

## MAZDA SUSTAINABILITY REPORT 2022



Message from an Executive Officer (Oversight of Sustainability Domain)

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Message from an Executive Officer (Oversight of Sustainability Domain)

#### About Mazda

#### The Origin and Meaning of "Mazda"

The Company's name, "Mazda," derives from Ahura Mazda, a god of the earliest civilizations in western Asia. The Company has interpreted Ahura Mazda, the god of wisdom, intelligence, and harmony, as a symbol of the origin of both Eastern and Western civilizations, and also as a symbol of automotive culture. It incorporates a desire to achieve world peace and the development of the automobile manufacturing industry. It also derives from the name of the Company's founder, Jujiro Matsuda.

#### Mazda Brand Symbol

The brand symbol expresses Mazda's dedication to continuous growth and improvement. It is a symbolic development of the Mazda "M", and shows the Company stretching its wings as it soars into the future (Established in June 1997).



#### Mazda Corporate Mark

Mazda developed its corporate mark as a symbol for Mazda's communications in 1975. It was later positioned as an easy-toread corporate mark, in line with the establishment of the brand symbol in 1997 (Established in January 1975).



#### Mazda Brand Slogan, "Zoom-Zoom"

Mazda's creativity and innovation continuously delivers fun and exhilarating driving experiences to customers who remember the emotion of motion first felt as a child (Announced in April 2002).

#### **Editorial Policy**

- As a complement to the non-financial information provided on the Integrated Report, this report presents result data primarily on Mazda's commitment to sustainability and business activities.
- Aiming to satisfy the needs of readers, Mazda studied the editorial policy and content of this report in reference to the stakeholders' ideas and views obtained through the questionnaire survey and engagements with stakeholders.

Disclaimer: This report includes future projections for Mazda Motor Corporation and its Group companies' performance based on plans, forecasts, management plans, and strategies at the time of publication, in addition to actual past and resent facts. Such forward-looking statements are predictions based on information or assumptions available at the time of edit, and may differ from future operational results due to changes in

#### Report Coverage

#### Referenced Guidelines

This report has been prepared in accordance with the GRI Standards: Core option.

Other guidelines referenced: Japanese Ministry of the Environment's Environmental Reporting Guidelines (2018 Edition), Japanese Ministry of the Environment's Environmental Accounting Guidelines (2005 Edition), ISO26000

**Period Covered:**The report primarily covers the period from April 2021 through March 2022, although some activities after April 2022 are included.

Organizations Covered: The entire Mazda Group, including Mazda Motor Corporation and its Group companies, is covered in this report. (Where the reporting item is not applicable to the entire Mazda Group, the organizations covered are specified.)

#### **Date of Publication**

Japanese version: December 2022 (The previous report was

published in February 2022; the next report will be published in the autumn of 2023.)

English version: January 2023 (The previous report was published in March 2022; the next report will be published in the autumn of 2023.)

#### **Position of the Sustainability Report**

Mazda discloses information in the following formats.\*

\* If any content errors are found after publication, a list of errata will be posted on Mazda's official website.



Message from an Executive Officer (Oversight of Sustainability Domain)

## Message from the President



Aiming for Sustainable Growth Through Our Commitment to Resolving Issues Facing Earth, People and Society and Enhancing Mazda's Unique Value

#### Issues Surrounding the Automobile Industry

It is becoming increasingly urgent for companies in the automobile industry to take concrete steps to resolving issues facing the earth and society that are a cause of concern to people in their everyday lives. Of particular importance are measures to address climate change. To make meaningful progress in our efforts to shift to a carbon neutral society, vehicle manufacturers like Mazda have a key role to play, and the breadth of this role encompasses a wide range of areas. Furthermore, one of our important missions is to build a safe and secure automotive society in emerging countries where automobile ownership is increasing and in regions where the aging of the population is advancing, especially in developed countries.

#### Commitment to Resolving Issues Earth: Achieving Carbon Neutrality

Taking measures to address global warming and other issues related to climate change are urgently needed. To contribute to resolving these issues, Mazda announced its Endeavor for Carbon Neutrality by 2050 in January 2021. To achieve this, we will first strive to realize carbon neutrality at Mazda factories around the globe by 2035. To accomplish our interim target, we will focus our efforts on the following three areas: energy conservation, a shift to renewable energies, and the introduction of carbon neutral fuels for in-house transportation.

As a member of the Carbon Neutral Electricity Promotion Subcommittee, one of the expert subcommittees of the Carbon Neutrality Promotion Council established by the Chugoku Economic Federation in November 2021, Mazda has been

participating in activities together with the five prefectural governments of the Chugoku region, local power companies, and businesses in the region. The council brings together various players across diverse industries in the region who are cooperating in promoting the widespread use of renewable energies and a circular economy.

To respond to fluctuating factors in the external environment and future uncertainties in business environment in a flexible manner regarding the electrification, our approach is to divide the period up to 2030 into three phases. In the first phase, we will make use of our technology assets comprising multiple electrification technologies to achieve both a reduction in our environmental footprint and produce attractive products. In the second phase, we will introduce a new hybrid system and battery EV vehicles based on multiple electrification technology while commencing the introduction of battery EV vehicles

| Message from an Executive Officer (Oversight of Sustainability Domain)

People

in the latter half of this phase. In addition, we will introduce battery EV vehicles in China, where electrification is advancing. In the third phase, we will promote the full-fledged launch of battery EV vehicles and consider investing in battery production. Bearing in mind electrification policies and trends toward tighter regulations in various countries as well as consumers' needs and receptivity, we will proceed with electrification step by step together with our partners.

#### People: Offering Moving Experiences that Uplift Mind and Body

To drive safely, a driver must recognize potential hazards, exercise good judgment and operate the vehicle in an appropriate manner. Driving a car allows people to continue to maintain a broad range of activities, and the experience of such activities is also mentally and physically uplifting. In developed countries where the aging of the population is accelerating, this is also vital from a well-aging perspective as such activities can also enrich and develop people's potential.

While offering value derived from a human-centered philosophy, which everyone at Mazda gives utmost priority to, we will continue to create moving experiences that uplift and energize people, bringing more enjoyment to everyday life.

#### Society: Realizing an Automotive Society that Offer Safe and Peace of Mind

Realizing a safe automotive society free of from traffic accidents is an obligation that vehicle manufacturers should adopt at their own initiative.

Guided by Mazda Proactive Safety, our own safety philosophy, we will continue to apply IT technologies to further develop advanced driver assist technology based on research on humans. We will produce vehicles that are safer and more reliable, not only for drivers and passengers, but also for people in the vicinity of vehicles. We aim for no new Mazda vehicle to cause a fatal accident that is avoidable with automotive technologies by 2040.

#### **Ongoing Commitment** to Fulfilling Stakeholders' Expectations

To enhance corporate value over the medium and long term, strengthening the management base that serves as the Company's foundation is essential. We will continue to strengthen and enhance our corporate governance so that we can maintain good relationships with all stakeholders, ensure thorough legal compliance, and make fair, transparent, prompt, and decisive management decisions.

In December 2021, we formulated the Basic Policy on Sustainability. Moreover, to share our commitment to reinforcing our governance with outside stakeholders more transparently, we have newly disclosed a skill matrix for all directors, including outside directors. Through measures like these, we are reinforcing our corporate governance and enhancing our disclosure.

In regard to non-financial information related to ESG on the themes earth, people, and society set out in the Basic Policy on Sustainability, and management underpinning these, we will make greater efforts in our communication of information and engaging in dialogue with our stakeholders in both financial and non-financial matters.

#### Further Growth Through Commitment to Mazda's Unique Value

Aware of the value of an in-depth understanding of people, we will continue to create unique value based on our human-centered development philosophy. In manufacturing, we will continue to refine Joy of Driving, which is a moving experience for people, as our unique value, based on our human-centered development philosophy of believing in human ability, building on human research, and enriching and developing human abilities. To create human connections in areas such as sales and services, we will respect our customers as unique individuals and address their requests and problems promptly and appropriately in efforts to establish enduring relationships. Manufacturing and the creation of human connections based on our human-centered philosophy will generate unique value, which will resonate with customers and other stakeholders and foster emotional ties, resulting in people's long-term association with Mazda. Through the ongoing development of such connections, we will strengthen our brand value management for realizing further growth.



The source of such unique value of Mazda lies in each individual member of the Mazda Group. Through the dedicated pursuit of a comfortable working environment and job satisfaction for employees, we will achieve an attractive corporate environment where all employees can feel proud of their jobs and work enthusiastically and energetically. In addition, we will make a wide variety of investments, including those as support for employees' capacity development, to boost our corporate growth. By doing so, we will facilitate employee's performance and growth.

While continuing to share our determination with the Group's employees, business partners, suppliers, distributors and dealers, we will respect all stakeholders and customers and work hard to enhance our brand value and fulfill the expectations of society. In all our endeavors, we ask for your ongoing support and understanding.

D. manumoto

Akira Marumoto Representative Director, President and CEO Mazda Motor Corporation

Message from an Executive Officer (Oversight of Sustainability Domain)

Message from an Executive Officer (Oversight of Sustainability Domain)



## Contributing to Solving Social Issues and Striving to Realize a Society in Which People Can Experience the Joy of Life

Many environmental and social issues are having a significant impact on our daily lives.

There are disasters precipitated by global warming and food shortages caused by drought, and these are not only driving the spread of poverty but also triggering a host of other problems.

It is essential for companies to play a key role in solving these problems.

While contributing to solving social issues through corporate activities, Mazda is striving to realize a society in which people can experience the joy of living.

#### Reinforcing the Promotion Framework for Sustainability Management

Since as early as the 1970s, Mazda has been committed to solving global environmental and social issues by enhancing emission performance to meet exhaust gas regulations and improving safety to eliminate traffic accidents. Since the mid-2000s, we have also been considering the most reasonable, correct approach to curbing global warming. In 2007, we announced "Sustainable Zoom-Zoom", our long-term vision for technology development through which we have been striving to achieve both "Joy of Driving" and "outstanding environmental and safety performance." This is also an initiative that incorporates the concept of life cycle assessments, which Mazda adopted

ahead of other companies. Focusing on every aspect of the carmaking process from resource extraction and refining to logistics, manufacturing, and sales, we scrutinized our vehicle production from scratch with a view to streamlining processes and at the same time dramatically improving the thermal efficiency of internal combustion engines to maximize the value of mobility.

At Mazda, we are now taking on the challenge of achieving carbon neutrality (CN) by 2050 with a view to realizing a decarbonized society. Today, as the need to address climate change becomes more imperative, we believe that not only financial performance indicators such as sales volume and revenue but also non-financial performance indicators such as improvement in CO<sub>2</sub> emission reduction as our social responsibility as a carmaker are core issues that will affect our

corporate value.

Two other officers and I established a business framework for realizing CN, with each assigned for decarbonization in the phase of product planning and design and for decarbonization at business sites (in the fields of production, logistics, etc.,) thereby striving to proceed with planning, implementation, and improvement. We hope that it is understood that this review of the framework has been intended to consolidate the foundation for implementing our plans steadily, with our commitment to social challenges, including climate change, reset as the core management initiative.

Message from an Executive Officer (Oversight of Sustainability Domain)

#### Contribution to Society through Business

At Mazda, we established a Basic Policy on Sustainability which identifies issues that we need to solve as an automobile manufacturer. In addition, we undertook a review of the 31 items which we previously earmarked as key issues. Last year, we identified eight items based on the three themes of "earth," "people," and "society," and also on "management" as the foundation for us to serve as a good corporate citizen. These key issues are related to the SDGs which are highly relevant to automobile manufacturers. Through these efforts, we believe that we can now communicate more clearly to stakeholders how we will contribute to society through our business.

#### **Achievement of Carbon Neutrality** at Our Factories around the Globe by 2035

Achieving CN to curb global warming is the automobile industry's most ambitious target. At Mazda, we are also taking on the challenge of realizing CN by 2050. Today we are striving to achieve CN at our factories around the globe by 2035 as a milestone in achieving this target.

We operate in more than 130 countries and regions around the world, and these countries and regions differ from one another not only in regional features and commercial practices, but also in the quality of social infrastructure and the composition of energy use. In this regard, we have adopted a multiple solution strategy for reducing CO2 emissions effectively and steadily. A feature of this strategy is the bundled-development of technology for presenting multipaths and the provision of options appropriate for the respective regions, rather than the deployment of individual solutions. For our commitment to the global environment, while engaging in in-depth dialogue with stakeholders, we intend to improve our information disclosure and other initiatives under our Task Force on Climate-related Financial Disclosures (TCFD) as common standards. We would like to continue to demonstrate ingenuity so that we can visualize how our output is being achieved through our mid- and longterm decarbonization strategies.

#### Commitment to Diversity

At companies of our size, autonomy and performance of all employees are directly connected with the companies' growth. Therefore, at Mazda, we see our employees as fundamental management resources. We will continue to invest in human resources through, for example, training programs, and enhancing the environment in a way that will encourage the growth of employees. During the COVID-19 pandemic, we expanded our remote work program, raised the retirement age, and presented diverse work styles for diverse human resources. We feel that it is necessary to provide further support, especially for women, for employees to fully demonstrate their potential. At Mazda, we have a target to increase the number of female managers to 80 by FY March 2026, but we recognize that this is a modest target, and there is much that we need to do. We will identify and address factors hindering female employees from displaying their potential to the fullest extent possible and we will accelerate our commitment not only to the issue of gender but also to other aspects of diversity.

#### Social Challenges and Corporate Sustainability

The purchasing behavior of consumers is changing significantly. When selecting and purchasing goods, experiences, and services, consumers make decisions based on their own particular identity and beliefs. In other words, a company's attitude toward global warming, human rights, diversity and other issues is also an important reference point in determining a consumer's purchasing behavior. This applies not only to consumers, however. When a company recruits and secures new employees, those employees carefully consider the company from the same perspective.

Issues related to the earth and society can no longer be separated from corporate sustainability. It is now taken for granted that companies are required to commit to CN, which is needed for social sustainability, by developing technology related to electrification and alternative fuels as effective means for achieving CN, and by fulfilling responsibility related to safety and security as ever through dedication to technology.

Under these circumstances, we will take on the challenge of continuing to enhance Mazda's uniqueness. I believe that the key to our uniqueness lies in our human-centered engineering, design, and development philosophy based on our interest



in human beings. When driving a vehicle, a driver repeats the process of recognizing potential hazards, exercising good judgment, and operating the vehicle. We will work with external organizations to engage in joint research and establish a model regarding the mechanisms of human body and brain. In doing so, we hope to contribute to realizing a society in which drivers and passengers alike can always maintain a broad range of activities and where all people can experience the joy of life through the "Joy of Driving" and the excitement and joy of mobility.

Director and Senior Managing Executive Officer, Mazda Motor Corporation

Masahiro Moro

Corporate Vision / Basic Policy on Sustainability Sustainability Initiatives

**CHAPTER** 

# SUSTAINABILITY

While striving to meet the requests and expectations of all stakeholders with the aim of realizing its corporate vision, Mazda promotes sustainability initiatives through its business activities in line with the basic policy on sustainability.

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P10 Sustainability Initiatives

Corporate Vision / Basic Policy on Sustainability Sustainability Initiatives

### **CORPORATE VISION**

We love cars and want people to enjoy fulfilling lives through cars. We envision cars existing sustainably with the earth and society, and we will continue to tackle challenges with creative ideas.

- 1. Brighten people's lives through car ownership.
- 2. Offer cars that are sustainable with the earth and society to more people.
- 3. Embrace challenges and seek to master the Doh ("Way" or "Path") of creativity.

#### BASIC POLICY ON SUSTAINABILITY

While striving to sincerely meet the needs and expectations of all stakeholders under our corporate vision,
Mazda aims for sustainable growth as a company through our global business activities.
We are determined to contribute to the sustainable development of society through efforts to resolve various social issues by making the most of our strengths.



#### Earth

Through environmental conservation initiatives, we aim to prevent global warming, realize a sound material-cycle society, and create a sustainable future in which people and vehicles coexist with a bountiful, beautiful earth.



#### People

Respecting diverse talents and values, Mazda understands that individuals working together each play an active role in their own way. This leads to innovation in products and services that offer true driving pleasure and emotional enrichment to our customers.



#### Society

We will realize vehicles and a society where all people, wherever they live, can enjoy unrestricted mobility that offers safety and peace of mind and contributes to enriching lives and the sustainable development of local communities.



#### Management

While working to build a good relationship with all stakeholders, we will continue our efforts to enhance corporate governance by ensuring compliance and making fair, transparent, prompt, and decisive decisions.

Established in December 2021

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Corporate Vision / Basic Policy on Sustainability Sustainability Initiatives

## SUSTAINABILITY **INITIATIVES**

#### Reviewing and Identifying Key Issues (Materiality)

Mazda has worked to identify the social issues that the Mazda Group should address while reflecting the external opinions of experts and various other stakeholders and taking into account opinions from both management and the relevant divisions. In July 2016, Mazda identified and disclosed the key issues (materiality). In subsequent years, which saw growing worldwide interest in environmental, social, and governance (ESG) issues, expectations from stakeholders became more specific and the social environments surrounding the Mazda Group underwent some changes. Given these circumstances, in FY March 2018, the Company started to review materiality. In 2021, Mazda identified the social issues that the Mazda Group should resolve through its business and clarified the relationship between these issues and the Sustainable Development Goals (SDGs) and targets adopted by the United Nations.

#### **Materiality Review and Identification Process**

In reviewing materiality, Mazda took into account two perspectives. One is the stakeholders' perspective in reference to the SDGs adopted by the United Nations and the details of surveys conducted by global ESG rating organizations. The other perspective is the importance to the Mazda Group, for instance, business initiatives toward realizing the Medium-Term Management Plan.

#### STEP 1 Extraction of social issues

To extract social issues from the stakeholders' perspective, Mazda analyzed and clarified what investors and the global society expect of the Company by looking into the details of surveys conducted by global ESG rating organizations. As for the importance to the Mazda Group, its specific issues described in the Medium-Term Management Plan, "Sustainable Zoom-Zoom 2030," and Securities Report were analyzed so as to select the social issues.

Step 2 Evaluation of the impact / prioritization of social issues Mazda identified potential priority issues to be tackled by evaluating the social issues selected in Step 1 according to two axes: Impact on stakeholders\*1 and impact on the Mazda Group.\*2 The Company also clarified the themes to be addressed from a long-term viewpoint by correlating with the 169 targets of the SDGs.

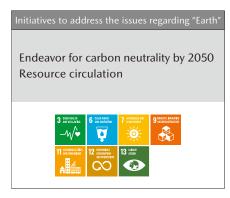
#### Step 3 Validation

To validate the priorities of themes identified in Step 2, consultations were held with management, which approved the priorities.

#### Step 4 Disclosure of materiality

A specific action plan is currently being prepared to ensure steady implementation of the materiality themes identified in Steps 1-3 and follow up on the progress. The materiality that Mazda recently identified and an action plan that will be formulated henceforth will be disclosed to stakeholders. By periodically evaluating and revising this materiality and plan, Mazda will develop the PDCA (plan-do-check-act) process.

From now on, Mazda will carry out initiatives to address the eight themes of materiality that the Company has identified.







Quality improvement

Exploring partnerships for "co-creation with others"







<sup>\*1</sup> Expectations for the Mazda Group and the automotive industry

<sup>\*2</sup> Risks and opportunities for the Mazda Group

#### **Sustainability Promotion Organization**

Each department carries out its operations based on goals and plans formulated with an understanding of the policies and guidelines determined by the CSR Management Strategy Committee, which the president chairs, and in cooperation with other Group companies. From FY March 2016, the Board of Directors holds discussions on issues concerning sustainability.

#### **CSR Management Strategy Committee**

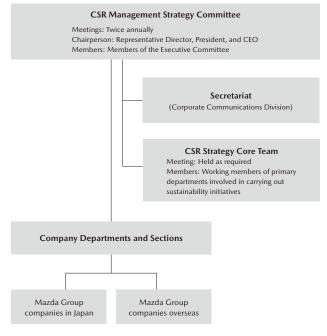
Deliberate the sustainability activities that are expected of Mazda from a global perspective, in consideration of changes in social environment.

- Reviewing and identifying key issues (materiality)( P10)
- Discuss social needs and trends, external evaluation analysis results, etc.

#### Sustainability Promotion throughout the Entire Value Chain

In cooperation with suppliers and dealerships, Mazda has established a sustainability initiative promotion system throughout the entire value chain. The Company places emphasis on dialogues with stakeholders, to ensure that its sustainability initiatives not only comply with international rules as well as the laws and regulations of each country/region, but also respect local history, culture, and customs.

#### Sustainability Promotion Organization (as of April 1, 2022)



## Research and Development



Research and development in Japan, North America, Europe and China for providing innovative products tailored to the markets

#### Purchasing



Implementation of a broad range of initiatives, in tandem with 1,072 our suppliers in Japan and overseas, aiming for harmonious coexistence and co-prosperity

#### Manufacturing



Pursuit of high-level manufacturing in a total of 7 countries, including Japan, Thailand, China and Mexico

#### Logistics



Pursuit of high-quality, safe and environmentally conscious transportation on a global basis

#### Sales and services



Provision of vehicles and services to customers in more than 130 countries and regions

## Recycling end-of-life vehicles



Pursuit of end-of-life vehicle recycling and waste reduction

#### **History of the Sustainability Structure**

FY March 2005	Began company-wide CSR initiatives     CSR Committee established
FY March 2008	Mazda evaluates its CSR initiatives in the six areas referencing the Charter of Corporate Behavior issued by the Japan Business Federation (Keidanren), etc.  CSR Promotion Department established as a permanent structure
FY March 2009	•Integrated CSR initiatives and management •Reinforced global perspective •CSR Committee reorganized as the CSR Management Strategy Committee
FY March 2010	Promoted initiatives both globally and across departments  CSR & Environment Department established as a permanent structure  Former CSR Promotion Department reorganized as a supervising compliance body and renamed as the Compliance Administration Department
FY March 2013	•CSR Targets established •Started to implement the PDCA cycle to promote CSR initiatives based on ISO 26000 •Compliance supervision functions transferred to the Office of General & Legal Affairs
FY March 2014	•Started study to review and identify key CSR issues (materiality)
FY March 2015 - FY March 2016	Disclosed the process of reviewing and identifying materiality Continued to conduct interviews with interested parties in the Company and with external experts and specialists
FY March 2017	•Disclosed the results of the materiality review, and the items that were identified •Reviewed the areas of CSR initiatives
FY March 2018 - FY March 2021	Continued the process of reviewing and identifying materiality Discussions under way to clarify the relationship between the Company's initiatives based on the Medium-Term Management Plan and the SDGs
FY March 2022	Completed the process of reviewing and identifying materiality Identified the social issues that the Mazda Group should resolve through its business and clarified the relationship between these issues and the SDGs and targets adopted by the United Nations.

Corporate Vision / Basic Policy on Sustainability Sustainability Initiatives

#### Long-Term Vision for Technology Development "Sustainable Zoom-Zoom 2030"

In 2007, Mazda announced the "Sustainable Zoom-Zoom" long-term vision for technology development. Based on that vision, Mazda has worked to provide both driving pleasure and outstanding environmental and safety performance.

In August 2017, Mazda announced "Sustainable Zoom-Zoom 2030," its long-term vision for technology development that looks ahead to the year 2030. In light of the significant changes in the global automobile industry, the new vision takes a longer-term perspective and sets out how Mazda will make use of driving pleasure—the fundamental appeal of the automobile—to help resolve issues facing the earth, society, and people.

## Sustainable Zoom-Zoom 2030

At Mazda, we see it as our mission to bring about a beautiful earth and to enrich people's lives as well as society. We will continue to seek ways to inspire people through the value found in cars.

#### People

Enhance customers' mental well-being with the satisfaction that comes from protecting the earth and contributing to society with a car that offers true driving pleasure

Farth

Through conservation initiatives, create a sustainable future in which people and cars coexist with a bountiful, beautiful earth



#### Society

Realize cars and a society that offer safety and peace of mind, and create a system that enriches lives by offering unrestricted mobility to people everywhere

Resource Circulation

Basic Approach to Environmental Protection, and Environmental Promotion Framework

Environmental Management

Initiatives for Reducing Environmental Impact

Biodiversity Conservation



# EARTH

Environmental problems, including global warming, are issues of critical importance for the human race. Mazda actively adopts initiatives to promote a decarbonized/low-carbon and recycling-oriented society in harmony with nature, in cooperation with local governments, industrial organizations, and non-profit organizations. These efforts are reflected in all of Mazda's corporate activities with the aim of achieving a sustainable society.

















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Resource Circulation

Basic Approach to Environmental Protection, and Environmental Promotion Framework

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EARTH

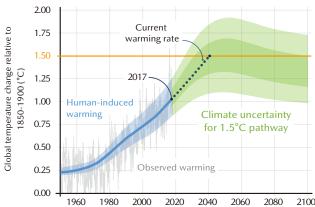
# ENDEAVOR FOR CARBON NEUTRALITY BY 2050

#### **Recognizing Social Issues**

The average global temperature has already risen by about 1.0°C from pre-industrial levels. The Special Report on Global Warming of 1.5°C published by the Intergovernmental Panel on Climate Change (IPCC) states that if global warming continues to increase at the current rate and the rise in temperature far exceeds 1.5°C, there will be a significant impact on nature and human activities. The Special Report therefore points out the need to achieve net zero global carbon emissions by around 2050 in order to limit the temperature rise to 1.5°C.

In response to the above forecast, 144 countries (including Japan)\*1 have declared their intention to achieve carbon neutrality by 2050, with nations around the globe stepping up their measures to design carbon pricing and other mechanisms and invest in the development of energy technologies. In the industrial world, initiatives have been accelerated to change the energy and industrial structures, promote decarbonization throughout the supply chain based on a life cycle assessment (LCA), and encourage the effective use of decarbonization/low-carbonization technologies to reduce greenhouse gas emissions.

#### Average anthropogenic temperature increase since the industrialization



This is not the IPCC's official translation of the [FAQ 1.2, Figure 1] of the IPCC report. It has been compiled by Mazda Motor Corporation with attention to the most accurate reflection of the language used in the original text.

"Frequently Asked Questions", Coordinating Editors: Sarah Connors, Ros Pidcock, p8, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\_FAQ\_High\_Res.pdf

#### Mazda's Approach to Resolving Issues

#### Reasons for Addressing Social Issues

As for the trends regarding vehicles around 2030, Mazda predicts that the fuel economy of vehicles as a whole will be further improved though the combination of highly efficient combustion engines, electric device technologies, highly efficient transmission systems and reduced body weight. Mazda also foresees technological innovation accelerating in accordance with fuel diversification. In addition, electric vehicles will be selected more often in regions where electricity can be generated with renewable energy or other cleaner sources. Energy decarbonization/low-carbonization and related technologies will be further promoted, which will intensify society-wide efforts to reduce environmental impact toward the achievement of carbon neutrality by 2050.

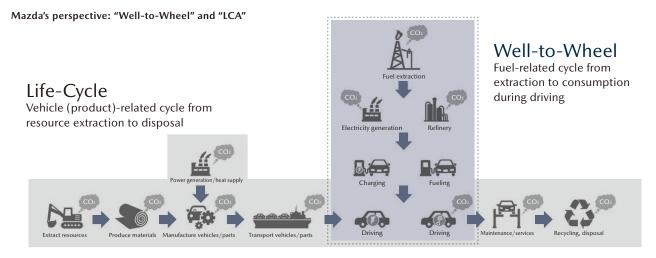
As a proportion of Japan's total CO<sub>2</sub> emissions, the entire transport sector contributes approximately 20%, with the automotive industry accounting for about 90% of CO<sub>2</sub> emissions from the sector. Mazda understands that, as a company belonging to the automotive industry, it has a duty to reduce CO<sub>2</sub> emissions with the aim of curbing global warming. In order to preserve our beautiful planet for future generations, the Company will advance its initiatives toward the realization of a sustainable mobility society.

#### **Approach to Resolving Social Issues**

Mazda announced that it will endeavor to achieve carbon neutrality by 2050.

To accomplish this objective, the Company recognizes the importance of reducing CO<sub>2</sub> emissions throughout a vehicle's life cycle. For this reason, Mazda considers it necessary to provide multiple solutions that enable the Company to offer various power unit choices that adapt to each region's energy sources and power generation methods, from both the perspective of well-to-wheel and the perspective of life cycle assessment (LCA). In manufacturing and logistics, the Mazda Group strives for energy value maximization and energy diversification, aiming to achieve reductions in the global total CO<sub>2</sub> emissions from plants/offices and logistics operations. The Group will continue these efforts, which must be made throughout the entire supply chain, with the cooperation of local governments and other industries.

For details of the activities carried out by the Carbon Neutrality Promotion Council refer to the following (Japanese only)



\*1 Compiled at the Ministry of Economy, Trade and Industry by counting countries participating in the Climate Ambition Alliance, countries that have expressed their commitment to achieving carbon neutral (CN) by 2050 by submitting long-term strategies to the United Nations, and countries that expressed their commitment to achieving CN by 2050 at the Climate Summit in April 2021, COP 26, and other events. (As of November 9, 2021)

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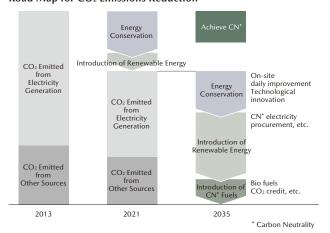
#### Commitment To Making Mazda Factories Worldwide Go Carbon Neutral by 2035

To achieve carbon neutrality throughout the entire supply chain by 2050, Mazda will endeavor to achieve carbon neutrality in its global plants by 2035. Toward the achievement of carbon neutrality, the Company will promote the following three initiatives in collaboration with partner companies. In addition, we will promote an optimum approach in overseas plants by employing initiatives in Japan.

#### Three Pillars to Achieve Carbon Neutrality

(1) Energy Conservation	In the manufacturing process of vehicles that emits a large amount of CO <sub>2</sub> emissions, reduce the thermal energy through the development of low-temperature curing coating paints and improvement of energy conversion efficiency by optimizing processing technologies.
(2) Shift to Renewable Energies	Mazda recognizes the importance of not only making steps toward the company's carbon neutrality, but also that of contributing to the growth of the local economy. Therefore, we will participate proactively in efforts of the Carbon Neutral Electricity Promotion Subcommittee, which aims to expand the supply and demand of carbon neutral electricity in the Chugoku Region.
(3) Introduction of Carbon Neutral Fuels for In-house Transportation	Mazda working toward using carbon neutral fuel for in-house transportation in cooperation with the Hiroshima Council for Automotive Industry-Academia-Government Collaboration which is promoting the practical use of next-generation biofuels.

#### Road Map for CO<sub>2</sub> Emissions Reduction



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EARTH

## RESOURCE CIRCULATION

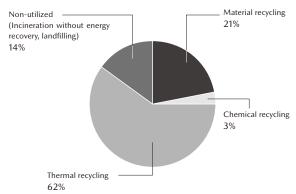
#### **Recognizing Social Issues**

#### **Resource Recycling for Materials**

In the context of a growing world population, the global community is facing challenges due to an increase in demand for resources and the worsening environmental issues, including the rising amount of waste. To address these challenges, it is necessary to transition to a circular economy that considers medium- and long-term outlooks, but also to promote the conventional 3R (reduce, reuse, and recycle) initiatives in all economic activities. A circular economy intends to generate new value while reducing resource inputs and consumption and making effective use of social stock.

Plastic recycling is indispensable in achieving a circular economy. In Japan, currently an estimated 60% of plastic waste goes through thermal recycling, which means that the waste is combusted in incinerators to produce energy. In Western countries, however, usually combustion is not included in the concept of recycling. Also, a minute amount of dioxin is generated during the process of combustion. For these reasons, companies are required to contribute to the circular use of resources (material recycling/chemical recycling) or the use of biomass plastics.

#### Breakdown of plastic waste recycling by type (Japan)



The above pie chart was created by Mazda, based on "An Introduction to Plastic Recycling 2022" published by the Plastic Waste Management Institute.

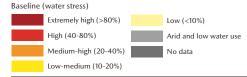
#### **Resource Recycling for Water**

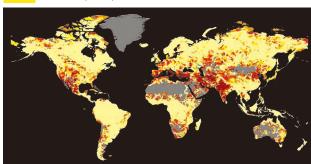
Of the total volume of water existing on the planet, only 0.01% is useable by humans. This small amount of water is not distributed around the world, so a number of countries and regions face high water stress.\*

If the earth's temperature continues to increase due to climate change in the future, the sea levels will rise owing to the thermal expansion of the oceans and melting ice caps. This will result in rivers being contaminated with salt water, a rise in groundwater levels and other disasters that will reduce the amount of freshwater available to humans. Meanwhile, the United Nations World Water Development Report 2018 states that by 2050, global demand for water is expected to increase by 20-30% from 2010, driven by population growth, economic development and changing consumption patterns, among other factors. Companies must address the issues regarding global water resources in order to conduct sustainable business activities.

\* Term that refers to the ability, or lack thereof, to meet human and ecological demand for water

#### Water stress around the world





The below figure was created by Mazda under license from the World Resources Institute (WRI).

Figure posted on the World Resource Institute (WRI)'s website

"17 Countries, Home to One-Quarter of the World's Population, Face Extremely High Water Stress", World Resources Institute/Aqueduct

#### Mazda's Approach to Resolving Issues

#### **Reasons for Addressing Social Issues**

Around 2030, Mazda forecasts progress in various initiatives to realize a recycling-oriented society from the perspective of natural capital. This will be achieved through using resources without any losses, promoting the 3Rs to encourage the reuse of water, plastic and other resources, and establishing resource circulation systems, such as a circular economy. Meanwhile, a significant reduction in energy and resource losses throughout the entire vehicle manufacturing supply chain may be expected as a result of efforts to make process more efficient. Dramatic progress will also be made in recycling and waste reduction initiatives through the promotion of the 3Rs and the transition to a circular economy.

Aiming to become a company that can coexist in harmony with the earth, Mazda will continue to implement thorough recycling and waste reduction initiatives.

#### Approach to Resolving Social Issues

To carry out product development and design with consideration for recycling needs, Mazda builds resource-recycling initiatives into every phase of the lifecycle of its vehicles, based on the 3Rs. Many limited resources are used to manufacture vehicles, such as steel, aluminum, plastics and rare metals. At its business sites (areas of manufacturing, logistics, etc.), the Company will push forward with initiatives toward the realization of a recycling-oriented society from two different perspectives shared throughout the entire vehicle supply chain. One is the well-to-wheel perspective, and the other is the global & supply chain perspective.

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#### Mazda's Initiatives

#### **Resource Recycling Initiatives for Products**

Mazda is steadily increasing the recyclability of its new vehicles, drawing on the following initiatives.

- Research into vehicle design and dismantling technologies that simplify dismantling and separation, to make recyclable parts and materials easier to remove
- 2. Use of easily recyclable plastics, which constitute the majority of ASR\*1 by weight

#### **Resource-Recycling Initiatives at Business Sites**

Mazda will pursue and promote environmental technologies that will contribute to resource/energy value maximization (by minimizing consumption and fully utilizing resources/energy without any waste) and resource/energy diversification.

#### **Resource Recycling for Materials**

The Mazda Group continues to expand its global efforts for zero emissions and resource recycling, by such means as using resources without any losses, and 3R activities (to reduce, reuse, and recycle resources).

2030	2050
Achieve zero emissions in manufacturing and logistics processes on a global basis.  •The status in which landfill waste is reduced to 0.1% or lower of the total waste generated. The Mazda Group companies in Japan achieved zero emissions in 2018.	Achieve zero emissions through expanded resource recycling initiatives in manufacturing and logistics processes on a global basis.  Break away from dependence on thermal recycling or other combustion based recycling methods, and augment material recycling.

#### Ideal vision



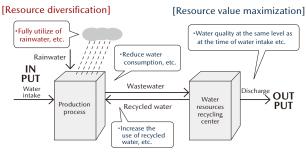
#### **Resource Recycling for Water**

To conserve water resources, the Mazda Group promotes activities to eliminate wasteful water use, and circulate water resources by treating used water so that it is the same quality as it was taken from nature.

2030	2050
Implement an optimal approach to water resources recycling and circulation at model plants' in Japan.  Fully utilize water without any waste, as a valuable resource that is a natural blessing.  Circulate water as a valuable resource that is a natural blessing, by treating used water so that it is the same quality as before it was used, and returning it to nature.	Implement an optimal approach to water resources recycling and circulation in global manufacturing processes. Fully utilize water without any waste, as a valuable resource that is a natural blessing. Circulate water as a valuable resource that is a natural blessing, by treating used water so that it is the same quality as before it was used, and returning it to nature.

<sup>\*</sup> Model plant: A pilot plant where new attempts are made, ahead of other facilities.

#### **Ideal vision**



#### \*1 Automobile Shredder Residue

It refers to the residue remaining after the crushing/shredding of what is left of the vehicle body following the removal of batteries, tires, fluids, and other parts requiring appropriate processing; the removal of engines, bumpers, and other valuable parts; and the separation and recovery of metals.

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## BASIC APPROACH TO ENVIRONMENTAL PROTECTION, AND **ENVIRONMENTAL** PROMOTION FRAMEWORK

#### The Mazda Global Environmental Charter

#### **Environmental Principles**

The Mazda Group aims to promote environmental protection and contribute to a better society while maintaining harmony with nature in its business activities worldwide.

- •We will contribute to society by creating environmentally friendly technologies and products
- •We will use the Earth's resources and energy sparingly and never overlook environmental considerations when conducting our business.
- •We will do our part to improve the environment by working with local communities and society.

#### Action Guidelines

1. Creation of Environmentally Sound Technologies and Products

We are committed to the task of creating clean technologies, including methods to achieve cleaner exhaust emissions and reductions in CO2 emissions, and the development of clean energy vehicles.

We will promote the creation of products that are environmentally friendly from planning and development to manufacturing, use and recycling/disposal.

2. Corporate Activities in Consideration of Conserving Resources and Energy

We will actively promote resource-saving and recycling activities to conserve the Earth's limited resources.

We will strive to diversify energy sources and use them efficiently.

We will promote the appropriate disposal and recycling of end-of-life vehicles.

3. Corporate Activities in Pursuit of a Cleaner Environment

We will comply with environmental laws and regulations, and will also impose voluntary controls for higher standards and implement self-regulated controls. We will promote the development of new technologies and the introduction of new systems in our pursuit of a cleaner environment.

4. Working with Business Partners to Create a Better Environment

We will actively provide our employees with education and information about environmental protection to enhance their awareness of the global

We will work in close cooperation with each other to achieve better environmental protection.

5.Creating a Better Environment in Cooperation with Local Communities and Society

We will work actively to understand and appreciate society's requirements for the environment and reflect them in our business activities.

We will disclose and publicize environment-related technologies, systems and

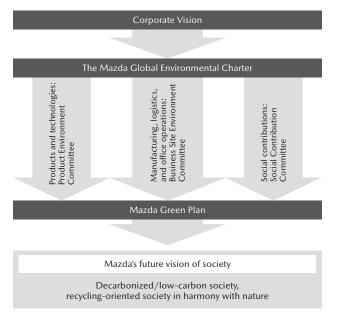
We will not only conduct our own environmental activities, but will also actively participate in social activities for the conservation of the environment.

(Established in 1992; revised in April 2005)

#### **Philosophy and Policies**

Mazda carries out its corporate activities with the aim of fulfilling its Corporate Vision (F P9). To this end, Mazda established the Mazda Global Environmental Charter as the basic policy for environmental matters in the Mazda Group. The Charter, which states "The Mazda Group aims to promote environmental protection and contributes to a better society while maintaining harmony with nature in its business activities worldwide," along with the five Action Guidelines forms the basis of Mazda's approach to the environment. The Company carries out corporate activities related to products and technologies; manufacturing, logistics, and office operations; social contributions, respectively in consideration of the environment. The Company also strives to address various social issues, including climate change and resource recycling, while placing emphasis on collaboration with external organizations/international initiatives.\*1

#### Philosophy and Policies for Environmental Initiatives



#### Mazda Environmental Promotion Framework

Mazda has established three committees under the CSR Management Strategy Committee, chaired by the president of the Company, to promote environmental management throughout the Group. These are the Product Environment Committee, the Business Site Environment Committee, and the Social Contribution Committee.

#### Mazda Environmental Promotion Framework (as of April 1, 2022)

**CSR Management Strategy Committee** Chairperson: Representative Director and President Studies and promotes key items Product Environment regarding environmental preservation Committee in relation to development, including (twice/year) development of environmentally conscious products and technologies. Studies and promotes key items regarding environmental preservation in relation to manufacturing and logistics. Studies and promotes **Business Site** methods to reduce environmental **Environment Committee** impact throughout the entire supply (twice/year) chain, encompassing dealerships, suppliers, and others (including the extension of EMS to Group companies). Studies and promotes key Social Contribution items regarding environmental Committee protection in the area of social (twice/year) contributions for the Group as a (**P**78) whole. Divisions within Mazda Group companies in Japan and overseas

of Keidanren (Japan Business Federation), etc.

<sup>\*1</sup> External organizations/international initiatives in which Mazda Participates: - Subcommittees of Japan Automobile Manufacturers Association, working groups of Global Compact Network Japan (GCNJ), Challenge Zero initiative

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# ENDEAVOR FOR CARBON NEUTRALITY BY 2050

Mazda announced that it would endeavor to achieve carbon neutrality by 2050. To accomplish this objective, the Company will promote efforts to reduce CO<sub>2</sub> emissions over a vehicle's entire life cycle through its products and business activities.

## Efforts Regarding Product and Technology Development

#### **Approach to Product Environmental Performance**

As vehicle ownership continues to expand around the world, automobile manufacturers must redouble their efforts to achieve cleaner exhaust emissions, and improve fuel economy in order to cut CO<sub>2</sub> emissions and help reduce the world's dependence on increasingly scarce fossil fuels. Mazda considers it necessary to develop a multiple solution approach to automobile-related environmental issues that takes into account various factors such as regional characteristics, vehicle characteristics and types of fuel.

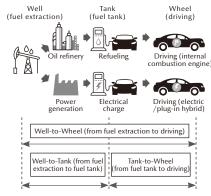
#### **Addressing Global Warming**

Mazda sees reducing emissions of CO<sub>2</sub> and other greenhouse gases over the vehicle's entire lifecycle — including manufacturing, use and disposal — as one of its top priorities and a duty of automotive industry. The Company wants to maximize its contribution by considering not only "tank-to-wheel" emissions that occur while driving but also "well-to-wheel" emissions, including fuel extraction, refining and power generation (well-to-tank). Offering a number of powertrain options in consideration of each region's energy sources and power generation methods will allow Mazda to make the optimum contribution to CO<sub>2</sub> emissions reductions by region.

#### The "Well-to-Wheel" Perspective

Make efforts to reduce CO<sub>2</sub> emissions from the perspective of "well-to-wheel," with the aim of reducing emissions over a vehicle's entire lifecycle.

#### Conceptual diagram of Well-to-Wheel\*



<sup>\*</sup> Where fossil fuel is extracted and used to drive a vehicle.

#### Life Cycle Assessment (LCA)

Life Cycle Assessment (LCA) is a method for calculating and evaluating the environmental influence of vehicles across their entire life cycle through the purchase of materials, manufacture, use, recycling, and final disposal. Since 2009, Mazda has adopted LCA as a means of determining the time required to reduce the environmental impact of vehicles in their life cycle, and has been actively working to reduce the environmental impact at each stage of the life cycle. The Company is also promoting evaluation of the practicability and reliability of new technologies for environmental performance in compliance with the methods specified in the international standards (ISO14040 and ISO14044).

## Multiple Solution Oriented Technology Development from the Perspective of LCA

In FY March 2019, the Company assessed the life cycle CO<sub>2</sub> emissions from internal combustion engine vehicles and electric vehicles (EVs) in five regions of the world. The results revealed that the significance of CO<sub>2</sub> emissions from internal combustion engine vehicles and EVs during their life cycles depends on the electric power supply status, fuel/electrical power cost, total mileage, and other factors in each region. In FY March 2020, these LCA results were compiled into academic papers and presented at academic conferences.

