

- **Energy conservation**
- **Renewable energy**
  - **Self-generation**

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<th>Target (2035)</th>
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**Domain**

- **Monozukuri**
- **New businesses (energy use)**

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**Notes:**
- *Base value: CO2 emissions from mobility products in fiscal 2021*

#### Initiatives to Enhance Corporate Value by Strengthening Relationships with Our Stakeholders

**Employees**

- **Relationship between Social Capital, Corporate Value, and Each Other Type of Capital**
  - Enhancing employee engagement to create new value from the collective wisdom and strength of our employees across the globe is essential to realizing the growth of DENSO.
  - To that end, we hold dialogues with our employees and are promoting various initiatives to maintain and enhance employee engagement so that all employees can work with enthusiasm and fully leverage their individual capabilities.
  - These initiatives include reforms to workstyles and personnel systems and the creation of employee-friendly work environments.

**Customers**

- **Relationship between Social Capital, Corporate Value, and Each Other Type of Capital**
  - In addition to increasing our financial capital through the adoption of our products and services, strengthening our relationships with customers helps us with such efforts as building optimal supply structures, acquiring new technologies and know-how, and cultivating employees by having them gain business experience together with customers.
  - Accordingly, we will seek to deepen our understanding of customer needs and expectations through ongoing dialogue in an effort to create products and services that satisfy our customers and truly gain their trust.

### Social and Relationship Capital

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

DENSO advances its business activities while interacting with various stakeholders. According to DENSO, it is essential to establish good relationships with its stakeholders and increase its number of allies as essential parts of improving corporate value. In particular, in the so-called VUCA (volatility, uncertainty, complexity, and ambiguity) era, where the future outlook is opaque, it has become extremely difficult for us to flexibly respond to social changes and needs on our own, and it is therefore necessary to collaborate and coordinate with a wide range of stakeholders.

- **Furthermore**, to avoid self-satisfying activities that are biased by our own logic and preconceptions, we are deepening our understanding of stakeholder expectations and options through dialogue with them and reflecting that understanding in our corporate activities. By doing so, we aim to become a company that is truly inspiring by realizing growth together with our stakeholders and society as a whole.

**Initiatives to Strengthen Relationships**

- **Expectations of and Points of Concern for DENSO**
  - Workplaces that facilitate good communication, flexible workstyles, fair and appropriate personnel evaluation systems, active roles of diverse human resources, workplace environments that are safe, comfortable, and promote health, etc.

- **Employee awareness surveys, in-house publications and information dissemination via internet, consultation centers (hotlines, general consultation office), social gatherings between labor and management, etc.**

**Characteristics of DENSO’s Social and Relationship Capital (Fiscal 2021 results)**

- **Number of suppliers**: Approx. 6,500
- **Local procurement rate**: Approx. 80%
- **Number of dialogues with institutional investors (total number of companies)**: Approx. 1,000

**Gain in Value (Outcome)**

- **Employees**
  - Enhanced employee engagement
  - Improved retention rate
  - Decrease in turnover rate
  - Increase in the number of improvements made by employees
  - Decrease in work-related injuries and accidents, etc.

- **Customers**
  - Acquisition of product share on a global scale
  - Increase in the number of customers adopting our products/services
  - Establishment of a localized global supply structure
  - Acquisition of rights and creation of know-how, etc.
### Business Partners
Suppliers, service stations, and NBA business alliance partners, etc.

**Relationship between Social Capital, Corporate Value, and Each Other Type of Capital**

- The competiveness of our products and services is underpinned by our technological capabilities, know-how, and stable supply of business partners. However, since matters such as carbon neutrality and human rights due diligence require the understanding and cooperation of our business partners.

- In order to strengthen our partnerships, we will continue to provide products and services that are indicative of our business development. For example, through cooperation, we will make our supply chains more sustainable. We will also engage in corporate conduct that helps us gain the support of society. By doing so, we will grow together with our business partners.

**Initiatives to Strengthen Relationships**

- Financial capital with an existing supplier or partner is an important factor in business. The provision of investments, such as technical and human capital, would help us to address our business relationships.

### Local Communities
Local community members, governments, NPOs and NGOs, people of the next generation, etc.

**Relationship between Social Capital, Corporate Value, and Each Other Type of Capital**

- To continue to operate in regions where our plants and offices are located, we need to be accepted by local communities. Local communities, as good corporate citizen and realize coexistence and co-prosperity together with these communities. In addition, having employees gain experience in working to resolve issues facing local communities provides them with an opportunity to enhance their perspective of social issues that need to be addressed in our business activities.

- We will therefore seek to gain an understanding of the unique needs and expectations of local communities through dialogues. By addressing these needs and expectations, we will contribute to the development of local communities.

**Initiatives to Strengthen Relationships**

- New business creation
- Acquisition of outstanding personnel
- Enhanced level of recognition for the Company
- Improved employee engagement
- Acquisition of opportunities for participation in regional revitalization businesses, etc.