#### Conference presentation / Publication of paper on Mazda's LCA

Conference presentation:

The 9th International Conference on Life Cycle Management (August 2019)
Subject: Estimation of CO<sub>2</sub> Emissions of Internal Combustion Engine Vehicle
and Battery Electric Vehicle Using LCA

Publication of academic paper:

Sustainability magazine, 2019, Volume 11, Issue 9, p.2690

Subject: Estimation of CO<sub>2</sub> Emissions of Internal Combustion Engine Vehicle

and Battery Electric Vehicle Using LCA https://doi.org/10.3390/su11092690

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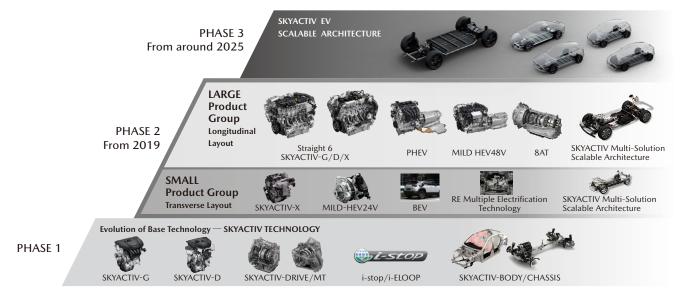
#### **Building Block Concept**

Mazda adopts the Building-Block concept to realize its goal of reducing CO<sub>2</sub> emissions and raising the average fuel economy of Mazda vehicles. The Building Block Concept calls for the commercial introduction of electric, plug-in and other electrified vehicles (EVs) with the combination of optimal control technology and efficient electrification technologies in consideration of each country or region's energy resources, regulations, power generation methods, infrastructure, and so on. Through this Building-Block concept and advances in process innovations, such as Model Based Development ( P85), and Monotsukuri Innovation ( P84), Mazda will, despite limited management resources, offer products and technologies that exceed customers' expectations.

#### Continuous Evolution of Skyactiv Technology

The term Skyactiv Technology covers all Mazda's innovative technologies. Mazda redesigned these technologies from scratch, enhancing the efficiency of powertrain components, such as the engine and transmission, reducing vehicle body weight, and improving aerodynamics. The number of models featuring Skyactiv Technology has steadily increased since the first Skyactiv-G engine was introduced in 2011 in the Demio (known as Mazda2 overseas). Following the adoption of the technology in the CX-5 in 2012, the number of models that fully incorporate Skyactiv Technology has increased.

## Building Block Concept for Product Technologies (As of June 2021 announcement)



#### The latest Skyactiv Technology

- •2019: Introduced new-generation technologies, including the Skyactiv-X engine, set to become the world's first commercial gasoline engine to use compression ignition.\*1 This engine is a new internal combustion engine unique to Mazda, which combines the advantages of gasoline and diesel engines to achieve outstanding environmental performance and uncompromised power and acceleration performance.
- 2020: Introduced vehicles newly equipped with its electrification technology, e-Skyactiv. Continued development of Skyactiv Multi-Solution Scalable Architecture, a platform that supports electrification technology.
- •2021: Newly developed e-Skyactiv D equipped with a new straight-six-cylinder engine with large displacement and powerful torque characteristics, as well as a small motor for effective environmental performance, and e-Skyactiv PHEV, Mazda's first plug-in hybrid system.

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#### **Improving Fuel Economy**

Mazda is working to improve fuel economy in order to help our customers save money and reduce the use of fossil fuels, which is a cause of global warming. Prioritizing improvements in real-world fuel economy, the Company has adopted cylinder deactivation and other technologies that suppress fluctuations in fuel consumption rooted in the way the car is used and environmental factors such as air temperature. Mazda has also employed the mild hybrid system, Mazda M Hybrid, which realizes enhanced fuel economy and a pleasant driving experience by maximizing performance of the engine that has been improved in pursuit of ultimate efficiency, through pairing with efficient electrification technologies.

#### **Development of Electrification Technology**

After taking into account the appropriate power source for vehicles, the energy situation, the power generation mix, and other factors in each region, Mazda is promoting the development of electrification technology to provide customers in each region with the best solution. In the development of electrification technology, Mazda follows its unique "human-centered" approach that sets priority on human characteristics and sensibilities in order to make the most of the advantages of electric drives.

#### **Electric Vehicles**

Mazda is also committed to developing electric vehicles (EVs) in line with its "Sustainable Zoom-Zoom 2030" vision. Based on the Well-to-Wheel perspective, the Company believes that its electric driving technology for EVs is the optimal solution for a region with sufficient clean energy resources or a region with air pollution control norms. Mazda is promoting the commercialization of EVs full of driving pleasure in these regions. In addition, from the perspective of a vehicle's life cycle, Mazda desires to contribute to substantive reduction of the global environmental impact by installing appropriately sized batteries. In October 2019, the Company unveiled its first mass-production EV, the Mazda MX-30, which was launched globally starting in September 2020.

#### Mazda MX-30 EV Model



## Virtual Power Plant Demonstration Experiment for Reuse Technology of Electric Vehicle (EV) Drive Batteries

Mazda, together with Chugoku Electric Power Co., Inc., and Meidensha Corporation signed a joint research contract to build a stationary-type storage battery system, which reuses driving-force batteries of electric vehicles (EVs), and conduct a demonstration experiment on a virtual power plant (VPP)\*1 based on the system. The aim of the demonstration experiment is to verify the possibilities of reusing EV drive-force batteries and utilize them as VPP resources. As part of the experiment, the three companies will build a system to aggregate and control several such batteries and integrate them with other distributed energy sources, including renewable energies, to evaluate the VPP's responsiveness and the degradation properties of storage batteries, among other aspects. Through this experiment, they intend to gain technologies to optimize the use of renewable energy and control the balance between the power demand and supply. Mazda will continue these undertakings in order to develop technologies that will lead to new services derived from the fusion of vehicle elements and energy, and contribute to the global environment and local communities.



The "development of next-generation lithium-ion batteries high capacity and input / output" adopted by NEDO's Green Innovation Fund Projects

Mazda's proposal of the "development of next-generation lithium-ion batteries (LIB) with high capacity and input/output"\* (hereinafter referred to as "project") was adopted by New Energy and Industrial Technology Development Organization (NEDO). The Company proposed the project for the "Research and development of high-performance storage batteries and materials," which is one of the project features of "Next-generation Storage Battery and Motor Development/Green Innovation Fund Projects" publicly offered by NEDO. Mazda will work on the development of lithium-ion batteries with both high capacity and high input/output.

\*1 For details on the "Next-generation Storage Battery and Motor Development/ Green Innovation Fund Projects," please refer to the press release by NEDO. https://www.nedo.go.jp/news/press/AA5\_101535.html (Japanese only)

<sup>\*1</sup> A VPP gathers the numerous dispersed power sources owned by general households or factories, such as renewable energy, EVs, and batteries, and integrates and controls them as if they were a single generation plant.

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#### **Promoting Technology Development for Alternative Fuels**

Toward the achievement of carbon neutrality through its products, Mazda addresses environmental issues based on a multiple solution approach, by endeavoring to spread carbon neutral fuels (hydrogen, next-generation biofuel, synthetic fuel, etc.) required to vehicles equipped with internal combustion engines, such as hybrids (HEV) and plug-in hybrids (PHEV), in addition to developing electrification technology for HEV, PHEV and battery electric vehicles (BEV). The Company believes that liquid fuel is valued as a useful energy source for automobiles and other movable bodies for its excellent storability and high energy density, contributing to energy security of the entire society promoted by energy diversification. However, the use of petroleum-based fuels mined from underground increases CO2 in the atmosphere and contributes to global warming. On the other hand, next-generation biofuels and synthetic fuels absorb or recover CO2 in the atmosphere to produce gasoline and light oils without requiring additional infrastructure. Therefore, Mazda believes that the use of these fuels is one of the effective and realistic methods to address environmental issues that can significantly contribute to reducing CO<sub>2</sub> emissions from vehicles including those already sold.

#### Compatibility with Bioethanol and Bioethanol Mixed Fuel

Mixed fuels, which include bioethanol or biodiesel (fatty acid methyl ester [FAME]) made from plant materials, are used in some regions for their effectiveness in reducing CO<sub>2</sub> emissions. Mazda sells vehicles that are compatible with these fuels.

Efforts for the Spread of Next-generation Automotive Liquid Fuel Mazda aims to expand the use of next-generation biofuels made from microalgae oil and used edible oil with excellent sustainability since they do not compete with food production and do not cause deforestation, unlike conventional biofuels made from food crops such as corn. Unlike conventional biofuels such as bioethanol and FAME, the next-generation fuels are hydrocarbon fuels equivalent to gasoline and light oil. For this reason, the Company considers them to be promising energy sources that can completely replace petroleum-based fuels.

#### R&D for Microalgae

In order to achieve mass production of next-generation biofuels in the future, Mazda considers it necessary to promote the mass cultivation of microalgae that has high oil production capacity compared to plants which are raw materials for edible oil. Toward this goal, the Company is currently promoting R&D for microalgae through industry-academia government collaboration. In 2017, Mazda opened a joint research course called the "Next-generation Automotive Technology Joint Research Course - Algae Energy Creation Laboratory" at a graduate school of Hiroshima University. With support of the "Program on open innovation platform for industry academia co-creation (COI NEXT)," sponsored by the Japan Science and Technology Agency (JST), the Laboratory continues research on improvement in algae performance using genome editing technology in collaboration with Hiroshima University and Tokyo Institute of Technology.

In 2020, Mazda became a member of the Institute of Microalgae Technology, Japan (IMAT), which is conducting a NEDO project on bio-jet fuel derived from microalgae on Osaki Kamijima Island, as part of efforts to resolve issues related to the commercialization of algae biofuels based on the Company's research to date.

#### **Demonstration Tests of Next-generation Biodiesel Fuels**

Mazda also aims to expand the use of next-generation biofuels by conducting demonstration tests. In 2018, the Hiroshima Council of Automotive Industry-Academia-Government, in which the Company participate, and Euglena Co., Ltd. jointly launched a "Your Green Fuel" Project, which established an entire biofuel value chain - from material manufacture and supply to the use of next-generation biodiesel fuels - as a "local production for local consumption model" within the Hiroshima area. Since 2020, Mazda has continued demonstration tests with its companyowned vehicles running on next-generation biodiesel fuels. The Company is increasing such tests of next-generation biodiesel fuels through various activities, including participation in the Super Endurance Race, one of the motorsports in Japan, since 2021, and operation of buses to transport Sanfrecce Hiroshima players in home games since 2022.

In cooperation with our partners on the entire biofuel value chain, from material purchasing, fuel manufacture, and supply to the use of next-generation biofuels, Mazda will continue its efforts to expand the use of such fuels and other carbon neutral fuels.

## TOPICS

#### Participation in motor sports with vehicles running on next-generation biodiesel fuel

Toward the achievement of carbon neutral society, Mazda uses 100 percent biomass-derived next-generation biodiesel fuel made from used edible oil and microalgae oil for racing vehicles equipped with diesel engines, with the aim of spreading the use of next-generation biodiesel fuels. The Company took part in the Super Endurance Race in Okayama"\*1 in November 2021 and competed for a full season in 2022.

Unlike conventional biodiesel fuels, the next-generation biodiesel fuels, which are made from sustainable materials such as used edible oil and microalgae oil, do not compete with food production. Furthermore, they can be used as fuels replacing light oil for exiting vehicles and equipment, without requiring additional infrastructure related to fuel supply, and are expected to be excellent liquid fuels that contribute to carbon neutrality.

Mazda aims to conduct demonstration tests by participating in races with its vehicles running on nextgeneration biodiesel fuels, and to contribute to the revitalization of motorsports in Japan in addition to the increased use of such fuels.

#### MAZDA SPIRIT RACING Bio concept DEMIO



\*1 As a demonstration experiment of 100 percent biomass-derived nextgeneration biodiesel fuel, Mazda participated in the ST-Q class with its vehicle "MAZDA SPIRIT RACING Bio concept DEMIO" running on a biofuel supplied by Euglena Co., Ltd.

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#### Development of Resin Material for Auto Parts for Weight Reduction

In addition to Skyactiv Technology, which is developed with the whole concept of weight reduction, Mazda actively adopt new technologies for reducing weights in detailed parts. Mazda will continue to pursue weight reduction by using resin, aluminum, ultra-high tensile steel and other materials having both lightness and strength.

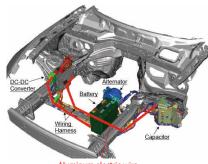
#### Offers a Bumper Which Is One of the Lightest in Its Class by **Developing a Resin Materials for Auto Parts**

Mazda has developed a new resin material for auto parts that can maintain the same level of rigidity as conventional materials while trimming vehicle weight. Because the new resin enables the manufacture of thinner parts and thus a significant reduction in the amount of material used, when used for front and rear bumpers, this resulted in the reduction of weight by around 20%. In the manufacturing process, thinner parts have enabled the shortening of cooling time upon shaping and halved the shaping time of bumpers partly due to the utilization of CAE analysis techniques. This resulted in a drastic reduction of the amount of energy used in manufacturing. Mazda further reduced the specific gravity of this new resin bumper by around 4%. The resultant bumper, one of the lightest in its class,\*1 has been mounted on a series of new generation models. The new bumper was attached to the CX-30 in FY March 2019, to the MX-30 in FY March 2020, to the CX-5 in FY March 2021, and to the CX-60 in FY March 2022.

#### **Development of Light Weight Wiring Harness Using Aluminum Electric Wire**

Mazda has developed a lightweight wiring harness using aluminum electric wire, which enables the Company to achieve vehicle weight reduction while maintaining connection reliability (quality). Since equipping the Roadster/MX-5, launched in 2015, with this lightweight wiring harness, the Company has been increasing the number of models\*2 that incorporate the material. In FY March 2023, the lightweight wiring harness was adopted in the CX-60.

Aluminum electric wire of the Roadster / MX-5 Connection between capacitor and DC-DC converter Connection between DC-DC converter and battery



Aluminum electric wire

<sup>\*11,500</sup> to 2,000 cc class, as of March 2017, according to Mazda data

<sup>\*2</sup> Models adopting the lightweight wiring harness (as of November 2022): Roadster/MX-5, Mazda3, CX-30, Atenza/Mazda6, CX-5, CX-8, CX-9, CX-60, and MX-30

## Efforts Regarding Manufacturing and Logistics

Mazda promotes the efficient use of energy while aiming to reduce CO<sub>2</sub> emissions in the areas of manufacturing and logistics.

## [Manufacturing] Energy-Saving / Measures to Reduce CO<sub>2</sub> Emissions

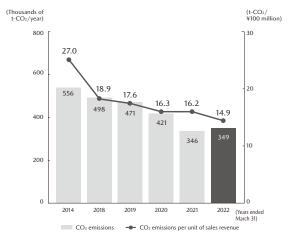
<FY March 2022 Results (compared with FY March 2014)>

- ■Total CO<sub>2</sub> emissions from Mazda's four principal domestic sites\*1 reduced by 37.2% compared with FY March 2014 (349 thousand t-CO<sub>2</sub>)
- Emissions per unit of sales revenue reduced by 44.8% (14.9 t-CO<sub>2</sub>/100 million yen)
- Production sites in Japan and abroad promote activities to improve the facility operation rate and shorten the cycle time, and take measures to cut losses at each step from production to consumption of energy.

Under "Monotsukuri Innovation," Mazda strives to reduce per-unit energy consumption. The "Monotsukuri Innovation" is the initiative to achieve a breakthrough in "sharing a completely new concept beyond the boundaries of models," in order to improve quality and brand value, as well as to increase profit margins, while flexibly responding to the requirements for the manufacture of several models and changes in production volume. (F) P84)

- Material: Reduced material weight by using thinner casted and forged parts, and reduced energy consumption by shortening the forging cycle time and downsizing the capacity of melting and heat treatment equipment.
- Processing and assembly: Evolved conventional flexible manufacturing lines to realize higher-efficiency, mixed flow production. Also pursued more efficient manufacturing by ensuring a smooth flow of lines and by consolidating and integrating lines.
- Press: Reduced the amount of scraps generated in manufacturing of press parts, and retrieved parts from scraps to reduce the amount of use of steel sheets. Also achieved multi-pressing, which performs molding of several parts using a single die, resulting in both integration of processes and reduction of energy consumption.
- Paint: Completed the introduction of the Aqua-Tech Paint System, a new water based painting technology realized through the integration of painting functions and highefficient panting technologies, into the Ujina Plant No.2. Also introduced the Aqua-Tech Paint System to global production sites, resulting in reduced energy use and a substantial reduction of VOC (volatile organic compound) emissions.

## $CO_2$ Emissions from Mazda's Four Principal Domestic Sites / $CO_2$ Emissions per Unit of Sales Revenue



- \* CO<sub>2</sub> emissions at Mazda's four principal domestic sites are calculated using the CO<sub>2</sub> coefficient for each year based on standards from the Japan Automobile Manufacturers Association Inc. (JAMA) (Carbon Neutrality Action Plan). The power coefficient for FY March 2022 was undetermined as of September 10, 2022; the FY March 2021 power coefficient is used for FY March 2022.
- \* The figures of the amount of CO₂ emissions at Mazda's four principal domestic sites in FY March 2022 have been verified by a third party. (☐ P128)

Greenhouse gas (GHG) emissions (P113)

<sup>\*1</sup> Head office (Hiroshima); Miyoshi Plant; Hofu Plant, Nishinoura District; Hofu Plant, Nakanoseki District (including non-manufacturing areas such as product development)

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#### Use of Renewable Energy

Mazda promotes the use of renewable energy\*1 for in-house power.

- Solar panels were installed at the Hiroshima Plant, and operation of the solar power generation system was started in July 2021. Electricity generated by this system is used to charge the batteries of MX-30 EV models produced at the plant and for other manufacturing processes there.
- At the Hofu Plant, solar-powered units have been introduced in some corridor lighting.
- A solar power system is installed on the roof of the radio wave experiment building of the Miyoshi Office. The amount of electricity generated by this system in FY March 2022 was 26.6 MWh. Electricity generated by this system is used to provide power and lighting for the building, thereby continuously contributing to the reduction of CO<sub>2</sub> emissions.
- Mazda de Mexico Vehicle Operation (MMVO) in Mexico installed outdoor solar lighting, thereby promoting effective use of renewable energy using solar power and LEDs.

Amount of electricity generated from renewable energy (P114)

#### Hiroshima Plant (Head Office) building with solar panels installed on the rooftop



Electrical charge of MX-30 EV model



Photovoltaic Generation Report (Japanese only)

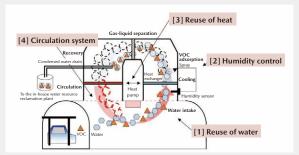
Mazda Receives "Ichimura Global Environmental TOPICS and Industrial Award/Contribution Prize" for its **VOC** recovery technology

In April 2022, Mazda received the "Ichimura Global Environmental and Industrial Award/Contribution Prize" of the 54th Ichimura Industrial Awards\*1 (organized by Ichimura Foundation for New Technology) for its VOC\*2 recovery technology.

The "Ichimura Global Environmental and Industrial Award/Contribution Prize" targets the industrial fields related to global warming prevention. The awarded VOC recovery technology reduces environmental impact and realizes energy saving by recovering and processing VOCs generated during the coating drying process using a heat pump.

This technology achieved zero emission from the coating drying furnace by adopting a system in which VOC components are absorbed to condensed water (from vapor water using a heat pump) and recovered with water, which serves as an alternative of the conventional method for removing VOCs through combustion. The Company expects that this technology will contribute to reducing CO<sub>2</sub> emissions by 63% compared to the conventional method (annual reduction of approximately 710 tons). The technology also saves water resources and electricity by reusing the heat and water in the system. It has been already introduced into several lines of the coating process in plants and will be introduced into other plants.

#### Structure of the "VOC recovery drying system"



<sup>\*1</sup> The awards go to a technology developer who is contributed to science technology and industrial development. There are four awards; "Ichimura Industrial Awards," "Ichimura Academic Awards," "Ichimura Global Environmental and Industrial Award," and "Ichimura Global Environmental and AcademicAward."

<sup>\*2</sup> Volatile Organic Compounds

<sup>\*1</sup> Refers to natural energy sources that can be used continuously without being depleted, such as electricity generation using solar, wind, geothermal, hydroelectric or biomass power, or direct solar heating. These types of energy generate zero or negligible CO2 emissions.

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## [Logistics] Initiatives for Reducing CO<sub>2</sub> Emissions during Product Shipment

Mazda is working with logistics companies, dealerships, and other automakers throughout Japan to provide customers with the volume they require, with the precise timing they expect, while reducing CO<sub>2</sub> emissions during product shipment through highly efficient logistics across the entire supply chain.

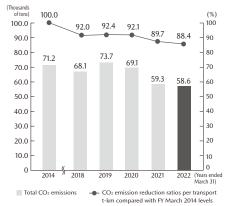
#### <FY March 2022 Results>

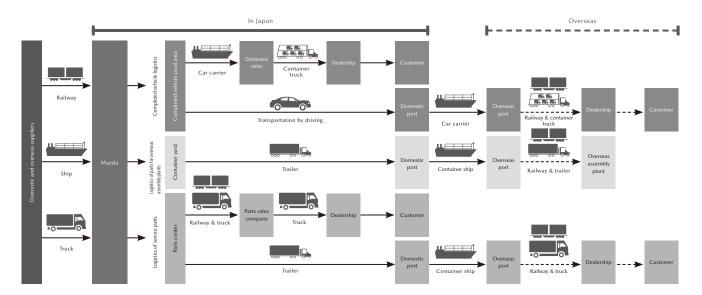
- ■Total domestic transportation volume was approximately 450 million ton-kilometers.
- In FY March 2022, CO<sub>2</sub> emission per ton-kilometer was reduced by 11.6% compared with FY March 2014 levels.

CO<sub>2</sub> emissions from logistics (P114)

- ■Range of the tracking capability for CO<sub>2</sub> emissions in the supply chain
- (
  → Current tracking line
- ► Tracking line to be extended by 2030)

#### CO<sub>2</sub> Emissions and Reductions for Logistics (in Japan)





#### <Specific Initiatives>

In logistics, Mazda continued its efforts to reduce CO<sub>2</sub> emission in the following three fields by visualizing in detail hidden logistics in each process on a global level.

#### 1. Delivering completed vehicles

<In Japan/Overseas>

Mazda has increased loading capacity and reduced CO2 emissions by continuously reviewing the operation of domestic vehicle carriers based on shipping volumes through initiatives such as promoting collaborative transportation with other companies using the domestic vehicle carriers on the return journey. In addition, the Company is promoting the loading of completed vehicles into ships as directly as possible from their manufacturing sites. Through these efforts, Mazda succeeded in curbing around 350 tons of CO<sub>2</sub> emissions in FY March 2022. With regard to domestic and overseas car carriers and container trucks, the Company will discuss and review with logistics companies including shipping companies as well as energyrelated companies in order to realize transport with further less CO<sub>2</sub> emissions. The Company will continue all of its initiatives as well as adopt new technologies and alternative fuels to achieve carbon neutrality.

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#### 2. Transport of service parts

#### <In lapan>

Mazda is striving to improve the rate of modal shift regarding the transportation of service parts. The Company has also used large returnable containers, originally introduced to transport parts overseas, for domestic transportation to improve the loading efficiency of JR containers, thereby contributing to the reduction of CO2 emissions. In FY March 2022, Mazda's railway transportation rate was 26%, reducing CO2 emissions by around 130 tons. In addition, the Company is planning to shorten transport distance by switching the production of service bumpers and some sheet metal parts that are currently transported from Hiroshima and Yamaguchi to the production in the area closer to the Kanto and Kansai regions where transport volumes are higher.

#### <Overseas>

The Company has shifted the production of service bumpers from its Mexican plant to North American plants, where transport volumes are higher, thereby shortening transport distances by around 30% and reducing CO2 emission by around 150 tons in FY March 2022.

#### 3. Transport of procured parts

#### <In lapan>

For trucks transporting procured parts in Japan, the Company introduced the Cloud-based Transportation/Delivery Progress Management Service for Logistics Operations\*1 in 2016. As a result of the initiative to apply this service to 600 vehicles in five years after its launch, the Company has already achieved application to 673 vehicles in FY March 2021, achieving the goal one year earlier than planned. By utilizing this system and reviewing cargo handling operations, Mazda is also working to improve truck turnover rates and reduce truck waiting time in the plants.

The Company is working to enlarge the scope of straight logistics--i.e., after the manufacture of parts to be exported to overseas assembly plants is completed, they are packaged and loaded into containers at the same location without the need for shipment between production locations and distribution centers. Now this straight logistics system has been expanded to cover engines, transmissions and auto body parts produced at Hiroshima Plant and the Hofu Plant. In FY March 2022, by applying this system to a broader range of parts destined for the Mexico Plant, the Company reduced CO<sub>2</sub> emissions by around 5 tons.

#### <Overseas>

The Company is now introducing new standard containers for parts to be transported in containers from Japan to overseas assembly plants. This makes us possible to eliminate the empty space inside the containers. It also reduces the number of containers and the number of transportation truck services. The Company is also working to reduce the inventory and transportation of unnecessary parts by shipping the parts to overseas plants at the timing they are needed. In addition, for the future, the Company is in discussions with shipping companies to introduce alternative fuels with lower CO2 emissions to its container carriers. With these steps, the Company expects to reduce CO<sub>2</sub> emissions by around 1,700 tons per year.

<sup>\*1</sup> The Cloud-based Transportation/Delivery Progress Management Service for Logistics Operators, developed by DOCOMO Systems, Inc.

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#### Initiatives by Mazda Offices

To raise environmental awareness among its employees, Mazda conducted a wide range of activities in FY March 2022, including the following.

#### **Eco Walk Commuting Program**

In order to raise employees' environmental consciousness and encourage them to take better care of their health, employees who walk two kilometers or more as part of their daily commute to work are rewarded with an addition of 1,500 yen per month to their commuting allowance.

#### **Environment Month**

#### Environmental activities survey

The Company conducted a survey of its employees on the environmental activities they carry out on a daily basis. Compared to the results of previous surveys, electricity and water saving activities have taken root.

#### ■ Environmental Education

To encourage every employee to think about and take action for the environment in all aspects of their work and personal life, educational programs regarding global environmental issues and trends in Japan and overseas, Mazda's environmental initiatives, and environmental conservation activities in the workplace have been implemented as part of environmental education and training on ISO 14001.

#### **Light-Down Campaign**

#### Mazda Light-Down Campaign

To raise environmental awareness, Mazda and its domestic Group companies participated in the Light-Down (i.e., lights-off) Campaign, in which they turned off their signboards and indoor lighting.

These participating sites shut off lighting for two hours from 20:00 to 22:00 on June 21 (summer solstice) and July 7 (Tanabata, or the Star Festival), 2021. This campaign saved 8,000kWh of electricity, equivalent to around 4 tons of CO2 emissions.

(No. of participants)

Mazda Motor Corporation: 12 sites

Domestic Group companies: 822 sites of 161 companies This campaign started in 2011 with turning off lights at Mazda's six sites. In 2021, when it was in the 11th year, the largest number of Mazda Group companies participated in the campaign.

#### WWF's Earth Hour 2022

Mazda and its domestic Group companies supported and participated in Earth Hour 2022 organized by the World Wildlife Fund (WWF), which is the world's largest global warming campaign.

For one hour from 20:30 to 21:30 on March 26, 2022, the participating sites turned off signboards and indoor lighting.

(No. of participants)

Mazda Motor Corporation: 12 sites

Domestic Group companies: 821 sites of 133 companies Mazda also participated in the Earth Hour promotional event held at the Hiroshima Peace Memorial Park as a partner company and streamed the event online.

For details of the Light-Down Campaign, see Sustainability "Earth: Related Information"

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#### Response to TCFD (As of June 2022)

#### **Basic Approach**

In May 2019, Mazda declared its support for the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD)\*1 and joined the TCFD Consortium,\*2 showing its commitment to strengthening its efforts to address climate change. In addition, in January 2021, the Company announced that it would endeavor to achieve carbon neutrality (hereinafter "CN") throughout the entire supply chain by 2050. Mazda strives to address climate change in accordance with the TCFD recommendations.\*3

#### Governance

In 2021, Mazda launched a special team to response to carbon neutrality, led by the Corporate Strategy Office and consisting of units specializing in merchandise, production, procurement, logistics, sales and recycle. Under the guidance of the officer in charge, Corporate Strategy Office leads the team in planning and implementing the strategy to respond to risks and opportunities selected based on scenarios and trends issued by the

Intergovernmental Panel on Climate Change and International Energy Organization from a perspective of life cycle assessment. The team also develops and promotes investment and response schedule required to address such initiatives.

Strategies reviewed are reported to and discussed at the Executive Committee Meeting attended by Representative Director and President.\*4 Development plans to products and technologies that are intended to materialize are discussed by the Product Planning and Design Committee consisting of executive officer and above.

#### Strategy

As a result of reviewing scenarios from IPCC and IEA, policies, regulatory trends, and industry trends, the Company recognized the following major risks and opportunities as shown in the table below.

#### Major Risks and Opportunities

Policies, regulations		Stricter fuel efficiency and emission regulations, stricter carbon pricing through the introduction of carbon tax	
	Technologies	Expansion of development resource of electrification technologies such as electric drives and batteries	
Transition Risks	Market	<ul> <li>Surging prices of raw material required for electrification and weight reduction, tight procurement of semiconductor components</li> <li>Energy price surge and supply instability due to tight fossil fuel and renewable energy supplies caused by political conditions and market influences</li> </ul>	
	Reputation	Impact on ESG investment decisions by investors	
	Acute	Production suspension due to disasters and supply chain disruptions caused by increasingly heavy rainfall	
Physical Risks Chronic		Impact of more severe and frequent natural disasters, flooding damage caused by tidal waves	
	Resource efficiency	Efficient use of raw materials through thorough material recycling	
Ī	Energy Resources	Stable supply of CN electricity through promotion of electricity supply in cooperation with local communities     Variety of options of renewable energy sources	
Opportunities	Production/ Service, Market	<ul> <li>Building-Block concept, multiple solutions to put the right products in the right places</li> <li>Diversification of products adaptable to next-generation fuels for vehicles (alternative fuels such as biofuels and synthetic fuels)</li> <li>Expanding market opportunities through the deployment of the right products in the right places and diversification of product offerings</li> </ul>	

#### Risk Management

Major risks and opportunities are identified based on the review of scenarios issued by IPCC and IEA, policies and regulatory trends and industrial trends. Specialist team is implementing the risk identification and assessment process biweekly, sharing the progress of initiatives and challenges. Strategies reviewed are reported to and discussed at the Executive Committee Meeting attended by Representative Director and President. Physical risks are managed within the emergency risk management system as part of the Business Continuity Plan (BCP).

#### **Metrics and Targets**

To achieve the goal for the entire supply chain by 2050, it is essential to grasp Scope 1, 2 and 3\*5 greenhouse gas (GHG) emissions. Also, stricter carbon pricing due to introduction of carbon tax may impact the financial conditions. Mazda is promoting the establishment of environmental management systems (EMS) such as ISO 14001 to ensure that all group companies and the entire supply chain effectively conduct their business activities in an environmentally friendly way. The Company requests its suppliers to develop the GHG emission reduction plan at monthly-held Supplier Communication Meeting.



- \*1 TCFD: Task Force on Climate-related Financial Disclosures
- A private sector organization set up by the Financial Stability Board (FSB), in response to the request from the G20 Finance Ministers and Central Bank
- \*2 An organization established in Japan, aimed at holding discussions regarding climate change on effective corporate information disclosure and efforts for leading disclosed information to appropriate decision-making on investment by financial institutes and other entities. The Ministry of Economy, Trade and Industry, the Financial Services Agency, and the Ministry of the Environment participate in the consortium as observers.
- \*3 Source: https://tcfd-consortium.jp/en/about
- \*4 As of June 2022, deliberated two times at Executive Committee Meetings.
- \*5 Scope 1: Direct emissions from consumption of fuels and industrial processes; Scope 2: Emissions associated with consumption of purchased heat/ electricity (indirect emissions from energy consumption); Scope 3: Other indirect emissions

People

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Endeavor for Carbon Neutrality by 2050

**Resource Circulation** 

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### RESOURCE CIRCULATION

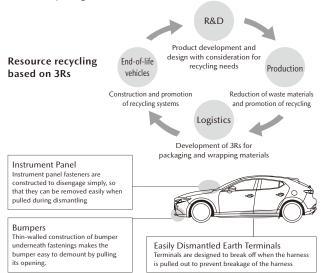
Mazda promotes initiatives for resource recycling based on the 3 Rs (reduce, reuse, and recycle) and the circular economy concept over a vehicle's entire life cycle. The Company implements thorough recycling and waste-reduction initiatives in order to ensure that limited resources are used effectively.

#### **Efforts Regarding Product** and Technology Development

#### Product Development and Design with Consideration for **Recycling Needs**

Many limited resources are used to manufacture vehicles, such as steel, aluminum, plastics and rare metals. Mazda is incorporating 3 Rs design into all vehicles currently under development to increase the recyclability of its new vehicles.

- <Specific Initiatives>
- 1. Research into vehicle design and dismantling technologies that simplify dismantling and separation, to make recyclable parts and materials easier to remove
- 2. Use of easily recyclable plastics, which constitute the majority of ASR\*1 by weight



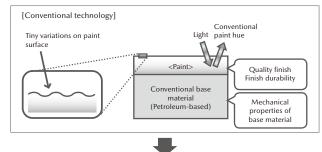
#### **Expanded Adoption of Biomaterials**

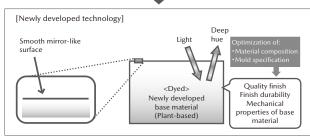
Mazda has been proactively developing plant-derived biomaterials which have the potential to help reduce environmental impact by curbing the use of fossil fuels and CO2 emissions. In 2006, the Company became the first in the automotive sector to develop high heat-resistant, high-strength bioplastic for vehicle interior parts. In 2007, Mazda succeeded in the development of the world's first biofabric made with completely plant-derived fibers for vehicle seat covers. In 2014, bio-based engineering plastic,\*2 suitable also for use in vehicle exterior parts, was developed by the Company, which is currently expanding the adoption of this material.

#### Technology development initiatives related to bio-based engineering plastics

- 2014: Mazda developed bio-based engineering plastic featuring a high-quality finish without painting. By developing paint-less technology for interior and exterior parts taking advantage of the characteristics of this material, the Company not only secured the excellent environmental performance of the material but also achieved a high-quality finish that could not be achieved with conventional paint, and contributed to environmental protection and production cost reduction by eliminating the painting process.
- 2017: Mazda developed materials suitable for making large, intricately shaped exterior parts, such as front grilles, and optimized the die specifications in order to substantially enhance the formability of these parts. In 2020, the Company received the Award for Science and Technology (Development Category) of the 2020 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology for the development of the above-mentioned bio-based engineering plastic.
- 2018: Mazda developed a new technology for two-layer molding of pattern designed bio-based engineering plastic, which enables the molding of a transparent surface layer and a base layer with a pattern-engraved surface, both of which are made of environmentally friendly bio-based engineering plastic. The new technology reduces environmental impact while making it possible to provide elaborated, shaded patterns of deep color, which was previously impossible with conventional technology. In 2021, the Company received the Aoki Katashi Innovation Award from the Japan Society of Polymer Processing for the development of the above-mentioned new technology for two-layer molding of pattern designed bio-based engineering plastic.

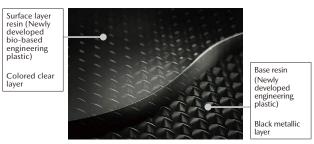
#### 2014: Development of paint-less technology for interior and exterior parts taking advantage of this material





2018: New technology for two-layer molding of pattern designed bio-based engineering plastic

#### New technology for two-layer molding of pattern designed bio-based engineering plastic: surface view



- \*1 Automobile Shredder Residue
- It refers to the residue remaining after the crushing/shredding of what is left of the vehicle body following the removal of batteries, tires, fluids, and other parts requiring appropriate processing; the removal of engines, bumpers, and other valuable parts; and the separation and recovery of metals.
- \*2 Bio-based engineering plastic was developed by Mazda Motor Corporation in collaboration with Mitsubishi Chemical Corporation.

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#### **Efforts Regarding Manufacturing and Logistics**

## Manufacturing Materials: Maintaining the Status of Zero Landfill Waste and Promoting the Reduction of Waste

To reduce landfill waste at its four principal domestic sites\*1 to zero, Mazda is promoting reductions in the volume of manufacturing by-products and waste, more rigorous sorting of waste, and recycling. As a result, the Company has achieved zero landfill waste, and has maintained this status from FY March 2009 to FY March 2022. The Company has also achieved material recycling, to ensure that packaging materials used in the vehicle assembly process can be reused as raw materials, by more strictly sorting these packaging materials by ingredient and quality. The amount of waste in FY March 2022 was reduced by 87% compared with FY March 1991 levels.

Mazda has been proactively using recycled materials for the plastic pallets used to transport parts overseas. Currently, the Company is planning to use plastic waste generated at its plants as a recycled material for the production of plastic pallets, working to further reduce the amount of waste generated.

Amount of landfill waste, amount of recycled materials, recycling ratio (P115)

## Logistic Materials: Reducing Volume of Packaging and Wrapping Materials

Mazda is moving forward with efforts centering on the "3 Rs of Mazda logistics" to cut down on resources used for packaging and wrapping. In FY March 2022, the use of packaging and wrapping materials was reduced by 27% compared with FY March 2020 levels. In FY March 2017, departments in the five areas—development, production, procurement (purchasing), logistics and quality-closely worked together to achieve the optimization of parts procurement and vehicle manufacturing, from the stage of product development, and to establish strong cooperation with the supply chain. These efforts resulted in reduced volumes of packaging and wrapping materials, and an increased packaging filling rate. In FY March 2022 as well, these departments worked in close collaboration to improve the packaging filling rate for some parts, and to reduce the volumes of their packaging and wrapping materials. Mazda will continue promoting and expanding these activities that involve efforts in different areas, so as to reduce the consumption of materials. In the area of repair parts for overseas, the Company continues to expand the application of large-size returnable containers, aiming at increasing the container filling rate. By utilizing these containers, Mazda succeeded in reducing the use of packaging and wrapping materials by about 1,900 tons in FY March 2021 and by about 2,100 tons in FY March 2022.

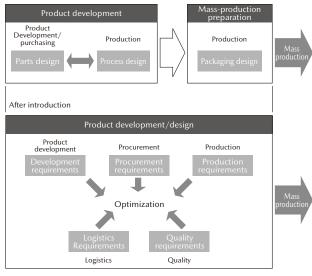
For the parts exported to overseas assembly plants, the Company is now introducing new standard contains for parts to be transported in containers from Japan. This makes it possible to eliminate the empty space inside the containers. By improving filling rate inside the container from 70% to 90%, the Company could reduce the number of containers and the number of transportation truck services, thus contributing not only to the reduction of the use of packaging and wrapping materials, but also to the reduction of  $CO_2$  emissions.

The Company also developed these activities at Mazda Toyota Manufacturing (MTM) that started operation in January 2022. By introducing new standard containers, in FY March 2021, the Company succeeded in reducing the number of containers about 50 vessels, and the use of packaging and wrapping materials by around 2,800 tons respectively. The Company is planning to introduce the new standard containers for the other parts to achieve further reduction.

Consumption of wrapping and packaging materials (p115)

#### Activities Image

Before introduction



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#### Introduction of Returnable Containers



<sup>\*1</sup> Head office (Hiroshima); Miyoshi Plant; Hofu Plant, Nishinoura District; Hofu Plant, Nakanoseki District (including non-manufacturing areas such as product development)

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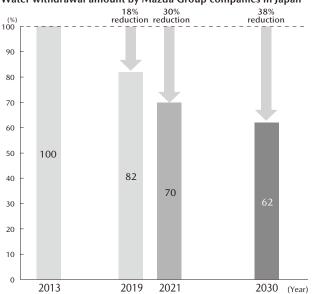
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#### **Water Resource Conservation Target**

Mazda Group promotes activities to eliminate wasteful water use and circulate water resources by treating used water so that it is the same quality as it was taken from nature. In order to implement its initiative of water resource reuse and recycling at a domestic model plant, the Company has set a target of reducing the water intake by the entire Mazda Group companies in Japan\*1 by 38% in 2030 compared with 2013 levels. In order to achieve this target, the Company is planning to reduce the annual water use by 2%. In addition, the Company promotes the further use of rainwater and recycled water.

■ Water withdrawal and wastewater amount (P116)

#### Water withdrawal amount by Mazda Group companies in Japan



#### To Achieve Water Resource Conservation Target

By clarifying input, process, and output of water resource in its business activities, Mazda is promoting initiatives to efficiently use the valuable water (i.e., utilizing water resources without wasteful use), minimizing the water usage, and circulating water resources by treating used water so that it is the same quality as it was taken from nature. For the progress of these initiatives, Water Resource Group was established consisting of members in charge of water resource conservation. Under two teams, the Group works for six major themes of "eliminating wasteful use," "reduction," "reuse,""recycling," "utilization of rainwater, water sludge and waste fluid" as well as "building communities and systems and developing human resources" by analyzing the current conditions and find out the solution based on the analysis. Water Resource Group also started sharing information on initiatives at domestic plant with overseas plant, as well as supporting the overseas plants address the issues.

- Recycling/Circulation Team: review models in the field of wastewater treatment, review models and implement trials in the field of water intake
- Use Reduction Team: Introduce models and trial results reviewed by Recycling/Circulation Team to plants

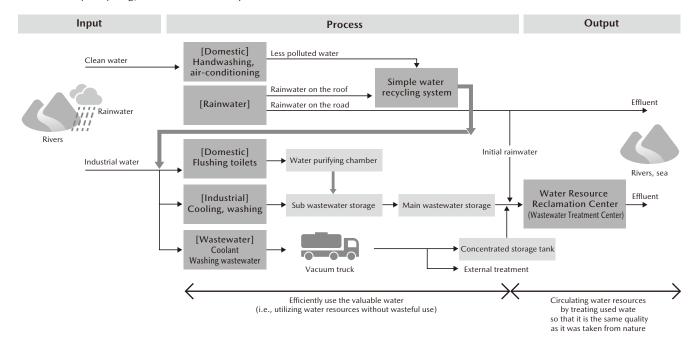
#### <Examples of Efficient Use of Water Resources>

#### [Appropriate use / reuse]

- Appropriate drainage of cooling towers
   Prevention of overflows caused by excessive water supply, and reuse of less polluted water in circulation without draining in accordance with internal standards
- Reducing toilet washing water:
   Put a sensor on each toilet that allows flushing only when the sensor senses the existence of the user
- Effective use of electrodeposition paint cooling drainage: Water used to cool paint is reused in other processes

#### [Recycling of drain water / utilization of rainwater]

 Less polluted water, such as hand washing water and airconditioning drainage, is recaptured and recycled with simple recycling system and used together with stored rainwater for flushing toilets, etc.



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#### Initiatives for Collection and Recycling of Endof-Life Vehicles (ELVs) and Used Parts

Around 80% of a vehicle can be recycled. Implementing thorough recycling and waste reduction initiatives to ensure that limited resources are used effectively, Mazda promotes efforts to establish a recycling-oriented society.

#### Measures in Response to End-of-Life Vehicle Recycling Law in Japan

Mazda properly processes and recycles three designated items (fluorocarbons, airbags, and automobile shredder residue [ASR]\*1) pursuant to the End-of-Life Vehicle Recycling Law in Japan. In addition, the Company is creating unique technologies and measures to move this recycling program forward. In the case of ASR, Mazda is working through ART,\*2 a consortium of 13 key companies including Mazda, Nissan Motor Co., Ltd., and Mitsubishi Motors Corporation, to comply with the law and achieve progress in the reuse of resources.

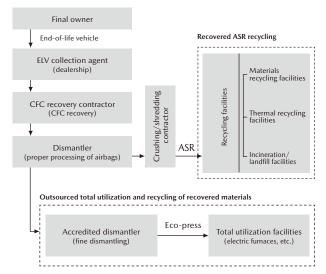
The Company appropriately executes recycling at dealerships. Dealerships collect vehicle recycling fees at the time of sale and receive the ELVs from their final owners in order to transfer them to the disposal processing companies. As for recycling fees, the Company reviewed its fee calculation standard in sequence for new models launched in 2012. The new fee standard is applicable to the Company's new models released after that. While forecasting a future recycling situation, the Company will continue to push forward with its recycling business in such a way to ensure a balance between revenue and expenditures in the medium and long term.

The End-of-Life Vehicle Recycling Law was revised in February 2012, and newly designated lithium-ion batteries and nickel-metal hydride batteries as items for advance collection before dismantling of end-of-life vehicles. Mazda is committed to collecting lithium-ion batteries installed in vehicles launched in and after October 2012 through the LiB Joint Collection System of Japan Auto Recycling Partnership, Ltd. The Company also independently collects nickelmetal hydride batteries installed in the Axela (Mazda3 overseas) Hybrid (launched in November 2013).

In order that the related supplier safely recycle vehicles installed with lithium-ion batteries and nickel-metal hydrate batteries as well as deceleration energy regeneration system capacitor, Mazda published the disposal work procedure on its website and promotes appropriate disposal.

Reference website (Japanese only) for Mazda's efforts with regard to the End-of-Life Vehicle Recycling Law

#### **End-of-Life Vehicle Recycling Process**



#### Resource Recycling Results in FY March 2022

Number of vehicles from which ASR is collected		129,770 units
Number of vehicles from which airbags are collected		118,837 units
Number of vehicles from which fluorocarbon is collected		118,939 units
	ASR	96.5%
Recycling ratio	Airbags	95.2%
Recycling ratio for ELVs*		More than 99%
Total contracting deposits received		1,556,426,986 yen
Total expenses for recycling		1,482,568,896 yen

#### (Includes separate cost required at Mazda)

\* Recycling ratio for ELVs is the recycling ratio in dismantling/shredder processes of around 83% (cited from the May 2003 joint council data), plus the remaining ASR ratio of 17% multiplied by the ASR recycling rate of 96.5%.

Status of resource recycling initiatives (Japanese only)

#### ASR and the End-of-Life Vehicle Recycling Law in Japan

Disposed vehicles consist of about 80% useful metal and about 20% automotive shredder residue (ASR) that includes resin.

Useful metal is recycled in cooperation with metal recyclingrelated companies such as dismantlers, crushing/shredding contractors, and steel manufacturers. With regard to ASR, which used to be disposed by landfill, is now subject to the End-of-Life Vehicle Recycling Law, which was enforced in January 2005.

This is due to the rise in the risk of illegal dumping of endof-life vehicles on the back of a surge in disposal costs due to overstrained final landfill sites and weakness in iron scrap prices. After the enforcement of this law, car manufacturers are required to recycle ASR, chlorofluorocarbons-which lead to global warming and ozone depletion-and airbags-which require specialist knowledge for disposal—under their responsibility, using recycling fees deposited by final owners of the ELVs.

<sup>\*1</sup> Automobile Shredder Residue

It refers to the residue remaining after the crushing/shredding of what is left of the vehicle body following the removal of batteries, tires, fluids, and other parts requiring appropriate processing; the removal of engines, bumpers, and other valuable parts; and the separation and recovery of metals.

<sup>\*2</sup> ART: Automobile shredder residue Recycling promotion Team

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#### Promoting Recycling of End-of-Life Vehicles Overseas

Mazda is committed to the recycling of end-of-life vehicles overseas in accordance with the laws in each country and region, under the initiative of the local distributors. As for countries in which recycling-related laws are planned to be established, Mazda is preparing to respond in cooperation with the distributors in such countries.

As well as vehicles for domestic use, in order that the related supplier safely recycle vehicles installed with lithium-ion batteries and capacitors, the Company published the disposal work procedure on its website and promotes appropriate disposal.



Reference website for Mazda's efforts with regard to recycling of endof-life vehicles overseas

#### Europe

Based on the EU Directive, Mazda Motor Europe provides a dismantling manual to recycling contractors when introducing a new model and has established a network to collect used vehicles from their final owners free of charge, in cooperation with the distributors in each country.

#### China

A law was enforced in January 2015, in accordance with which local manufacturers are managing substances with environmental impact and developing dismantling manuals.

#### Promoting the Collection and Recycling of Used Parts in Japan

Mazda is continuously engaged in the recycling of damaged bumpers replaced for repairs as plastic materials for new vehicle bumpers, etc.

Recycling of damaged bumpers: Mazda collects bumpers removed for repairs at dealerships throughout Japan, and recycles them for reuse as plastic parts (new vehicle bumpers, undercovers, etc.). In FY March 2022, the Company collected 47,939 bumpers, which were utilized as recycled materials.

Amount of recycled parts (P115)

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# ENVIRONMENTAL MANAGEMENT

#### **Establishing Environmental Management Systems**

Mazda is promoting the establishment of environmental management systems (EMS) across its entire supply chain and in all Group companies. The purpose of the EMS is to carry out more environmentally conscious business activities in a more effective manner, based on ISO 14001 and other standards.

#### **Progress Status**

- 14 Mazda and Group manufacturing companies in Japan and overseas have now acquired ISO 14001 certification. (Obtained by 14 out of a total of 15 companies)
- Mazda has had dealerships in Japan certified under EcoAction 21 (EA21)\*1, an environmental management system. Introduction of the system has been completed at the Company's 15 consolidated dealerships, and is now expanded to ownermanaged dealerships. As of March 2022, 25 dealerships of the Mazda/Mazda Enfini sales channel, 119 dealerships of the Mazda Autozam sales channel, and Mazda Chuhan, a used car sales company, have been certified. The dealerships that have already been certified are continuously supporting the introduction of the environmental management system at newly opened shops.
- Mazda has completed introduction of an exclusive Mazda EMS to two Mazda Group vehicle parts companies in Japan.

## List of ISO 14001 Certified Production and Business Sites Domestic production / business sites

Hiroshima district	Hiroshima Plant	l 2000
mirosnima district	Miyoshi Plant	June 2000
	Nishinoura district	September 1998
Hofu Plant	Nakanoseki district (extended certification)	September 1999
Tokyo Headquarters	Tokyo Headquarters	
Mazda R&D Center Yokohama		
Proving Ground (Mine, Kenbuchi, Nakasatunai)		September 2016
Technical Service Center Osaka		
Osaka Corporate Sales Office		

#### Overseas production site

AutoAlliance (Thailand) Co., Ltd.*1	May 2000
Changan Mazda Automobile Co., Ltd.*1	December 2008
Changan Mazda Engine Co., Ltd.*1	February 2009
Mazda de Mexico Vehicle Operation*2	December 2014
Mazda Powertrain Manufacturing (Thailand) Co., Ltd.*2	November 2016

<sup>\*1</sup> Equity-method group company

## Four domestic consolidated group companies (excluding sales companies)

Mazda E&T Co., Ltd.*3	June 2000
Mazda Ace Co., Ltd.*3	June 2000
Mazda Logistics Co., Ltd.*3	June 2000
Kurashiki Kako Co., Ltd.	December 2001

<sup>\*3</sup> Some or all of the organizations at each of the companies above acquired ISO 14001 certification in the certification scope of Mazda.

#### Four domestic equity-method group companies

Toyo Advanced Technologies Co., Ltd.*4	June 2000
Japan Climate Systems Corporation	May 2000
Yoshiwa Kogyo Co., Ltd.	April 2002
MCM Energy Service Co., Ltd.*5	June 2008

<sup>\*4</sup> The company was ISO 14001 certified in the certification scope of Mazda. As a separate business facility, the company individually acquired the certification in March 2016. As a separate company, however, the company acquired re-certification in April 2017, resulting in the exclusion of the company from the certification scope of Mazda.

#### **Development of Environmental Policies**

In order to promote environmental initiatives, Mazda has developed the following environmental policy within the scope of domestic certification.

#### Mazda Environmental Policy

#### Basic Polic

Through business activities that coexist with the society and local community, we will realize the carbon neutral and recycling-oriented society.

#### Action guidelines

- Mazda will strive to recycle resources, reduce energy consumption, introduce renewable energy, and conserve biodiversity.
- (2) Mazda will promote the use of environmentally friendly products and services by providing products and services whose life cycle was considered.
- (3) Mazda will not only comply with environmental laws and regulations, but also consider the environmental impact of its corporate activities on local communities and society and ensure the comfortable environment of the society in the future.
- (4) Mazda will raise the environmental awareness of each employee and contribute to the realization of a sustainable society through the Company's entire corporate activities, while placing importance on the appropriate disclosure of information and mutual communication.

<sup>\*2</sup> Consolidated group company

<sup>\*5</sup> Although the company was inside the certification scope of Mazda, it acquired the certification on its own in March 2013.

<sup>\*1</sup> Simplified EMS established by the Ministry of the Environment, for application at companies of various scales, such as small to medium-sized companies.

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#### **Promoting Green Purchasing**

With the aim of reducing the environmental burden throughout its entire supply chain, Mazda established the "Mazda Green Purchasing Guidelines" and engages in operation activities accordingly. These guidelines require all of its suppliers worldwide to undertake measures to reduce their burden on the environment, at all stages from product development to manufacturing and delivery. The guidelines also make it clear that Mazda will give preference in purchasing to suppliers who implement such environmental measures.

Mazda also requires its suppliers of parts, materials, and industrial equipment and tools to obtain and maintain ISO 14001 certification, and to reduce the amount of greenhouse gas emissions generated through their corporate activities. In addition, the Company promotes environmental activities in collaboration with its suppliers by providing them with information and other assistance. Presently, all major suppliers involved in Mazda vehicle development and manufacturing have acquired ISO 14001 certification.

## Status of Establishment of Environmental Management Systems (EMS) at Suppliers

- All major suppliers in Japan and abroad with which the Company has ongoing business relationships (around 500 companies), including new suppliers, have maintained certification as of the end of March 2022.
- Under the Mazda Green Purchasing Guidelines, Mazda requires, through primary suppliers, secondary suppliers and the subcontractors to establish EMS.

#### **Status of Implementation of Environmental Audits**

To confirm that environmental management systems, such as ISO14001 and EcoAction 21, are operating effectively, both internal audit and environmental management system audit (EMS audit) are carried out annually at Mazda and all of its Group companies, both in Japan and overseas, that have obtained certification. The FY March 2022 EMS audit revealed no serious compliance issues.

The results of the internal audit and EMS audits were reported to senior management. Any problems were swiftly and appropriately rectified.

#### **EMS Audit Results on ISO 14001**

#### Mazda Motor Corporation

	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
Serious noncompliance issues	0	0	0	0	0
Minor noncompliance issues	1	0	0	0	0
Observation issues	5	6	6	5	5

#### **Group Companies**

		FY March 2022	
		Japan	Overseas
	Serious noncompliance issues	0	0
ISO14001	Minor noncompliance issues	0	7
	Observation issues	27	24
EA21	Noncompliance Issues	0	_
	Minor noncompliance issues	2	_
	Issues requiring improvement	56	-

#### **Eliminating Sensory Pollution**

Sensory pollution comprises noise, vibration, and odors that have a sensory or psychological impact on people. Mazda recognizes that clearing legal regulations may not be enough to prevent noise, vibration, and odors from annoying neighborhood residents. For this reason, Mazda is systematically stepping up measures to alleviate the causes of such pollution, as well as measures to improve noise insulation and odor removal.

#### Specific Initiatives in Environmental Risk Management

#### **Environmental Monitoring**

- Regular training is conducted at each plant and office to prepare for response in the event of accidents that adversely affect the natural environment.
- Environmental monitoring, including monitoring of air and water pollution, is conducted regularly.

#### **Legal Violations**

In FY March 2022, there was one case of violations of environmental laws and regulations at Mazda's group companies in Japan. The Company is taking appropriate actions and will implement measures to prevent recurrence.

#### Complaints

In FY March 2022, Mazda received complaints concerning two cases, and is taking appropriate actions to address it in good faith.

#### **Environmental Monitoring**

Environmental monitoring item	Target of monitoring	Items monitored	Monitoring frequency
Air quality	Boilers, melting furnaces, heating furnaces, drying furnaces, etc.	5 items: sulfur oxides, nitrogen oxides, soot, volatile organic compounds, hydrogen chloride	Around 400 times per year
Water quality	Treated wastewater	43 items: cadmium, cyanide, organic phosphorus, lead, hexavalent chromium, etc.	Around 1,600 times per year
Noise and Vibration	Site boundaries	1 item: noise level	12 times per year
Odor	Site boundaries	1 item: odor index	12 times per year
Waste products	Slag, sludge, scrap metal, etc.	25 items: cadmium, cyanide, organic phosphorus, lead, hexavalent chromium, etc.	Around 200 times per year

#### **Legal Violations and Complaints**

(FY March 2022)

		Number of incidents	Response
Legal violations	Water quality	1 item	Reviewed control methods
Complaints	Odor	1 item	Implemented remedies for the sources
	Exhaust	1 item	Implemented remedies for the sources

\*Boundary: Mazda and its Group companies

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#### **Environmental Education / Education Program Structure**

As part of its EMS, Mazda conducts regular environmental education for all employees once a year, as well as education for EMS leaders twice a year, and encourages employees to obtain environment-related public qualifications. In addition, Mazda offers support for employees working toward these qualifications, including financial support through the Mazda Flex Benefit program. ( P120)

#### Qualifications that Employees Are Encouraged to Obtain:

- Energy attorney
- Head supervisor of pollution control
- Supervisor of air and water pollution control (Class 1 to 4)
- Supervisor of noise- and vibration-related pollution control
- Supervisor of dust and particulate pollution control (Specified, General)
- Supervisor of dioxide pollution control
- Special managing supervisor in charge of industrial waste disposal
- Environmental Society Test (=Eco Test)
- EMS inspector
- Internal environment auditor
- Environment measurer
- Construction environment hygiene control engineer

#### **Environmental Education Structure**

General education		Basic environmental education
		Education for EMS leaders
	$\vdash$	Education for managers
	$\vdash$	Education for foremen
	$\vdash$	Education for new employees
	$\vdash$	Education for newly-employed mid-career workers
	-	Follow-up educations among general employeesworkers
	Ш	Departmental education
Internal environmental audit education	-	Pre-internal environmental audit education
Education of personnel engaged in specific tasks	_	Education covering operational procedures manual
		Training to deal with accidents
Education conferring qualifications		Education for development of assistant ISO14001 inspectors and internal environmental auditors, and support for obtaining environmentrelated qualifications
Other educational programs	-	Education for visitors
	$\vdash$	Education for construction and logistics contractors
	$\Box$	Education for irregular visitors

#### **Routine Environmental Activities**

Every day, each employee is involved in environmentally friendly initiatives in the work they are responsible for.

#### **Reducing Paper Use**

Mazda continually makes efforts to considerably reduce the amount of paper used for office work through the digitization of documents, ledger sheets, and other forms, as well as through the use of projectors and monitors at meetings, etc. As part of its recycling efforts, the Company also reuses waste paper (shredder dust) as packaging material for shipping parts, and is increasing efforts to separate the collection of waste paper by type during disposal.

#### **Reducing Energy Use**

Through regular initiatives, including purchasing of low powerconsumption office equipment and furniture, and turning off lights and computers when they are not in use, Mazda makes continual efforts to reduce energy use.

Furthermore, Mazda implements a "Cool Biz" program during the summer season every year, setting internal room temperatures at 28°C (82.4°F) on a standard basis.

During the winter season when electricity consumption is particularly high, the Company implements a "Warm Biz" program, setting internal room temperatures at 20°C (68°F) on a standard basis.

## Environment-Related Accident Emergency Drill and Prevention Campaign

- Emergency Drill to Prevent Marine Pollution Mazda's plants are located close to the se.
- Mazda's plants are located close to the seas and has a high environmental risk of oil leakage from domestic vessels, etc. For the oil leakage on the sea, the Company has conducting drills based on realistic scenarios to extend oil fence to prevent the spread of oil and collecting oil floating on the sea surface and confirm the effectiveness. In 2021, the drill was cancelled due to Covid-19 pandemic, but the Company is planning to resume the drills in the future, considering the pandemic situations.
- Campaign for Oil Spill Prevention and Traffic Safety Jointly with Mazda Logistics Co., Ltd. and several truckload transportation companies, Mazda Motor Corporation conducts an awareness-raising campaign to prevent oil spills on roads during vehicle delivery and improve traffic safety awareness. In this campaign, which are held twice a year, awareness-raising leaflets are distributed to drivers of delivery trucks to the Hiroshima Plant and the Hofu Plant. In doing so, the Company strives to improve such drivers' awareness of the environment and safety and create a system that ensures that employees can make a quick and appropriate response in the event of an accident.

As part of prevent oil leakage from occurring, Mazda established a database to visualize maintenance status of each vehicle and information on past environmental defects and allows to timely send information alert message to transportation companies. The system began operation in March 2021. Initially around 38% of vehicles that deployed the MILK-RUN System\*1 adopted the system. As of August 2022, around 60% vehicles adopted the system. In future the Company is striving to extend the system to more suppliers to prevent oil leakage from occurring.

Campaign for Oil Spill Prevention and Traffic Safety Emergency Drill to Prevent Marine Pollution in FY March 2020 (Deploying oil containment booms)





<sup>\*1</sup> A method in which a single truck visits multiple suppliers to collect supplies.

Named after truck routes in rural areas, which picked up milk from each farm.

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### INITIATIVES FOR REDUCING ENVIRONMENTAL IMPACT

#### **Cleaner Emissions**

#### **Cleaner Gas Emissions**

Mazda is committed to mitigating air pollution from exhaust gas. To this end, the Company is actively developing low-emission vehicles, clearing the emission regulations in each country/region to introduce these vehicles globally.

#### **Development of Unique Single-Nanotechnology**

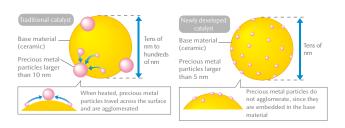
Mazda pays attention to global movements toward tighter control of exhaust emissions and fuel economy, market expansion due to rapidly growing emerging countries, and depletion of scarce resources. The Company has developed its unique single-nanotechnology and soot (PM) oxidation catalyst, promoting reduction of the use of precious metals and cleaning of exhaust gases.

#### Single-Nanotechnology

Based on the belief that it is important to help catalytic converters exercise excellent catalyst performance after reducing the use of scarce elements, such as rare metals (precious metals) and rare earths (ceria material), Mazda developed the single-nanocatalyst\*1 that achieves both cleaner exhaust characteristics and higher durability.

The Company has been progressively introducing the technology into gasoline engines and clean diesel engines on a global basis.

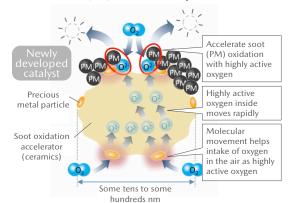
#### Model of precious metal dispersion by new catalyst technology



#### Soot (PM) Oxidation Catalyst

Mazda has developed a unique PM oxidation technology for diesel engine catalysts, which enables rapid combustion and removal of soot (PM) and reduces CO<sub>2</sub> emissions. Compared with conventional catalysts, this technology effectively utilizes oxygen not only on the surfaces of catalyst particles but also of their inside, and enables supply of a larger amount of highly active oxygen for soot (PM), thereby achieving dramatic improvement in functions. The introduction of this technology has reduced the use of precious metals, or rare elements, to around one-tenth, along with the durability sufficient to maintain the catalytic function throughout the entire vehicle life cycle.

#### Mechanism of soot (PM) oxidation catalyst



#### **Proper Management of Chemical Substances and Heavy Metals**

Mazda publishes Management Standards for Environmentally Hazardous Materials, specifying substances and heavy metals whose use in parts and materials it purchases is subject to restrictions (prohibited substances and substances for which reporting is required), to properly control the use of such hazardous materials.

<sup>\*1</sup> Catalyst featuring single-nanotechnology to control finer materials structures than nanotechnology

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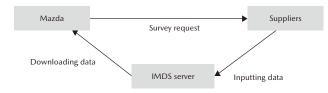
#### **Collection and Management of Automotive Parts Materials**

Mazda is working across its entire supply chain to reduce the use of environmentally hazardous materials such as lead, mercury, hexavalent chromium and cadmium. Using the standardized IMDS,\*1 international system, the Company gathers information on the materials from suppliers (Met all of the voluntary targets of the Japan Automobile Manufacturers Association, Inc. (JAMA) (reduction of the use of lead and mercury, and prohibition of the use of hexavalent chromium and cadmium) by February 2007, earlier than the scheduled deadlines).

#### Measures Related to Application of IMDS

- The Company developed and published the guideline that helps suppliers to correctly input IMDS data.
- The data gathered through IMDS is used to calculate the Company's vehicle recycling rate and to comply with various regulatory regimes for chemical materials, such as REACH\*2 in Europe.

#### **How IMDS Works**



#### VOC Reductions in Vehicle Cabins

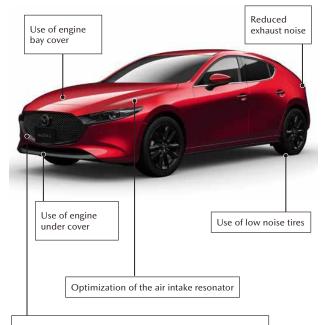
To maintain a comfortable cabin environment, Mazda is committed to reducing VOCs\*3 such as formaldehyde, toluene and xylene, which have been implicated as possible causes of sick building syndrome.

■ In new models, starting with the Demio (Mazda2 overseas)\*4 launched in 2007, Mazda reduced VOCs in the main materials used in the cabin, such as plastics, paints, and adhesives, thereby conforming with the indoor aerial concentration guidelines established by Japan's Ministry of Health, Labour and Welfare. (The MX-30, introduced in FY March 2021, followed the above guidelines.)

#### **Reduction of Vehicle Noise**

Mazda has established its own noise standards which are even stricter than the most recent legal requirements. In compliance with the above in-house standards, the Company has been working to reduce the road traffic noise of all the passenger vehicles and commercial vehicles it produces. The Company has also been actively addressing the development of technologies to reduce the three major vehicle noises:engine noise, air intake/exhaust system noise, and tire noise.

#### Example of Anti-Noise Measures (Mazda3)



#### Reduced engine noise

\* Encapsulation technology is used for the Skyactiv-X engine.

#### [Manufacturing] Air Pollution Prevention:

#### **Actively Adopting Fuels that Reduce Environmental Burdens**

Mazda is continuing efforts to reduce the emission of sulfur oxides (SOx), nitrogen oxides (NOx), dust and soot, fine particles, vapors, and volatile organic compounds (VOCs).

In addition, Mazda is shifting the use of fuel oil to that of city gas and makes other efforts to actively adopt materials that reduce the environmental burden.

NOx emissions and SOx emissions (P117)

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#### **VOC Reductions: Body-Painting Lines**

In FY March 2022, Mazda made steady progress toward achieving the target of reducing VOC emissions from vehicle body paint in body-painting lines to 19.0 g/m² or less. The target was achieved as a result of various measures. Such measures include the Three Layer Wet Paint System introduced as the standard process in all plants in Japan and major plants overseas, the Aqua-Tech Paint System ( P24) that delivers world-leading environmental performance, a low-VOC paint that the Company developed and introduced, and improved efficiency in thinner recovery in cleaning operations.

#### [Manufacturing] Reducing Emissions of PRTR-Listed Substances

With various efforts, such as the introduction of the Aqua-Tech Paint System into the painting process and improvements to the efficiency of thinner recovery for cleaning operation, in FY March 2022 the amounts of substances that are designated under the PRTR Law\*5 released into the water system and the atmosphere decreased by 78% from FY March 1999 levels to 620 tons. Mazda will continue working to reduce emissions of PRTR-designated substances.

<sup>\*1</sup> International Material Data System

<sup>\*2</sup> Registration, Evaluation, Authorization and Restriction of Chemicals

<sup>\*3</sup> Volatile Organic Compounds

<sup>\*4</sup> As of 2007

<sup>\*5</sup> Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. PRTR: Pollutant Release and Transfer Register

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### BIODIVERSITY CONSERVATION

#### Approach to Biodiversity Conservation

Endorsing the aims of the "Declaration of Biodiversity by Keidanren (the Japan Business Federation)," Mazda promotes initiatives to protect the global environment. In FY March 2012, with the aim of systematically developing its initiatives to protect biodiversity, Mazda conducted an assessment of impacts on biodiversity, and it recognized the significance of the impacts of its business activities and products on the blessings of nature and the environment.

In line with this assessment, the Company established the Mazda Biodiversity Guidelines in December 2012 and has been implementing various initiatives through its business activities aiming at contributing to the conservation of biodiversity and creating a rich, sustainable society that ensures harmony between people and nature.

Based on the results of the above assessment of impacts, Mazda takes measures to mitigate its impacts on biodiversity with a particular focus on energy, water and other resources in the areas of products, technology, production, and logistics. Also, to understand the impacts of business activities on ecosystems, the Company has continued to conduct biodiversity surveys with the cooperation of experts. By carrying out biodiversity surveys not only on company-owned lands but also in surrounding areas and on top of that by conducting literature study, Mazda strives to preserve the ecosystem of the entire region.

#### **Process for Assessment of Impacts on Biodiversity**

Step 1: Selecting an assessment target scope
(The assessment is made for Group companies engaged in automobile-related business, primarily those with major impacts in the value chain in Japan, although the assumed targets also include overseas companies and affiliates.)

Step 2: Assessing the levels of the dependence and impacts on ecosystem.

Step 2: Assessing the levels of the dependence and impacts on ecosystem services, as well as assessing the threat to biodiversity

Step 3: Identifying business risks and opportunities regarding biodiversity

Step 4: Identifying priority issues and assessing the current situations of the existing responses

Step 5: Identifying a direction for future responses

#### The Mazda Biodiversity Guidelines

#### [Basic Approach]

Based on "The Mazda Global Environmental Charter," the Mazda Group, recognizing the blessings of nature and the significance of environmental impacts, contributes to the conservation of biodiversity through its corporate activities worldwide, with the aim of establishing and developing a rich, sustainable society that ensures harmony between people and nature.

#### [Priority Initiatives]

recycling and biodiversity.

- 1. Creation of Environmentally Sound Technologies and Products We will encourage the creation of technologies and products considering harmony between the environment and our corporate activities, by developing technologies that contribute to cleaner emission gases, reduction of CO<sub>2</sub> emissions, research and development of clean energy-based vehicles, promotion of
- 2. Corporate Activities in Consideration of Conserving Resources and Energy We will promote reduction of substances with environmental impact and effective use of resources, and contribute to conservation of biodiversity, through efficient energy use and resource-saving/recycling activities.
- 3. Collaboration/Cooperation with Society and Local Communities We will promote local community-based activities, by striving to establish collaboration/cooperation with a wide range of stakeholders including supply chains, local governments, communities. NPOs/NGOs. and education and research institutions.
- **4.** Awareness Enhancement and Information Disclosure
  We will take active and self-initiative actions and disclose and share the achievements widely to society, by striving to enhance awareness of the importance of coexistence between people and nature.

Established in December 2012

#### **Examples of Initiatives**

Creation of Environmentally Sound Technologies and Products	• Continuous Evolution of Skyactiv Technology (☐ P20) • Electric Vehicles (☐ P21) • Product Development and Design with Consideration for Recycling Needs (☐ P30)	
Corporate Activities in Consideration of Conserving Resources and Energy	•Improving the facility operation rate and shortening the cycle time in the production process (☐ P24) •Assessing and considering the impact on biodiversity when constructing a new plant	
Collaboration/ Cooperation with Society and Local Communities	Promoting the preservation of forests, support for the protection of wildlife, etc.*  Conducting biodiversity initiatives on Company-owned lands	
Awareness Enhancement and Information Disclosure	Activities through the Mazda Foundation*2 Promoting awareness of social contribution activities and disclosure of information on these activities Educating employees and raising their awareness Introducing the activities to the inside and outside of the Company through the Mazda Sustainability Report, etc.	

<sup>\*1</sup> https://www.mazda.com/en/sustainability/social/report/

Australia https://mazdafoundation.org.au/ New Zealand https://mazdafoundation.org.nz/

South Africa https://www.mazda.co.za/mazda-foundation/foundation/

#### **Information Provision**

The Biodiversity Newsletter is issued regularly to keep employees up to date on the biodiversity initiatives undertaken on Companyowned lands and biodiversity-related news. A total of 11 issues have been published thus far. The newsletter will continue to be issued so that more employees will become interested in biodiversity.

#### Biodiversity Newsletter (Japanese only)

#### 生物多様性ニュースレター

VOL.11 2021年11月発行

#### 身近な外来種との関わり方

皆さんは『外来種』と聞くと、どのような生き物を想像されるでしょうか。外来種とは、「本来の生息地から、人の手によって移動してきた生き物」を意味します。

外来種は国内の生態系に強い影響を与えるとされていますが、その理由として、大きく以下 の3点が考えられています。

①外来種は、生息地と異なる環境にも適応できる生存・繁殖能力が高い種である

②外来種は生息地にいる天敵や病原菌の影響を受けないため、個体数が減りにくい

③国内の在来種は、生息地内の限られた種の中での競争関係しか経験していないため、 外来種による影響や被害を受けやすい

私たちは、現在も新型コロナウイルスとの戦いの最中にありますが、新型コロナウイルスは人間がこれまで出会ったことのない未知のウイルスである為、対策に時間がかかっていると言えます。自然界でも同じように、外来種が突然その環境に入ると、在来種は外来種に適応するための進化を経ていない為、すぐに対策が取れず、壊滅的な影響を受けてしまうのです。

#### 身近に生息する<u>外来種</u>

私たちの身の回りには、海外から日本に入ってきた約2,200種の外来種が生息していると考えられています。外来種と聞くと、生態系に悪い影響を与える種という印象が強いですが、私たち人間にとっては有益な生き物が数多く含まれています。

例えば、オカダンゴムシ (通称: ダンゴムシ)は、元々地中海沿岸に生息する種が、明治時代 に日本に持ち込まれ、日本全国に広がった外来種と考えられています。ダンゴムシは、枯れ葉 を分解し、土壌に返す分解者として様々な土壌の生育に役立っています。また、クローバーとし てよく知られているシロツメクサも、もとは牧草用にオランダから持ち込まれた外来種です。ク ローバーは身近な様々な場所に生育しているので、外来種と感じている人は少ないのではない でしょうか。

- 1 -







シロツメクサ

<sup>\*2</sup> Japan https://mzaidan.mazda.co.jp/ (Japanese only)

United States https://www.mazdafoundation.org/

| Improving Employee Job Satisfaction

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**CHAPTER** 



## PEOPLE

While ensuring every individual working together fully demonstrates his/her individuality, Mazda enriches the lives of customers by offering new forms of car ownership and automobile culture through its unique human-centered approach.











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# CONTRIBUTION TO PEOPLE'S MENTAL WELLNESS

#### **Recognizing Social Issues**

The preamble to the Constitution of the World Health Organization (WHO) defines that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Here, health is expressed with the word "well-being."

Gallup, Inc. of the United States has conducted an emotional health survey in more than 140 countries and areas. In this survey, Respondents' emotional experiences serve as one of its key measurement indicators.

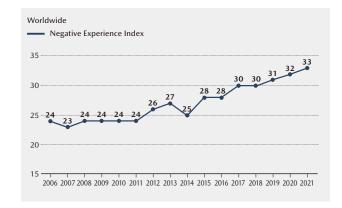
The survey results revealed that during the period between 2006 and 2021, Positive Experience Index scores (feeling well-rested, feeling treated with respect, laughing and smiling, enjoyment, and learning or doing something interesting) stayed about the same, whereas Negative Experience Index scores (physical pain, worry, sadness, stress, and anger) showed a deteriorating trend since 2015. Presumably, increasing the opportunities for positive experiences will lead to improvement in people's emotional health in the future.

Meanwhile, the industrial world — the information technology industry in particular — has begun to see some companies incorporating the perspective of well-being, which encompasses not only physical health but also mental and social health, into the process of product and technology development.

#### Positive Experience Index, 2006-2021



#### Negative Experience Index, 2006-2021



The above graphs were created by Mazda with permission from Gallup, Inc., based on the graphs in the Gallup Global Emotions 2022 report.

Gallup Global Emotions 2022 Report by Gallup, Inc.

#### Mazda's Approach to Resolving Issues

#### **Reasons for Addressing Social Issues**

Around 2030, Mazda predicts that while people will benefit from the economic affluence achieved by mechanization and automation, they will be less associated with society due to weakening real-world human connections, with reduced opportunities to live spiritually rich lives, realize a society where all people harmoniously coexist, and feel the pleasure of ownership. Furthermore, people may be subject to high stress caused by the vulnerability of the social systems, which will have been optimized to seek higher efficiency.

Given these circumstances, the value of vehicles is expected to become more diversified, so people will select vehicles according to their purpose, e.g., for driving supported by vehicle-infrastructure cooperative systems, for enjoying driving, and for feeling the joy of ownership.

Mazda aims to enhance customers' mental well-being with the satisfaction that comes from protecting the planet and contributing to society with a car that offers true driving pleasure.

#### **Approach to Resolving Social Issues**

Mazda hopes to enrich the lives of customers by offering new forms of car ownership and automobile culture through its unique human-centered approach.

- Further maturing Mazda's Kodo design language, which is grounded in a philosophy of bringing cars to life and raises car design to the level of art to enrich people's emotional lives
- · Further pursuing a *Jinba-ittai* or sense of oneness between driver and vehicle driving feel, which unlocks people's potential and revitalizes them mentally and physically
- Enhancing events and experiences for customers to build special bonds with Mazda by providing a comfortable space and through other means

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PEOPLE

## IMPROVING EMPLOYEE JOB SATISFACTION

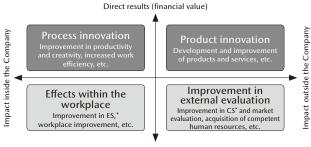
#### **Recognizing Social Issues**

Securing a labor force is one of the challenges confronting developed countries, where the percentage of working-age population has been on the decline. On top of this, changing market circumstances as exemplified by globalization in recent years have caused numerous new uncertainties for companies and brought changes in their competitive environments. Companies are therefore required to accurately identify diversifying customer needs and innovate to seize new revenue-generating opportunities, while also needing flexibly respond to risks and making them into business opportunities.

In these circumstances, in order for companies to sustain growth, it is essential to secure a diverse range of human resources in accomplishing their management strategies. To this end, companies should pursue diversity management. Cultivating both a work climate and work-style frameworks that can motivate a diverse pool of employees, enables companies to assign the right person to the right position, and thus provide opportunities to individual employees to exercise their potential to the fullest. By doing so, diversity management aims to allow companies to achieve positive management results, including product innovation, process innovation, improvement in external evaluation and effects within the workplace.

Furthermore, companies must step up their efforts to continue to create corporate value over the medium and long term by leveraging the differences between diverse attributes to improve the company's risk management capabilities and the supervisory function of the Board of Directors.

#### **Results of Diversity Management**



Indirect results (non-financial value)

\*CS: Customer Satisfaction/ES: Employee Satisfaction

The above figure was created by Mazda, based on "FY March 2017 New Diversity Management Selection 100 — Collection of Best Practices" published by the Ministry of Economy. Trade and Industry (Japanese only)

#### Mazda's Approach to Resolving Issues

#### **Reasons for Addressing Social Issues**

Mazda recognizes that people are its most important resource and aims to be a company staffed by people who enjoy their work. In accordance with Mazda's value of "our unique co-creation with others," Mazda respects the diversity of its employees from various backgrounds, including race, nationality, faith, gender, social status, family origin, age, mental or physical disability, sexual orientation, and gender identity. The Company also strives to promote flexible and diverse work styles and improve working conditions and environments, thereby enhancing employees' motivation and increasing work efficiency from the viewpoint of total optimization.

#### **Approach to Resolving Social Issues**

The Company aims to foster a corporate climate in which every employee can express his/her individuality while working alongside others to contribute to the Company and society. Mazda promotes human resources training based on the Mazda Way principles that are shared throughout the entire Mazda Group worldwide. Also, the Company has established Group-wide human resources policies and measures along with promotion of various initiatives.

- · New flexible work styles (remote work, satellite office)
- Reform company-wide operation system to support new work style
- · Promote diversity and inclusion, etc.

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## CONTRIBUTION TO PEOPLE'S MENTAL WELLNESS

Mazda hopes to enrich the lives of customers by offering new forms of car ownership and automobile culture through its human-centered approach.

With a view to building special bonds with customers in more than 130 countries and regions where Mazda vehicles are sold, Mazda pushes forward with various initiatives in cooperation with local distributors/dealerships to provide customers with a Mazda brand experience in all stages of their car ownership.

#### Three Approaches to Establish an Emotional Connection with Customers

To establish an emotional connection with customers, Mazda considers it necessary to take into account all touch points, i.e., not only the period during which customers are in possession of a Mazda vehicle, but also the periods before they purchase the vehicle and after they let go of it. Under this belief, the Company has determined three approaches that sales, marketing, customer services, and other relevant divisions should jointly pursue, based on which the Group companies of each country/ region implement specific measures appropriate for their local cultures and environment.

#### Three approaches

**Every touch point** 

- View customers from a lifelong perspective. In childhood, people ride in their family vehicle, and after growing up, they enjoy owning their own vehicle. Then at an advanced age, they return to riding in someone else's vehicle. It is important to have customers continue to feel close to Mazda and Mazda vehicles over all these years.
- Continuously maintain the relationship. Always provide

search for

information

Test-drive.

Considering

Contact

itomotiv lifestyle

customers with excitement and stimulation so that customers can feel a stronger connection to Mazda as time proceeds.

■ Place particular emphasis on Mazda's uniqueness (e.g., strong attachment to Hiroshima, where Mazda Head Office is located, enthusiasm for offering driving pleasure).

#### **Approach to Developing Products**

In 2017, in light of the rapid changes taking place in the global automotive industry, Mazda announced "Sustainable Zoom-Zoom 2030." This new vision for technology development takes a longer-term perspective and sets out how Mazda will use driving pleasure, the fundamental appeal of the automobile, to help solve issues facing people, the earth and society. Mazda aims to offer new forms of car ownership and automobile culture through its unique human-centered approach. To achieve this, Mazda is engaged in various research and development projects.

- Further maturing Mazda's Kodo design language, which is grounded in the philosophy of bringing cars to life and enriching people's lives.
- Further pursuing a *linba-ittai*—or a sense of oneness between driver and vehicle-driving feel, which unlocks people's potential and provides a mentally and physically revitalizing experience.

Kodo-Soul of Motion Design Philosophy: A Step Further Since 2010, Mazda has striven to create cars that embody the dynamic beauty of life through application of its Kodo-Soul of Motion design philosophy. Going deeper, the matured Kodo design pursues the expression of a "new elegance" based on Japanese aesthetic sensibilities. This further evolved Kodo design focuses on a "less is more" aesthetic that cherishes space and eliminates non-essential elements to create simplicity of form. The challenge then is to bring the car to life via carefully honed reflections on the body surface.

The CX-60, launched in 2022, was designed to further mature the Kodo-Soul of Motion design philosophy. The model encapsulates the Japanese sensibility to harmonize with nature, embodying the toughness and meticulousness through its form.

CX-60



#### MAZDA SUSTAINABILITY REPORT 2022

#### Skyactiv-Vehicle Dynamics Improves Handling, Comfort, and Stability

Mazda has been pushing ahead with the development of Skyactiv-Vehicle Dynamics, a series of vehicle dynamics control technologies. These technologies provide integrated control of the engine, transmission, chassis, and body to enhance the car's Jinba-ittai driving feel-a sense of connectedness between the car and the driver. In July 2016, the Company released the first technology in the Skyactiv-Vehicle Dynamics series, G-Vectoring Control (GVC),\*1 followed by the second technology, G-Vectoring Control Plus (GVC Plus), introduced in October 2018. GVC Plus uses the brakes to add direct yaw moment control. As the driver steers out of a corner by returning the steering wheel to the center position, GVC Plus applies a light braking force to the outer wheels, providing a stabilizing moment that helps restore the vehicle to straight-line running. The system realizes consistently smooth transitions between yaw, roll, and pitch, even under high cornering forces, improving the vehicle's ability to accurately track sudden steering inputs and crisply exit corners. In addition to improving handling in emergency collision avoidance maneuvers, GVC Plus offers a reassuring feeling of control when changing lanes on the highway and when driving on snow or other slippery road surfaces. In FY March 2021, the Company also introduced electric G-Vectoring Control Plus (e-GVC Plus), designed to enhance the consistency of vehicle response to control inputs in all directions and realize seamless transitions between G forces, taking advantage of its electrification technologies.

#### **Skyactiv-Vehicle Architecture Vehicle Structural Technologies**

Skyactiv-Vehicle Architecture was developed and enhanced focus on the human-centered design philosophy to leverage the human body's inherent ability to balance itself. Mazda reviewed every component and function -- seats, body, chassis, NVH performance, etc.-- approaching development and commercial implementation from the viewpoint of total vehicle optimization. This technology improves the body's balance in driving operations and allows the driver to control the car more easily, enhancing the ultimate Jinba-ittai driving feel.

\*1 The world's first control system to vary engine torque in response to steering inputs in order to provide integrated control of lateral and longitudinal acceleration forces and optimize the vertical load on each wheel for smooth and efficient vehicle motion. (As of June 2016 for mass production vehicles, according to in-house investigation)

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## New Technologies and Values Incorporated in the Skyactiv-Vehicle Architecture

Skyactiv-Vehicle Architecture used in the Large Products portfolio, starting with CX-60, has elevated Mazda's pursuit of humancentered design to the next level. The longitudinal engine layout was adopted to harness the higher output of the newly developed powertrain, enabling the ideal front-real weight distribution that maximizes the four wheels' performance. Combined with the RWD-based AWD, which offers both good handling and high stability, the Architecture has significantly enhanced the car's dynamic performance potential.

Mazda also focused on people's "ability to extend bodily boundaries"\*1 and aimed to allow the ability to manifest itself through driving. The design team took an integrated approach in crafting the car's sounds and handling system so the driver can feel the car's behaviors and experience a sensation as if their brain is directly connected to the vehicle.

The advancement in platform technology introduced in CX-60 to unleash the "ability to extend bodily boundaries" allows the driver to enjoy driving with more confidence by having a continuous sense of connectedness to the car. Passengers also benefit from the improved designs: with the suspension that smoothly controls car body motions, the seating that allows occupants to demonstrate their bodies' balancing capability, and the car body that offers a quiet, high-quality ride, CX-60 provides a comfortable and pleasant travel environment to all passengers, where they would not easily get tired even during long drives.

#### Longitudinal engine layout × RWD-based AWD



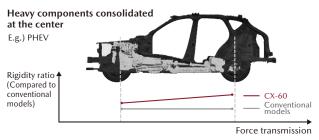
## The ability to extend bodily boundaries

The sensation that simulates a direct connection between the brain and the car



## 1. The force transmission design that provides a sensation of constant synchronization between the vehicle and the driver:

Leveraging the longitudinal engine layout, the powertrain and other heavy components were consolidated at the center, enabling the smooth conversion of wheels' force to cornering motion without delay. Furthermore, the rigidity distribution of the vehicle was comprehensively revised to increase the rigidity toward the downstream as the force is transmitted from the steering wheel to the front tires and to the rear tires. The new design enhances smooth force transmission, enabling the driver to experience an increased sense of connectedness (synchronization) to the vehicle.



Rigidity increased toward the downstream of force transmission
Front tire force
Rear tire force

#### 2. Postural design that maintains the sense of synchronization:

To maintain the sense of connectedness (synchronization) between the driver and the vehicle, Mazda introduced a double wishbone suspension system for the front and a full multi-link suspension system for the rear to stabilize the car body's postural changes against external disturbances, including changes in road surfaces.

Aligning the front and rear operating axes of the suspensions allows smooth operation from the very first stroke, with springs following the vehicle's cornering force in a simple motion. The suspension systems also convert pitching\*2 to vertical bouncing to consistently maintain the driver's sense of connectedness to the car, even against external disturbances. The vertical bouncing, combined with the driver's and passengers' seating designed to keep the pelvis upright, enables all car occupants to demonstrate their body balancing capability throughout the travel, mitigating motion sickness and fatigue in longer drives.

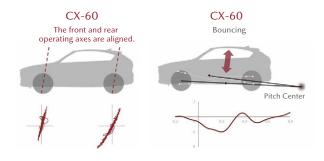
The design also maximizes the effects of Kinematic Posture Control (KPC),\*3 a vehicle dynamics control technology that provides a better sense of connectedness and keeps the car in a more stable posture even during high-speed cornering maneuvers.



Front: Double wishbone suspension



Rear: Full multi-link suspension





- \*1 Example: The ability to use a tool or a device as an integral part of the human body, such as when using chopsticks.
- \*2 Seesaw-like behavior
- \*3 The rear suspension is built in such a way that it generates an anti-lift force when the brakes are applied by lightly braking the inside back wheel while cornering at higher G-forces, thereby reducing roll and pulling the body down into a more stable position.

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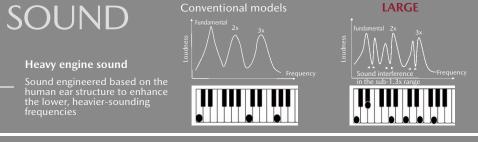
#### 3. Feedback design that stimulates all five senses to convey the sense of synchronization:

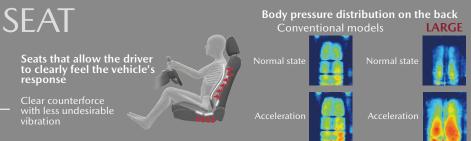
A feedback design that engages all five senses is critical in providing a sense of connectedness (synchronization) to the car. This time, we focused on the abundance of stimulation via the typical interface between the vehicle and its occupants, such as the seating and the engine sound. The seat pushing the driver from behind as they press down on the gas pedal, the heavy engine sound, and the views outside rapidly changing as the car travels ahead--such stimulations combine to provide excitement and the sense of connectedness to the vehicle.