### Shareholders and Investors
Financial capital to invest in such areas as facility enhancement, R&D activities, and human resource development is required in order to realize sustainable growth and enhance corporate value.

**Relationship between Social Capital, Corporate Value, and Each Other Type of Capital**

- For that reason, we understand that our shareholders and other investors are valuable supporters who provide us with advice on how to promote sound management of the Company. We believe it is important to build solid trust-based relationships with them.

- By enhancing the transparency of our management through timely and accurate information disclosure and dialogue, we will aim to enhance our corporate value.

**Initiatives to Strengthen Relationships**

- Appropriate share price
- Improvement in stable, long-term dividend level
- Expansion of years over which shares are held (reduction of share price fluctuation risk)
- Improvement in investor evaluation (credit rating, etc.)

### Gained Value (Outcome)

- **Gained Value (Outcome)**

- **Expectations of and Points of Concern for DENSO**

  - Business expansion, business alliances, cross-industry exchange, information on business trends (procurement, policies, services, etc.)
  - Support for responding to sustainability needs (environment, human rights, etc.).

- **Initiatives to Enhance Relationships**

  - Close communication with business partners, Supplier Appreciation Meeting, sustainability self-assessments, General Meeting of DENSO Service Stations, serving skills competition, etc.

- **Related Capital**

  - Human capital, natural capital, and social and relationship capital

### Undertaking Initiatives toward Respecting Human Rights
Against the backdrop of the rising interest toward sustainability around the globe, corporations are strongly expected to consider human rights within their business activities.

- A workplace free of harassment and discrimination helps to resolve the risks of quality-related issues and work-related injuries. Furthermore, promoting business activities that give consideration to human rights increases the number of business opportunities for the Company and enables us to acquire vital human resources. Such business activities also lead to improved employee engagement.

- DENSO views respect for human rights as a crucial theme and therefore established respect for human rights as one of its material issues within the promotion of sustainable management, and is undertaking efforts toward respecting human rights accordingly.

**Human Rights Policy**

- Our Sustainability Policy and the Code of Conduct clearly prohibit labor practices or similar actions that infringe upon human rights, and we have worked to ensure that these policies are thoroughly shared across the Group.

- Recently, initiatives toward respecting human rights in business are becoming even more important for global corporations in this environment, and we believe we need to further promote human rights-related initiatives and have therefore formulated the DENSO Group Human Rights Policy as an individual policy to address human rights issues.

**Promoting Employee Education and Enlightenment**

- DENSO promotes education and enlightenment activities for employees at each Group company with the aim of encouraging employees to act based on the DENSO Group Human Rights Policy.

- Through education programs by grade for corporate officers, newly appointed management, new employees, mid-career hires, and employees on a fixed-term contract, etc. and online compliance tests that target all employees, including those at domestic Group companies, DENSO CORPORATION is engaging in education and enlightenment activities to deepen employee awareness and understanding of human rights.

**Human Rights Due Diligence**

- In accordance with the DENSO Group Human Rights Policy, we identify and evaluate human rights-related risks that can occur as a result of our business activities and are promoting the ongoing process of human rights due diligence to ensure measures to prevent such risks and minimize their impact should they occur.

- As the first step of this process, we carried out a human rights risk assessment to identify and evaluate potential human rights-related risks that have a high relationship with the automotive supply chain.

- Going forward, we will carry out an impact assessment (evaluation of impact on human rights) regarding these identified themes and enact and strengthen appropriate measures and initiatives accordingly.

**Non-Japanese Workers in Japan**

- Human rights issues facing non-Japanese technical interns represent a major human rights-related risk that has a high relationship with the automotive supply chain.

- To address these issues, we conduct written surveys of domestic Group companies and suppliers to confirm the presence of non-Japanese technical interns. Due to the existence of potential human rights-related risks, we will conduct an impact assessment to ascertain whether there are any issues that impact human rights and confirm the level of impact if so. We will then enact appropriate measures based on the results of this assessment.

**Initiatives toward Respecting Human Rights in the Supply Chain**

- Mining sites for mineral resources involve a substantial amount of dangerous work, and there have been reports of human rights issues at such sites, including child and forced labor. Accordingly, responsible mineral resource and raw material procurement is an extremely important theme within the supply chain.

- In its Supplier Sustainability Guidelines, DENSO clearly states its commitment to conducting business activities that give consideration to human rights. To ensure that our suppliers comply with these guidelines, we promote such initiatives as requiring them to implement self-assessments and directly assisting them with improvement measures through dialogue.

**Grievance Mechanism**

- We have established an internal whistleblowing system that can be used by domestic Group companies and suppliers. In the event an issue arises that impacts human rights or contributes to an impact on human rights, this system provides relief to the affected party.

- Going forward, in addition to steadily promoting the DENSO Group Human Rights Policy, we will enhance the level of our initiatives toward respecting human rights in such ways as bolstering our human rights due diligence and relief measures.