#### 4. Body design that offers a quiet, high-quality ride:

The straight, uninterrupted skeleton of the longitudinal platform has been fully leveraged in the design to control the three major energies: collision, tire input, and sound vibration. Specifically, the design utilizes the linear front structure to efficiently convert and absorb the collision energy at the front of the damper tops. Furthermore, rigidity is increased behind the damper tops to raise the resonance frequency of the skeleton, enabling efficient transmission of necessary energies and reducing the transmission of vibrations caused by unpleasant frequencies. The dumper tops are constructed of cast aluminum to effectively reflect the sound vibration energy off the vehicle body to reduce vibration, simultaneously improving quietness.



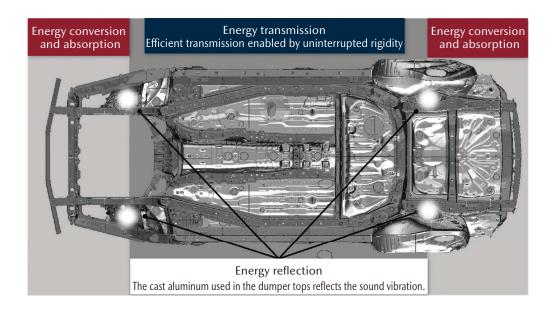




Collision energy

Tire input energy

Sound vibration energy



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#### Responding to the Diverse Customer Needs

Mazda has been establishing a system to deliver products and services to customers in the most appropriate way taking into consideration the cultures and trends of each country and region. At its R&D centers in Japan, North America, Europe and China, Mazda gathers information about markets and customers around the globe. Through local testing, Mazda develops products and provides services to suit its customers' wide-ranging needs.

To effectively enhance its brand awareness, Mazda focuses on promoting an understanding of the Mazda brand's common visions and the Company's spirit of product development and manufacturing, rather than on awareness of individual models.

#### **Examples to Meet Specific Customer Needs**

#### <Research and Product Planning Conducted by Female Members>

To respond to the increasingly diverse needs of female drivers, a team composed of female members from various departments conducts planning and research on the vehicles which are convenient for them to use.

#### <Customizing Business (in Japan)>

Believing that the development of vehicles serving people with specific needs is essential to a more open and accessible automotive society, Mazda produces a wide range of vehicle types, as described below (as of October 2021).

Specially outfitted passenger vehicles	Vehicles for the transportation of COVID-19 patients with mild symptoms	Mazda has developed specially designed vehicles for the transportation of COVID-19 patients with mild symptoms to be used by local governments, companies, etc. Mounted with various accessories to reduce the risk of infection, the specially designed vehicle provides safety and peace of mind to both transport staff and patients.
utfitted passe	Instructional vehicles	Mazda offers its instructional vehicles equipped with various unique features. As the first car that trainees drive in their life, it can help them to feel driving pleasure and to acquire correct driving techniques.
Vehicles for people with special needs		In 1995, Mazda became the first Japanese automaker to launch a vehicle for people with special needs. It was developed with top priority placed on "ease of use and comfort for both care givers and receivers." The Company has expanded the lineup to three types.
Commercial and specially equipped vehicles		Mazda offers a wide commercial vehicle lineup to respond to various business needs. To satisfy highly specialized needs, the Company has developed the TESMA line of specially equipped vehicles, adapting the Bongo Van and Titan Truck for use as refrigerator trucks, freezer trucks, lift gate trucks, etc.

#### Mazda instructional vehicle

Mazda instructional vehicles (released in May 2019) pursue the ideal features for instructional vehicles, i.e. being easy to operate for both trainees and trainers, and able to help trainees acquire correct driving techniques and drive more safely and with peace of mind.



#### Lineup for vehicles for people with special needs (as of June 30, 2021)



- Vehicles with a swivel passenger seat:
- Vehicle with a powered passenger seat that rotates (Mazda2)
- Vehicles with a lift-up passenger seat:
- Vehicles with a powered lift-up passenger seat that elevates and rotates (CX-5)
- Wheelchair-ramp-equipped vehicle:
- Vehicle with a ramp that enables people in a wheelchair to get in and out while remaining in a wheelchair (Flair Wagon)
- Vehicle with hand-operated controls:

A welfare model that allows the driver to enjoy driving pleasure by only using both hands (Roadster [MX-5 overseas])

#### **Self-empowerment Driving Vehicle**

Self-empowerment Driving Vehicles were developed to empower people to travel and act independently, helping them enjoy richer, more fulfilling lives.

In developing the vehicle, Mazda interviewed a large group of individuals with lower-limb disabilities about their difficulties. The insight propelled the development forward with the focus on driving, entering the vehicle, and wheelchair loading to solve the common challenges and deliver the "driving pleasure" Mazda has to offer to everyone.

MX-30 Self-empowerment Driving Vehicle, which became available for pre-orders in December 2021, is a vehicle with hand controls that we offer as an option to help empower customers' mobility and autonomy. One example of equipment is the driving system with hand controls. This system allows easy switching between hand-operated and pedal-operated driving, providing an opportunity for people with disabilities to operate the vehicle themselves or take turns with their friends or family members. A Transfer Board that helps a wheelchair user transfer between their wheelchair and the driver's seat is also available. We offer online consultations with our specialists via our official website, who will listen to customers' individual requirements and propose a configuration specifically tailored to the customers' needs.

Mazda will continue its development efforts to brighten people's lives through car ownership.

#### MX-30 Self-empowerment Driving Vehicle



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## Co-Creation of Product Training by Mazda Motor Corporation and Distributor / Dealership Staff

Mazda offers training for sales staff to enable them to provide customers with correct and detailed information on the attractive features of Mazda vehicles. As part of the initiatives to enhance brand value, the training is aimed at globally communicating the ideas and efforts employed in development and manufacturing, as well as stories behind the technology, in addition to basic information on functions and equipment.

#### Seminar targeted at training staff of distributor / dealership



#### Product Information, Display, and Advertising

For product information and display, Mazda not only complies strictly with each law and regulation of each country and region, but also places strong emphasis on safety, human rights, environmental issues, and ethical standards, giving careful attention to information display and expression appropriate for a company that manufactures and sells automobiles. Moreover, Mazda conducts studies on advertising on a periodic basis to check whether information provided to customers is correct and understandable. Video and animated computer graphics are used to provide customers with easily understandable explanations of products' features and functions.

## Building Bonds with Customers Through Mazda Official Merchandise

The Mazda Collection, a series of Mazda official merchandise created to commemorate the Company's 100th anniversary, was planned and developed under the supervision of Mazda's Design Division with the aim of bringing the essence of Mazda's world into various aspects of everyday life.

The Mazda 787B 30th Collection, launched in June 2021, focused on how the legendary victory at the 24 Hours of Le Mans is still talked about among the generations even after 30 years. The product lineup includes matching T-shirts for parents and children who wish to reminisce and share the excitement beyond generations.

Mazda Journey is a collection that encapsulates the essence of Mazda CX-60, representing the time a Mazda can spend together with a customer as a "Journey." It features items that invite owners to go on a journey with their cars, including weekend bags and cushion blankets created in collaboration with a long-established Japanese brand.

Mazda will continue to expand the Mazda Collection to provide opportunities for the customers to feel closer to the Mazda brand and enjoy Mazda's world.



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## Communicating the Mazda Brand and Providing the Brand Experience

Mazda promotes initiatives to provide customers with opportunities to communicate with the Mazda brand and strengthen bonds with Mazda throughout their car ownership. To convey globally consistent visual impressions, the VI (Visual Identity) Guidelines have been established and shared within the entire Mazda Group.

#### New Concept in Sales Outlets "New-Generation Showrooms"

Starting in FY March 2015, Mazda has been developing a new concept in sales outlets both in Japan and overseas, which is called New-Generation Showrooms, to allow customers to experience the attractiveness of Mazda and its vehicles (218 sales outlets in Japan as of March 2022). Under the supervision of Mazda's Design Division, the showrooms are built in accordance with guidelines specifying three values to provide\*1 and four showroom design concepts.\*2 Interiors and exteriors are designed using colors of black, white and silver, with blackbased facility signs,\*3 and as accents, wood is used to form a comfortable space where dignity, high quality and warmness are well-balanced. In FY March 2016 in Japan, Mazda Brand Space Osaka, a showroom directly run by Mazda, was opened and has attracted many visitors. Mazda is also developing New-Generation Showrooms overseas in collaboration with local sales-related Group companies.

#### [Japan] New-Generation Showroom



[United States] New-Generation Showroom



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#### **Information Service for Customers through Websites**

Mazda makes efforts to enhance the usability of its website to enable the website visitors to easily obtain the information they need. The website is designed to communicate to many people, not only the facts, but also the underlying principles and philosophy. The website also provides easily understandable information useful for customers at all stages from considering a purchase to the ownership of their vehicles. Many opinions and messages of encouragement have been posted in response to the articles on the Company's social media pages. Mazda has also launched various new services that allow members to enjoy a variety of experiences unique to Mazda through the membership website (CLUB MAZDA).





Digital magazine "Mazda Stories"



Membership website "CLUB MAZDA"



- \*1 Shop designed with sense of exhilaration and Mazda uniqueness, new vehicle showroom that highlights the attractive features of Mazda vehicles, and shop layout that can help strengthen bonds with people
- \*2 Dignified presence, power to attract people, showing vehicle as attractive and beautiful, with comfortable furniture
- \*3 Mazda brand symbol and showroom name that are used at each showroom

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#### CLASSIC MAZDA

Thus far, the Classic Mazda website has provided information about restoration services and restoration parts for the first MX-5 (Roadster in Japan) and RX-7, based on the Company's aspiration to foster a society where not only new vehicles but also old vehicles can be valued and contribute to the automobile culture of the world.

We have so far worked on and completed the restoration of 11 vehicles. Although Mazda's services emphasize sharing thoughts and feelings with customers, we were compelled to replace the work tour with online sessions for the first time due to the COVID-19 pandemic. We were grateful for our customers' flexibility despite the circumstances. It also became a precious opportunity for us to reaffirm that Mazda's spirit is well understood and reciprocated.

In conjunction with the release of restoration parts for the RX-7, our website has started a series of articles on the production site of the rotary engine. These articles describe how technology, people, and ambition play central roles in ensuring the continuity of the parts required to maintain the vehicles even after mass production has ended.





CLASSIC MAZDA website (Japanese only)

## Promoting Activities to Enable Customers to Experience "Driving Pleasure"

Mazda promotes activities in which both beginners and advanced drivers can easily participate, to experience "driving pleasure" and learn about driving considering safety and the environment. Various events for multiple needs are offered. For example, at circuit events sponsored by Mazda, the Company holds lessons to learn advanced techniques useful in daily driving, and races in which everyone from beginners to advanced drivers can participate. These activities are designed to communicate the concept of Mazda's monotsukuri and its latest technologies to customers, and offering them opportunities to dialogue with employees. Through these various approaches, Mazda strives to establish special bonds with customers, while striking a balance between providing customers with driving pleasure and raising their safety and environmental awareness.

#### **Examples of Mazda-Sponsored Events:**

Mazda Fan Endurance (organizer: Circuit where the event is held, main administrator: B-Sports Corporation)

A circuit event held by Mazda vehicle users. Regular vehicles without any special modifications can participate in this race. To promote safety and environmental awareness, professional driving advisors are stationed at the circuit to give participants advice regarding safe driving, and refueling is prohibited during the race, as a way to encourage better fuel economy.

Mazda Driving Academy (organizers: B-Sports Corporation / Fuji International Speedway Co., Ltd.)

A driving lesson event to teach participants driving theory and skills so that they can enjoy driving safely and with peace of mind in everyday life and lead a fulfilling life. As lessons are conducted using a circuit, participants can experience driving, turning and stopping in a way that they cannot do on ordinary roads. With the guidance of Mazda instructors, participants learn the correct driving posture and how to drive the car smoothly at low speed.

#### **Examples of Mazda-sponsored events**

Mazda Fan Endurance (With a total of 691 participants [in six races] in FY March 2022)

50



#### Mazda Driving Academy



Contribution to People's Mental Wellness

Improving Employee Job

Respect for Human Rights

### Realizing Customer Services that Provide Close Support

Mazda's customer support aims to spur a positive change in customers' lives through our interactions, inspiring customers to discover small, unexpected happiness and surprise in their daily lives.

To achieve this, we are challenging ourselves to create such lifestyle-changing opportunities for customers on top of our ongoing efforts to provide a safer, more secure, and comfortable ownership experience.

Understanding customers' difficulties and expectations are crucial in successfully leading this initiative.

In addition to the fundamental efforts to develop and provide service/repair tools and service manuals and establish parts supply networks, Mazda is working with dealerships in Japan and overseas to reform operations and cultivate human resources capable of considering and acting toward customers' happiness.

#### **Providing Tools / Service Manuals**

Hoping that customers can use Mazda vehicles more safely and with peace of mind that they can make better use of increasingly multifunctional devices, Mazda distributes digital owner's manuals, which enable customers to easily search and obtain the information they need by using their PC or smart phones. Mazda also promotes the initiatives to ensure a constant high service quality at Mazda Group dealers in Japan and overseas.

- Establishing an internet-based support system, which enables quick and efficient access to the latest service manuals, as well as efficient search for and ordering of parts
- Deploying unique malfunction diagnostic devices that are compatible with the sophisticated electronic control systems adopted in a wide range of safety and environmental technologies
- Providing information on special tools dedicated to Mazda vehicles and their usage

#### Examples of tools in use

#### Digital owner's manual





Maintenance service information system (that provides information on various maintenance services for Mazda vehicles)



Mazda's unique malfunction diagnostic device

#### **Developing Service Trainers / Staff**

Mazda aims to enrich individual customers' car ownership through the realization of the highest level of services that cater to individual customer needs and wishes.

To this end, the Company strives to develop service professionals with excellent maintenance skills and customer service skills. Mazda operates dedicated training centers in major countries and regions, and stations instructors who are well-versed in the local culture. The Company supports service staff members in their growth and in developing their individual sense of fulfilment and pride by holding online training sessions in response to the recent environmental changes and hosting Service Skills Competitions as a venue where service staff can demonstrate the skills that they have acquired. Furthermore, by incorporating information on the ideas and efforts employed in development and manufacturing into training sessions on new mechanisms and new technologies, the Company strives to develop service staff members who can communicate stories behind the technology to customers around the world.

As service staff will be increasingly diverse in the future, Mazda will continuously develop and introduce programs suitable for the aptitude of individual trainees to further improve the level of service staff.



Online training



Training using video

Respect for Human Rights

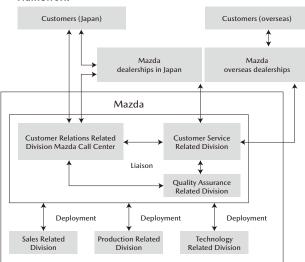
## Communication with Customers and Business Partners

#### **Responding to Expectations and Opinions of Customers**

At distributors/dealerships in each country and region, systems have been established to listen to the opinions and requests of customers, to respond to them honestly, accurately and quickly, and to reflect them in sales and services in cooperation with Mazda Head Office.\*1 The contacts of each market area and FAQ (frequently asked questions)\*2 are available on the Mazda website for the convenience of customers.

To strengthen bonds with customers, Mazda conducts global surveys focusing on "Mazda brand experience," "sales and after-sales services," "ownership cost," "product attractiveness," and other specific items. Through these surveys, the Company identifies problems in each market and addresses them in cooperation with local distributors/dealerships. With the indicators to measure customer satisfaction (P110) applied, the PDCA (plan-do-check-act) cycle process has been established.

#### Framework



## Sharing and Recognition of Best Practices at Distributors / Dealerships

To boost the sales and CS\*3 efforts throughout the distributors and dealerships, Mazda has a system of sharing and honoring best practices demonstrated by the staff members of the dealerships that contributed to increased CS through excellent teamwork and the sales and service staff members who achieved outstanding results.

#### **Examples of initiatives in Japan**

Measures	Frequency	Objective / Contents
Staff Awards/ Shop Awards	Once a Year	To encourage staff self-improvement, meetings are held on a periodic basis to award sales and service staff members according to their degrees of achievement of targets, improvement of technical skills, and contribution to improved vehicle quality. Awards are also given to dealerships that have achieved their targets as a result of all staff's customer-oriented activities, demonstrating excellent teamwork. In particular, best practices from the shops producing outstanding results are shared and commended at the presentation meetings hosted by the Mazda Dealership Association in each region across Japan.

#### **Communication with Dealerships**

Mazda works to provide its all dealerships in Japan and overseas with information on mid- and long-term strategies, products, and services in a timely manner, and also makes proactive efforts to collect information from them.

#### Communication Opportunities with Distributors / Dealerships in Japan

	Participants	Frequency	Objective / Contents	
Conferences for dealership representatives	Representatives of dealerships and Mazda directors	Once a year	To communicate Mazda policies	
Mazda Dealership Association in Japan Executive board of directors meeting	Executive board members and others from Mazda Dealership Association in Japan	Twice a year	Opinions are exchanged concerning sales strategies, product planning, used car	
Mazda Dealership Association in Japan Committees	Committee members from Mazda Dealership Association in Japan and Mazda representatives	As needed	policies, services, quality concerns, and other topics.	

#### Communication Opportunities with Overseas Group Companies and Distributors

	Participants	Frequency	Objective / Contents
Product Launch Events	Representatives from major overseas bases of operation, such as the United States, Europe, China, and Australia	Indetermined	To share information and exchange opinions globally upon the product launch. In FY March 2022, the event was held online in April and June, with a total of around 100 participants.
Global Brand Events	Representatives from major operation bases, such as the United States, Europe, China, Australia, and Japan	Twice a year	Representatives of major regions meet to build common understanding and consensus on brand strategies, and share initiatives. In FY March 2022, the event was held online, with around 50 participants.
4A*1 Distributor Events	Representatives from Southeast Asia, Central and South America, Middle East, and Africa regions	Once or twice a year	The event was held online due to the COVID-19 pandemic. A range of topics was covered, including business, product launches, and CS. In FY March 2022, the event was held on October 2021 and March 2022, with around 300 participants.

<sup>\*1</sup> Areas except North America, Europe, China, Taiwan and Japan

https://www.mazda.com/en/about/d-list/

\*2 Inquiries from Japan/FAQ (Japanese only) https://www.mazda.co.jp/inquiry/

<sup>\*1</sup> Distributor list in each country

<sup>\*3</sup> Customer Satisfaction

Improving Employee Job Satisfaction Respect for Human Rights

## IMPROVING EMPLOYEE JOB SATISFACTION

Mazda recognizes that people are its most important resource and aims to be a company staffed by people who enjoy their work. To this end, the Company promotes human resources training based on the Mazda Way principles that are shared throughout the entire Mazda Group worldwide. Also, the Company has established Group-wide human resources policies and measures along with promotion of various initiatives.

#### Mazda Way

In FY March 2009, Mazda summarized seven basic principles and values handed down within the Company over time and defined these as the Mazda Way.

Employees' attitude and behavior based on the Mazda Way are utilized as competency evaluation items to encourage their further growth. On the occasion of celebrating its 100th anniversary, Mazda provided all employees with an opportunity to look back on the Company's history, which constitutes the foundation of the Mazda Way. The Company continues to promote measures to ensure that the Mazda Way can easily be put into practice by employees.

#### Seven Principles of the Mazda Way

#### **■ INTEGRITY**

We keep acting with integrity toward our customers, society, and our own work.

#### ■ BASICS/FLAWLESS EXECUTION

We devote ourselves to the basics, and make steady efforts in a step by step fashion.

#### **■** CONTINUOUS KAIZEN

We continue to improve with wisdom and ingenuity.

#### **■ CHALLENGER SPIRIT**

We set a high goal, and keep challenging to achieve it.

#### ■ SELF INITIATIVE

We think and act with "self initiative."

#### **■**TOMOIKU

We learn and teach each other for our mutual growth and success.

#### ONE MAZDA

We think and act with the view of "Global" and "One Mazda."

#### **Group-wide Human Resources Policies**

With the aim of maximizing employee performance across the Mazda Group, Mazda works together with its Group companies worldwide while engaging in regular communication with them to create an organizational culture based on shared values and promote personnel exchanges within the Group. For overseas Group companies, the Company works to create a comfortable working environment tailored to the culture of each country and region by appointing locally hired personnel as managers and above, thereby establishing a system globally to conduct management strongly rooted in local communities.\*1 Mazda also implements Group-wide human resource development measures to enable a diverse range of employees to succeed on the global stage regardless of their country of origin or place of employment.

#### Global Leader Development Committee\*2

Mazda is aiming to provide medium and long term training for employees to become leaders in every field of global business and ensure their optimal positioning and performance. Top managements of Mazda Motor Corporation and its Group companies discuss and decide the development and exchange plan for individual personnel in these companies.

#### **Short-term Personnel Exchange Program**

This program is mainly designed for employees in mid-level positions, with the aim of developing human resources who can be immediately effective in global business settings. Suitable employees in the Head Office are exchanged with their counterparts in overseas regions to gain opportunities for overseas business experience for a short term (three to six months).

## Regular Meetings with Human Resources Managers of Group Companies

- Online information provision by Mazda
- Bimonthly regular meetings with overseas regions
- Annual global human resource meetings with the managements in charge of human resources of major overseas bases
- Half-yearly meetings with domestic Group companies located on the premises of the Head Office (Hiroshima)

#### **Maintaining Global Employment and Recruitment**

The Mazda Group conducts recruitment activities to employ the personnel suited to each country and region.

Particularly production sites strive for the maintenance and management of appropriate employment, with an understanding that such practices have great impact on the local economies. In Japan, the Company has maintained the production volumes and related employment at manufacturing sites in Hiroshima and Yamaguchi Prefectures. Overseas, initiatives are under way to improve the operation rate of plants in Mexico and Thailand. In addition, amid the commence of operations by Mazda Toyota Manufacturing (MTM) in the United States, each of the Group companies promotes employment maintenance and recruitment activities tailored to the labor practices of each country/region.

<sup>\*1</sup> Countries/regions where Mazda Group companies are located.

<sup>\*2</sup> The Personal Development Committee (PDC) comprises four committees: PDC1, which cover personnel in domestic and overseas global companies; PDC2, which covers the personnel in middle management of Mazda Motor Corporation; and PDC3, which covers employees of Mazda Motor Corporation excluding PDC1 and PDC2 level.

Improving Employee Job

Respect for Human Rights

#### Realization of Diversity

Mazda respects the diversity of its employees, and the Company aims to foster a corporate climate in which every employee can express his/her individuality while working alongside others to contribute to the Company and society. Mazda also works on a variety of programs to enable its employees — a diverse range of people with different values and lifestyles — to enjoy their work by finding a healthy balance between their work and personal

#### Increasing the Employment and Range of Opportunities for Female Employees\*1\*2

Through enhancement of measures promoting work-life balance and other initiatives, Mazda is striving to cultivate a workplace in which women can work comfortably. In 2021, based on the Act of Promotion of Women's Participation and Advancement in the Workplace, and the Act on Advancement of Measures to Support Raising Next-Generation Children, the Company set the goals of increasing the number of female mangers to 80 by the end of FY March 2026 (approximately four times the number in FY March 2015) and increasing the number of male employees taking child-rearing leave to 80 annually the end of FY March 2026 (approximately two times the number in FY March 2021), and it submitted business owner's action plans to the authority concerned. In FY March 2022, the number of female managers totaled 55 (approximately 2.3 times the number in FY March 2015) and the number of male employees taking child-rearing leave reached 69 (approximately 1.5 times as the number in FY March 2021), showing steady growth. In the future, Mazda will continue to draw up and implement individual development plans for female candidates for middle and above management positions and initiate company-wide activities to publicize, review and raise awareness of the child-rearing leave system among all staff, including male employees, thus pushing forward with efforts to further promote the opportunities for female employees.

#### Employment and Empowerment of Those with Special Needs\*1

Mazda steadily and continuously recruits employees with special needs. To ensure that each employee can demonstrate his/her best performance, the Company has established the Physical Challenge Support Desk, which offers consultations on various matters to employees with special needs, in support of a comfortable working environment for them. At the same time, Mazda has employed two certified sign-language interpreters to further ensure provision of information to people

with hearing impairments (as of April 2022). In FY March 2014, the Company was certified as an Ai Support Company/ Organization under the Ai Support campaign\*3, by Hiroshima Prefecture. Mazda participates in this campaign with the aim of helping realize a society where all people can live in harmony and in comfort, regardless of whether they are with or without special needs. Since FY March 2015, the Company has also registered itself with the "special support school employment support unit Hiroshima"\*4 to carry out the internship program for intellectually challenged students, as part of its collaboration with the local community to promote employment of people with special needs. As a result of these initiatives, Mazda has seen an increasing number of employees with special needs being recognized as Excellent Workers with Disabilities by the Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers.

Mazda has also worked to promote active inclusion of people with disabilities, and in January 2021, it joined The Valuable 500, an international initiative to promote disability inclusion. The Valuable 500, launched at the World Economic Forum's Annual General Meeting in January 2019, aims to inspire business leaders to make changes for disability inclusion that will enable people with disabilities to realize their potential value in the areas of business, society and economy. In support of this aim, the Company will promote and strengthen its efforts in line with the commitments it has established as to Mazda's Corporate Vision, employment and empowerment of people with disabilities, and products and services that consider the needs of people with disabilities.



#### Promoting Re-Employment of the Elderly, and Passing on Expertise, Skills, and Know-How\*1

Under the current re-employment system, about 90% of employees who have reached retirement age continue to work, although there is some variance depending on the fiscal year. Reemployed employees play active roles as specialists while passing on the expertise and skills that they have cultivated to younger generations.

#### Extending the retirement age\*1

Mazda has overhauled its retirement system and, beginning in April 2022, raised the retirement age in stages, eventually extending it to 65 in FY March 2031, and has implemented related measures\*5.

Through the implementation of these measures, the Company has established a system in which all employees of all generations, regardless of age, can make the most of their potential and continue to play active roles with a sense of motivation. With the aim of passing on the experience, expertise and skills cultivated by veteran employees to various generations, as well as expanding opportunities for them to play active roles and contribute to the local community and society, Mazda will also develop an environment that can support autonomous career development and choices for its employees.

#### Systems to Enable Limited-Term Employees in Manufacturing Operations to Become Fulltime Employees and Mazda Workers' Union Members\*1

Mazda is implementing ongoing measures toward the achievement of a workplace in which limited-term employees can feel fulfilled with their work. A system has been put in place for limited-term employees who have worked for one year or more at Mazda in becoming full-time employees. In addition, limited-term employees who have worked for six months or more and had their contracts renewed can become members of the Mazda Workers' Union. Through these and other initiatives, the Company is cultivating a sense of oneness among employees with different employment styles as it aims to cultivate a vibrant environment where employees can enjoy their work.

- \*1 Initiatives at Mazda Motor Corporation
- \*2 Data of Mazda shown in the Database on Promotion of Women's Participation and Advancement in the Workplace organized by Ministry of Health, Labour and Welfare
- https://positive-ryouritsu.mhlw.go.jp/positivedb/ detail?id=754 (Japanese only)
- \*3 "Ai" is Love in English. The Ai Support campaign is intended to certify companies and organizations that recommend their employees to read the textbook "Let's Learn about and Live with People with Special Needs," and to participate in Ai Supporter training programs.
- \*4 A program to promote the employment of special school students through collaboration between local companies and Hiroshima Prefecture.
- \*5 Review of the re-employment system for the employees reaching the retirement age, introduction of retirement age options, etc.

Improving Employee Job

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#### **Global Employee Survey**

Mazda has conducted employee surveys on a continual basis. These surveys are intended to identify employees' work motivation and the conditions in the environment supporting such motivation, and the results are used to make further improvements.

The survey results are reported to top managements of Mazda and its Group companies at home and abroad, and the major contents are disclosed to employees. The results for each division/company are fed back to its management-level members, who are thereby encouraged to develop improvement plans as part of the PDCA (plan-do-check-act) cycle.

To more accurately grasp the state of human resources and organizations that contribute to the realization of its corporate vision, Mazda revised the survey items in FY March 2018. The revised survey was commenced in May 2018. (FE P123)

#### **Examples of Improvement Measures at Workplaces Based on Survey Results**

Organizing divisional town hall meetings (for explanation of strategies/policies and holding discussions) and meetings with senior management

■ Promoting idea sharing and strengthening teamwork by activating small-group activities

#### Best Match of People, Work and Rewards

Mazda has put in place a system to ensure that each employee understands their work evaluation results and ability level assessments, and feels that their growth and performance are appropriately reflected in their compensation.

Specifically, since 2003, instead of using gender, age, nationality, or years of service as criteria, employees are graded according to their ability level (production and medical staff) and work level (administrative and engineering staff), so that individual employee's performances are directly reflected in their base salaries and bonuses.

In wage determination, Mazda is not only in compliance with local laws and regulations in each region both in Japan and overseas, but also taking industry standards into consideration.

#### Creating a Working Environment that Enables Each Employee's **Successful Performance**

Mazda strives to create a working environment where each employee can continue to proactively work and succeed.

Specifically, the Company promotes the introduction of a system that encourages flexible and diverse work styles, reduction of working (overtime) hours through the effective use of information technology, and development of career plans for employees' continued success.

#### **Choice and Self-Accomplishment**

Mazda provides various opportunities for employees to take the initiative in setting their own growth and performance goals and doing their best to achieve them, so that ultimately, such efforts will bring great results to the Company. Mazda offers a range of education and training programs to support employees develop their careers and improve their skills according to their job types and positions. These programs are for Mazda and its Group companies in Japan and overseas to manufacture and sell products of the same quality in all countries and regions, by sharing the same objectives.

Improving Employee Job Satisfaction Respect for Human Rights

## Human Resources System to Provide Appropriate Jobs and Environments\*1

Mazda uses the Tobiuo Human Resources System to provide the appropriate jobs and environments where each employee can demonstrate their best performance and to support their development and success.

Specifically, a wide variety of human resource measures are actively deployed based on the system's three pillars of "Choice and Self-Accomplishment," "Promote Balance between Work and Life," and "Best Match of People, Work and Rewards."

#### The Three Pillars of Tobiuo

Employee success development and performance of each employee Mazda success realization of the corporate vision

#### Choice and Self-Accomplishment

There is the opportunity to choose jobs or environments where I can fully display my abilities. People are able to show their initiative as they are matched with positions that suit their abilities, and thus produce results.

#### Promote Balance between Work and Life

I can have a very productive day every day, actively enjoying both work and play. The energetic spirit of employees is reflected in their work and products, allowing customers to truly feel the brand (power) of Mazda.

#### Best Match of People, Work and Rewards

My contribution is fairly and directly reflected when rewards are determined.

Active players can be rewarded according to the level of their contribution.

#### Career Meetings\*1

At Mazda, opportunities for formal communication are provided for all employees through one-on-one career meetings between supervisors and their staff, held four times a year. The things that employees should do, the specific targets and broad goals expected by supervisors are combined with the employees' personal goals as well as the things they hope to, and can achieve, enabling supervisors and their staff to understand each other and proceed to set common half-yearly targets. In light of these targets, they also reflect on their work accomplishments to clarify the issues to be addressed and set the next targets. Through these activities, employees' successful performance in the next half of the year and their further personal development are encouraged. Furthermore, the feedback on the competency evaluation results are utilized to help employees review their own work attitude and behavior, in order to facilitate their personal development.

#### Main Themes of Career Meetings

Discussions to encourage personal development:

Confirm vision of future upon accomplishment of goals, determine abilities to refine through work and activities to undertake, monitor rate of improvement

Discussions to encourage performance:

Determine work-related targets, confirm progress toward meeting targets, share present and future issues

Ratio of career meetings held FY March 2022: 92.6% of all applicable employees

#### Competency Evaluation System\*1

Once a year, Mazda carries out a competency evaluation, through which the work attitude and behavior of administrative and engineering staff are evaluated. Based on the seven principles of the Mazda Way, a subjective evaluation is carried out to assess the work attitude and behavior that individual employees are expected to improve (competency evaluation items), from the employees' own perspectives and from the perspectives of their supervisors, and for managers and above, also from the perspective of subordinates/colleagues/partner companies (multidimensional feedback).

Feedback on the evaluation results is given to employees by supervisors at the career meetings, at which they discuss future issues to be addressed.

The competency evaluation system is used as an effective tool for supporting employees' personal development and successful performance. The evaluation results are used as a reference for effective company-wide positioning of personnel.

<sup>\*1</sup> Initiatives at Mazda Motor Corporation

Improving Employee Job Satisfaction Respect for Human Rights

#### OJT Coach System\*1

Mazda has introduced the OJT (on-the-job-training) coach system for all new employees in administrative and engineering positions since FY March 2012. Typically a senior employee who shares a workplace with the new hire is assigned as an OJT coach providing the job related advices to each new hire. The purposes of this system are to train new employees, foster the coach's growth, and energize the workplace.

#### Career Challenge (In-House Recruitment/FA) System\*1

As part of the Career Challenge System (for employees' career development assistance), an in-house recruitment system has been implemented. Briefing sessions on in-house recruitment are held, with many employees considering applying for the system participating online. They actively exchange information with the personnel from various departments that called for applicants for specific assignments. Each time applications are invited, there are a large number of applicants. Mazda will continue to periodically implement this system to provide employees with an opportunity to think about their own career development.

#### In-house recruitment

A system where the Company releases details on occupational experience and skill requirements for the specific assignments so that the appropriate employees are able to apply for a particular job

#### Mazda Technical College (Two-Year Course)\*1

Mazda Technical College, approved by the Ministry of Health, Labour and Welfare, is an in-house education institution offering courses to high school graduates and selected employees in order to cultivate human resources that can play a central role in manufacturing at Mazda. Those who complete the two-year program are assigned to various divisions, from research and development to manufacturing, and thrive at various vehicle manufacturing sites.

- Number of present students: 100 (as of April 1, 2022)\*2
- Total number of graduates (among present employees): 1,572 (from April 1988 to March 2022)

#### Promotion of Work-Life Balance\*1

Mazda is working on a variety of programs to enable its employees — a diverse range of people with different values and lifestyles — to enjoy their work and find a healthy balance between their work and personal lives.

- Promotion of understanding of various measures to help employees achieve a better life-work balance ( P120): To promote understanding of various measures, the Company provides explanations in management skills training programs, and in the section "Compass for Work and Rewards of Employees" on the Intranet about support measures designed for each life event.
- Review of the contents of the working regulations: The contents are reviewed in accordance with changes in the social environment. Amid the novel coronavirus (COVID-19) pandemic, taking into account changes in infection status, the Company has taken various infection prevention measures, including easing conditions for working from home.
- Efforts to reduce excessive working hours: With the aim of making conscious efforts to reduce excessive working hours by streamlining operations, the Company has implemented various measures targeting divisions not directly connected with production, including the designation of no-overtime days and mandatory lights-out times since 2007.

<sup>\*1</sup> Initiatives at Mazda Motor Corporation

<sup>\*2</sup> Including 11 students from Group companies

People

Earth, People and Society

Contribution to People's Mental Wellness Improving Employee Job Satisfaction Respect for Human Rights

#### Mazda Mutual Aid Union\*1

The Mazda Mutual Aid Union has its foundations in the spirit of mutual assistance for all members\*2. Funded by mutual membership fees (from both members and the Company) as well as special contributions from the Company, this organization provides a range of assistance to its members and their families.

#### Marriage and Childbirth Support

■ Payments of gift money for marriage and childbirth 15,000 yen is paid upon marriage, and 5,000 yen per child is paid upon childbirth

#### **Long-Term Care Support**

■ Long-term care leave payments

30,000 yen/month will be paid to members who take leave under the long-term care leave system (If payment continues for more than three months, 100,000 yen/month will be paid for the months after first three months)

Family long-term care relief payments

50,000 yen/year will be paid to members whose dependent, or child who has not yet reached the first March 31 after his/her eighteenth birthday, is in a state requiring long-term care (as defined by the Ministry of Health, Labour and Welfare) for a continuous period of one year or more

#### **Education Support**

■ Payment of subsidies for raising disabled children 50,000 yen/year will be paid in support of child development to members whose child possess a grade 2 disability or higher

#### Support During Disasters, etc.

Payments of money as condolence following a disaster
Up to 160,000 yen will be paid in condolence if a member or his/her parents'
home is adversely affected by a disaster

#### Other Support

- Injury/sickness leave payments, long-term medical relief payments, and injury/ sickness leave special payments
- 5,000 yen will be paid each time a member takes leave of one month or more for injury or sickness
- 30,000 yen/month will be paid for a long-term (three months or more) period of leave (if long-term leave results in the member not receiving his/her bonus the member will receive a special payment of up to 100,000 yen)
- Financial aid for advanced medical treatment
- Monetary condolence gifts and farewell gifts, financial support for survivor's pensions funds and scholarship pension funds, etc.

#### **Industrial Relations**

Mazda has a standing labor agreement with the Mazda Workers' Union.\*3 The Company builds relationships in which everyone thinks and works together with the Union to build environment contributing to all stakeholders. The Company and the Union held discussion on such themes as personnel affairs, production and sales once or twice a month.

A discussion with the Mazda Workers' Union is also held regarding operation changes which may have a significant impact. The information about operation changes should be shared with employees with sufficient lead time. Moreover, various measures for discussion with labor are ready in entire Mazda Group to maintain and develop positive labor relations.

- Group companies in Japan Regularly exchanges information and engages in active discussions with the Federation of All Mazda Workers' Unions.
- Group companies oversea

  Measures for discussion with labor are ready based on the labor practices in each country and region.

  (There was no collective labor dispute in FY March 2022.)

<sup>\*1</sup> Initiatives at Mazda Motor Corporation

<sup>\*2</sup> Executives and regular employees, as well as those approved by the governing board

<sup>\*3</sup> Membership is around 90% of Mazda employees.

Improving Employee Job Satisfaction

Respect for Human Rights

#### Occupational Safety and Health

Under its Safety and Health Creed, Mazda is making group-wide efforts to develop people, workplaces, and mechanisms that ensure the safety and health of the employees. From FY March 2023, Mazda launched a new three-year plan and globally promoted all participating-type activities under the three pillars that support the realization of a proactive and enjoyable workplace. The Company believes that it will help invigorate employees and improve their work performance, also leading to the fulfillment of Mazda's Corporate Vision.

#### Safety and Health Creed / Three-Year Plan "One Mazda Movement for an Enjoyable Workplace"

Safety and Health Creed

For workers, safety and health are essential assets.

Our people are our most valuable resource, and we are committed to keeping them safe.

\* Proactive and enjoyable workplace: A workplace where intensive problem-solving activities are implemented, taking into account the division's characteristics, and where individual employees work as a team harmoniously led by their manager, so that individual employees and the organization are both invigorated.

One Mazda Movement for an Enjoyable Workplace The Three-Year Plan

Policy: Realize a proactive and enjoyable workplace\* by accomplishing safety and health activities initiated by individuals and divisions.

Slogan: Safety and health first in One Mazda, 24 hours a day

Three pillars of activities

- 1) Development of human resources with heightened sensitivity
- 2) Creating optimal systems (promoting standardization)
- 3) Development of a safe, secure and comfortable working environment

#### Safety and Health Management System

Mazda has established the General Safety and Health Committee, whose members include management (executive officer in charge of safety, general managers of each division and independent department) and labor representatives (Mazda Workers' Union\*1 leaders.) The committee members meet to discuss each year's action plan and priority measures concerning safety and health. Based on the decision made by the committee, division/independent department general managers take the lead in promoting occupational safety and health activities taking into account the work characteristics and risks of each workplace.

#### **Coordination with Group Companies**

Mazda offers proactive support to its Group companies in Japan and overseas by such means as sharing information on its activities, observing and giving guidance to each workplace, and providing education. Notably, the Company shares Mazda's safety and health management system, machinery, equipment and environmental standards, and improvement examples with overseas production sites while considering the laws and regulations as well as labor practices of the countries and regions. In so doing, Mazda implements safety and health management that is standardized across the Group. In connection with these activities, three overseas plants have obtained ISO 45001 certification, which is an international standard for occupational safety and health management systems, and other plants operate an occupational safety and health management system that is based on ISO 45001 or other standards.

#### Safety and Health Management System (SMS)

Mazda implements voluntary and continuous safety and hygiene management through its occupational safety and health management system with the aim of reducing the potential risks for work-related accidents, enhancing overall levels of safety and hygiene standards, and achieving the industry's lowest-level workplace accident occurrence in Japan. The lost-time injury frequency rate has remained at low levels over the past five years (F) P122). Since 2019, Mazda has established a system to carry out audits focusing on risks that may easily lead to a serious accident, thereby improving the performance of its occupational safety and health management system.

#### **Risk Assessments**

Mazda conducts risk assessments in all divisions, including manufacturing, product development, administration and office operations, to identify and evaluate the potential risks of disasters, diseases and fire and implement appropriate countermeasures. Through these efforts the Company reviews and identifies risks each year, improving the level of workplace safety. Moreover, Mazda has established a system under which, when chemical substances and/or machinery equipment are newly introduced, the division in charge of procurement identifies the possible risk source in advance and takes appropriate measures and then communicates the information to the division that uses these substances or equipment. Particularly regarding chemical substances, since FY March 2020, the Company has introduced a system to create a database of Safety Data Sheets (SDSs)\*2 for management of these substances so as to implement risk assessment and provide information in a reliable manner.

#### **Education and Training Concerning Occupational Safety and** Health

To develop human resources with heightened sensitivity toward occupational safety and health, which is one of the three pillars of its activities, Mazda strives to improve safety and health education and training. The Company places particular emphasis on training to enhance employees' risk sensitivity and organizes safety education seminars\*3, risk simulation training\*4 and KYT (risk prediction training) for all the divisions, including production, development, management and administration. Mazda also supports Group companies in Japan and overseas, suppliers (Toyukai Affiliated Corporation\*5), and collaborating companies within the Company premises in conducting education and training programs on safety and health in order to develop safety-conscious human resources across the Mazda Group.

<sup>\*1</sup> Membership is around 90% of Mazda employees.

<sup>\*2</sup> A Safety Data Sheet is a document used when chemical substances and chemical mixtures are transferred or offered to others to provide information on their physical properties, potential risks and harmfulness, as well as instructions for safe use of these chemical substances.

<sup>\*3</sup> The seminars feature panel exhibitions showing Mazda's safety chronology that summarizes past serious accident cases and safety activities that Mazda implemented so far to help employees reflect on the Company's safety activities and past accidents, raise their awareness and obtain new knowledge, which will be helpful to safety management in the future.

<sup>\*4</sup> The training is intended to improve employees' sensitivity toward risk, through simulations of various notential risks in their workplaces

<sup>\*5</sup> The Toyukai Affiliated Corporation consists of 62 vehicle parts and equipment companies that are direct or indirect trading partners with Mazda, and is a union organization that actively engages in initiatives with a constant awareness of the need to put "quality first." It was founded in 1952 by Mazda and 20 collaborating companies that have trading relationships with the Company, with the aim of promoting friendly relations among members and improving welfare, as well as developing a system for cooperating with Mazda. The Company offers advice and support to this group from a safety viewpoint by introducing safety information and inviting safety training provided by Mazda.

Improving Employee Job

Respect for Human Rights

#### Mental Health Measures\*1

In 2003, Mazda declared its commitment to active cooperation between labor and management to promote employees' mental health in the Warm Heart Declaration, and formulated the Mazda Warm Heart Plan. In 2007, labor and management, including managements, respective divisions, Company doctors and health advisors, and the Mazda Worker's Union, cooperated to establish the Mental Health Project and construct a Companywide support system.

#### **Consultation System**

Mazda has established a system to provide consultations by Company doctors and health advisors. Not only for employees at Mazda Head Office, but also for employees dispatched to other companies in Japan and overseas, the Company offers onsite healthcare consultations and consultations via telephone-, web- and video-conference systems to support their health maintenance.

#### **Education and Training**

Mazda holds "listening skills, coaching and assertion training" and "advanced training based on case studies" targeting newly appointed managers, and self-care training targeting third-year employees, on a regular basis. The Company also offers training by division on demand of the workplace. In addition, information is periodically provided to managers regarding the important points of mental health measures.

#### System for Supporting Employees Returning to Work

The Company is also making efforts to support employees who have taken time off from work not to be absence again by improving measures to support them in getting back to work. The measures are such as the reduce work hour system, a system of allowing them to return to workplaces on a trial basis, and follow-up consultations after their reinstatement. In addition, a contact point has been set up in order to help employees manage both their illness and work, and the information is broadly provided within the Company.

#### Vitality Checkups (Stress Check System)

Prior to the legislation requiring companies to implement the stress check system (that came into effect in December 2015), in 2008 Mazda introduced occupational stress diagnoses known as "vitality checkups" for employees to reveal individual and organization-level risks. Employees use the results of individual diagnoses to grasp and manage their own health conditions.

The result for organization-level is shared with the respective divisions. Based on the results of these diagnoses, each division promotes the complete checkups for workplaces\*2 which will facilitate workplace improvements to prevent mental health problems.

#### Measures to Prevent Lifestyle-Related Diseases\*3

To alleviate and prevent lifestyle-related diseases, including metabolic syndrome, Mazda carries out various activities, such as non-smoking measures, promotion of walking, and holding seminars on these themes.

#### **Promotion of Non-Smoking Measures**

Mazda has set a long-term target of reducing the percentage of smokers in the Company to 25%. To achieve this target, Mazda offers full individual support and promotes a nonsmoker-friendly environment. A Company-wide smoke-free day has been implemented once a month. In addition, the provision of outside smoking areas is promoted to prevent passive smoking.

#### Promotion of Walking

To help employees improve their health, Mazda promotes various measures to encourage walking. These include:

- Eco-Walk Commuting Program (with allowance payments)
- Mazda Active Walking, a walking activity using "PepUp," which is a personalized website jointly operated with the Mazda Health Insurance Society

#### **Health Promotion Events**

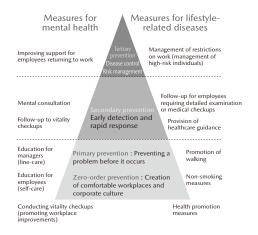
Mazda conducts activities to promote employees' health in collaboration with the Mazda Health Insurance Society\*4. These include the following:

- Weight Challenge Event: To promote weight management by employees
- Health Quiz Challenge: To deepen employees' understanding on health checkup items

#### Health Maintenance and Improvement

To maintain and improve the health of its employees, Mazda promotes measures to prevent and mitigate mental health problems and lifestyle-related diseases. Also, company-wide health improvement activities are under way emphasizing the reduction of health risks, by providing guidance and education based on the results of health checkups, taking aging countermeasures, supporting related activities at domestic Group companies, and offering health maintenance support for employees dispatched to other companies overseas.

#### Measures for Health Risk



<sup>\*1</sup> Initiatives at Mazda Motor Corporation

<sup>\*2</sup> Activities in which all members of a workplace participate to identify points needing improvements and make proposals for improvements, and assess their working environment from a broad perspective, thereby improving it by using clear and simple procedures. Implemented since FY March 2017.

<sup>\*3</sup> Initiatives at Mazda Motor Corporation

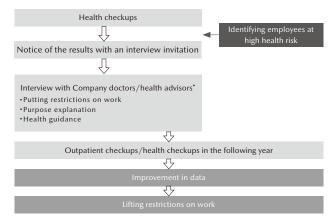
<sup>\*4</sup> Collaboration between the health insurance society and the company in promoting preventative health and health improvement for the insured in an efficient and effective manner based on the clear segregation of roles and in a good work environment.

Contribution to People's Mental Wellness Improving Employee Job Satisfaction Respect for Human Rights

#### Health Checkups\*1

In addition to legally prescribed health checkups\*2 for all employees, Mazda carries out comprehensive medical checkups\*3 covering a variety of areas for employees when they reach the ages of 25, 30, and 35, and when they pass the age of 40. Furthermore, the Company conducts complete physical checkups, including gastroscopy and abdominal ultrasonography, for employees when they reach the ages of 50, 54, and 58. Based on the results of these health checkups, Company doctors determine if employees can continue to work or not. Mazda also promotes employees' health by offering personal health guidance by Company doctors and health advisors.

#### **Healthcare Guidance Data**



<sup>\*</sup> After the interview results are confirmed by the employee, these results are also reported to the employee's manager.

#### Health Risk Measures\*1

The business climate has undergone various changes, including the globalization of workplaces and the extension of retirement age. Giving consideration to these changes, Mazda strives to establish a system to appropriately assess and deal with the health risk of employees from the perspectives of risk prevention and management.

#### **Infection Prevention Measures**

In view of various risks related to infectious diseases, Mazda takes appropriate measures in accordance with the relevant laws and regulations, including the Infectious Disease Control Law. To prevent infectious diseases, Mazda, at its expense, provides employees dispatched to other companies overseas and their accompanying spouses with necessary vaccinations, such as hepatitis A and tetanus, taking into account the risk status of each country or region. The Company also provides pre-overseas assignment education which incorporates information on how to prevent infectious diseases, such as malaria and tuberculosis.

Regarding influenza, in FY March 2020, the Company launched a system to cover part of the expenses paid by employees for flu vaccinations to prevent mass flu infection at workplaces.

#### [Specific Examples]

Actions against the Spread of the Novel Coronavirus (COVID-19)

Mazda opened a portal for infection response and prevention on its Intranet in order to communicate correct information to all the employees. To eliminate their anxieties, the Company has prepared and distributed a response flowchart to clearly indicate how employees should respond when they feel that they are in poor physical condition. The flowchart is updated as needed. The Company also provides education to help employees gain a correct understanding of COVID-19 and thoroughly implement basic preventative measures. If an employee is confirmed to be infected, the Company responds to him/her individually and quickly to prevent the spread of infection and clusters. Workplace vaccination drives have been also held for employees of Mazda and its Group companies and their families upon request. Mazda will continue to take preventative measures and actions against the spread of COVID-19 while responding to the requests from the government.

#### Measures for Employees at High Health Risk

Mazda has established a system to take appropriate measures for employees at high health risk for heart diseases and cerebrovascular diseases. The Company also promotes activities to clarify the assessment indexes, such as the process of determining high-risk individuals by multiple Company doctors based on relevant data, and to establish a follow-up system to care for high-risk individuals after their health checkups, through collaboration among the person in question, the Company doctor and other members of the workplace.

<sup>\*1</sup> Initiatives at Mazda Motor Corporation

<sup>\*2</sup> Checkup items: Height, chest circumference, chest X-ray, blood test, urinalysis, electrocardiogram, etc.

<sup>\*3</sup> For employees who reach the age of 30, 35, and 40-and above, breast cancer and uterine cancer examinations are available with comprehensive medical checkups upon request.

Checkups of the brain, the lungs, etc. are offered as paid options.

Improving Employee Job Satisfaction Respect for Human Rights

## RESPECT FOR HUMAN RIGHTS

#### **Basic Approach**

Mazda respects for human rights as fundamental to its corporate activities. Mazda never tolerates human rights violations of any kind in all business activities inside and outside the Company, including discrimination or bullying on the basis of race, nationality, faith, gender, social status, family origin, age, mental or physical disability, sexual orientation, or gender identity.

Mazda recognizes that, from the perspective of human rights due diligence\*1, a system and mechanism to grasp the activity status and to identify, report, correct and follow-up actual and potential negative impacts are required. The scope of human rights activities has been expanded to include domestic and overseas Group companies as well as suppliers, with the following efforts being conducted.

#### **Basic Principles**

Mazda's respect for human rights is fundamental to its corporate activities, and it never tolerates human rights violations of any kind in all business activities inside and outside the Company.

The Company will continue human rights protection activities with the ultimate goal of zero problems.

#### **Human Rights Declaration (November 2000)**

Mazda will strive to become the leading company in Japan for respecting human rights and for the ethical treatment of its employees.

#### Rules / Guidelines

One of the five principles of behavior stipulated in the Mazda Corporate Ethics Code of Conduct is "to comply with laws and regulations, company rules, common sense and sound practice in international society." Mazda has striven to increase employee awareness of its fundamental approach to respect for human rights, by further clarifying Company policies and standards of behavior among employees, in the light of the basic principles of the United Nations Universal Declaration of Human Rights, the United Nations Guiding Principles on Business and Human Rights, and the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work.

Specifically, Mazda established the Guidelines on Eliminating Sexual Harassment (name later changed to Guidelines to Eliminate Human Rights Violations) in 1999 and the Rules to Eliminate Human Rights Violations, which prohibit any activity that may infringe on an employee's human rights in business activities inside and outside the Company, in 2000. These rules and guidelines are revised as needed according to law amendment and circumstances inside and outside the Company. The most recent revisions are as follows:

- June 2020: Mazda working regulations were revised so that employees are treated fairly in terms of holidays, allowances, and other conditions regardless of legal marriage or marriage without registration (marriage between people of opposite genders or the same gender).
- August 2020: The Guidelines to Eliminate Human Rights Violations were revised according to revisions in harassment-related laws (effective from June 2020).
- March 2021: The Rules to Eliminate Human Rights Violations were revised according to revisions in harassment-related laws so that the definition of power harassment conform to the definition in the relevant laws.

The Guidelines to Eliminate Human Rights Violations and the Rules to Eliminate Human Rights Violations are posted on the Company's Intranet and are made known to employees through educational and training programs.

#### **Systems for Promoting Human Rights**

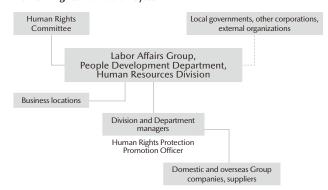
The Human Rights Committee, comprising executive officers and division general managers, deliberates on human rights activities, and based on their decisions the Human Resources Division promotes human rights protection activities and resolves issues throughout the Group. Each division manager leads the division's activities as the human rights promotion officer at Mazda Motor Corporation, while the person in charge of human rights leads activities at each Mazda business location as well as at Group companies in Japan and overseas.

At Group companies in Japan, a network has been established to exchange opinions on a regular basis. Serious human rights violations identified through the network are reported to executive officers and other management-level members of Mazda Motor Corporation, providing a framework that enables the implementation of Group-wide solutions.

Moreover, once a year, the Global Employee survey is conducted to check the progress in human rights protection activities in each region around the world and confirm whether there is any problem to be addressed or not. The results of the survey are fed back to each management and improvement measures are taken as needed.

As for suppliers, Mazda seeks to establish a supply chain in which suppliers are also required to fulfill their social responsibilities in the area of respect for human rights, based on the Mazda Supplier CSR Guidelines (E) P107)

#### **Human Rights Promotion System**



<sup>\*1</sup> Due diligence is the comprehensive, proactive process to identify the actual and potential negative social, environmental and economic impacts of an organization's decisions and activities over the entire life cycle of a project or organizational activity, with the aim of avoiding or mitigating negative impacts (cited from ISO 26000)

Improving Employee Job Satisfaction Respect for Human Rights

#### **Activities at Group Companies in Japan and Overseas**

In line with its "ONE MAZDA" concept, Mazda is committed to promoting human rights activities in its Group companies.

Based on the basic principles stated in the Mazda Human Rights Declaration and with reference to the Rules to Eliminate Human Rights Violations, the Guidelines to Eliminate Human Rights Violations, Mazda Group companies are maintaining a set of rules and guidelines that take into account the conditions in each country where they are applied. Through these efforts, the Company strives to protect human rights at all companies throughout the Group. There is also regular information exchange between human rights officers at Mazda Motor Corporation and each Group company. Depending on the circumstances of the particular company, Mazda Motor Corporation may also take steps such as providing training/education tools or dispatching instructors.

Since FY March 2017, Mazda supports Group companies in establishing a system for human rights training, and providing materials of Mazda's Human Rights Meetings to Group companies.

Mazda also responds to human rights consultations from employees of Group companies via the Human Rights Counseling Desk, the Female Employee Counseling Desk, the Mazda Global Hotline, etc. ( 17 P105)

#### **Human Rights Counseling by Dedicated Counselors**

Mazda has established a Human Rights Counseling Desk and a Female Employee Counseling Desk to appropriately respond human rights consultations from employees, through providing advices and supporting early relief from human rights violations.

Mazda has set out regulations mandating strict confidentiality, guaranteeing immunity from reprisals, and ensuring that no disadvantage will accrue to employees who request consultations. Counseling is offered in various forms, such as face-to-face, by telephone, or by e-mail. Mazda promptly responds to consultations, with the goal of rapidly improving the work environment for the affected employee, while taking necessary measures against the relevant violator based on factual inquiry. The Company also offers the necessary support to ensure respect for human rights throughout the entire workplace, through the abovementioned counseling desks. For example, these desks offer advice on workplace culture improvement to the employee's supervisor, and provide counseling and advice for the employees and other persons concerned.

#### **Initiatives to Prevent Human Rights Violations**

Mazda carries out various initiatives to eliminate human rights violations. In case a problem involving human rights violations occurs, the Company discloses the case on the intranet as an example of disciplinary action, and conducts educational and awareness raising activities in order to prevent a recurrence. Mazda records the results of handling these cases and manages in accordance with the stipulated procedure, and reports to the Human Rights Committee. These records are used to formulate more effective Companywide policies and to prevent the recurrence of similar problems.

#### **Training and Educational Activities**

Mazda proactively and regularly provides awareness-raising activities and education on human rights, targeting all executive officers and employees. In March 2008, recognized for these initiatives and other human rights protection activities, Mazda became the first corporation in Japan to be awarded the Human Rights Merit Award by Japan's Ministry of Justice and the National Federation of Consultative Assemblies of Civil Liberties Commissioners.

Human Rights Training\*1

■ Collective training

Mazda holds obligatory human rights training programs for employees when they newly join the Company and they are promoted in rank or position. The Company also holds event-based training such as human rights lectures for executive officers and senior managers. Moreover, the Company also holds training programs by department that are customized to each department in response to its specific needs.

In FY March 2017, Mazda started to organize training programs and lectures to promote understanding of sexual minority (LGBT) issues.

■ Human rights mini-lectures and other information offered via the in-house intranet

Mazda conducts activities to raise human rights awareness by human rights minilectures through intranet, and e-learning programs and to ensure that all employees can share recognition regarding power harassment and sexual harassment.

Senior Management's Message During Human Rights Week\*1
The Company senior management delivers to all employees a message on the importance of respect for human rights every year during Human Rights Week, in connection with Human Rights Day on December 10.

#### Human Rights Meetings\*1

Mazda holds regular meetings (four times a year for plant workers, twice a year for office workers) at each workplace themed on familiar topics, allowing employees to develop awareness for human rights on a daily basis.

Other Human Rights Education Activities\*1

Mazda has held Human Rights Slogan Competitions and established a special website on its human rights protection activities.

#### Themes of Human Rights Mini-Lectures (Examples)

- Materials on communication
- Critical thinking
- Assertion
- ·Metacognition and mindfulness
- ·Emotion, etc.
- Human rights education materials
- \*Discriminated communities issues (Dowa issues)
- ·Gender diversity, etc.
- e-learning materials
- Gender diversity (LGBT)
- Power harassment
- Sexual harassment
- · Harassment regarding child-rearing, nursing care leave, etc.
- •Various issues and challenges (regarding women, people with special needs, nationality/race, the elderly, HIV-infected persons, etc.)

## Collaborating with External Organizations and Contributing to Local Communities

Mazda actively collaborates with local governments, companies and other external organizations to implement human rights protection activities for local communities.

Other efforts towards promoting respect for human rights include social contributions on a global basis, such as participating in human rights events in regional communities, exchanging opinions with human rights organizations, adopting measures against poverty, and supporting a HIV/AIDS care facility.\*2

https://www.mazda.com/en/sustainability/social/

<sup>\*1</sup> Initiatives at Mazda Motor Corporation

<sup>\*2</sup> Social contribution initiatives

Realizing a Motorized Society Free from Traffic Accident

Creating a System that Enriches People's Lives

**CHAPTER** 



## SOCIETY

Mazda is making an active commitment to solving social issues of primary importance to automobile manufacturers, including traffic safety. We also promote activities to help enrich people's lives by capitalizing on Mazda's technologies and resources.







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Society

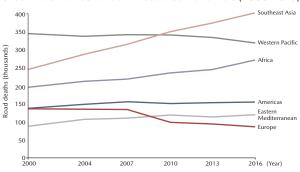
# REALIZING A MOTORIZED SOCIETY FREE FROM TRAFFIC ACCIDENTS

#### **Recognizing Social Issues**

The number of traffic fatalities has been leveling off or decreasing in developed countries. In emerging countries, however, the number has been on the rise along with the progress of motorization (widespread use of private passenger cars). As of 2016, the annual number of people killed in traffic accidents reached approximately 1.35 million worldwide.

The automotive industry working to promote vehicle safety measures with a view to reducing the number of fatal road traffic accidents to zero by securing the safety of pedestrians and vehicle occupants, preventing serious accidents, and encouraging the effective and proper use of autonomous driving-related technologies.

#### Trends in the number of traffic fatalities worldwide (2000-2016)



In accordance with the guidelines of the World Health Organization (WHO), the above graph was created by Mazda based on the graph in the

Death on the roads based on WHO Global Status Report on Road Safety 2018

#### Mazda's Approach to Resolving Issues

#### **Reasons for Addressing Social Issues**

Around 2030, Mazda expects that advanced safety technology will have further evolved and become widespread, which will lead to a declining number of traffic accidents and help realize a society where people can move safely with peace of mind on a global basis.

With the goal of realizing a motorized society without traffic accidents, Mazda aims to create a system that enriches people's lives by offering unrestricted mobility to people everywhere.

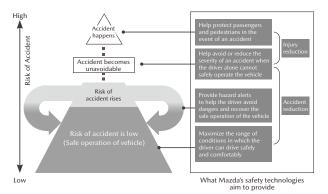
#### **Approach to Resolving Social Issues**

Mazda Proactive Safety ( P67) is the Company's safety philosophy based on understanding, respecting and trusting the driver. Mazda places this philosophy at the heart of its research on and development of safety technologies.

To drive safely it is essential to recognize potential hazards, exercise good judgment and operate the vehicle in an appropriate fashion. Mazda aims to support these essential functions so that drivers can drive safely and with peace of mind, despite changing driving conditions.

Since drivers are human beings, and human beings are fallible, Mazda offers a range of technologies which help to prevent or reduce the damage resulting from an accident.

#### Mazda Proactive Safety: Mazda's Safety Philosophy



Realizing a Motorized Society Free from Traffic Accident

Creating a System that Enriches People's Lives

Society

### CREATING A SYSTEM THAT **ENRICHES PEOPLE'S LIVES**

#### **Recognizing Social Issues**

According to the 2020 White Paper on Information and Communications in Japan (published by the Ministry of Internal Affairs and Communications), Japan has been called as a country with advanced challenges. The country began to experience a declining population and aging society prompted by a falling birthrate sooner than other countries, while also facing the increasing concentration of its population in urban centers. In recent years, various issues have become apparent.

In urban areas, daily traffic jams and congestion have caused extended traveling and commuting times and other problems that lead to social losses. Meanwhile, areas in rural Japan where no public transportation is available have expanded, due to reduced and discontinued public transportation services such as trains and buses. As a result, freedom of mobility in everyday life is limited for people who have difficulty using private vehicles as their main means of transport.

As measures to effectively fulfill these mobility needs of local communities with different characteristics and issues, expectations are running high for Mobility as a Service (MaaS\*.) Amid ongoing discussions nationwide about MaaS in Japan, the automotive industry is striving to develop related technologies and create mobility service systems.

\* Mobility as a Service (MaaS): An integrated transport service of search, reservation, payment, etc. that optimally combines multiple public transportation and other travel services in response to the travel needs of each local resident or traveler on a trip-by-trip basis

#### Mazda's Approach to Resolving Issues

Society

#### Reasons for Addressing Social Issues

Mazda predicts that around 2030, against the backdrop of global digitalization and widespread use of work efficiency improvement tools, the automotive industry will seek to increase convenience by linking cars and communications systems, offering various services one after another. Making the selection of which convenience-oriented services to provide a decision of significant value. Metropolitan areas with advanced infrastructure built to accommodate a greater concentration of people should be able to resolve any concerns or inconveniences regarding mobility with little difficulty, thanks to the development of shared services as well as expanded vehicle use and services, which will become comparable to those of public transportation systems.

On the other hand, depopulated areas in hilly and mountainous regions of Japan will continue to suer a lack of transportation means due to the disappearance of public transportation services, making it harder for local residents-particularly the elderly and people with special needs-to get around. This issue will also involve regional revitalization, which cannot be resolved by merely providing relevant services alone.

Mazda will leverage available car and connectivity technologies to help create a community where local residents help one another and facilitate human interaction, assisted by drivers from both within and outside the community.

#### **Approach to Resolving Social Issues**

Mazda aims to evolve connectivity technologies to further cultivate connections among people and between people and society, thereby building a social contribution model that will enrich lives in the region by off-ering safe, secure, and unrestricted mobility to people everywhere. At the same time, the Company will move forward with initiatives to enhance brand value through active social contributions capitalizing on the strength of a vehicle manufacturer.

#### Five Types of Regions Identified to Promote Japanese-style MaaS

(1) Metropolitan area (2) Metropolitan suburban (3) Local urban (4) Suburb/Depopulated area (5) Tourist destination Population size: LargePopulation density: High • Population size: Medium • Population size: — • Population size: Large • Population size: Small Population density: High • Population density: Medium • Population density: Low Population density: – • Transport system: Primarily trains • Transport system: Trains/cars • Transport system: Primarily cars • Transport system: Primarily cars • Transport system: · Lack of secondary transportation and • Reliance on private cars • Reliance on private cars provision of tourism transportation in • Decline in local transportation • Lack of first-/last-mile transportation • Response to diversifying mobility needs • Decrease in convenience and rural areas • Expansion of areas where no public Lack of information about potential services and connectivity profitability of public transportation • Need to facilitate smooth movement transportation is available · Local congestion due to events, demand Insufficient transportation for non-car of foreign visitors to Japan, whose • Increasingly insufficient transportation Daily traffic jams and congestion weather, etc. owners and elderly people who have numbers are rapidly increasing for non-car owners and elderly people returned their driver's license Finely tuned response to diversifying who have returned their driver's license tourism needs

The above table was created by Mazda based on the "Outline of the Interim Report from the Roundtable on New Mobility Services for Cities and Rural Areas of the Ministry of Land, Infrastructure, Transport and Tourism."

Realizing a Motorized Society Free | Creating a System that Enriches from Traffic Accident

People's Lives

## REALIZING A MOTORIZED SOCIETY FREE FROM TRAFFIC ACCIDENTS

Aiming to achieve a safer and accident-free automotive society, Mazda promotes safety initiatives from the three viewpoints of vehicles, people, and roads and infrastructure.

#### Three Viewpoints of Safety Initiatives



#### **Initiatives in Vehicles**

Mazda aim to realize a safer and accident-free automotive society by creating system where all people, wherever they live, can enjoy unrestricted mobility.

While continuing to further enhance its safety technologies, Mazda works on technology development with the belief that technologies will demonstrate their true value only when their use becomes widespread.

#### Mazda Proactive Safety: Mazda's Safety Philosophy

By providing a good driving environment and excellent handling stability to support the drivers' safer driving, Mazda aims to maximize the range of ordinary driving conditions in which the driver can concentrate on driving without anxiety or stress.

If the risk of an accident increases, the sensing functions on the vehicle provide hazard alerts to help the driver avoid danger, thereby supporting safer driving. Moreover, understanding that human nature means that mistakes cannot be totally eliminated, Mazda offers safety functions on its vehicles that help prevent such human errors as much as possible, and if an error occurs, help prevent an accident or reduce the resulting damage.

Mazda places the highest focus on improving ordinary driving conditions to remove possible causes of an accident rather than on a "what if"-based approach (preparing for possible results). Through providing these safety technologies based on a respect and understanding of human nature, Mazda supports driver's safer and more secure driving.

Realizing a Motorized Society Free from Traffic Accident

Creating a System that Enriches People's Lives

#### Continuously Evolving Basic Safety Technologies as Standard for All Vehicles

Aiming to realize an automotive society that offers safety and peace of mind, Mazda promotes continuous evolution of basic safety technologies, such as the ideal driving position and pedal layout, excellent visibility, and human machine interface, and will install these in all vehicles as standard.

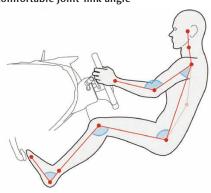
#### **Ideal Driving Position**

The major driving operation devices, including the pedals and the steering wheel, which are interface between man and vehicle, are located in an ideal position for a driver to operate them with ease and without fatigue.

#### Pursuing the Ideal Joint Angle for Comfortable Driving

The driving position is designed based on the theory of the "comfortable joint-link angle," the joint angle at which the driver of any physical type can exert strength quickly and properly. For Mazda3, which was introduced in 2019, the adjustable range of the telescoping mechanism\*1 has been extended and the driving position adjustment accuracy has been improved to provide the driver with a more comfortable driving position. The above design modification has reduced the tightness a small driver feels when he/she moves the seat forward. The front console layout has also been renewed. In particular, the cup holder position has been moved to the front of the shift lever.

#### Image of comfortable joint-link angle



#### **Helping Drivers Assume the Ideal Driving Position**

Mazda believes that the ideal driving position not only allows drivers to properly control a vehicle, but also can improve their handling in emergency collision avoidance and reduce injury to occupants even if a collision occurs. Therefore, the Company has offered driving position lectures by experts at the Mazda Driving Academy ( P76) and other events.

The CX-60 has incorporated an automatic driving position guide so that many more people can drive the car in the driving position that Mazda considers ideal.\*2 As one of the driver personalization systems, this feature perceives the driver's physical build by detecting the positions of his/her eyes with a camera, as well as based on the body data that he/she has inputted in advance. Then this feature automatically adjusts the positions and angles of the driver's seat, the steering wheel, the Active Driving Display, and the outer mirrors. The driver can also make fine adjustments on his/her own.







Receiving the 15th Kids Design Award\*1 (in the TOPICS division of Designs Contributing to the Safety and Security of Children)

The MX-30 has a system for helping children get in and out of the car safely and securely. In August 2021, this system earned Mazda the Kids Design Association Chairperson Award (an encouragement award), being one of the 234 award-winning works in the 15th Kids Design Award. The jury presented the award in full recognition of the value of the Freestyle Doors, which the MX-30 uses as part of the abovementioned system. Since the rear door is hinged at the rear, you can open and close both front and rear doors from the same position outside the car. In addition, since both front and rear doors can open at an angle of up to nearly 90 degrees, with the opening between the doors thoroughly designed based on human engineering, you can smoothly make a series of body movements when you open or close the doors, get in or out of the car, load or unload baggage, transfer your child from the baby carriage to a child safety seat, etc. Moreover, the front seats, which are movable to make it easier for passengers to reach the rear seats, feature a safety system that prevents children from moving the front seats by mistake and consequently falling out of the car. The MX-30 thus supports a high level of child safety and security.



#### MX-30



- Winning the Kids Design Association Chairperson Award, an encouragement award in the 15th Kids Design Award
- \*1 This award is granted to supreme works that address social issues related to children and child-raising among products, services, spaces, activities and research that fulfill the following objectives: children's safe and secure lives; the cultivation of children's sensitivity and creativity; and the creation of a society that supports having and raising children, (sponsored by the Kids Design Association, a Japanese nonprofit organization)
- \*1 A mechanism to move the steering wheel back and forth.
- \*2 Some grade only

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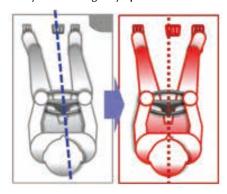
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#### **Ideal Pedal Layout**

The front tires and tire houses have been repositioned farther forward to realize an offset-free, ideal pedal layout where the driver can stretch his/her foot forward and naturally rest it on the accelerator pedal when he/she sits in the seat. The distance between the accelerator pedal and the brake pedal has also been reviewed and optimized. As a result, the driver can enjoy driving more comfortably for many hours in a relaxed posture while operating the pedals more smoothly.

These design improvements reduce both driving fatigue and the possibility of the driver stepping on the wrong pedal when braking in an emergency.

#### Comfortable layout enabling easy operation

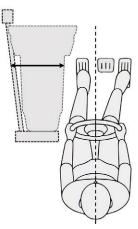


#### Ideal Pedal Layout in Both Front-Engine,

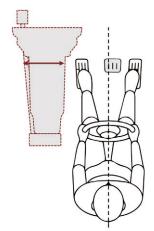
Rear-Wheel-Drive (RWD) Cars and All-Wheel-Drive (AWD) Cars The CX-60, the first among the new SUV models, uses a longitudinal-engine power unit. Although its transmission layout posed challenges to be solved to realize the ideal pedal layout, those challenges have been overcome by downsizing the transmission. In addition, Mazda developed a lightweight, compact AWD system with a well-designed layout of the frontwheel-drive shaft, thereby realizing the ideal pedal layout even in AWD cars. Creative development ideas were put into practice to make a sufficient space available for the pedals and realize a pedal layout that allows the driver to press a pedal in a natural position whether in an RWD car or in an AWD car, resulting in the ideal driving position that provides a jinba-ittai (sense of oneness between driver and vehicle).

#### In the case of an AWD car





Twisted position



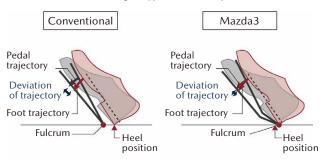
Comfortable. natural position

CX-60 AWD

#### **Organ-Type Accelerator Pedal**

With an organ-type accelerator pedal, the driver's heel is placed on the floor, and the driver's foot and the pedal follows the same trajectory. This makes accelerator pedal control easier because the heel position is stabilized. For the 2019 Mazda3, Mazda has developed a new organ-type accelerator pedal structure in which the pedal fulcrum is positioned more closely to the driver's heel when compared with conventional accelerator pedals of this type. The new accelerator pedal minimizes the deviation of its trajectory when depressed, enabling the driver to use his/her calf muscles more efficiently.

#### New and conventional organ-type accelerator pedal



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#### **Excellent Visibility**

Mazda considers it important to secure good visibility to help the driver prevent accidents by supporting his/her ability to predict and react to his/her surroundings, such as road environment, other vehicles, obstacles, and pedestrians including children. To expand the vision through the door mirror so as to improve the visibility of pedestrians and obstacles, door mirrors of all Mazda passenger vehicles currently available on the market are installed on the outer door board in a lower position. For the 2019 Mazda3 and subsequent models, the visibility has been further enhanced by a combination of the inherent slenderness and the well-devised shape of the A-pillar. Visibility for children is especially cared.

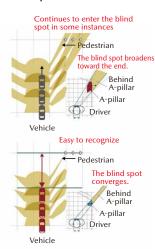
#### Opening angle enlarged by improved A-pillar

In the case of an A-pillar where the blind spot broadens toward the end

A pedestrian is often continuously hidden behind the A-pillar, preventing the driver from recognizing him/her.

In the case of Mazda3's A-pillar where the blind spot converges

Sufficient visibility is provided by a combination of the slenderness of the A-pillar itself and its well-devised shape, making the blind spot smaller than in the case of a conventional pillar.



Introducing the See-Through View Technology, which Helps the Driver Check the Surroundings

The See-Through View technology has been introduced in the CX-60 to allow the driver to check the surroundings with a stronger feeling of security.\* This technology uses a camera system that has the three functions of detection, identification and collision prediction. With this camera system, the technology complements the driver's vision by displaying an image of the surroundings as if they are seen from inside the car in order to enable the driver to not only find an object or pedestrian as early as possible but also park or start the car without concern.

- Detection: Broadening the field of vision by integrating a frontview (or rear-view) image with part of a side-view image
- ■Identification: Making the integrated image show an object in a larger size and three-dimensionally so that it seems like a diagonal view (from the driver's seat)
- Collision prediction: Displaying the outermost side of the car and its predicted line of course

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#### "HMI Concepts" to Minimize Causes of Careless Driving

Mazda has been committed to developing Human Machine Interface (HMI), which denotes equipment and mechanisms that facilitate communication of information about various things occurring during the drive between the driver and the vehicle, based on the concept "Heads-up Cockpit." Equipped with thoroughly human-centered HMI, the cockpit is designed to minimize three risk factors for careless driving\*1 (cognitive distraction, visual distraction, and manual distraction) to enable the driver to concentrate on driving.

The information necessary for driving is presented in order of priority, so that the driver can concentrate his/her attention on driving and thus reduce cognitive distraction. Indications in front of the driver's seat have been simplified to make the display easier to see and thus reduce visual distraction. Indicators and other intuitively operable devices are installed to reduce manual distraction.

## Designing a cockpit that enables the driver to concentrate his / her attention on driving

The area that becomes visible when moving the eyes ①Active driving display Vehicle speed •Sign Navigation information and others The area that becomes The area that becomes visible when lowering visible when rotating the the head head from side to side 2Meter 3 Center display Status information Information for comfort Tachometer ·Fuel gauge, water Media information temperature gauge Map information Travel distance and others ·Warning information and others

- Vehicle speed and other "active information that should be checked at every moment" are shown in the active driving display.
- The amount of fuel and other "status information necessary for checking the status of the vehicle" are shown by meters.
- 3. Media information and other "information for comfort and convenience" are shown in the center display.

More Advanced HMI Based on an Enhanced Human-Centered Design Philosophy

The CX-60 is the first model to be equipped with HMI that features an advanced indicator system based on an enhanced human-centered design philosophy.\*2 The most prominent advancement lies in the increased area of the Active Driving Display (ADD), which is three times larger than ADDs in preceding models, including the Mazda3. In response to the enlarged ADD, the indicator layout has also been reconstructed to make displayed information more recognizable and more quickly readable. More specifically, the indicators are laid out optimally, grouped more appropriately, and enlarged.

#### ■Optimal indicator layout

When Mazda Radar Cruise Control (MRCC) or other driving support systems start working, the indicator layout will change from the usual one. Now that necessary information is displayed in the optimal layout according to the situation, the driver can read the indicators in a minimum time in each setting and recognize the state of the vehicle intuitively.

[Usually] Speed indicator displayed in the center



[When a driving support system is working] Information about the surroundings detected by the sensor displayed in the center



#### ■ More appropriate indicator grouping

The ADD is divided into zones each of which shows indicators for similar kinds of information in a group, thereby making the indicators more recognizable and reducing the time required to look for necessary information.



#### ■Enlarged indicators

In order to provide a safer and enjoyable driving experience for drivers of various age groups, the size of letters and graphics has been increased to improve visibility.

Changes in information that should be recognized can be easily noticed without having to pay close attention to the ADD by devising color and shape changes.

- Cognitive distraction: The driver is distracted by something other than vehicle control, such as checking the position of a switch and its operation method.
- Visual distraction: The driver takes his/her eyes off the road to check the information or for other purposes.
- Manual distraction: The driver strongly moves his/her body and adopts an awkward posture to operate a device.

<sup>\*1</sup> The following are three factors that cause careless driving.

<sup>\*2</sup> Some grade only

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#### i-ACTIVSENSE Advanced Safety Technologies\*1

Mazda is committed to continuous evolution of i-Activsense advanced safety technologies, to deliver safer, more reliable cars to a greater number of customers, from beginners to elderly drivers. Mazda's i-Activsense is an umbrella term covering a series of advanced safety technologies, developed in line with Mazda Proactive Safety. They include active safety technologies that support safer driving by helping the driver to recognize potential hazards, and pre-crash safety technologies which help to avert collisions or reduce their severity in situations where they cannot be avoided.

As a result of ongoing steady technological evolution, in 2020, two new safety features were added to the i-Activsense umbrella: a Smart Brake Support <Turn-Across Traffic> (SBS), and an Emergency Lane Keeping <Blind Spot Assist> <Road Keep Assist> (ELK). These new technologies have been adopted for the MX-30.

The Company has completed application of six technologies, including the collision damage reduction brake (Advanced Smart City Brake Support or Smart Brake Support) and an acceleration suppression device that functions when the driver depresses the wrong pedal (AT Acceleration Control), for all 12 major models\*2 sold in Japan, as standard equipment. Under the new vehicle safety concept "Safety Support Car S (Suppocar S\*3)" recommended by the Ministry of Economy, Trade and Industry and the Ministry of Land, Infrastructure, Transport and Tourism, these models qualify for the "Wide" Suppocar S category (as of November 2022).

### TOPICS

#### Driving Support Plus\*1, a System That Supports Safe Driving with an Electronic Key

Drivers in all age groups can cause an accident by stepping on the wrong pedal. To allow all drivers to enjoy driving with a feeling of security, Mazda has introduced Driving Support Plus, starting with the CX-60. If this new system detects the driver suddenly stepping on the accelerator pedal and judges this to be a pedal misapplication, the system will prevent the vehicle from suddenly accelerating and will reduce damage by suppressing the acceleration even if there is no obstacle in front of the vehicle, as well as informing the driver of the pedal misapplication with the warning buzzer and the indicator. Driving Support Plus is automatically started by unlocking the doors with the optional dedicated keyless entry system and starting the engine. In addition to AT Acceleration Control, this system helps prevent accidents caused by pedal misapplication and reduces damage from such errors.

#### «Conditions for system functioning»

- When the select lever is at any position other than "P" or "N" When the vehicle is moving forward at a speed of about 30
- when the venicle is moving forward at a speed of about 30 km/h or lower or reversing at a speed of 15 km/h or lower
- \*1 Warning concerning Driving Support Plus
- Since Driving Support Plus is a driving support system, its functions have limitations. For your safe driving, please do not rely solely on this system. Excessive reliance on this system may expose you to danger of an unexpected accident. Be sure to confirm that the situation surrounding your vehicle is safe while you are driving.
- · Please note that Driving Support Plus may not function in some situations.
- Driving Support Plus is not a collision prevention system. In addition, since it has no function of automatically stopping the vehicle, the vehicle will move by inertia even after the system functions. Be sure to check the surrounding traffic situation and apply the brakes on your own.
- Please do not test the acceleration control function of the system by trying suddenly stepping on the accelerator pedal on your own. The system may not properly function in some situations, exposing you to danger of an unexpected accident.

## Human-centered Advanced Driving Support Technology Mazda Co-Pilot Concept

The Mazda Co-Pilot Concept is Mazda's unique concept for human-centered advanced driving support technology. Based on this concept, people enjoy driving and are revitalized mentally and physically through the process. Meanwhile, the car knows all the movements of the driver and the car is driving "virtually" in the background at all times. If the unexpected occurs, such as the driver suddenly losing consciousness, the car takes control to help prevent an accident and reduce potential injuries. It also automatically contacts emergency services and drives to a safer location.

The Company aims to develop technologies of the Mazda Co-Pilot Concept, which uses autonomous driving technologies to allow drivers to enjoy any drive with peace of mind, and make these technologies standard.

<sup>\*1</sup> i-Activsense technologies are designed to help reduce damage and/or injuries resulting from accidents. However, each system has its limitations, and no safety system or combination of such systems can prevent all accidents. These systems are not a replacement for safe and attentive driving. Please drive carefully at all times and do not rely on technology to prevent an accident.

<sup>\*2</sup> Applied models: Mazda2, Mazda3, Mazda6, CX-3, CX-30, CX-5, CX-8, Roadster/MX-5, and Roadster RF/MX-5 RF

<sup>\*3</sup> A popular name for a safe-driving support car designed to prevent traffic accidents, which have been a societal problem in Japan. It is particularly recommended for use by aged drivers.

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# Driver Monitoring (DM)

For Driver Monitoring (DM), which was introduced in the Mazda3 in 2019 for the first time, two new functions have been added: step-by-step warnings issued when the driver's drowsiness is detected, and an earlier frontal collision warning issued when careless driving is detected. More advanced technologies are applied to the CX-60, detecting drowsy driving with the driver's eyes closed and noticing a sudden change in the driver's condition based on changes in his/her posture or the position of his/her head, in addition to issuing a warning against careless driving. The accuracy of DM's detection of both drowsiness and changes in the driver's condition has been increased through comprehensive judgment based on various factors, including the state of driving.

# **Driver Monitoring**



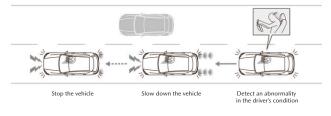
#### Detecting the driver's condition by Driver Monitoring

				•	o .
MAZDA 3 (from 2019		ection of ess driving		Directions of the eyes and face	Detecting careless driving from the directions of the driver's eyes and faces
onward)	Detection of drowsy driving		•	Movement of the eyelids	Detecting drowsy driving from the movement of the driver's eyelids
	driver's itions	Closed eyes	*	Closed eyes	Detecting the driver's closed eyes from the distance between his/her upper and lower eyelids
CX-60 (from 2022 onward)	of the al cond			Steering	Detecting the driver not holding the steering wheel from his/her abnormal position
		Abnormal position		Position (location and angle)	Detecting abnormalities in the driver's position in comparison with his/her usual driving position

# Driver Emergency Assist (DEA) system\*1

The CX-60 is the first model to be equipped with the Driver Emergency Assist (DEA) system based on an advanced safety technology that can detect abnormalities in the driver's condition to help avoid an accident or reduce damage and injuries. Working with Driver Monitoring, the DEA system will slow down and stop the vehicle if it becomes difficult for the driver to continue to drive due to a sudden sickness or for other reasons, regardless of whether the vehicle is running on an expressway, an automobile road, or an ordinary road. This system therefore helps avoid an accident or reduce accident damage and injuries.

# Steps in the operation of the DEA system



- Step 1: Monitor the state of the driver and detect an abnormality
- Step 1-1: After detecting an abnormality in the driver's condition, start the hazard lights blinking to inform the passenger that the vehicle will make an emergency stop soon
- Step 2: If the driver cannot resume driving, slow down and stop the vehicle while blinking not only the hazard lights but also the brake lights and sounding the horn repeatedly
- Step 3: Automatically make emergency contact with an external party as needed

# A New Connected Service Plan Designed to **TOPICS** Enable Customers to Enjoy Automotive Lifestyles for a Long Time

Mazda has developed services with the aim of making customers' lives shine with not only its products and technologies but also services. Since September 2019, the Company has provided connected services focusing on two groups of functions: 1) safety and security and 2) comfort and pleasure. In June 2022, the price system for the overall connected services was revised, with the free-of-charge period for the "safety and security" functions extended from three years after the first registration for the services to 10 years after the first registration for the services. In the event of an emergency, such as a sudden sickness and a vehicle breakdown, connected service users can receive support provided by the operator in cooperation with emergency medical service staff, the police, and the distributor. Moreover, the CX-60 owners can use the additional function of Mazda Emergency Call, which automatically issues a report in the event of an emergency, such as the driver losing consciousness, in coordination with the Driver Emergency Assist function. Mazda will continue its efforts to realize a safe and secure society where people can enjoy travel freely by driving a car whenever they like.

<sup>\*</sup> Some functions of the DEA system are available only for customers who have contracted for the connected services and inserted an SD card in their navigation system.

<sup>\*1</sup> This system is designed to help reduce damage and/or injuries resulting from accidents and to lighten the burden of driving. The system will function only on certain conditions, and its functions have limitations. No safety system or combination of such systems can prevent all accidents. This system is not a replacement for safe and attentive driving. Please drive carefully at all times and do not rely on technology to prevent an accident. For details, please ask dealer staff or refer to Mazda's website.

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# Technologies for Mitigating Injuries and Damage from an Accident

In anticipation of an accident, Mazda has been developing technologies for mitigating injuries to the driver, passenger, and pedestrians and damage to other vehicles involved in the accident, mainly focusing on analyzing various real cases of accidents and various forms of accident-caused injuries and damage in the market, as well as human-engineering mechanisms for causing injuries to human bodies.

The Company has been dramatically enhancing the collision safety performance of Mazda vehicles by utilizing a sturdy body structure that can absorb energy more efficiently and minimize cabin deformation in the event of a collision in any of the various directions and a protective structure developed based on the human characteristics of drivers, passengers, and pedestrians to reduce injuries to them from various kinds of accidents. Mazda's major safety technologies are described below.

# Lightweight collision-safety body:

Mazda has developed a sturdy vehicle body structure that can absorb energy very efficiently by introducing highly strong material for pillars and frames, reinforcing skeleton joints, and designing the optimal forms of skeleton joint sections. This body can absorb and disperse impacts in various directions to support the cabin and mitigate its deformation.

# Occupant protection:

Mazda has developed a technology for reducing injuries based on research on the human characteristics of people who are different in terms of build, including elderly people. Mazda vehicles use an occupant-protection structure in anticipation of various forms of accidents and injuries.

# Pedestrian protection:

As a technology for mitigating injuries to not only drivers and passengers but also pedestrians in the event of an accident, Mazda vehicles use a pedestrian-protection structure designed in anticipation of injuries in various spots in pedestrians' bodies.

# Technologies Introduced in 2022 for the CX-60 and subsequent models

The following technologies have been used in the CX-60, which was launched in Europe in April 2022.

# Lightweight Collision-Safety Body

# Ultrahigh-tensile steel plate

The percentage of steel panels with an ultrahigh tensile strength of 980 MPa or more used in a vehicle has increased from about 13% for the previous model to about 21% for the CX-60. The CX-60 is Mazda's first model to use 1,470-MPa-class cold-stamped steel and 1,800-MPa-class hot-stamped steel for body structural parts, thereby achieving light weight.

# Frontal collision safety performance

The bumper beam and the perimeter beam have been elongated at both sides to protect the vehicle from a collision in any of the various directions and reduce damage to other vehicles involved in the collision.

#### Side collision safety performance

A highly strong underbody structure is used to provide a protective space for the drive battery under the floor in anticipation of a collision against a tree, a utility pole, etc.

#### **Occupant Protection**

#### Front seat

To reduce possible neck injuries from a rear-end collision, the front seats are designed not to lean backward at the initial stage of the collision, using seat frames with increased rigidity and bend-resistant seat sliders. In addition, the seat back cushions, featuring the optimized hardness of each part, are designed to securely hold the head as early as possible to mitigate the opposite-direction movements of the head and the torso.

### Seatbelt lap anchor

To minimize the slack of the belt irrespective of the forward-backward position of the seat, the lap anchor of each front seat is now attached to the seat, instead of the floor, to which the previous type of lap anchor was attached. This change helps the seat firmly hold the occupant's body as soon as possible in the event of a collision.

#### Driver's seat knee airbag

The driver's seat knee airbag has been introduced to protect the front parts of the driver's knees. It helps to prevent the driver's body from moving forward to reduce possible injuries to his/her chest, stomach and legs.

# Front seat side airbag

The front seat side airbag has been improved with novel ideas for folding and packaging so that it can open more quickly to firmly hold the driver's and passenger's body. Its ability to hold the driver's and passenger's body has been optimized by effectively utilizing the stroke of energy absorption with the aim of reducing possible injuries to aged drivers and passengers who are less resistant to impacts.

#### **Pedestrian Protection**

#### **Head protection measures**

To reduce injuries to the head of a pedestrian in the event that his/her head hits the hood in a collision, a space has been secured inside the hood so that his/her head will be softly supported by the structure inside the hood and prevented from touching hard objects inside the engine compartment, such as the engine and structure parts.

#### Lower-back and leg protection measures

To reduce the severity of possible bone fractures in a pedestrian's lower back and legs, as well as injuries to his/her knee ligaments, the CX-60 is designed so that, even if his/her lower back and thighs hit the front bumper, the face upper will softly support them with a reduced impact after that, while the lower stiffener will work similarly on his/her lower legs, thereby preventing the eversion of his/her knee joints and their resulting abnormal bend.

# Lightweight, safer body



Frontal collision safety performance (Front body structure)



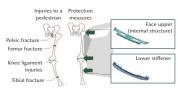
Side collision safety performance (Under body structure)



Driver's seat knee airbag



#### Leg protection measure



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# **External Evaluations for Mazda's Safety Technologies**

Mazda has earned high evaluations for its safety technologies.

# **Third Party Safety Evaluations**

# Rating by vehicle model

(As of the end of July 2022)

		DEMIO/ MAZDA 2	MAZDA 3	ATENZA/ MAZDA 6	CX-3	CX-30	CX-5	CX-8	CX-9	MX-30	ROADSTER/ MX-5
	J-NCAP*1 (Collision Safety Performance Tests)	5-Star (2014)	*6	5-Star (2013)	5-Star (2015)	5-Star	5-Star (2017)	5-Star (2017)	*5	*6	_*6
Japan	J-NCAP*1 (Advanced Safety Vehicle (ASV) Technology Assessment)	ASV+ (2014)	*6	ASV+++ (2018)	ASV+++ (2018)	(2021)	ASV+++ (2018)	ASV+++ (2018)	*5	*6	_*6
US	US- NCAP*2	*5	5-Star (2022MY)	*5	_*5	5-Star (2022MY)	5-Star (2022MY)	_*5	5-Star (2022MY)	5-Star (2022MY)	*6
U3	IIHS*3	*5	22TSP+	*5	_*5	22TSP+	22TSP+	_*5	22TSP+	*6	*6
Europe	Euro- NCAP*4	5-Star*8 (2020)	5-Star (2019)	5-Star (2018)	*6	5-Star (2019)	5-Star (2017)	<b></b> *5	<b></b> *5	5-Star (2020)	_*6

#### Recent Evaluations \*7

		2022	Number of vehicle models receiving the highest possible rating/number of vehicle models evaluated
Japan J-NCAP* <sup>1</sup> (Collision Safety Performance Tests)	5-Star	Not evaluated	_
US US-NCAP* <sup>2</sup>	5-Star	MAZDA 3, CX-30, CX-5, CX-9, MX-30	5/5
Europe Euro-NCAP* <sup>4</sup>	5-Star	Not evaluated	-

<sup>\*1</sup> Japan New Car Assessment Program: Vehicle collision safety performance evaluations conducted by the National Agency for Automotive Safety and Victims' Aid. For collision safety performance, 5-Star is the highest possible rating.

For Advanced Safety Vehicle (ASV) Technology Assessment, ASV+++ is the highest possible rating (from 2018 to 2019).

Mazda Earns the 2022 Top Safety Pick+ (2022 TOPICS TSP+),\*2 the Highest Safety Rating given by IIHS\*1 for the Third Consecutive Year

Five Mazda U.S. specification models,\*3 including the 2022 model year's Mazda3 and CX-5, tested by the U.S. Insurance Institute for Highway Safety (IIHS), have been awarded the nonprofit organization's highest safety rating. In addition to conducting crashworthiness tests (including a moderate overlap frontal crash test, a driver-side small overlap frontal crash test, a passenger-side small overlap frontal crash test, side crash tests, a head restrains test, and a roof strength test), the IIHS evaluates the performance of the crash damage reduction brake, which is a preventive safety technology, the crash avoidance performance of a frontal crash warning system, and headlight performance.

<sup>\*2</sup> National Highway Traffic Safety Administration's 5-Star Safety Ratings program. 5-Star is the highest possible rating.

<sup>\*3</sup> Insurance Institute for Highway Safety: Safety performance evaluations by an independent, nonprofit organization funded by auto insurers. Top Safety Pick + (Plus) is the highest possible rating.

<sup>\*4</sup> European New Car Assessment Programme: An independent agency comprised of the transport authorities of European countries, etc. 5-Star is the highest possible

<sup>\*5</sup> Not yet introduced as of the end of July 2022.

<sup>\*6</sup> Not evaluated.

<sup>\*7</sup> As of the end of July 2022. Excluding OEM vehicles.

<sup>\*8</sup> Mazda 2 Hybrid.

<sup>\*1</sup> Insurance Institute for Highway Safety

<sup>\*2</sup> Top Safety Pick+

<sup>\*3 2022</sup> model year Mazda3 Sedan, Mazda3 Hatchback, Mazda CX-30, Mazda CX-5, Mazda CX-9 currently on sale in the U.S.

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# **Initiatives with People**

It is said that most traffic accidents are caused directly or indirectly by human behavior.

Mazda endeavors to raise safety awareness among adults and children through various means of communication.

# **Raising Traffic Safety Awareness**

In cooperation with local municipalities and organizations, Mazda and its Group companies in Japan and overseas conduct various activities to raise safety awareness.

In FY March 2022, Mazda participated in the Traffic Safety Challenge Festa held at Hiroshima City Transportation Museum and conducted safety-awareness raising activities, which it had continued in cooperation with the Hiroshima Branch of the Japan Automobile Association (JAF) since 2017 to increase the seatbelt usage rate. The importance for all car occupants to wear a seatbelt was explained through the simulation of a collision at a speed of 5 km/h, guizzes to raise children's safety awareness, and shock absorption experiments with toy cars. In addition, a safe driving seminar for aged drivers was held at a local community center.

# Raising awareness of using a seatbelt and child seat



# **Safe Driving Demonstration**

Starting from FY March 2015, Mazda has held the Mazda Driving Academy, an experience and training program to help customers in Japan learn the theories and techniques to control their cars easily, comfortably and safely. A variety of curriculums tailored to the needs and level of the customers are offered, from basic driver training of drive, turn, and stop, to the exciting experience of driving on a racing circuit, with the aim of improving their driving skills and raising the awareness of safe driving. In FY March 2022, the Mazda Driving Academy was held six times.

# **Driving position lecture**



# **Experiencing sudden braking**



# Initiatives with Roads and Infrastructure

# Initiatives toward Realizing a Safe Automotive Society with ITS\*1

Traffic accidents and congestion are serious social problems in many countries and cities. To solve these problems, worldwide efforts have been taken to introduce advanced technologies for roads and automobiles. As an automobile manufacturer, Mazda has been proactively supporting the ITS project driven by the government and private sector, and working collaboratively with the national and local governments and related companies in order to realize a society where the road traffic is safe and accident-free.

# Technology to Notify the Driver of Unseen Dangers

Mazda is promoting research and development of ITS as a means to monitor the objects in a distant position that cannot be detected by Mazda's advanced technology i-Activsense or the areas in an intersection that cannot be seen from the driver.

# **ITS Projects Mazda Participates**

Project	Description	Organizer
ASV (Advanced Safety Vehicle)	Research and development to realize a system to assist safer driving utilizing cutting-edge technologies, including communication-based driving safety support systems. In 1991, the project's first phase was launched, and currently discussions are under way as to the sixth phase.	Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism
ITS Connect*	The ITS Connect Promotion Consortium promotes practical application and widespread use of a driving support system combining automobile-related technology with new ITS communication technology. The consortium aims to achieve a safe anxiety-free transportation society, by studying the fundamental technology for the driving support system (ITS Connect), which utilizes ITS dedicated frequency band, and carrying out operation support.	ITS Connect Promotion Consortium
Hiroshima Sandbox	Effective use of communication-type ITS systems and open cloud data to enhance the safety and convenience of public transportation systems and make transportation smoother by realizing priority traffic signal control for public transportation systems, minimizing hazardous events at intersections and other places, and promoting ride sharing by increasing transfer convenience.	Hiroshima Prefecture

<sup>\*</sup> Website of ITS Connect Promotion Consortium (https://www.itsconnect-pc.org/en/)

<sup>\*1</sup> ITS: Intelligent transport system uses telecommunications technology to bring together vehicles, people, and the traffic environment, with the aim of easing traffic congestion and reducing the number of accidents throughout Japan.

Realizing a Motorized Society Free from Traffic Accident

Creating a System that Enriches People's Lives

# CREATING A SYSTEM THAT ENRICHES PEOPLE'S LIVES

Mazda aims to build a model of social contribution that will enrich lives by offering safe, secure and unrestricted mobility to people everywhere. The Company is also committed to improving its brand value by making active regional contributions through automobiles.

# Social Contributions Capitalizing on the Strength of a Vehicle Manufacturer

Mazda promotes various initiatives to help resolve social issues, taking advantage of technologies and skills that the Company has cultivated thus far. While valuing dialogues and co-creation with its stakeholders, Mazda aims to achieve sustainable development of society.

# **Testing a Shared Mobility Service Leveraging Connectivity Technologies**

Mazda will leverage the car and connectivity technologies to help create a community where local residents help one another, assisted by drivers from inside and outside the community, and promote real-life discoveries, experiences and growth through human interactions. Surely that is the way to create a more human world that allows people to really experience the joy of life.

Recent years have witnessed the dilapidation of public transportation systems in depopulated areas in hilly and mountainous regions of Japan, and this has made it harder for the elderly and disabled to get around. To help resolve such social issues, in December 2018 in Miyoshi City, Hiroshima Prefecture, Mazda started testing a shared mobility service utilizing its connectivity technologies, in cooperation with local residents and prefectural and city authorities. The Company is in charge of developing a transportation service management system and application software for users. Mazda is in the process of coming up with ideas to improve the convenience of the service through dialogues with the local community while having residents of the testing sites—the Kawanishi district and Sakugi-cho of Miyoshi City—continue using the service.

The Company is currently implementing various measures to ensure seamlessly connected mobility of people and goods inside and outside the community by linking the shared mobility service with regional information on local exchange events, shipping/collection of agricultural products, etc. Through such measures, Mazda strives to realize a sustainable service used by many more people, thereby leading to community invigoration in the future. Through this testing, Mazda aims to build a social contribution model that will support regional revitalization and enrich lives in the region by offering safe, secure and unrestricted mobility to people everywhere.

# Driver **Outline of Shared** Local **Mobility Service Testing** government Pickup and drop-off service (share-ride) Arrangement and dispatch of vehicles port system/support for legal compliance procedures, etc Station/bus stop Local community - Collaboration with local events Mazda Clinic Providing application and vehicles Supermarket, etc. Request through phone or application Collaboration through promote mobility and revitalize the local econor Service users

# Helping Disaster Evacuees Spend the Night in a Car

By leveraging its knowledge as an automobile manufacturer in response to recent frequent disasters beyond expectation, Mazda has launched a Mazda original kit of emergency items that are useful for disaster evacuees in spending the night in a car. The kit includes goods that enable evacuees to spend the night as comfortably as possible in a car, such as pressure socks, which help reduce the risk of suffering from economy class syndrome, as well as portable toilets and a water bag. The kit also includes a booster cable, which will be helpful when the car battery dies. In the aftermath of a disastrous torrential downpour in Japan in July 2020, Mazda sent quantities of this kit to disaster-affected areas so that it would be used for support and recovery activities. Moreover, in July 2022, a more affordable low-price variety of this emergency kit (5 L) was added to the lineup with a view to having many more people use it.



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# Contribution to Society

Mazda is fulfilling its responsibilities as a good corporate citizen through ongoing involvement in socially beneficial activities tailored to the needs of local communities.

# **Basic Policy on Initiatives**

# **Basic Principles**

As a company engaged in global business, Mazda is fulfilling its responsibilities as a good corporate citizen through ongoing involvement in socially beneficial activities tailored to the needs of local communities, in order to ensure that its business activities contribute to the building of a sustainable society.

### **Plans for Future Activities**

- Proactive, ongoing responses to social needs through the core business activities of the Mazda Group in Japan and overseas
- In collaboration with local communities, contribute to the development of a sustainable society through activities tailored to the needs of communities
- Emphasize and provide support for self-motivated volunteer activities by employees, and incorporate diverse values to foster a flexible and vibrant corporate climate
- Proactively disclose the details of activities and engage in a dialogue with society

#### **Three Pillars**

Mazda promotes activities that are strongly rooted in local communities. Its social contribution activities are underpinned by the three pillars of environmental and safety performance, human resources development, and community contributions. (**I** → P80-81)

#### Three Pillars in Basic Policy on Social Contribution Initiatives

Environmental and Safety Performance Responsibility as an automobile manufacturer **Human Resources** Community Contributions Development Fostering people who Responding will be future leaders to local social in the foundation of needs as a good society and in business corporate citizen

#### **Promotion Framework**

In May 2010, Mazda established the Social Contribution Committee. The role of this committee, which meets regularly (twice a year), is to discuss issues facing the entire Mazda Group and share information, in line with the social contribution policy decided by the CSR Management Strategy Committee. ( P11)

The details of the actual activities are considered by a Working Group comprised of related divisions.

Through the activities of the committee undertaken since 2010, Mazda continues to enhance information collection and utilization from a global and Group standpoint. Individual activities are carried out based on the budget plan in each region or department.\*1

### FY March 2022 Major Results:

- Carried out over 450 activities\*2 in Japan and overseas\*3 (cost of social contribution activities: around 2.58 billion yen in FY March 2022). ( P123)
- Established the Mazda Social Contribution Prize, selected based on evaluation indexes for social contribution programs, and continued implementing the PDCA (plan-do-check-act) cycle process.

# **Evaluation Indexes for Social Contribution Programs**

In FY March 2015, Mazda established the evaluation indexes for social contribution programs. These indexes are used to evaluate and promote programs which resolve social issues and improve corporate values. Mazda also created the PDCA (plan-

#### **Promotion Framework**

**CSR Management Strategy Committee** Framework for implementation Social Contribution Committee Hiroshima: Mazda Chairperson: Executive officer in charge of General Affairs Community Vice Chairpersons: Executive officers in charge of Global Service Committee Marketing, in charge of Global Human Resources, in Domestic region charge of Operations in the Greater Tokyo Metropolitan Area, and in charge of Domestic Sales Overseas region Secretariat: General Affairs Department Social Contribution Committee Working Group (comprising related divisions)

do-check-act) process. They are designed to evaluate these social contribution programs from three perspectives: effect on society; effect on the Company; and Mazda uniqueness. (To be more specific, the indexes comprise eight categories such as "the number of beneficiaries," "the number of participating employees," "conformity with the Three Pillars in Basic Policy on Social Contribution Initiatives," etc.)

# **Mazda Social Contribution Prize**

In January 2015, Mazda established the Mazda Social Contribution Prize as a commendation system to recognize outstanding social contribution activities. The objective of the prize is to raise in/external recognition of the outstanding social contribution activities and support for increasing excellent social contribution activities. Based on the evaluation indexes for social contribution programs, members of the Social Contribution Committee Working Group, the Mazda Workers' Union and the Federation of All Mazda Workers' Unions collaborate to evaluate candidate activities. The Social Contribution Committee then selects prizewinning activities, each of which will be presented with a certificate of recognition in the name of the Company President on the anniversary of Mazda's foundation in January every year.

■ The 8th Annual Mazda Social Contribution Prize The FY March 2022 prize winning activities were selected from the social contribution activities introduced in the Mazda Social Contribution Activities Report\*3 (which covered the period from April 2020 through March 2021).

# The 8th Annual Mazda Social Contribution Prize

	Activity name
Grand Prize	Support activities in response to the spread of COVID-19 (Support for healthcare workers) [Mazda North American Operations]
Special Prize	Support for Auckland Zoo [Mazda Motors of New Zealand Ltd.]
Special Prize	Operation Blue Seed [Chiba Mazda Co., Ltd.]
Honorable Mention	Supporting learning through Monotsukuri [Mazda Motor Corporation]
Honorable Mention	Food Drive [Chiba Mazda Co., Ltd., Mazda Autozam Ichihara-Kita]

- \*1 In Japan, the United States, Australia, New Zealand, and South Africa, the Mazda Foundation in each country separately undertakes various activities.
- \*2 Social contribution activities: Consolidated basis, Mazda Motor Corporation and its major subsidiaries. Monetary donation, goods donation, facility sharing, employee participation and dispatch, voluntary programs, and support for disaster-stricken areas.
- \*3 "Social Contribution Initiatives" on the official website https://www.mazda.com/en/sustainability/social/

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# **Volunteering by Employees**

Mazda offers support to help employees become actively involved in volunteer activities.

- Providing volunteer opportunities (Mazda Specialist Bank, Mazda Volunteer Center, etc.)
- Subsidizing part of the cost of activities (Mazda Flex Benefits ( P120), etc.)
- Enabling employees to take leave for activities (volunteer leave included in the Special Warm Heart leave system (F P120), etc.)
- Providing volunteer training opportunities

# **Support for Disaster-Affected Areas**

The Mazda Group provides various supports for the early recovery and restoration of areas affected by natural disasters. Mazda Head Office coordinates with its production/business sites in the affected area to provide appropriate support in case of natural disasters such as an earthquake and abnormal weather. Recent support cases: Great East Japan Earthquake/Northern Kyushu heavy rain in July 2017/heavy rain in July 2018/Typhoon Jebi (No. 21) in 2018/Hokkaido Eastern Iburi Earthquake in 2018/Typhoon Hagibis (No. 19) in 2019/heavy rain in July 2020 (Japan), hurricanes (United States), Mexico Earthquake (Mexico), flooding in Southern Thailand (Thailand), etc.

# **Support through Mazda Foundations**

Mazda and its Group companies have established Mazda Foundations in five countries, to promote support activities tailored to each region.

Country	Name	Support activities / objectives	Year of establishment	Amount of grants (donations) in FY March 2022
Japan	Mazda Foundation	Support activities to promote science and technology and the sound development of youth.		Around ¥50,150,000
U.S.	Mazda Foundation U.S.A. (MFUS)	Provide funds to various initiatives for education, environmental conservation, social welfare, cross-cultural understanding, etc.	1990	Around US\$475,000
Australia	Mazda Foundation Australia (MFA)	Provide funds to various initiatives, including education, environmental conservation, technology promotion, and welfare.	1990	Around A\$675,000
New Zealand	Mazda Foundation New Zealand (MFNZ)	Provide funds to various initiatives, including education, environmental conservation, and culture.	2005	Around NZ\$260,000
South Africa	Mazda South Africa	Provide funds to various initiatives, including education, career development, technological development, and environmental conservation.	2017	Around R845,000

# TOPICS Renovated Mazda Museum Grand Reopening



The Mazda Museum has undergone a full renovation. The museum showcases historic vehicles and exhibits of the company's history from its foundation. Open to the public in May 2022, the museum's spatial design and displays have seen a complete makeover with the aim to provide customers and people in the community with a space in which they can grow closer to Mazda, as well as to strengthen the Museum's role as a base for communication of the Mazda brand.

The museum has 10 different exhibit zones with decor and lighting that match each zone's theme. The entire museum has been designed to provide visitors with a narrative experience of Mazda's vision for the next century and the thoughts that have gone into the past 100 years of Mazda manufacturing.

# TOPICS Mazda supports humanitarian efforts to help Ukraine emergency situation

Mazda has been deeply saddened by the events taking place in Ukraine since February 2022 and is concerned for the safety and well-being of people there and throughout the region. Regarding the situation, Mazda provided humanitarian support to Ukraine.

Mazda made financial donation of 1 million euros to the Office of the United Nations High Commissioner for Refugees (UNHCR) in March 2022. From March to April 2022, the Company also conducted the "One Mazda Ukraine Humanitarian Aid Fund," a fundraising campaign by Mazda Group employees around the world, in an effort to support grassroots activities, such as refugee assistance in Europe undertaken by employee volunteers at Mazda Motor Europe GmbH, Mazda Motor Poland and other local subsidiaries. The fund raised approximately 8 million yen in total. Donations were shared equally between UNHCR and grassroots activities, and used to provide food, sanitary and medical supplies, batteries, blankets, and other items in cooperation with local sales companies in areas such as Poland and Kyiv, which required assistance and sustained significant damage. There was an anonymous donation with a message "for friends in Europe". Through this effort, all of Mazda's employees around the world united together for Ukraine.

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#### **Initiatives Based on the Three Pillars**

Mazda promotes activities that are strongly rooted in local communities. Its social contribution activities are underpinned by the three pillars of environmental and safety performance, human resources development, and community contributions.

# **Environmental and Safety Performance**

Mazda's business activities have a relationship with and impact social issues, such as global warming, energy and resource shortages, and traffic accidents. To resolve these issues, the Company attaches importance to the environmental and safety perspectives, not only in conducting its main business, but also when making social contributions.

- Hosting environmental awareness-raising programs at various events, dispatching lecturers to environmental education programs, and carrying out volunteer activities for biodiversity conservation and various other environmental protection initiatives
- Offering lectures on traffic accident issues at various events, and holding safer driving seminars

# [Environment]

Japan / Greening Activities in Collaboration with Communities The Mazda R&D Center Yokohama (MRY), Mazda's base for research and development in Yokohama, has supported the Keihin Afforestation Project promoted by Yokohama City. Since 2004, they have also supported "How Far Does a Dragonfly Fly?" Forum, a collaborative project implemented by companies, universities, local governments, and citizens to investigate and track the flight of dragonflies. Through such projects, they are working to revitalize nature and expand green environments. In this investigation, dragonflies are used as indicators to verify whether sufficient green space is available and the quality of green space is maintained with consideration for biodiversity (ecosystem).



New Zealand / Assisting in the Development of Hands-on Learning Since 2004, Mazda Motors of New Zealand Ltd. (MMNZ) has been supporting the activities of Project Crimson Trust, one of New Zealand's leading conservation organizations. Since 2008, in cooperation with the trust, the Mazda Foundation New Zealand has been participating in the "TREEmendous" project to work with schools to assist them in the development of handson learning that incorporates outdoor areas into the curriculum. In FY March 2022, the foundation assisted four schools.



# [Safety]

Japan / Raising Traffic Safety Awareness

Local dealerships conduct traffic safety patrols around their neighborhood. This activity is aimed at reducing traffic accidents by distributing reflectors and installing flags to raise awareness of traffic safety among local residents.



# Japan / Cleaning Convex Traffic Mirrors

During the Road Safety Week, among other opportunities, local dealerships have regularly participated in the cleaning and inspection of convex traffic mirrors, to contribute to traffic safety. These dealerships work in collaboration with local police stations and other parties. This activity is aimed at preventing traffic accidents involving passing vehicles by ensuring visibility of convex traffic mirrors and by reporting their damage and other issues to the competent police stations.



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# **Human Resources Development**

Mazda emphasizes the perspective of human resources development, based on the idea that fostering people who will be future leaders in the foundation of society and in business is important.

- Holding seminars and lectures by employees with specialized knowledge and skilled techniques such as manufacturing
- Accepting students for internship programs, supporting to learn about vehicles using facilities in the Company, etc.

# **Community Contributions**

Mazda promotes community contribution activities to cope with specific issues of each local community, in the countries/regions where the Company conducts its business operations.

- Making monetary/vehicle donations to charities and participating in various charitable activities
- Promoting sports and culture

# [Human Resource Development]

Japan / Promoting Children's Education

Mazda conducts plant tours for elementary schools in the vicinity of the Hiroshima Plant and Hofu Plant (Yamaguchi Prefecture). In FY March 2022, the tours were conducted online for the first time due to the impact of the novel coronavirus (COVID-19) pandemic. The Company also offers environmental education and vocational lectures at the request of elementary schools. middle and high schools, and universities in the neighborhood. In addition, every year Mazda participates in the "Kids Engineer" program for elementary school students, sponsored by the Society of Automotive Engineers of Japan (JSAE). In FY March 2022, the Company provided the online program on painting technologies "Secrets of Colors."



# **Thailand / Vocational Support**

AutoAlliance (Thailand) Co., Ltd. has been working with universities since 1998 to offer internships aligned with the academic programs by the Ministry of Education, Culture, Sports, Science and Technology. The internships aim to provide opportunities for gaining work experience and useful knowledge in order to produce outstanding students who will contribute to the development of Thailand. This activity has been well received by universities and related institutions, and the Company continues to support it.



# [Community Contributions]

Japan / Donation of Vehicles

Mazda contributes to community revitalization, making effective use of the Hiroshima Municipal Baseball Stadium (Mazda Zoom-Zoom Stadium Hiroshima), for which Mazda acquired the naming rights. For each one million stadium visitors, the Company donates one Mazda vehicle to a social welfare organization. Since the cumulative number of visitors reached 22 million in October 2021 and 23 million in June 2022, two vehicles were donated to organizations in Hiroshima City. Mazda had donated a cumulative total of 23 vehicles.



# Mexico / Holding an Ekiden Road Relay Race

Since 2016, Mazda de Mexico Vehicle Operation (MMVO) has held the Mazda Ekiden road relay race to promote Japanese culture in the region and provide a space where employees, their family members, and local residents can spend quality time together. In FY March 2022, amid the COVID-19 pandemic, the Ekiden road relay race was held online as in the previous fiscal year, with not only participants from Mexico but also those invited from Japan, the United States, Canada and Australia, in an effort to continue healthy and active initiatives (more than 3,000 participants from 611 teams in total).



Quality Improvement

Exploring Partnerships for "Co-Creation with Others"

**CHAPTER** 



# EARTH, PEOPLE, AND SOCIETY

Mazda believes that both quality improvement and the exploration of partnerships for "co-creation with others" provide an essential foundation for its endeavors to solve issues faced by the earth, people, and society.







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Quality Improvement

Exploring Partnerships for "Co-Creation with Others"

# QUALITY IMPROVEMENT

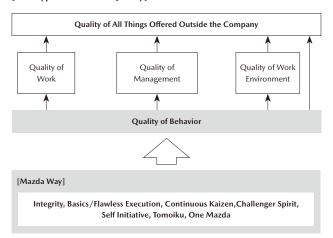
# **Basic Approach**

Toward the realization of its Corporate Vision, Mazda believes that it is important to enhance the quality of "all things offered outside the Company," including products and services, to satisfy customers. The Company defines the Five Types of Mazda Quality: "quality of work," "quality of management," "quality of work environment," "quality of behavior," and "quality of all things offered outside the Company," which is underpinned by the preceding four. In line with its quality policy, Mazda further advances the efforts it has made and promotes united collaboration among all areas, continuing to enhance Mazda's unique value.

# Mazda Quality Policy

Mazda Quality Policy
To enrich the lives of our customers
by providing products and services
that reflect steady and uncompromising work.

# [Five Types of Mazda Quality]



# **Approach to Quality Improvement**

To deliver customers safety, trust and excitement through automotive lifestyles, and to have customers continuously realize the value of its products, Mazda makes Groupwide efforts based on the three principles below:

- 1. Establishing consistent quality, from planning to production
- 2. Early detection and early solution of market problems
- 3. Building special bonds with customers—cultivating human resources capable ofconsidering and acting toward the happiness of customers

# **Vision for Quality Assurance**

Vehicle production based on the "100-1=0" belief

1. Establishing consistent quality from planning to production:

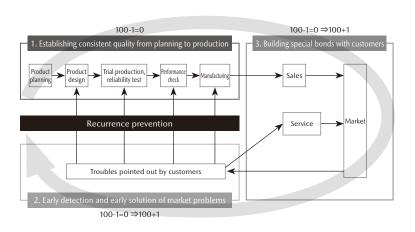
"100–1=0" expresses Mazda's strong desire to provide good quality to all customers under the belief that if even only one out of 100 vehicles is found to be defective, the car has no value for the customer. Mazda pursues a kind of vehicle production that respects each vehicle as a certain customer's "one-and-only," and aims to achieve "zero defects." In keeping with the basic principles of manufacturing and based on a full understanding of its mechanisms, all related departments work in close collaboration to establish consistent quality in all processes, from planning to production.

Initiative for the process to change "100-1=0" to "100+1"

- 2. Early detection and early solution of market problems:

  If an unpredictable problem arises in the market, it may result in loss of trust from customers ("100–1=0"). To avoid this, Mazda promotes quality assurance activities for the early detection and early solution of any trouble pointed out by customers.
- 3. Building special bonds with customers:

Mazda aims to build special bonds of ever-lasting trust with its customers by keeping contact with customers in good faith and with a sense of commitment to them ("100-1=0"  $\Rightarrow$  "100+1"). Toward this goal, the Company promotes human resource development by encouraging every employee to think about what they should do to make customers happy and to act accordingly.



Explorng Partnerships for "Co-Creation with Others"

# Mazda Quality Management System (M-QMS\*1)

To make faithful and unceasing efforts and constantly ensure quality in products, sales and after-sales services that can always satisfy the expectations and trust of customers, Mazda has established the Mazda Quality Management System (M-QMS) based on ISO 9001\*2, and has applied it to the series of processes from product development to production, sales and after-sales services.

At overseas production sites, Mazda also promotes the establishment of systems that encourage local employees of new sites to make self-reliant efforts to improve quality, and encourages them to acquire ISO 9001, thereby promoting the quality improvement of Mazda vehicles, which are produced and sold worldwide.

### Acquisition of ISO 9000 Series

Year of acquisition	Types of ISO certification	Certified organization, product, service, etc.		
1994	ISO9002	Mazda Motor Corporation: Vehicles produced at Hiroshima Plant and Hofu Plant (First to be certified as Japanese automaker)		
1996	ISO9001	Mazda Motor Corporation: Engineering, product development, manufacturing and after-sales service		
2001	ISO9001	Mazda Motor Corporation: Accessories, KD, product planning, design Mazda Engineering & Technology Co., Ltd.: Specially equipped vehicles (TESMA), etc. (Application range expanded)		
		Auto Alliance (Thailand) Co., Ltd.		
2007	TS16949 (ISO9001 Sector certificate)	Changan Ford Mazda Automobile Co., Ltd. (now Changan Mazda Automobile Co., Ltd.), Changan Ford Mazda Engine Co., Ltd. (now Changan Mazda Engine Co., Ltd.)		
2015	ISO9001	Mazda de Mexico Vehicle Operation, Mazda Powertrain Manufacturing (Thailand) Co., Ltd.		
2016	ISO9001: 2015	Mazda Sollers Manufacturing Rus LLC		
ISO9001: 2015		Mazda Motor Corporation: Head Office, Hiroshima Plant and Hofu Plant, Mazda de Mexico Vehicle Operation, Auto Alliance (Thailand) Co., Ltd.		
2018	IATF16949: 2016 (ISO9001 Sector certificate)	Changan Mazda Automobile Co., Ltd., Changan Ford Mazda Engine Co., Ltd. (now Changan Mazda Engine Co., Ltd.)		

# 1. Establishing consistent quality, from planning to production

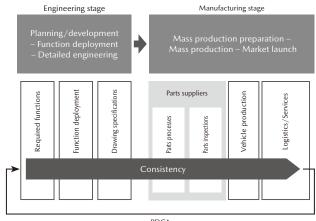
To satisfy the diverse needs of customers and offer greater trust, joy and excitement, Mazda is engaged in establishing a consistent quality level to be assured at all stages from planning/ development to the delivery of products to customers.

# **Establishing Stable Quality**

Not only to improve the performance of products but also to enhance the quality of new technologies including the initiatives to address environment issues, Mazda is committed to "process assurance." Process assurance is the approach of ensuring a consistent quality level at all stages from engineering (planning, product development) to manufacturing (purchasing, vehicle production, logistics, after-sales services). Based on the correct understanding of customer needs and expectations, the important elements necessary to ensure each function and performance are identified. The Company has established a system to maintain and manage them in every stage from engineering to manufacturing.

Furthermore, to allow customers feel driving pleasure through its products, Mazda identifies the functions and performance that embody "driving pleasure" for each stage from before getting in the car to after starting driving, so as to enhance consistency in establishing quality.

# Consistent Process Assurance based on Major Characteristics



PDCA

### Monotsukuri Innovation

Looking five to 10 years into the future, Mazda has implemented Monotsukuri Innovation for efficiently developing and manufacturing products. Shared development methods and manufacturing processes are made possible by using bundled product planning for models to be introduced in the future, spanning market segments and model classes.

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Optimized structures for each function are shared across all car lines and laterally spread to each car line based on bundled product planning. A flexible production system is used to produce products engineered based on a common architecture concept in a highly efficient and flexible manner. Mazda is aiming to raise operational efficiency by building a flexible production process that can handle changes in volumes and can quickly introduce new models with a minimum of investment.

Through Monotsukuri Innovation, the Company's products since the CX-5, launched in 2012, and Skyactiv Technology have achieved the efficiency improvement in terms of both product development and manufacturing facility investment as well as significant improvements in vehicle costs.

Through design based on common architecture under Monotsukuri Innovation, Mazda is able to promptly apply the latest technologies and designs to all of its products. In newgeneration technology development, the Company is working to enhance the efficiency of development processes through bundled planning and computer modeling-based development.

<sup>\*1</sup> M-QMS: Stands for Mazda Quality Management System

<sup>\*2</sup> ISO: Stands for International Organization for Standardization. ISO 9001 is a set of international standards for quality management and assurance.

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Quality Improvement

Explorng Partnerships for "Co-Creation with Others"

#### Model-Based Development (MBD)

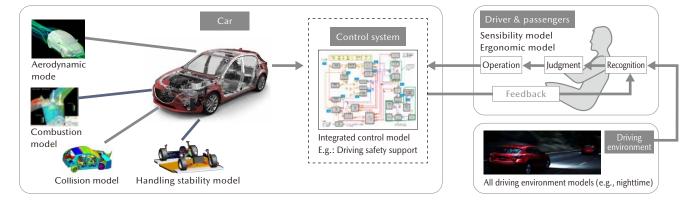
Cars are being called on to provide increasingly advanced and diverse functions, while vehicle architecture and control systems are becoming more and more complex. Model-based development, which uses computers to efficiently replicate development processes, is essential to keep developing complex systems quickly and with limited resources. Model-based development involves creating computer models of the vehicle, control systems, drivers, passengers, driving environments and other development subjects, and conducting development via thorough computer simulation. It is an efficient method of optimization. By carrying out model-based powertrain and vehicle development through simulations from design to vehicle evaluation, Mazda strives to reduce the number of prototype parts and actual unit verification, in order to develop complex, highly sophisticated technologies and products with minimum resources while also ensuring quality.

Mazda believes that to further promote model-based development, universities working on cutting-edge technologies, automobile manufacturers and suppliers that cooperate in manufacturing must concretize the SURIAWASE 2.0 concept, which seeks to enhance development efficiency by using virtual models across the engineering chain. In July 2021, ten companies became operating members, and the "Japan Automotive Model-Based Engineering center (JAMBE)" was established to spread MBD technology widely to the automobile industry nationwide. Mazda is also participating as one of the operating member companies, and will contribute to improve the international competitiveness of the Japanese automobile industry by realizing the advanced matching development "SURIAWASE 2.0" using models. (E) P93)

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#### **Model-Based Development**

A technique to develop outstanding products by modeling (quantifying) and connecting all four elements of (1) the car, (2) control systems,(3) the driver & passengers, and (4) the environment without using an actual vehicle



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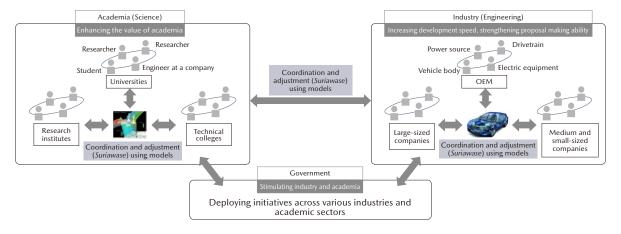
**Quality Improvement** 

Explorng Partnerships for "Co-Creation with Others"

# What is advanced matching development SURIAWASE 2.0?

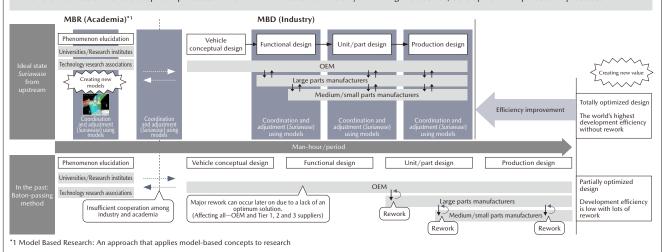
Created based on the SURIAWASE 2.0 concept presented in the materials prepared by the Ministry of Economy, Trade and Industry of Japan in 2017

SURIAWASE 2.0 is an initiative to enable academia and businesses (parts manufacturers and OEMs of all sizes) to share digital models across the board, linking academic research with development of parts, systems and vehicles, thereby allowing both sides to coordinate and make adjustments (Suriawase in Japanese) digitally from the initial stages of development, without using physical machines. This approach makes it possible to create the most-advanced development community in the mobility sector, able to carry optimal and high-grade monotsukuri efficiently and without rework.



#### Goal: Concretize Suriawase 2.0

Achieve the most efficient development processes in the world and create new value by innovating the research, development and production processes



Referred to materials for the online forum to commemorate the start of the Japan Automotive Model-Based Engineering center (JAMBE)

MAZDA SUSTAINABILITY REPORT 2022

Data/Materials

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**Quality Improvement** 

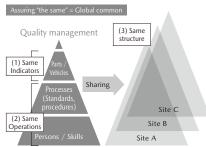
Explorng Partnerships for "Co-Creation with Others"

# **Global Quality Assurance**

To ensure the same quality on a global scale, Mazda has adopted the "global common" concept, under which overseas production sites establish the same quality by employing the same indicators, the same operations, and the same structures as those of the Mazda Head Office.

With the aim of achieving and maintaining the same quality into the future, the roles and responsibilities of the Mazda Head Office and overseas production sites have been clarified for management. As part of its efforts to secure the same quality on a global basis, Mazda works to establish common indicators of quality achievements and processes (standards and procedures) to be shared when conducting quality control of purchased parts or quality evaluation of finished vehicles. At the same time, initiatives are under way to develop human resources who can properly operate these processes. As part of its global quality assurance efforts, in cooperation with Mazda North American Operations, Mazda has developed a quality assurance system for a new joint-venture plant in Alabama, the United States. Under this system, Mazda commenced mass production of a new model in 2022.

# Initiative for Global Quality Assurance



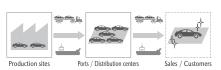
Mazda Head Office

Overseas production sites

# **Quality Assurance after Shipment**

To ensure that the high quality at factory shipment is maintained until delivery to customers around the world, Mazda has introduced the same quality evaluation indicators to be applied, from production plants to distributors and dealers, with the aim of delivering products maintaining high quality to customers around the world under a consistent evaluation system.

Consistent evaluation system



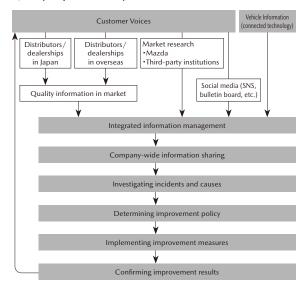
# 2. Early detection and early solution of market problems

Mazda strives to offer an enriched car ownership experience, in which customers can feel satisfied with the car and realize the value of the product. While respecting each vehicle as a certain customer's "one-and-only," the Company endeavors to ensure stable and speedy quality improvement and enhance the quality of present and future products.

# **Comprehensive and Speedy Quality Improvement**

To enable early detection and early solution of market problems, Mazda has established a system for unified management of all items of quality information. Such information is gathered from distributors and dealerships in Japan and overseas and by employing the results of surveys by external institutions and conducting the Company's own market research. Under the system, the collected information is shared company-wide in real time. By using the system and closely monitoring daily progress, Mazda investigates quality related incidents and their causes, determines and implements improvement measures, and confirms the results. In this manner, Mazda works to achieve comprehensive and speedy improvement.

# Quality improvement system



The Company also promotes quality improvement, capitalizing on the vehicle information collected through the utilization of connectivity technologies, in addition to conventional initiatives based on customer input.

# <Examples of Surveys/Analyses>

- Gathering customer voices through Mazda-unique market survey
- Market surveys conducted by third parties
- Analysis of customer voices on social media
- Analysis of vehicle information obtained through connected technologies

# Corporate Activities with Highest Priority on Customer Safety and Comfort

Mazda prioritizes safety and comfort of vehicles above all. Under a strict quality assurance system, Mazda conducts inspections on conformity with laws and regulations of each country and on functions to be used by customers, with a view to manufacturing vehicles that customers feel safe using.

This quality assurance system is maintained and managed by the development, production and quality divisions auditing each other from independent standpoints.

# Recall Procedures (Overview)\*1

- Registration with authorities in each jurisdiction, according to the laws and regulations of each country and region
- Disclosure to customers via direct mail, telephone, and other methods, and explanations at dealerships
- Disclosure of information on recalls on the Mazda Official Website

Number of recalls in FY March 2022 (in Japan) (F P123)

<sup>\*1</sup> Recall procedures may vary among countries/regions.

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Explorng Partnerships for "Co-Creation with Others"

# 3. Building Special Bonds with Customers

-Cultivating Human Resources Capable of Thinking and Acting for the Happiness of Customers

To encourage every employee to think about what they should do to please customers and to act accordingly, Mazda places emphasis on cultivating a customer-oriented corporate culture/ mind. Specifically, the entire Mazda Group is committed to promoting quality awareness-raising activities, quality control education, and QC (Quality Control) circle activities.

Under the impact of the COVID-19 pandemic, since FY March 2021, Mazda has continued these activities by shifting to an online format through active introduction of e-learning and video streaming.

# <Major Activities>

# **Quality Awareness-Raising Activities**

Mazda holds quality meetings on a regular basis. At these meetings, top management communicate their commitment to compliance and quality in their own words to all employees. This provides opportunities for individual employees to reflect on and

# Quality meeting materials

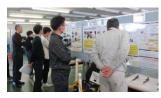


think about their work, thereby enhancing their compliance and quality awareness.

# **Sharing Past Cases**

Mazda has undertaken an initiative to share lessons learned from past cases through exhibits of actual defective products and videos. This program is intended to encourage employees to think about past issues as issues concerning themselves and to improve their attitudes and behavior. Since its launch in FY March 2019, a total of 12,000 employees have experienced this initiative.

# **Employees share past cases**





# **Quality Control Education**

For the purpose of developing human resources capable of proactively finding/solving problems from a customer viewpoint and working for continuous improvement, quality control education is provided for employees. Quality education courses taught by internal instructors are offered, and employees take appropriate courses when their job type or management level changes.

# Group-wide Quality Education Courses in FY March 2022

	Course	Objective
1	Quality program for freshmen	To understand basic quality control concepts (customeroriented attitude, continuous improvement efforts)
2	Quality management elementary course	To apply the concepts, processes, and basic techniques of problem solving to daily operations, thereby obtaining problem-solving abilities
3	Quality management intermediate course	To become capable of applying and practically implementing specialized quality management techniques
4	Quality Improvement Seminar	To understand the current status and issues of Mazda's quality and learn the Mazda's vision for quality assurance

# QC (Quality Control) Circle Activities

Mazda promotes QC circle activities to encourage members of each workplace to find and solve problems by themselves. QC circle activities, which have been implemented for over 60 years as key activities for the company, have evolved into global activities, being conducted not only inside Mazda but also at its suppliers and dealerships. The All Mazda QC Circle Competition

held every year at the Mazda Head Office is now participated by OC circles of overseas sites, such as those in China, Thailand, and Mexico.



FY March 2022 All Mazda QC Circle Competition President's Award **Quality Engineering** Department (Hofu Plant) Dash Circle

Training Program to Deepen Employees' Understanding of the Mazda Brand

To enable Mazda employees to explain Mazda's products and communicate the concept of Mazda's monotsukuri, or product development and manufacturing, with their own words to Mazda's stakeholders, Mazda offers a training program for employees, designed to help them deepen, through test rides in the latest models, their understanding of not only each product's characteristics but also the spirit and philosophy common in all Mazda products.

# 4. Results of Quality Improvement Initiatives

Mazda's initiatives to improve quality have been highly praised worldwide.

#### FY March 2022 Results

Country	Name of the Study	Vehicle Type and Rankings	Name of Company
	Reliability/Road Test by Consumer Reports	2022 Automobile Brand Ranking: 2nd	Consumer Reports
U.S.	2021 Automotive Performance Execution and Layout (APEAL)*1	CX-5: 3rd among compact SUVs	J. D. Power
Japan	2021 Automotive Performance Execution and Layout (APEAL)*2	CX-3: 3rd among compact SUVs	J. D. Power

- \*1 The J.D. Power 2021 U.S. Automotive Performance Execution and Layout (APEAL) is based on responses from around 110,000 purchasers of new cars. The study was fielded between February and July 2021.
- \*2 The J.D. Power 2021 Japan Automotive Performance Execution and Layout (APEAL) is based on responses from around 20,000 purchasers of new cars. The study was fielded between May and June 2021.

Quality Improvement

**Exploring Partnerships** for "Co-Creation with Others"

# **EXPLORNG PARTNERSHIPS** FOR "CO-CREATION WITH OTHERS"

To ensure that Mazda will continue to thrive and grow, we must cherish and cocreate Mazda's uniqueness together with everyone involved with it. While enhancing alliances with existing partners, Mazda will continue to explore new partnerships—even outside the auto industry.

# Open innovation

Mazda has promoted collaboration with companies, universities and government authorities, aiming to efficiently resolve business issues by obtaining new knowledge from outside the Company and to achieve the sustainable growth of society and businesses (open innovation).

The business environment in which companies operate is becoming increasingly competitive due to stricter environmental and safety regulations, new competitors from other industries, and diversification of the mobility business. Through open innovation,

### Objectives of open innovation

- [Achieve the growth of the Mazda Group]
- · Improve engineering capabilities, improve the brand value, and increase R&D efficiency

[Contribution to society]

· Achieve a sustainable society, advance monotsukuri or product development and manufacturing (share knowledge and skills), and enhance regional empowerment

the Company will achieve the growth of the Mazda Group and contribute to society, thereby fulfilling the Corporate Vision.

# (1) Inter-company collaboration

Mazda has been promoting inter-company collaboration with other automakers and suppliers, etc. to enhance their manufacturing and engineering capabilities and create synergies.

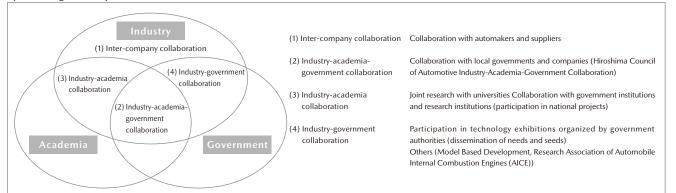
# Collaboration with partners who work with Mazda

While working hard together with its partners to realize our shared dreams, the Company wants to enable them to feel proud of their connection with Mazda, and emotionally attached to the brand. This will turn Mazda into the brand it wants it to be, connected to all stakeholders, including customers, by the strongest of bonds. On the basis of mutual trust with Toyota Motor Corporation and various other companies, the Company plans to promote active collaboration.

[Collaboration examples] For examples related to technologies compatible with alternative fuels, (E P22)

- March 2019: Participated in D-Call Net\*1
- June 2019: Concluded a capital and business partnership agreement with MONET Technologies Inc.\*2
- April 2021: Reached an agreement to jointly develop technical specifications for next-generation vehicle communications devices and to promote the common use of communications
- September 2021: Participated in the Japan Automotive Model-Based Engineering center (JAMBE)\*4
- November 2021: Participated in the Carbon Neutral Electricity Promotion Subcommittee in the Chugoku Region\*5

# System diagram of open innovation



# TOPICS

# Commencing Mass Production at Mazda **Toyota Manufacturing**

In August 2017, Mazda announced a joint plant construction alliance with Toyota Motor Corporation. In January 2022, with the commencement of mass production of CX-50 at Mazda Toyota Manufacturing (MTM), Mazda has established a production and supply system to deliver high quality products in a timely manner. At the ceremony commemorating the commencement of mass production, the President of Mazda expressed his appreciation for the people involved in setting up the new plant, the Huntsville, Alabama community, and the partnership with Toyota Motor Corporation. Mazda

aims to become a cx-50 company that is trusted and chosen by North American customers through sales reforms in North America,\*1 products that meet local needs, and the start of mass production.



\*1 For the details of the sales

reforms in North America, please refer to the Mid-Term Management Plan announced in November 2019.

https://www.mazda.com/en/investors/policy/mid-term/

- \*1 An advanced automatic collision notification system that uses vehicle connectivity technology
- \*2 A company that works to create an environment to promote MaaS (Mobility-as-a-Service), aiming to encourage the widespread use of nextgeneration mobility services and to resolve Japan's social mobility issues. The MONET shareholder structure is as follows: SoftBank Corp., Toyota Motor Corporation, Hino Motors, Ltd., Honda Motor Co., Ltd., Isuzu Motors Limited, Suzuki Motor Corporation, Subaru Corporation, Daihatsu Motor Co., Ltd., and Mazda Motor Corporation.
- \*3 An agreement between Suzuki Motor Corporation, Subaru Corporation, Daihatsu Motor Co., Ltd., Toyota Motor Corporation, and Mazda Motor Corporation that the five companies will jointly develop and share safer and more convenient connected services with the aim of providing such services as early as possible.
- \*4 An organization aimed at spreading Model-Based Develop (MBD) technology widely to the automobile industry nationwide. It was established in order to create the most-advanced development community in the mobility sector, with capabilities to carry optimal and high-grade monotsukuri efficiently and
- \*5 Set up as one of the special subcommittees under the Chugoku Region Carbon Neutrality Promotion Council, established by the Chugoku Economic Federation. The subcommittee carries out discussions to expand the supply and demand of carbon-neutral electricity in the Chugoku Region.

People

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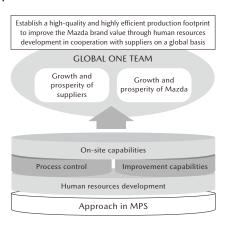
Quality Improvement

**Exploring Partnerships** for "Co-Creation with Others"

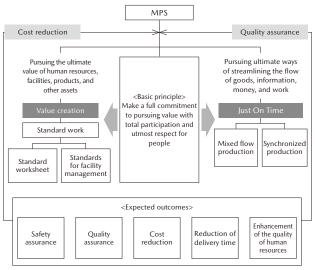
# Implementation of the Autonomy Development Program That Supports the Autonomous Growth of Local Suppliers

Mazda has conducted the Autonomy Development program aimed at promoting the autonomous growth of local suppliers since 2019. This program was created for local suppliers based on the approach adopted in the Global Manufacturing Network (GMN), which has been promoted since 2013 to enable each production site in Japan and overseas to autonomously carry out high-quality and highly efficient production activities that improve the Mazda brand value and to learn from each other at the same time. The program is designed to enhance human resources development as the key to the autonomous growth of local suppliers, for which the Jiba Achieve Best Cost (J-ABC) program as a foregoer was not clearly intended. In the Autonomy Development program, promoters are assigned to play a leading role in promoting understanding of the approach in the MPS through top management training and promoter training. Local suppliers are encouraged to create a system to develop human resources through practical project work toward the companywide operation of the system. Launched at three model suppliers in August 2019, the program is being conducted at a total of 19 suppliers (as of September 2022), with seven Mazda Production System (MPS) Master Trainers appointed from five of those suppliers to lead other supervisors toward full in-house implementation of the program.

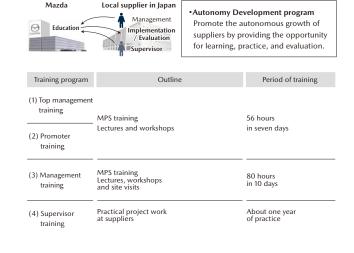
#### Vision to promote MPS



#### MPS flow chart



# Program developed for local suppliers



# Implementation of the Autonomy Development Program at **Overseas Production Sites and Their Local Suppliers**

In the course of transition to the Autonomy Development program in Japan, the Company has adopted the Global Manufacturing Network (GMN) at overseas production sites toward the autonomous growth of local suppliers. The four overseas production sites including AutoAlliance (Thailand) Co., Ltd. (AAT), Changan Mazda Automobile Co., Ltd. (CMA), Changan Mazda Engine Co., Ltd. (CME), and Mazda de Mexico Vehicle Operation (MMVO), engage in activities with 14 local suppliers in total as of September 2022. A total of 19 members from 12 suppliers have been appointed as MPS Master Trainers.

Quality Improvement

Explorng Partnerships for "Co-Creation with Others"

# (2) Industry-academia-government collaboration

Mazda, in establishing the Industry-Academia-Government Collaboration Secretariat, has promoted collaboration with local companies, universities and government authorities. Through collaboration among government, academia and industry, the Company has contributed to the local community in terms of developing new creative technologies and nurturing human resources capable of bringing about innovation.

# Hiroshima Council of Automotive Industry-Academia-Government Collaboration (Hirojiren)\*1

As a company which has its research & development and production facilities mainly in Hiroshima Prefecture, Mazda believes that cooperation with local business and industry is very important. Under this belief, Mazda is collaborating with the Chugoku Bureau of Economy, Trade and Industry, Hiroshima Prefecture, Hiroshima City, Hiroshima Industrial Promotion Organization, and Hiroshima University to support local automobile-related companies and promote innovation and the vitalization of the region. Toward achieving the 2030 Industry-Academia-Government Collaboration Vision established in 2015, various activities have been conducted, such as creating new frameworks to support local businesses,

investigating next-generation automotive societies, and raising awareness in society.

In FY March 2019, a research program proposed by Hiroshima Prefecture was selected to receive a subsidy under the Cabinet Office's Project for Revitalization of Local Universities and Regional Industries.\*2 By establishing the Digital Monozukuri (Manufacturing) Education Research Center at Hiroshima University, Mazda has been conducting R&D activities related to innovative materials technology, data-driven control technology, and smart inspection monitoring. In March 2022, the construction of a material MBR\*3 building and a data-driven technology research building was completed. Mazda will continue to accelerate activities with a view to the social implementation of development technologies in the future.

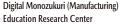
# The 2030 Industry-Academia-Government Collaboration Vision Upheld by Hirojiren

- Transform Hiroshima into a hub that attracts people seeking innovative automotive technologies and dynamic car culture, and a place that continually produces technologies that amaze the world.
- Industry, government and education sectors work together to nurture human resources capable of innovation across all generations, and enliven the region through Monotsukuri (product development and manufacturing).
- Develop Hiroshima's unique Industry-Academia-Government Collaboration into a leading model for "regional empowerment" in Japan, serving also as a benchmark for the rest of the world.

#### Major initiatives

Major initiatives		
	Initiative	Details and results
Assisting elementary schools in providing programming education		Provided support for programming education at elementary schools, which has become compulsory in Japan since FY March 2021, as an initiative to foster the next generation of innovators by assisting elementary schools in Hiroshima Prefecture in offering programming classes following a curriculum focused on the theme "Let's think about the future of our lives and cars." Created and provided learning videos on issues faced by automotive society and efforts to solve them, gave programming classes using crash-free car-shaped robots, and offered preparatory practical skill training to teachers working at the participating schools (with the participation of 1,270 students at 15 schools).
Co-creation and technology exchange with suppliers	Local companies co-creation subcommittee     Industry-academia collaboration subcommittee     Administrative organs collaboration subcommittee	NVH performance assessment of a benchmark vehicle, and research on a lightweight frame structure     Innovation training     Review of the creation of collaboration synergies and the next-generation vision
Efforts for the spread and expansion of next-generation liquid fuel	Demonstration testing of next-generation biofuels     Studies on micro algae	• Started demonstration testing on the use of next-generation biofuels made of used cooking oil and micro algae collected locally for company and public vehicles in 2020 (in collaboration with Euglena Co., Ltd., FamilyMart Co., Ltd., UEDAYUSHI Co., Ltd., and YOSHIKAWAYUSHI Co., Ltd.) ein September 2022, Started the use of next-generation biofuels for buses to transport players of soccer clubs, Sanfrecce Hiroshima And Sanfrecce Hiroshima Regina to their home games, expanding the initiative in the region across different industries.  •In order to realize mass production of fuels that cannot be covered only by used cooking oil, Mazda has been promoting studies on micro algae culture with the support of the Japanese government in collaboration with partners, including the Institute of Microalgal Technology, Japan (IMAT), Hiroshima University, and Tokyo Institute of Technology, which established a research base on Osaki Kamijima Island in 2022.
Research and development of power source for vehicles	Applying the combustion research results to product development	The combustion research results achieved through the Hiroshima University-Mazda joint study course on next-generation automotive technology were utilized in the development of the next-generation Skyactiv-X gasoline engine. Model-Based Development (MBD)** advanced in the field of combustion and catalysts.
Research and development in KANSEI (sensibility) field	Research and development of KANSEI (sensibility) technology and basic research on sensibility in collaboration with Hiroshima University     Interest of the sensibilities with local suppliers     Overall coordination of sensibility activities by relevant local groups	① Completed the Center of Innovation (COI) program led by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (FY March 2014 – FY March 2022). Will promote brain science studies through industry-academia collaboration at the global site of Hiroshima University's Center for Brain, Mind and Kansei Sciences Research (BMK Center) going forward. ② Aims to create and implement "new value for customers" in vehicle cabins by working with suppliers of interior and exterior materials. Currently working on the development of human model hypothesis by focusing on seven "sensibility axes" in the Model Based Development (MBD) by connecting human models and vehicle models related to sensibility in vehicle cabins. ③ Starting in FY March 2022, the eight regional support agencies worked closely together to provide more coherent support by leveraging the expertise of each agency for the projects since it had been difficult for individual agencies to provide support on their own. Also, strengthened the partnership with Hiroshima regional collaboration and support activities by the Hiroshima Kansei (Sensibility) Innovation Promotion Council as a special subcommittee on sensibility under the Hiroshima Council of Automotive Industry-Academia—Covernment Collaboration (Hirojiera).
Human resources development in Model-Based Development (MBD)*1 field	Aiming to enhance the research & development capabilities of local companies, opening basic courses for the development of human resources with MBD/CAE abilities	MBD/CAE training courses were planned and organized for all manufacturing companies, including both auto suppliers and non-automobile industries, in collaboration with the Hiroshima Digital Innovation Center. In the past seven years since F Warch 2017, a cumulative total of 7,079 individuals participated in the training (as of August 2022). Of these training course was certified as a Course on IT-Skill Training to Meet the Era of the Fourth Industrial Revolution by the Ministry of Economy, Trade and Industry.

<sup>\*1</sup> Model Based Development: Development process employing simulation technologies.





# Material MBR Building / Data-Driven Technology Research Building



# Initiative to Develop Human Resources: Implementing Internship Programs

As an effort for human resource training through industry-academia-government collaboration, Mazda provides internships for technical college and university students. Since FY March 2016, Mazda has improved the organizational relationship with the schools to provide a program with different levels that cover students from lower grades up to the doctorate level. This is provided as a place of self-training with a focus on the foundation of innovative human resources, that is, high ambition and practical skills. Students can nurture their own ambition and dreams through the corporate ambition and philosophy, and improve their practical skills through cocreative work and practical training.

Although no internship programs were implemented due to the COVID-19 pandemic in FY March 2021, Mazda resumed some of the internship programs linked with joint research aimed at strengthening collaboration with schools subject to joint research and accelerating research as well as internship programs based on the proposal of themes of work experiences from universities and students as part of the practical online training program in FY March 2022.

# A scene from a FY March 2020 internship program



- \*1 A council that promotes industry-academia-government collaboration. Motivated by the strong hope and enthusiasm for encouraging the manufacturing industry in Hiroshima, its member organization have voluntarily joined Hiroshima Council of Automotive Industry-Academia-Government Collaboration, to consider what manufacturing ought to be and to leverage innovation that will lead to industrial development.
- \*2 The Hiroshima Prefecture Special Committee to Promote the Project for Revitalization of Local Universities and Regional Industries was set up. Chairperson: Hidehiko Yuzaki, Governor of Hiroshima Prefecture Project manager: Kiyotaka Shobuda, Representative Director and Chairman of the Board of Mazda Motor Corporation
- \*3 Model Based Research

Explorng Partnerships for "Co-Creation with Others"

# (3) Industry-academia collaboration

Mazda has a system to efficiently offer advanced training through collaboration with educational institutions such as universities and research institutions.

# Participating in World-Leading National Projects and Joint Studies

Mazda participates in world-leading national projects and joint studies with external research institutions, with the aim of solving social problems facing the automobile industry.

#### **Collaboration with Universities**

Through enhancing collaboration with universities in various fields, Mazda aims to solve a broader range of issues from a wider perspective, thereby contributing to society.

Relevant government institutions/organizations	Project name	Outline
Ministry of Economy, Trade and Industry / New Energy and Industrial Technology Development Organization / Innovative Structural Materials Association	Development of Innovative New Structural Materials Technology https://www.nedo.go.jp/activities/ZZJP_100077.html (Japanese only)	Research and development on structural materials, bonding technology, etc., to fundamentally reduce the weight of automobiles and other transportation equipment, for the purpose of reducing CO <sub>2</sub> emissions
Ministry of Economy, Trade and Industry / New Energy and Industrial Technology Development Organization / Thermal Management Materials and Technology Research Association	Research and development on innovative technology to utilize unused thermal energy https://www.nedo.go.jp/activities/ZZJP_100097.html (Japanese only)	Research on technology to make use unused energy" released as thermal energy into the atmosphere
Ministry of Economy, Trade and Industry / New Energy and Industrial Technology Development Organization / Green Innovation Fund Projects Coordination Office	Green Innovation Fund Projects / Development of Next- Generation Batteries and Next-Generation Motors https://www.nedo.go.jp/news/press/AA5_101535.html (Japanese only)	In addition to improving the performance and reducing costs of storage batteries and motor systems, efforts will be made to improve performance and save resources from the material level and to put advanced recycling technologies into practical use.

<sup>\*1</sup> In Japan, refers to the energy consumed in the living environment, industry, and transportation fields and released as unused heat energy into the atmosphere

University	Collaboration outline	Measures and activities
Hiroshima University	Next-generation automotive technology joint research course (since April 2015)  Mazda has set up five joint research courses with the university (e.g., an internal combustion engine lab, the Algae Energy Creation Laboratory) to find solutions to long-term technological issues and to develop human resources to implement the solutions. Industry-academia collaboration activities have been promoted to enable Hiroshima to lead Japan in Monotsukuri (product development and manufacturing) through human resources development and research and development based on Model-Based Research (MBR) and Model-Based Development (MBD).  Comprehensive collaboration agreement (since February 2011)  Through collaboration in broad areas, from technologies related to research and development and production to social science fields such as planning, management, and marketing, proactively conducting joint research.  Regional empowerment and open innovation  Mazda contributes to regional empowerment and human resources development of the Chugoku region and Hiroshima Prefecture, and to global sustainable development goals (SDGs) through collaboration with Hiroshima University and local communities and participation in national projects, etc.	Opened next-generation automotive technology joint-research course (in April 2015)  • Internal combustion engine laboratory (opened in April 2015)  • Aerodynamics laboratory (opened in July 2016)  • Advanced materials laboratory (opened in October 2016)  • Algae energy creation laboratory (opened in April 2017)(  P22)  • Model based development laboratory (opened in April 2019)  Comprehensive collaboration agreement (since February 2011)  Proactively conducted joint research, from exploring research themes to finding solutions. Also cooperated in examining the ideal form of internship, and decided the method of accepting interns and setting themes for human resources development. Regional empowerment and open innovation  Participated in the Co-Creation Consortiums in the Material Model Based Research Division and the Data-Driven Smart Syster Division of the Digital Monozukuri (Manufacturing) Education Research Center ( P91).
Hiroshima City University	Mazda and Hiroshima City University Faculty of Arts Co-Creation Seminar (since May 2017)  Set up a co-creation seminar with the university, aiming to develop human resources who are capable of creating new manufacturing for a new era, and make Hiroshima a place to generate human resources for manufacturing that Hiroshima can boast to the world.	In FY March 2022, held a co-creation seminar that conducted formative activities on the theme "Eternal Flame" (Miyajima flame holder)."
Kyushu University	Establishment of a joint research department (since August 2017)  Mazda has set up a joint research department with the university to find solutions to long-term technological issues and to develop human resources to implement the solutions.  Inter-organizational collaboration regarding next-generation automotive technologies (since May 2011)  Mazda has been working together with the university to reinforce research and development projects and to encourage academic research and education activities.	Opened the Mazda Next-generation Energy Storage Joint Research Department (in August 2017).  Delivered a special lecture on introduction to automotive science in the Department of Automotive Science of the Graduate Schoo of Integrated Frontier Sciences (in April 2021).
Kindai University	Agreement concerning comprehensive research collaboration (since December 2012)  Cooperating in bolstering cutting-edge research development and in strengthening the technological capabilities of local industries.	Research Collaboration Promotion Committee  • Held meetings to discuss the progress of joint research projects and specific measures to strengthen cooperation.
University of Hyogo	Concluded an agreement on joint research using Spring-8, a large synchrotron radiation facility (May 2016)  Cooperating in the development of innovative materials and product development technologies using radiation analysis techniques.	Set up an experimental station dedicated to research into applications of advanced analytical techniques.
Tokyo Institute of Technology	Mazda's participation in Tokyo Tech's Super Smart Society Promotion Consortium (from October 2018)  In the consortium, industry, government and academia collaborate in accelerating the development of both essential technologies and human resources that are necessary to realize a super smart society (Society 5.0).  Mazda has contributed to integrating physical-space technology and cyberspace technology toward a connection between people, the earth and society and to providing education about a combination of the most advanced sciences and technologies, including quantum science and artificial intelligence.  Membership system (from April 2020)  In April 2020, Tokyo Tech's Industry Liaison Member system shifted to the Membership system. Mazda pursues comprehensive information sharing and collaboration with the institute.  Comprehensive Security Protection Agreement (from October 2016)  The agreement defines comprehensive security protection rules that apply to technical consultation and other occasions.  Lecture on automotive technology  Along with Toyota Motor Corporation and Honda Motor Co., Ltd., Mazda has been commissioned to teach automotive technology courses at the School of Engineering every three years on a rotating basis.	Mazda's participation in Tokyo Tech's Super Smart Society Promotion Consortium (from October 2018)  • Participated in matching workshops for exchange of information about research seeds and companies' needs, held twice a year to promote the matching of joint research projects  • Collected and disseminated the latest information on relevant technologies through free symposiums and seminars  • Conducted joint research utilizing big data, machine learning, etc. (from FY March 2021)  • Introduced and arranged internships  Membership system (from April 2020)  • Assisted in materializing joint research projects, held free seminars, etc.  Comprehensive Security Protection Agreement (from October 2016)  • Simplified the procedure for security protection during technical consultation  Lecture on automotive technology  • Structured and implemented the lecture based on the concept of Mazda's Monotsukuri

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Quality Improvement

Explorng Partnerships for "Co-Creation with Others"

# (4) Industry-government collaboration

Mazda efficiently promotes cutting-edge joint research and shares needs and seeds with suppliers through collaboration with government authorities.

# Business Matching Meetings for Suppliers and Universities (Collaboration with Administrative Organs)

Mazda organizes business-matching meetings in collaboration with the local administrative organs, in which information on technological needs and seeds was exchanged between suppliers, universities and public research institutes.

# FY March 2022 Activity

Activity Organized an event to share information about Mazda's needs with the Kyushu Automotive and Motorcycle Industry Promotion Council and held the online event "Kyushu New Technology and New Methodology Exhibition in Mazda," with the participation of companies in the Kyushu Region.

# Promotion of Model Distribution in the Automotive Industry

Mazda has participated in the Study Group for Ideal Approaches to Model Utilization in the Automobile Industry organized by the Ministry of Economy, Trade and Industry since its launch in November 2015. The Company works on initiatives with other automakers and parts manufacturers to spread Model Based Development (MBD), a development technique to achieve the advanced development and performance assessment process for automobiles through virtual simulation.

In April 2018, the Company agreed on the Enrichment of SURIAWASE 2.0\*1 for the Automobile Industry (an industryacademia-government joint strategy project policy), and announced that the Company would continue with the initiatives to enrich MBD and harmonization areas, etc. In addition, Mazda formulated the guidelines for smoothly promoting model distribution between companies, based on the results of activities implemented by the study group thus far. In December 2018, the study group and ProSTEP iVip,\*2 an international standardization organization, jointly announced these guidelines to the world, as international rules originating from Japan. This study group concluded its activities in March 2021, and in order to carry on the results of the study, ten companies became operating members, and the "Japan Automotive Model-Based Engineering center (JAMBE)" was established in September 2021 to spread MBD technology widely to the automobile industry nationwide. Mazda is also participating as one of the operating member companies, and it takes full advantage of its knowledge of virtual simulation and unique MBD that have been refined through Mazda Digital Innovation (MDI) to contribute to activities for increasing the global competitiveness of the Japanese automotive industry.

# Basic and Applied Research on Technologies for Internal Combustion Engines and Cleaner Exhaust Emissions

Mazda participates in the Research Association of Automobile Internal Combustion Engines (AICE\*3), a new joint research organization in the Japanese automobile industry. AICE was established on April 1, 2014, with the support of the Ministry of Economy, Trade and Industry to enable automobile manufacturers to conduct basic and applied studies jointly with universities and research institutions on themes common to automobile manufacturers, and to use the research results to accelerate their in-house development activities. AICE is currently conducting basic research under a research scenario aimed at achieving carbon neutrality by 2050. Taking advantage of its participation in AICE, Mazda is promoting its development of technologies for internal combustion engines and cleaner exhaust gases, with a view to achieving improved fuel economy and reduced exhaust emissions. Beginning in April 2019, the Company has expanded the scope of its development efforts to include mechanical resistance reduction and heat management technologies.

<sup>\*1</sup> SURIAWASE 2.0 is an initiative to enhance the harmonization of development processes by taking advantage of an MBD process that uses virtual simulations instead of physical machines across entire supply chains in Japan. A Study Group for Ideal Approaches to Model Utilization in the Automobile Industry was organized in November 2015 by the Ministry of Economy, Trade and Industry, to further enhance the international competitiveness of the automotive industry.

<sup>\*2</sup> An international standardization organization based in Germany. Its membership comprises 185 companies, primarily automakers in Europe, the United States and Japan, as well as airlines and software companies. ProSTEP iVip works to develop and promote international rules regarding CAD and MBD.

<sup>\*3</sup> Research Association of Automobile Internal Combustion Engines, participated in by nine Japanese auto manufacturers and two organizations (as of April 2021).

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**CHAPTER** 



# MANAGEMENT

Mazda has established management systems to fulfill its social responsibility throughout the Mazda Group and the entire supply chain.

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# **Corporate Governance Framework**

#### General meeting of shareholders Selection/dismissal State opinions Selection/dismissal Selection/dismissal ⑤Officer Lineup & Advice/report 1 Board of Directors Remuneration Advisory Committee 2 Audit & Supervisory Committee Representative Directors Advice Directors (Audit & Supervisory Audit Directors Committee members) Report Supervise ECM and other president advisory Cooperate (4 out of 6 are outside directors) (excluding members of Audit & Supervisory Committee committee/organization (6 out of 16 are outside directors) Report Supervise Committees\* Audit & Supervisory Cooperate Report Committee Department Group companies Audit Internal audit dept Dept. managers Employees

\* Risk & Compliance Committee, company-wide information security meetings, etc.

# MANAGEMENT

# Corporate Governance

Mazda respects the purport of the Corporate Governance Code formulated by the Tokyo Stock Exchange and, while working to build a good relationship with its stakeholders, including shareholders, customers, suppliers, the local community and its employees, the Company strives to sustain growth and enhance its corporate value over the medium and long term through transparent, fair, prompt and decisive decision-making and to continue to enhance its corporate governance.

The Company's surrounding business environment is undergoing rapid changes. In order to enable faster business decision-making, further enhance discussion of management strategies and strengthen supervisory functions of Board of Directors' meetings, Mazda has adopted a Company with an Audit & Supervisory Committees structure.

#### For detailed information, please see the following.

# Corporate Governance Report

# 1 Board of Directors

The Company's Board of Directors deliberates and makes decisions on items related to the execution of important business, such as management strategy and basic management policies, and supervises the execution of individual directors' duties. In addition, in order to facilitate quick and flexible decision-making, based on the Articles of Incorporation, a substantial part of decision-making regarding the execution of important business will be delegated to management, and executive directors including and below the president to whom authority has been delegated based on the Company's rules of administrative authority will make decisions regarding these matters. The board is made up of 16 directors, six of whom are highly independent outside directors.

# ②Audit & Supervisory Committee

The Company's Audit & Supervisory Committee audits the Board of Directors' decision-making process and business execution through the execution of voting rights at Board of Directors' meetings and the execution of its right to state opinions on the personnel changes and remuneration of directors (excluding directors who are Audit & Supervisory Committee Members) at the general meeting of shareholders. The Audit & Supervisory Committee is made up of six members, four of whom are highly independent outside directors. For smooth auditing, two people have been appointed as full-time members of the Audit & Supervisory Committee.

# **3**Accounting Auditor

Accounting audits are conducted by KPMG AZSA LLC.

#### **4** Executive Officer

Mazda has also introduced an executive officer system. By separating execution and management, the effectiveness of the oversight of the Board of Directors is enhanced, and decision-making is speeded up through expanded debate by the Board of Directors and by delegating authority to executive officers. In this way, the Company is working to further managerial efficiency.

# **⑤**Officer Lineup & Remuneration Advisory Committee

The Company established the Officer Lineup & Remuneration Advisory Committee, made up of two representative directors and six outside directors and chaired by a representative director, as an advisory body to the Board of Directors. The committee reports to the Board of Directors the results of its deliberation on matters such as officer lineup and policies regarding the selection and training of directors, as well as remuneration payment policies and the remuneration system and process based on those policies, which contribute to the Company's sustainable growth and raising of corporate value in the medium and long term.

The policies and procedures for the nomination, appointment and dismissal of officers and for determining their remuneration are disclosed in the Corporate Governance Report.

Stakeholder Engagement

# **Skills Matrix of the Board of Directors**

As the business environment surrounding the Company rapidly changes, Mazda believes that the Board of Directors must have an appropriate balance in knowledge, experience and competence and also be diverse in composition to effectively fulfill their roles and responsibilities for the sustainable growth and improvement in corporate value over the medium to long term.

# **Organizational Affiliation**

As of the end of June 2022

	Number	16 (Inside Directors: 10, Outside Directors: 6), including 2 female directors						
Board of Directors	Ratio of Outside Directors	37.5%						
	Ratio of Female Directors	12.5%						
Audit & Supervisory Committee	Number	6 (Inside Directors: 2, Outside Directors: 4), including 1 female director						
Officer Lineup & Remuneration	Number	8 (Inside Directors: 2, Outside Directors: 6), including 2 female directo						
Advisory Committee	Ratio of Outside Directors	75.0%						

					War and the second												
	Name and attribute*1	Kiyotaka Shobuda 63; male	Akira Marumoto 64; male	Mitsuru Ono 63; male	Akira Koga 60; male	Masahiro Moro 61; male	Yasuhiro Aoyama 56; male	Ichiro Hirose 61; male	Takeshi Mukai 60; male	Kiyoshi Sato 66; male Independent Director Outside Director	Michiko Ogawa 59; female Independent Director Outside Director	Masatoshi Maruyama 65; male	Nobuhiko Watabe 63; male	Ichiro Sakai 80; male Independent Director Outside Director	Akira Kitamura 71; male Independent Director Outside Director	Hiroko Shibasaki 68; female Independent Director Outside Director	Masato Sugimori 65; male Independent Director Outside Director
	Job title	Representative Director and Chairman of the Board	Representative Director, President and Chief Executive Officer (CEO)	Director and Senior Managing Executive Officer	Director	Director	Director Audit & Supervisory Committee Member (full-time)	Director Audit & Supervisory Committee Member (full-time)	Director Audit & Supervisory Committee Member	Director Audit & Supervisory Committee Member	Director Audit & Supervisory Committee Member	Director Audit & Supervisory Committee Member					
izational iation*²	Board of Directors	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Audit & Supervisory Committee											•	•	•	•	•	•
Orgar Affil	Officer Lineup & Remuneration Advisory Committee	•	•							•	•			•	•	•	•
	Management (executive experience)	•	•			•	•			•			•		•		
	Global business	•	•	•	•	•	•	•	•	•		•	•				•
expertise*3	Product planning/R&D		•		•		•	•			•						
Fields of experience and expe	Manufacturing/Purchasing/ Quality	•	•						•			•					
	Brand/Marketing/Sales	•	•			•	•			•	•		•			•	
	ESG	•	•	•		•		•	•	•	•	•		•	•		•
	IT/DX				•					•							•
	HR management/ Personnel development			•		•								•		•	
	Legal/Risk management			•		•								•			•
	Finance/Accounting			•	•								•		•		•

<sup>\*1</sup> The age is as of June 24, 2022.

<sup>\*2 •</sup> in the "Organizational affiliation" column shows the person's status as chairperson.

<sup>\*3</sup> The "Fields of experience and expertise" column only shows each person's major fields of experience and expertise, instead of providing complete information.

Stakeholder Engagement

# **Support System for Outside Directors**

Mazda provides explanations of matters to be brought before the Board of Directors as necessary so that outside directors can freely state their opinions at board meetings and so that outside directors can easily participate in decision-making. The Company also arranges for outside officers to interview executive officers and provides opportunities for them to inspect facilities and participate in events both inside and outside the Company.

Audit & Supervisory Committee Members (full-time) offer observations based on information they have acquired or opinions they have formed through their attendance at important internal meetings or through their audit activities. The departments concerned work together to provide information based on the opinions of the outside directors and to support them.

# Analysis and Evaluation of the Effectiveness of the Board of Directors

Mazda analyzes and evaluates the effectiveness of the Board of Directors in order to steadily advance measures for the further enhancement of the board's efficiency. In this initiative, based on a survey prepared by the board's secretariat, all of the directors evaluate the board's effectiveness. After the results are compiled by the secretariat, an analysis of the current situation is shared at a board meeting, and the ideal to be pursued and improvements are discussed.

In FY March 2022, the survey primarily covered the constitution of the Board of Directors, debate on the business strategy, debate on compliance and internal control, the provision of information (the amount of information, materials, explanations, and support for outside directors), and involvement in the debate. Additionally, results were inspected regarding the objectives of the transition to a Company with an Audit & Supervisory Committee, namely improved management decision-making speed, enhanced deliberation among the Board of Directors, and the strengthened supervisory function of the Board of Directors. Consequently, it was found that members of the Board of Directors were properly involved in determining the Company's business strategy and share an understanding of its content, that outside directors and corporate auditors expressed their opinions from an independent perspective after gaining an understanding of the Company's situation by receiving explanations of resolutions in advance and other forms of support, and that the oversight function of the execution of operations was ensured.

Additionally, it was confirmed that the matters were thoroughly discussed by securing ample time, that decision-making speed had been improved by delegating the Board of Directors' authorities to representative directors within an appropriate scope based on the Company's Articles of Incorporation. On the other hand, to achieve full-scale growth steadily in the future as the surrounding business environment grows more severe, it is necessary to further enhance the deliberation at the Board of Directors and strengthen the supervisory function. With this understanding, all directors confirmed their commitment to continue strengthening the monitoring of key business areas including the management strategy and enhancing deliberations on risks and profitability.

The Company will analyze and evaluate the effectiveness of the Board of Directors every year and continue initiatives for constant improvement to raise corporate value in the medium to long term.

Stakeholder Engagement

# **Cooperation among Parties Responsible for Auditing**

Audit & Supervisory Board members, the auditing company, and Mazda's auditing department hold meetings on a regular basis to deepen their mutual understanding and improve the quality of auditing by exchanging information and opinions on audit plans and results.

# **Group Governance**

To achieve comprehensive development of business, sustainable and stable growth, and proper governance as a group, Mazda has established and disseminated the Group Company Management Regulations to all its Group companies.

In the Mazda Group, each Group company has established a corporate governance framework in accordance with the Regulations as well as the laws and regulations of the relevant country, with the aim of enhancing cooperation between Mazda and the Group companies.

# Group companies in Japan

Group companies in Japan set the corporate auditors who audit directors' execution of their duties. Through the Group Audit & Supervisory Board Members' Meetings attended by Mazda's Audit & Supervisory Committee members, the Audit & Supervisory Board members of the Group's large companies and by having staff from Mazda's internal auditing-related department concurrently serve as auditors of the Group companies, Mazda aims not only to reinforce each Group company's governance framework but also to strengthen ties between Mazda and its Group companies.

# **Overseas Group companies**

Many overseas Group companies hold meetings of the Audit Committee.\*1 Members participating in these meetings are executives and internal auditing-related departments of each overseas Group company, Mazda's executives and internal auditing-related department, and the department in charge of each Group company. They enhance each Group company's internal control by discussing and exchanging opinions on activities related to internal control.

Mazda further provides appropriate guidance and support to other overseas Group companies, to improve their internal control-related initiatives.

# **Internal Auditing**

The internal auditing departments of Mazda and its Group companies collaboratively conduct internal audits for the purpose of ensuring sound and efficient management. In June 2020, the Mazda Group Basic Internal Audit Regulations were established, which define basic and common matters concerning internal auditing, such as the role, mission, organizational position, and scope of activities. In accordance with the Regulations, Mazda's internal auditing department holds regular meetings with and training sessions online for the internal auditing departments of Group companies in Japan and overseas. In addition, the department also conducts various tasks, such as approval of the internal audit plans of Group companies, receipt of their internal audit reports and follow-up of their improvement activities, thereby ensuring consistency of auditing policies across the Group and gathering audit-related information.

Also, Mazda's internal auditing department evaluates the functions of auditing departments of Group companies and supports their activities with the aim of strengthening internal auditing departments of respective Group companies.

The Mazda's internal auditing department is staffed with those qualified as Certified Internal Auditor (CIA), Certified Information System Auditor (CISA), etc. Members of the department are continuously encouraged to improve their auditing skills, acquire specialized qualifications, and participate in outside training programs and internal workshops.

#### Internal auditing in Group companies

OMajor Group companies (North America, Europe, China, Thailand, Australia, etc.): The internal auditing department of each company conducts audits and reports the results to Mazda. To ensure high auditing quality, Mazda's auditing department conducts audits advises on annual audit plans and audit results, and provides information related to auditing, and various other supports.

Other Group companies in Japan and overseas, and Mazda: Mazda's auditing department conducts audits.

<sup>\*1</sup> Committees are set and operated independently for each overseas group company for the purpose of gathering information and exchanging opinions on internal control.

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# **System Auditing**

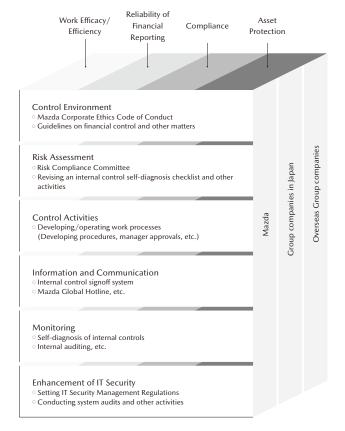
The Mazda's auditing department and the internal auditing departments of overseas Group companies conduct audits on overall IT control concerning financial reports and IT security for individual operations and systems, with the aim of reducing IT-related risks.

# **Internal Controls**

Mazda has established the Mazda Corporate Ethics Code of Conduct (P104), which states action guidelines for employees, and other guidelines on financial control and other matters. Based on these guidelines, each department develops rules, procedures, manuals, etc. to promote the establishment of internal control.

In the Mazda Group, in line with the affiliates' administration rules, each Group company is supported in employee education and system construction by Mazda's related department. All Group companies thus collaborate with each other in facilitating the establishment of Group-wide internal control.

#### Mazda Internal Controls



# **Internal Control Self-Diagnosis**

In 1998 Mazda initiated a system of self-diagnosis of internal controls for the purpose of disseminating awareness concerning internal controls. Currently, self-diagnosis is carried out at almost all Mazda Group companies in Japan and overseas. This system enables the supervisors and persons in charge of actually developing and operating the processes and mechanisms, not third parties such as internal auditing departments or auditing companies, to evaluate internal controls using the checklist. Through this system, Mazda's departments and Mazda Group companies find inadequacies in internal controls and take actions to improve them.

Mazda's relevant department reviews the checklist and makes necessary revisions while ensuring that any newly found risks will be reflected in the checklist so as to always ensure proper and effective diagnosis.

# Implementation of Internal Controls Signoff System

From FY March 2007 Mazda has introduced the signoff system, in which top management of each department and each Group company of Mazda ensures internal controls by "signing off" after confirming the status and issues of its organization's internal controls through auditing and self-diagnosis. The Mazda Internal Controls Report is prepared based on the contents of these signoffs. From FY March 2010, for the purpose of early discovery of inadequacies at each department or Group company, a new system of quarterly reporting has been implemented whereby inadequacies found are reported to the Mazda's auditing department on a quarterly basis. For each inadequacy reported, the deadline and responsible person for improvement are specified to facilitate speedy improvement.

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# Risk Management

Mazda makes continuous efforts to identify and reduce various internal and external risks in accordance with the Basic Policy on Risk Management, Risk Management Regulations, and other related internal regulations, so as to ensure continuous and stable progress of business activities.

Among the risks identified, considering the level of importance, individual business risks are managed by the department in charge of that business area while companywide risks are handled by departments that carry out business on a company-wide basis. These departments manage the risks appropriately, following the PDCA cycle.

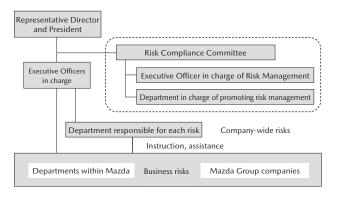
In the event of an emergency, such as a natural disaster or situation that creates serious managerial consequences, Mazda takes appropriate measures in reference to its internal regulations, including establishing an emergency response taskforce when necessary.

The Risk Compliance Committee reviewed the activities implemented under the medium-term action plan up to FY March 2020 and established a new medium-term action plan (2020-2024) in FY March 2021. In line with the new action plan, the committee has worked to further clarify the risks in the Company and its Group companies and to strengthen risk management. The committee has also ascertained the progress of these activities on a half-yearly basis. Its initiatives are periodically reported to the Board of Directors.

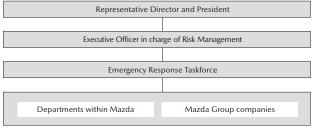
The Risk Compliance Committee's activities in FY March 2022 included confirming the risks identified by each division and the progress of measures taken to address those risks, and it selected the common key issues to be addressed across the Mazda Group. Then, the committee took measures to deal with these key issues. In addition, to enhance each Group company's risk management activities, the committee checked the actual status of each company's activities in light of the rules established in the previous year and planned necessary improvements, which are currently under way.

Mazda is presently upgrading and expanding its business continuity plan (BCP) to avoid suspension of business that would extensively impact society. In response to the spread of COVID-19, Mazda holds regular meetings under the direct control of top management to discuss and address various issues, including infection prevention and production continuity.

# **Risk Management Structure in Normal Times**



# **Emergency Risk Management Structure**



For incidents that fall outside the scope of existing risk management organizations and require a coordinated interdepartmental response, the executive officer in charge of risk management will consult with the president, establish an emergency response taskforce, and appoint a general manager for this taskforce.

# **Basic Policies of Risk Management**

# Concept

With the advance of IT and globalization and the growing awareness of environmental issues and compliance with the law, the environment surrounding the company's activities is rapidly changing, and it can be expected to change even further in the future. In order to realize this "Corporate Vision," it is necessary to specifically address these changes in the environment and minimize the potential risks that threaten to interfere with the continuous, safe furtherance of our business activities. The company must also create a system that will allow a rapid recovery when abnormal or emergency circumstances occur and gain the strong trust from our customers, shareholders and the community. The entire Mazda Group shall address risk management and work toward becoming a company that can truly be trusted.

#### Goals

In the following ways, Mazda shall strive for Enhancement of Corporate Value and Harmony with the Community thereby realizing the company's "Corporate Vision."

- 1. Ensure the health and safety of all those who make up the Mazda Group as well as local citizens
- 2. Maintain and increase the trust from the community
- 3. Make appropriate use of the tangible and intangible corporate assets of the Mazda Group
- 4. Secure interests of the stakeholders, earn their trust and meet their expectations
- Support the functions of the organization and seek a rapid restoration of business activities at the time of abnormal circumstances or emergencies

#### **Action Plan**

All corporate officers and all employees shall have responsibility for carrying out risk management based on the awareness that risk exists in every facet of business activities. Risk management shall be addressed from all angles at every stage of operations.

#### Methods

Risk management activities shall be divided into two types:

- Continuous efforts to prevent and mitigate potential risks existing in everyday duties and the promotion of the proactive use of these activities (risk management)
- 2. Minimization of damage resulting from crisis and rapid recovery (crisis management)

# **Scope of Application**

- 1. Shall include the control of all types of business risk
- 2. Shall apply to the entire Mazda Group including subsidiaries and related companies

Stakeholder Engagement

# **Response to Accidents and Other Emergencies**

Mazda has been continuously implementing measures to respond to natural disasters in preparation for major earthquakes such as the expected Nankai Trough Earthquake and tsunamis associated with them. Examples of such measures include not only "hardware" measures, such as quake-proofing buildings and facilities and raising embankments, but also the systematic development of "software" measures by introducing an employee safety confirmation system, organizing self-disaster-defense teams, and conducting training for the operations of these systems.

In addition, in preparation of large-scale disasters, the Company holds disaster drills jointly with fire authorities. Since FY March 2021, in addition to simultaneous evacuation drills. the Company has been conducting practical disaster drills to prevent the spread of damage to neighboring areas due to a secondary disaster, by incorporating disaster simulation exercises to respond to various emergency situations, such as the leakage of high-pressure gas or hazardous substances, as well as practical training.

# **Information Security**

Mazda manages and protects personal information and other important information appropriately based on the established information management policies and internal regulations. The Company also checks the implementation status of information security measures and the management system each year, so as to ensure information security. As for the system to promote information security, a company-wide information security officer is appointed from directors, and when cyber security risks are recognized across the entire supply chain, the Information Security Committee\*1 under his/her initiative submits improvement plans to the Executive Committee Meeting and continuously implements the plan following deliberations. In addition, Mazda strives to enhance the quality of cyber security measures for its products by participating in the Japan and U.S. Auto-ISAC\*2 and responding to information on security incidents detected within the industry as well as best practices. The Company also complies with the cyber security standards enforced in July 2022.

To raise employees' awareness about information security, Mazda requires its employees to execute training on the management of confidential information, protection of personal information, and IT security. When newly joining the Company, management of confidential information and personal information protection are covered in the introduction programs, while e-learning is used for IT security training. Other continuous education efforts are also available, including an Intranet site dedicated to information and knowledge on information security. For companies in the Mazda Group, Mazda provides guidelines and educational tools regarding information security, realizing a group-wide effort to ensure information security.

<sup>\*1</sup> An organization that manages company-wide information security on a global basis. The committee regularly holds company-wide information security meetings as the decision-making body regarding information security issues on a company-wide level.

<sup>\*2</sup> Stands for the Automotive Information Sharing & Analysis Center. In addition to participating in the U.S Auto-ISAC, Mazda has participated in the establishment and operation of the Auto-ISAC of Japan (J-Auto-ISAC).

Stakeholder Engagement

# **Protection of Personal Information**

Mazda rigorously protects personal information in line with its own Personal Information Protection Policy.

Handling rules are set out in order to ensure appropriate management of personal information, regular examination of management records for retained personal data is taken, and management statuses are checked once a year. In cases in which the handling of personal information is entrusted to outside parties, such contractors are carefully selected based on a checklist which determined the necessary items including security management. The Mazda Call Center responds to customers who wish to inquire about the Company's handling of personal information and those who request disclosure regarding privacy issues.

In FY March 2022, as in the previous year, Mazda reviewed the rules and mechanisms to enable more proper management of personal information, in view of the establishment and revision of laws and regulations concerning personal information in each country.

# **Personal Information Protection Policy**

The Company endeavors to adequately protect the personal information of its customers, business partners, employees and other parties in accordance with laws and regulations on the protection of personal information and the basic guidelines described below.

- 1. Mazda shall establish Regulations for the Protection of Personal Information, to be adhered to by all parties that handle personal information.
- 2. Mazda shall put in place a presiding supervisor for the management of personal information, and provide corresponding educational activities for its employees (directors, employees, part-time workers, temporary agency workers, etc.) and other related persons.
- 3. Mazda shall acquire personal information through appropriate means. When collecting personal information, Mazda shall either inform that person of the purposes of use and its contact address, or announce such information by a wellrecognized method or methods (such as through a website).
- 4. At Mazda, personal information shall only be utilized by those who have been authorized to manage such data, to the extent disclosed to the parties concerned or publicly announced, and within the scope necessary.
- 5. Mazda shall take all necessary measures required by law, including obtaining consent from the relevant party, for the provision of such personal information to a third party.
- 6. If Mazda assigns a third party to any business relating to personal information, the Company shall make an appropriate selection of the assignee for such business, and take all necessary measures required by law, such as conducting necessary and adequate supervision.
- 7. If Mazda receives any claim for disclosure, correction, suspension, or elimination of all or any part of the personal information retained by the Company, Mazda shall react appropriately in accordance with laws after the Company confirms that said claim was made by the relevant party.
- 8. Mazda shall ensure reasonable security measures, and continuously improve such measures to prevent illegal access, loss, destruction, falsification, and/or leakage of personal information.

# **Basic Policy on Intellectual Property**

Mazda's overall vision for intellectual property is to use intellectual property as a management resource in support of its business management and enterprise activities, based on respect for its own and others' intellectual property.

Based on this vision, Mazda has established an Intellectual Property Committee to discuss and decide key items regarding intellectual property. The committee is comprised of division general managers from related divisions and chaired by an executive officer responsible for intellectual property issues.

Also, the invention incentive system increases motivation for inventions among employees working at the forefront of research and development.

For its Group companies in Japan and overseas, Mazda supports them in developing/implementing policies and establishing systems for handling intellectual property, with the aim of enhancing the intellectual property management functions of the entire Mazda Group.

#### Invention and device awards

Once a year on Mazda's foundation day, certificates of commendation, commemorative medals, prize money, etc. are presented to the selected recipients through the manager of their department. No limit is set for the amount of prize money, so that inventors are fully rewarded for their contribution.

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# Protection of Intellectual Property and Intellectual Property **Risk Management**

Mazda's dedicated Intellectual Property Department leads Company activities regarding intellectual properties so as not to infringe upon the intellectual property rights of other companies, and conducts strategic activities aimed at fiercely protecting, accumulating, and making optimal use of the intellectual properties generated through these in-house activities.

- 1. Globally obtains rights concerning intellectual properties created by its business activities, including new technologies, markings, model names and vehicle designs, and protects Mazda technologies, designs and the Mazda brand.
- 2. Takes steps to exhaustively uncover as well as prevent and solve any problems regarding intellectual properties that may obstruct business activities in each domain, such as infringement of other parties' patent rights; trademark rights, design rights and copyrights; and violations of the Unfair Competition Prevention Act.

In May 2020, Mazda Motor Corporation joined the IP Open Access Declaration Against Covid-19 to cooperate in preventing the spread of the novel coronavirus in terms of intellectual property activities. The declaration states that for a fixed period of time, all participating companies and research institutions will not exercise any intellectual property rights, such as patent rights, utility model rights, design rights and/or copyrights, for acts aimed at ending the spread of Covid-19. This is in order to allow for prompt development, manufacturing and provision of therapeutic drugs, vaccines, medical equipment, infection control products, etc. that can prevent the spread of the novel coronavirus pandemic.

# **Awareness-Raising Activities**

The Mazda Corporate Ethics Code of Conduct (F P104) stipulates "Protect confidential information. Never infringe on any intellectual property rights, whether belonging to Mazda or another party," so as to clearly convey a relevant code of conduct to all employees and guide their behavior. The Intellectual Property Department is responsible for the overall management of intellectual property, and also regularly conducts awarenessraising activities to instill respect for intellectual property law. Based on periodic review of risks according to changes in the external environment, the Department offers awareness-raising programs tailored to the management level and position of each employee and executive in Mazda and each Mazda Group company at home and overseas. In response to an increase in communication through social media, Mazda has recently provided education with particular focus on intellectual property risks in the internet environment, thereby promoting information sharing and awareness raising to prevent intellectual-propertyrelated problems.

### Examples of awareness-raising activities

- Offering webinars and e-learning programs on intellectual property risks
- · Preparing manuals for creating and publishing materials
- Developing Mazda-Shared Image-Collection, which collects communication materials that involve no risks of intellectual property infringements

# **Brand Protection (Measures against Imitation Products)**

To protect customers, Mazda implements activities to eliminate the risk posed to customers by the purchase of imitation products. These activities are aimed at supporting and improving the strength of the Mazda brand and its trustworthiness, as a brand that continues to be relied on by customers. [Details of Activities]

- 1. Mazda develops and implements its own measures against the sale of imitation products.
- 2. Mazda actively participates in programs organized by the private and public sectors against imitations.
- 3. To promote brand protection activities in countries and regions that are major sources of imitation products, Mazda implements constructive and systematic measures through local related companies and in close cooperation with government and other agencies tasked with exposing imitation products.

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# Compliance

At Mazda the concept of compliance applies not only to laws and regulations, but also includes adherence to other rules such as internal guidelines and societal norms and expectations. Business operations are conducted in accordance with the Mazda Corporate Ethics Code of Conduct to ensure fair and honest practice. As part of its efforts to prevent corruption, Mazda presents its basic ideas on anti-corruption in the Guidelines on the Mazda Corporate Ethics Code of Conduct. Also, to promote highly transparent and fair transactions with all partner companies, Mazda has established the Guidelines on Entertainment and Gifts, which lays out the policy for prohibiting bribery. These guidelines are revised as needed to cope with changes in the social environment, social needs, etc. Overseas as well, Mazda not only complies with international regulations and the laws of each country and region, but also respects local history, culture, and customs. There were no fines or other incidents related to bribery in FY March 2022.

The Global Employee Engagement Survey, which includes a questionnaire concerning compliance, is conducted to check the employees' degree of understanding of compliance.

# Outline of the Mazda Corporate Ethics Code of Conduct

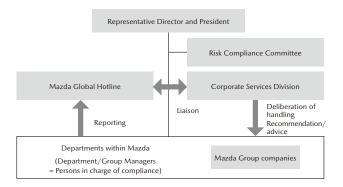
# Five principles of "faithful" behavior

- 1. To comply with laws and regulations, company rules, common sense and sound practice in international society.
- 2. To be fair and even-handed.
- 3. To fulfill the company's social responsibilities.
- 4. To fulfill your own duties truthfully.
- 5. To be honest.

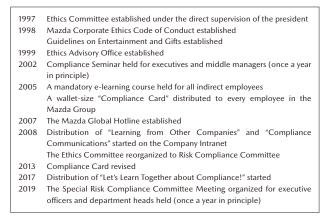
#### Guidelines

- Comply with laws and regulations and the company rules. In a situation where such rules are not clearly defined, make a judgment considering their spirit.
- Treat employees, customers and clients fairly and justly. Do not obtain from or give anybody an unjust benefit and/or favor taking advantage of your business position.
- 3. Make distinctions between public and private affairs, and never pocket or abuse the company assets.
- Keep confidential information. Never infringe on any intellectual property rights, whether it belongs to Mazda or another party.
- 5. Seek to develop, manufacture and sell products taking human safety and the environment into consideration.
- 6. Act with a view to seeking sound profit.
- 7. Respect human rights and human dignity.
- 8. State the truth honestly and timely in reporting internally and  $\!\!/$  or to the public.

# **Compliance Promotion System**



# **Overview of Compliance Activities**



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# Mazda Global Hotline

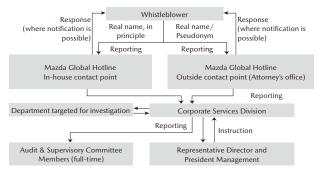
The Company has established the Mazda Global Hotline, as an in-house system to receive reports regarding non-compliance and other issues. With its contact points set up both inside the Company and outside (attorney's office), the hotline enables Mazda Group employees to choose a contact point to submit their reports to either under their real names or anonymously. The content of these reports is carefully handled, and the whistleblowers' confidentiality is completely protected. In so doing, Mazda takes sufficient follow-up measures to ensure that those who make reports to the hotline or who cooperate in an investigation will not be subject to unfavorable treatment. The Company has distributed the Compliance Card with the contact information to all employees on the occasion of compliance education. As part of its efforts to make the hotline better known to everyone, Mazda also puts up posters and implements e-learning programs.

In FY March 2022, in preparation for the revised Whistleblower Protection Act coming into effect in 2022, Mazda reviewed its relevant regulations and operation procedures to be followed by staff in charge of contact points.

The Mazda Global Hotline is also introduced to suppliers so that they can report the questions arising from any transaction.

The hotline received a total of 54 reports, including consultation, in FY March 2022. The major contents of the reports were about harassment and other labor-related problems, working hours management, and suspected violations of the Mazda working regulations. Of all the reports received, 25 were regarding Mazda, 27 were regarding Group companies, and 2 were regarding unknown companies.

#### Mazda Global Hotline



# **Compliance Education**

Mazda believes that mere adherence to laws and regulations is not enough; it is important to have each and every employee understand the essence of such laws and regulations and to practice integrity.

In line with the changes in the social environment and social needs, the Company provides voluntary learning opportunities using e-learning, conducts compliance seminars by internal and external lecturers, and provides information in a timely manner to executives and middle managers of Mazda as well as Group company executives, thus continuing initiatives aimed at increasing awareness on the importance of compliance.

# **Compliance Education Themes (Example)**

- Agreement
- Insider Stock Trading
- Act on Subcontracting
- Act against Unjustifiable Premiums and Misleading Representations
- Anti-Monopoly Act
- Security Export Control
- Non-Disclosure Agreement
- Anti-Corruption (entertainment and gifts)
- Copyright
- Personal Information
- Security Control
- Ordinances on Exclusion of Violence Group
- Unfair Competition Prevention Act (including bribery of national civil servants)
- Outsourcing Agreement

And others

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# **Enhancing Global Tax Compliance**

The Mazda Group handles tax affairs with integrity, in keeping with the Mazda Corporate Ethics Code of Conduct and other relevant rules and regulations. It is an important duty as a good corporate citizen to pay taxes in an appropriate and timely manner, in accordance with followings: international rules, each country's laws and regulations, and the Company's Finance Control Guidelines. With this in mind, Mazda contributes to social development in each country, by voluntarily fulfilling its tax obligations. The Mazda Group supports the Base Erosion and Profit Shifting (BEPS) initiatives, which are promoted by the OECD and the G20 countries. The Group will not engage in tax-evasion behaviors through the abuse of tax havens, but will sincerely cooperate in implementing information disclosure in response to requests from the tax authorities of each country, to ensure tax transparency. Particularly in its global business operations, Mazda is well aware of the importance of transfer pricing taxation as a means of determining proper profit sharing among Group companies in the respective countries. By promoting active dialogue with tax authorities through effective use of Advance Pricing Arrangement, the Mazda Group is committed to transparent and fair transfer pricing.

The Group will continue to establish trusted relationships with the tax authorities in each country and enhance tax compliance from a global standpoint, while taking into account changes in the social environment and needs regarding tax affairs.

# Supporting Enhancement of Compliance at Dealerships in Japan

To support transparent management throughout all Mazda Group companies, Mazda systematically promotes the strengthening of compliance among its dealers in Japan based on the principle as compliance being the base for building the brand.

# **Specific initiatives:**

- The Sustainability site has been opened on the intranet used by all dealerships in Japan in order to promote understanding of compliance and internal controls among dealership employees. The site provides the "Standard Operating Procedures," which define the basic business operations to be performed by dealerships, as well as education tools, such as "One-point Lessons on Compliance" concerning near-at-hand case studies, "Learning from Other Companies," which records the true causes of accident cases and recurrence prevention measures, and specialized e-learning programs.
- Questions encompassing risks concerning standard operating procedures and laws particular to dealerships in Japan as well as internal control were added to the Self Diagnosis Checklist on Internal Controls, which is deployed throughout the Mazda Group. It supports the promotion of dealership management in compliance with related laws and improvement of work efficiency. The Self-Diagnosis Checklist reflects examples of dealerships' activities. It is intended to promptly share best practices and risks with related parties and to promote more practical self-diagnosis.
- At training sessions with dealerships in Japan, trainees' awareness is raised to fully implement measures to find inadequacies in compliance and internal controls and prevent recurrence of similar problems. They also share examples of these inadequacies with related parties and carry out relevant investigations.
- For immediate reporting of problems regarding compliance, internal controls, human rights and other Sustainabilityrelated issues, an in-house consultation contact point has been set up at each dealership in Japan, and effective use of the Mazda Global Hotline reporting system has been brought back to attention.

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# IMPLEMENTING SOCIAL RESPONSIBILITY IN THE SUPPLY CHAIN

# Working with Mazda's Suppliers

Mazda carries out a wide variety of activities in order to achieve mutual growth and prosperity with companies, both in Japan and overseas. In line with its basic purchasing policy, Mazda is making efforts to build open business relationships and ensure fair and even-handed dealings with its companies both in Japan and overseas, while extending opportunities to businesses throughout the world, regardless of nationality, scale or history of transactions with the Company. Upon receiving a request to start business with Mazda, Mazda assesses the company in question in a fair and even-handed manner according to its in-house criteria for evaluation of suppliers, and determines the feasibility of a business partnership.

In addition, Mazda bases its assessments of business dealings with new suppliers on a comprehensive evaluation that covers not only quality, technical strengths, pricing, delivery time and management approach, but also the corporate compliance structure and sustainability initiatives, including environmental protection activities (F P108). Mazda has conducted questionnaire surveys of its suppliers on an asneeded basis, aiming to understand and evaluate the status of their implementation of sustainability initiatives in more detail (E P108). Also, concerted efforts are under way between Mazda and its suppliers to establish risk management systems that ensure business continuity and stable development, so as to avoid suspension of business that would extensively impact society. (F P108)

In addition to proactively offering opportunities for communication, Mazda provides supports in various forms to suppliers to ensure that the Company can promote sustainability initiatives and risk management in close concert with them. (**I P**109)

# **Basic Purchasing Policy**

Mazda will, in the fullest sense of coexistence and mutual prosperity, engage in research and production for improved competitiveness. The Company will build open and fair business relationships to ensure sustainable growth and raise its level of contributions for social and economic development. (1994)

# **Measures for Supplier Support**

- Co-creation and technology exchange with suppliers, aimed at improving their competitiveness
- Cooperating with suppliers in improving their product quality
- Adoption of the Milk-Run system (Mazda has shifted from the conventional system, with delivery of parts by each supplier, to the Milk-Run system\* (MRS), in which Mazda trucks stop at multiple suppliers to collect parts
- Provision of information on third-party exhibitions and conventions to showcase the latest technologies and manufacturing methods
- \* A method in which a single truck visits multiple suppliers to collect supplies. Named after truck routes in rural areas, which picked up milk from each farm.

# **Promoting Sustainability Initiatives** in Partnership with Its Suppliers

# **Promoting Suppliers' Sustainability Initiatives and Deployment** of the Mazda Supplier CSR Guidelines

The Company stipulated the Mazda Supplier CSR Guidelines, based on Mazda's basic approach on CSR initiatives and with reference to the CSR Guidelines of the Japan Automobile Manufacturers Association. The Guidelines outline CSR areas and items that are closely related to the purchasing area. In the Guidelines, CSR activities are categorized into six areas: Customer Satisfaction (Safety/Quality), Environment, Social Contribution, Respect for People (Human Rights/Work), Compliance, and Information Disclosure. The Guidelines request that all Mazda suppliers comply with the guidelines in these areas. The Mazda Green Purchasing Guidelines (E P36) are separately created to indicate the Company's approach on the environmental protection area in more detail, and Mazda requests that suppliers observe these guidelines. The Company also conducts periodic surveys of suppliers to confirm their compliance status. ( P108)

Mazda Supplier CSR Guidelines and Mazda Green Purchasing Guidelines

Customer Satisfaction (Safety/Quality): Suppliers are requested to abide by the guidelines regarding products and services that meet the needs of consumers and customers, sharing appropriate information about products and services, safe products and services, quality products and services, etc.

**Environment:** Suppliers are requested to abide by the guidelines regarding environmental management/greenhouse gas reduction/air, water and soil pollution prevention/resource conservation and waste reduction/chemical management/ ecosystem conservation, etc.

Social Contribution: Suppliers are requested to make social contributions proactively and continuously at home and abroad to meet the needs of each region, thereby fulfilling their responsibilities as a good corporate citizen.

Respect for People (Human Rights/Work): Suppliers are requested to abide by the guidelines regarding abolition of discrimination/respect for people/prohibition of child labor/ prohibition of forced labor/non-use of conflict materials\*1 (P108)/wages/working hours/dialogue with employees/ safe and healthy working environment, etc.

Compliance: Suppliers are requested to abide by the guidelines regarding regulation compliance/competition law compliance/ promotion of fair business practices/corruption prevention/ confidential information management and protection/export management/intellectual property protection, etc.

Information Disclosure: Suppliers are requested to disclose information to their stakeholders in a timely and appropriate manner, and make efforts to maintain and develop mutual understanding and trustful relationships with stakeholders through open and fair-minded communication.

<sup>\*1</sup> Conflict minerals: Minerals and their derivative metals designated by Financial Regulatory Reform Article 1502 that are sourced from and used as financial sources for armed groups in conflict-affected regions in the Democratic Republic of Congo or adjoining countries (Regulated minerals: tantalum, tin, tungsten, gold). Under this act, listed US companies are obliged to report that no conflict materials are used in their products.

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# **Example of Sustainability Initiatives in Cooperation with Suppliers**

Respect for People: Activities to Address Problems regarding Conflict Minerals\*1

Mazda considers that among crucial social problems in the supply chain are human rights violations and illegal extraction in disputed regions and issues regarding conflict minerals, which may be used as financial sources by armed groups. To ensure that conflict minerals and other materials that may cause social problems are not used, the Mazda Supplier CSR Guidelines clearly state Mazda's policy, and the Company requires all suppliers to comply with it. In FY March 2022, Mazda conducted a survey on conflict minerals, targeting about 300 suppliers of the parts and materials of vehicles to be supplied to companies to which Mazda vehicles are delivered, in response to the request. The survey was carried out using the format designated by the Electronic Industry Citizenship Coalition (EICC) (now the Responsible Business Alliance [RBA]).

# **Compliance: Promotion of Fair Business Practices**

Mazda promotes fair business practices to ensure that both the Company and its suppliers have fair dealings under clear standards with a common recognition to strengthen their global competitiveness through mutual collaboration. Based on the Guidelines for Appropriate Transactions in the Automobile Industry, which was formulated at the initiative of the Ministry of Economy, Trade and Industry, Mazda carries out various activities, including the formulation of the Promotion Manual for Appropriate Purchasing, education for those engaged in procurement operations at Mazda, and information provision to suppliers through the website and briefing sessions.

#### In-House Education to Ensure Fair Transactions

The following educational initiatives are conducted for those engaging in procurement operations in order to realize fair and equal transactions.

- Administering comprehension tests on promotion of fair business practices (including Subcontractors Act)
- Education on financial control
- · Posting of guides and process rules regarding fair business practices and compliance on the Purchasing Division website on the Intranet
- Holding a course on promotion of fair business practices for employees who were newly assigned to the relevant sections

# The Supplier Evaluation System

When starting business with a new supplier, related departments coordinate together to confirm the supplier's quality control system, research & development system, technological capabilities, financial conditions, and sustainability initiatives, in order to evaluate whether or not the supplier is compliant with the procurement/selection policies of the Mazda Group. For each long-term supplier, Mazda conducts not only an evaluation based on the quality, cost and delivery time of the procured goods or services, but also a comprehensive evaluation of the entire business including the quality control system, research & development system, technological capabilities, and the status of its sustainability initiatives. For the supplier quality control system, Mazda employs a system that enables continuous grasping of issues, evaluation of the situation, and provision of guidance for improvement by receiving daily reports on product quality as well as voluntary audit results, and when a supplier is in need of quality improvement, conducts remote quality auditing in addition to onsite confirmation of actual products at both domestic and overseas sites.

Also, Mazda comprehensively evaluates its suppliers every year (303 suppliers in 2021) from the perspectives of quality, pricing, delivery time, etc., in order to build more positive business relationships with them, and passes the results of these evaluations back to the suppliers. Outstanding suppliers are recognized with awards. The Company has also introduced sustainability-based evaluation, giving special awards to suppliers that have made outstanding proposals on weight trimming, which greatly affects environmental performance such as fuel efficiency.

# **Evaluation System**

Evaluation items when starting business with a new supplier

Quality management system, research & development system, technological capacity, production and delivery capacity, financial conditions, sustainability initiatives, etc.

Evaluation items for long-term suppliers

Quality management system, research & development system, technological capacity, production and delivery capacity, financial conditions; quality, pricing, delivery time of goods or services procured, and other items in the Supplier CSR Guidelines ( F P107)

# **Questionnaire Survey for Suppliers**

Mazda has conducted questionnaire surveys of its suppliers since FY March 2014, aiming to understand and evaluate the status of their implementation of sustainability initiatives. The survey results confirm that these suppliers have appropriately implemented sustainability initiatives and established their own sustainability promotion systems. FY March 2022, a questionnaire survey was also carried out about fair business practices, which attracted a lot of social interest, targeting all subcontractors. The survey results showed that progress has been made. After analyzing these results, the Company held individual hearings with companies deemed to be in need of further improvement, in order to offer them cooperation in devising improvement methods. Using these surveys, the Company also checks each supplier's recognition of the Mazda Supplier CSR Guideline.

# Risk Management in Collaboration with Suppliers

# Upgrading and Expanding the Business Continuity Plan (BCP)

In the light of risk management, Mazda works together with its suppliers to upgrade and expand its business continuity plan (BCP) in order to avoid suspension of business that would extensively impact society. The Company has introduced the "SCR Keeper,"\*2 a supply chain risk management system, to accelerate its initial response in the event of a disaster by promptly and thoroughly grasping information on the situation of operation sites. Also, initiatives are under way to promote disaster prevention and mitigation activities. Mazda had already completed risk inspections and made provisions against the expected Nankai Trough Earthquake and other large earthquakes. In addition, beginning in FY March 2020, the Company has pushed forward with the inspection of supply chain risks with its scope of application broadened to cover risks from landslides and flooding. In accordance with the degree of risks, Mazda strives to further advance its disaster preparedness, including reinforcement of disaster prevention and mitigation measures. The Company will continue to enhance its BCP in cooperation with its suppliers.

<sup>\*1</sup> Conflict minerals: Minerals and their derivative metals designated by Financial Regulatory Reform Article 1502 that are sourced from and used as financial sources for armed groups in conflict-affected regions in the Democratic Republic of Congo or adjoining countries (Regulated minerals: tantalum, tin, tungsten, gold). Under this act, listed US companies are obliged to report that no conflict materials are used in their products.

<sup>\*2</sup> SCR stands for Supply Chain Resiliency. SCR Keeper is a system combining map data with earthquake information from the Meteorological Agency by which the seismic intensity at the registered production sites can be determined quickly in the event of an earthquake.

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# STAKEHOLDER ENGAGEMENT

# **Basic Approach**

Mazda clarifies key responsibilities and issues that the Mazda Group should accomplish, through dialogue with stakeholders which are important for a company's sustainable development,\*1 and carries out daily business activities while making efforts for improvement. To ensure effective communications with customers and other respective stakeholders, Mazda has defined its key stakeholders, and determined the frequencies of providing opportunities for dialogue and information disclosure. The information obtained is reported to the relevant departments or committee meetings attended by the Company's management, and used for planning and improving Mazda's daily business activities. In the brand value management which the Company has been promoting in earnest since 2013, Mazda is pushing ahead with various initiatives, aiming to continue to grow as a corporate group that earns the trust of all its stakeholders. By establishing indicators for its relationships with its stakeholders, Mazda implements the PDCA (plan-do-check-act) cycle.

#### Dialogue with Shareholders and Investors

For continued growth and enhancement of corporate value over the medium and long terms, Mazda engages in a variety of investor relations initiatives in keeping with its policy of timely and appropriate disclosure of information and with constructive dialogue. In addition to general shareholders' meetings, the Company holds frequent meetings with its shareholders and investors, providing quarterly announcements to explain its business results and other activities. The Company is working to increase opportunities for dialogue in such ways as holding business briefings for securities analysts, institutional investors, and individual investors.

Mazda's official website provides information such as the schedule for general shareholders' meetings and financial results announcements, performance/financial data, notices of the general meetings of shareholders, summary of financial results, briefing materials for the financial results, Securities Report (Japanese only), Integrity Report, Corporate Governance Report. Mazda strives for highly transparent and fair disclosure.



## **Information Exchange and Dialogues with Suppliers**

Mazda proactively offers opportunities for communication with suppliers, to ensure that the Company can work in close concert with them. Seeing all the suppliers as its important business partners, the Company takes steps to promptly brief suppliers on medium- to long-term business strategies and on matters related to sales and production, and arranges opportunities for information exchange and dialogues on a regular basis. As part of such efforts, Mazda organizes an annual seminar with the aim of enhancing awareness of environmental and other sustainability initiatives. The Company also maintains close liaisons with supplier-managed purchasing cooperative organizations.\*2 In FY March 2022, amid the COVID-19 pandemic, the Company held a total of 68 remote sessions of theme discussions and meetings for opinion exchange with 117 suppliers, instead of visiting them in person.

In FY March 2022, during which Mazda was forced to change its production plan due to the spread of COVID-19 and issues with semiconductor procurement, the Company held monthly production adjustment briefing meetings with member companies of Toyukai Affiliated Corporation\*3 to share its views on production adjustments and to provide related information with the aim of enhancing communication with suppliers. Moreover, the Company conducted monthly cash management checks and surveys throughout the entire supply chain jointly with Tier 1 suppliers of the member companies. Based on the survey results, the Company provides suppliers that have faced difficulties in cash management with required advice. With a strong determination to protect all suppliers from bankruptcy risks, Mazda will continue to support suppliers affected by the COVID-19 pandemic and component supply issues in cooperation with Tier 1 suppliers.

# Major Channels of Communication with Supplier

Target	Target participants		Aims / content
Roundtable Conference with Supplier Management	Executive-level management at major suppliers	Once a year	•Mazda's president and CEO explains Mazda's current status, the problems the Company faces and its policies, after which the general manager of the Purchasing Division explains Mazda's purchasing policies in order to heighten participants' understanding of Mazda and gain their cooperation.  •This conference also deepens friendly ties between Mazda and its suppliers.
Supplier Meeting	Representatives of frontline business divisions and departments at major suppliers	Once a year	•Mazda's specific purchasing policies are explained to representatives of frontline business divisions at suppliers, based on the explanation given at the roundtable conference by the general manager of the Purchasing Division. This helps to promote a better understanding of Mazda and provides useful input for the work that suppliers do.
Supplier Communication Meeting	Representatives of frontline business divisions and departments at major suppliers	Once a month	•To facilitate smoother collaboration with its suppliers, Mazda provides them with information, such as topics concerning daily operations between Mazda and its suppliers (including the environment and other sustainability-related topics), production/sales status, quality status of purchased materials, pilot construction schedules for newly developed models, and mass-production implementation schedules for new models.
Other	-	As needed	•Mazda also employs a range of other communication channels, by using the in-house "Mazda Technical Review," highlighting new technologies and research.

- \*1 Parties who are directly or indirectly related to the business of the Mazda Group
- \*2 An autonomous management organization, comprising suppliers that have a certain degree of transaction with Mazda, with the purpose of strengthening relationships between Mazda and its suppliers as well as promoting mutual growth and prosperity. The procurement amount from member companies of Yokokai and Yoshinkai accounts for about 90% of the whole.
- \*3 Established in 1952 as a voluntary organization by 20 collaborating companies having trading relationships with Mazda (then Toyo Kogyo). Currently its membership consists of 62 companies. While sharing information with one another and with Mazda and deepening cross-industrial exchange primarily through various committee activities, these member companies continue constant efforts to hone their skills.

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# Key Stakeholder\*1 Relationships and Opportunities for Key Dialogue and Information Disclosure

# **Examples of Indicators**

Customers	Degree of customer satisfaction, brand likeability, loyalty (retention), net promoter score, (unaided) awareness level, brand recommendation level
Shareholders and investors	Evaluations by external research organizations
Business partners	Stakeholder Survey
Employees	Global Employee Engagement Survey
Global society and local communities	Stakeholder Survey
Next-generation people	Evaluations by external research organizations

Key Stakeholder	Mazda Group's Key Responsibilities and Issues	Opportunities for Key Dialogue and Information Disclosure (Frequency)
Customers	<ul> <li>Improving customer satisfaction</li> <li>Providing safe, reliable and attractive products and services</li> <li>Appropriate disclosure and explanation of information regarding products, services and technical terms</li> <li>Providing customer support in a timely and appropriate manner</li> <li>Appropriate management of customer information</li> </ul>	Establishment of call centers (always)     Mazda Official Website and social media (always)     Day-to-day sales activities (always)     Customer satisfaction surveys (as needed)     Holding events (as needed)     Interviews with customers (as needed)     Meetings with Mazda vehicle owners (as needed)
Shareholders and investors  Investors	Timely and appropriate information disclosure Maximizing corporate value Strict exercise of voting rights (at the general meeting of shareholders) Active investor relations activities	Website for shareholders and investors (always)     Publication of the asset securities report and the quarterly financial reports (for times a year)     Publication of the summary of financial results (four times a year)     Quarterly presentation of financial results (four times a year)     Holding ordinary general meetings of shareholders (once a year)     Publication of the Integrated Report (once a year)     Publication of the Corporate Governance Report (as needed)     Presentations and plant tours for investors (as needed)
Business partners  Suppliers  Domestic dealerships  Overseas distributors	Pair and equitable trading Open and transparent business opportunities Support for requests for collaboration on sustainability implementation Appropriate disclosure and sharing of information	<ul> <li>Hotlines linking Mazda with dealerships (always)</li> <li>Day-to-day purchasing activities (always)</li> <li>Supplier communication meetings (once a month)</li> <li>Conferences with representatives of dealerships (once a year)</li> <li>Conferences with supplier executives (once a year)</li> <li>Commendation of outstanding suppliers and dealerships (once a year, respectively)</li> </ul>
Employees	Respect for human rights Choice and self-accomplishment Promoting a healthy work-life balance Optimum matching of people, work and placement Promotion and improvement of employee health and safety Promotion of diversity Mutual understanding and trust between labor and management	Labor-Management Council (as needed)     Direct communication with senior management (MBLD) (as needed)     Global Employee Engagement Survey (as needed)     Career meetings (four times a year)     Career Challenge System (in-house recruitment and "Free Agent") (as needed)     Group and optional training (as needed)     Lectures (as needed)
Global society and local communities  Community people  Government and administrative agencies  NGOs/NPOs  Experts and specialists  Educational institutions	Respect for local cultures and customers Prevention of workplace accidents and disasters Activities contributing to local communities (including cooperative work) Disaster-relief activities in regions in which Mazda does business Compliance with laws and regulations Payment of taxes Cooperation with government policies Cooperative work and support in search of solutions to global social issues Foundation activities	<ul> <li>Opening to the public of the Mazda Museum and plant tours (always)</li> <li>Execution of social contribution activities and participation in and promotion of volunteer activities (as needed)</li> <li>Dialogue through economic and industry organizations (as needed)</li> <li>Interaction/exchange of views with the local community (as needed)</li> <li>Response to hearings, information disclosure, etc. (as needed)</li> <li>Dialogue, cooperation and support through collaboration of industry, academia and government (as needed)</li> </ul>
Next generation people (environment)	Consideration for the environment Energy-/global-warming-related issues Promoting resource recycling Cleaner emissions Environmental management	<ul> <li>Holding and participating in environmental events (as needed)</li> <li>Conducting onsite lectures on environment (as needed)</li> </ul>

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#### Raising Executive and Employee Awareness

Mazda endeavors to deepen awareness and understanding of sustainability among all its executive officers and employees, and to promote the undertaking of sustainability initiatives in the course of their daily business activities. The level of employees' sustainability awareness is confirmed through Global Employee Survey and training programs by level. To ensure constant improvement of the sustainability awareness level, Mazda will continue a range of initiatives.

#### **Examples of Awareness-Raising Activities**

- Distribution of the Mazda Sustainability Report to Group companies in Japan and overseas (once a year)
- Implementation of sustainability training programs by level (lecture-type training and group discussions)

  Number of training participants in FY March 2022: around 2.150\*1
  - New recruits (once a year), mid-career hires (approximately 20 times a year)
  - Employees who are dealership interns (once a year)
  - Team Leaders, Assistant Foremen, Foremen (twice a year each)
  - New band 6 employees (manager in charge) (six times a year)
  - New band 5 employees (assistant manager level) (twice a year)
  - Newly appointed senior managers (twice a year)
- Conducting seminars on ESG targeting executives (as needed)

#### Collaboration with Local Governments, Industrial Organizations, etc.

To fulfill its social responsibility, Mazda is actively collaborating with external organizations, including local governments and industrial organizations. The Company has participated in activities conducted by industrial organizations, such as the Japan Business Federation (Keidanren) and the Japan Automobile Manufacturers Association, while also being involved in government-led activities, such as the Strategic Commission for the New Era of Automobiles set up by Japan's Ministry of Economy, Trade and Industry. In addition, Mazda signed the United Nations Global Compact\*2 and declared its support for the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD)\*3, as part of its efforts in line with the international social initiatives.

# **Conducting the Stakeholder Survey**

Since FY March 2014, Mazda has conducted a Stakeholder Survey (once a year), inviting opinions from stakeholders outside the Company regarding employee conduct and attitudes toward the promotion of brand value management. The submitted opinions and their analysis results are shared with top management. After clarifying the actual situations and issues to be addressed, the results are announced to Mazda employees and employees of the entire Group in Japan and abroad through MBLD (P121). This provides these employees with opportunities to review their own actions and practices, from the perspective of implementing the corporate vision and strengthening connections with stakeholders. To generate frank opinions and guarantee objectivity of the analysis, Mazda has commissioned a third party organization (research firm) to conduct the survey.

#### Those Covered by Stakeholder Survey (Only in Japan)

Suppliers, distributors/dealerships, local autonomous entities, academic societies, industrial associations, etc.

# Communication through Publication of the Mazda Sustainability Report

The Mazda Sustainability Report has been published with the aim of informing stakeholders of Mazda's sustainability initiatives, in accordance with GRI Reporting Principles for Defining Report Content. To obtain the opinions and evaluations regarding the report's content and editorial method, Mazda has conducted a questionnaire survey and applied for sustainability-related awards. The submitted opinions and evaluations are fed back to executive officers, external directors, and each division's employees in charge of producing the Mazda Sustainability Report, and are utilized for designing the next year's initiatives and for considering the information to be disclosed in the report.

# External Evaluations (As of August 31, 2022)

Mazda identifies key external ratings and evaluations both from within Japan and overseas. By analyzing the results, the Company evaluates its own initiatives. Mazda continuously makes active efforts to disclose information by responding to both domestic and global surveys and evaluations, such as those by socially responsible investment (SRI) and environmental, social and governance (ESG) rating organizations.

#### [Inclusion in key indices]

- Dow Jones Sustainability Index (DJSI)
   Asia Pacific Index
   (Selected since September 2017)
- **■** FTSE4Good
- (Selected since March 2011)
- MSCI ESG Leaders Indexes (Selected since June 2020)
- FTSE Blossom Japan Index
- (Selected since the index was established in July 2017)
- MSCI Japan ESG Select Leaders Index (Selected since June 2022)
- MSCI Japan Empowering Women Index (WIN) (Selected since December 2019)
- S&P/JPX Carbon Efficient Index (Selected since the index was established in September 2018)

#### [Key evaluations]

- CDP Climate Change: A-(FY March 2022)
- EcoVadis Supply Chain Assessment: Gold (FY March 2022)

Member of

# Dow Jones Sustainability Indices

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Good FTSE Blossom

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The UNGC is a voluntary effort by corporations and organizations to be good corporate citizens by exercising responsible, creative leadership, and to build a global framework for sustainable growth. More than 13,000 corporations and organizations in approximately 160 countries worldwide are participants or signatories to the compact. Mazda joined the Global Compact Network Japan (GCNJ) comprising Japanese signatory companies and organizations to the UNGC. As a member of GCNJ, the Company participates in workshops and gathers information on such themes as ESG, the environment, supply chains, labor and human rights.

\*3 TCFD: Task Force on Climate-related Financial Disclosures A private sector-led organization set up by the Financial Stability Board (FSB), in response to the request from the G20 Finance Ministers and Central Bank Governors

<sup>\*1</sup> Unconsolidated activities of Mazda

<sup>\*2</sup> UNGC: United Nations Global Compact

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# DATA/MATERIALS

This section presents the results of major initiatives undertaken by Mazda and the Mazda Group through their business activities.

(The results other than those listed on P113-123 are also presented in each relevant item.)

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★The figure of each item verified by a third party ( FP128 ) is shown in ( ).

#### Earth

#### Greenhouse gas (GHG) emissions: Global\*4\*5\*6\*7

(Thousand t-CO2e)

	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
Scope 1 (direct emissions)*1	137	135	119	96	95 (71) ★
Scope 2 (indirect emissions)*2	587	537	506	438	438 (379)
Scope 3 (other indirect emissions)*3	35,954	37,027	36,336	31,603	29,797
Total	36,678	37,699	36,960	32,137	30,330

#### Greenhouse gas (GHG) emissions (Scope 1 and 2) By region: Global\*4\*5\*7\*8

(Thousand t-CO2e)

	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
In Japan	595	554	509	430	426
Overseas	130	118	116	104	107
Total	724	672	625	534	533 (449)

#### Scope of coverage

· Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies, and 16 overseas consolidated Group companies\*9 and five overseas equitymethod Group companies

#### Scope of third-party verification

(Scope 1 and 2 CO<sub>2</sub> emissions from energy consumption)

• Mazda Motor Corporation's four domestic production sites and five overseas production companies (two consolidated Group companies and three equity-method Group companies)

#### Greenhouse gas (GHG) emissions (Scope 3: other indirect emissions): Global\*6\*7 (Thousand t-CO2e)

		FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
1	Purchased products/services	4,518	4,524	4,570	3,600	3,374
2	Capital goods	59	93	95	93	149
3	Fuel- and energy-related activities not included in Scope 1 or 2	85	65	111	97	99 (99) *
4	Upstream transportation and distribution	27	29	30	26	27
5	Waste generated in operations	4.6	4.7	4.4	3.8	3.4 (3.4)
6	Business travel	11	1.6	2.2	0.3	0.5 (0.5)
7	Employee commuting*10	3.2	3.4	5.2	4.9	14 (14)
8	Upstream leased assets	0	0	0	0	0
9	Downstream transportation and distribution	41	44	63	54	52
10	Processing of sold products	0	0	0	0	0
11	Use of sold products	30,799	31,853	31,068	27,386	25,777
12	Disposal of sold products	406	409	387	338	301
13	Downstream leased assets	0	0	0	0	0
14	Franchises	0	0	0	0	0
15	Investments	0	0	0	0	0
_	Total	35,954	37,027	36,336	31,603	29,797

#### Scope of coverage

- •Categories 1, 2, 6 and 7: Mazda Motor Corporation
- ·Category 3: Mazda Motor Corporation's four domestic production sites and five overseas production companies (two consolidated Group companies and three equity-method Group companies)
- ·Categories 4 and 9: Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies
- •Category 5: Mazda Motor Corporation's four domestic production
- ·Categories 8, 10, 13, 14 and 15: Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equitymethod Group companies, and 16 overseas consolidated Group companies\*9 and five overseas equity-method Group companies
- ·Categories 11 and 12: Domestic and major sales regions (North America, Europe and China)

#### Scope of third-party verification

- ·Category 3: Mazda Motor Corporation's four domestic production sites and five overseas production companies (two consolidated Group companies and three equity-method Group companies)
- •Category 5: Mazda Motor Corporation's four domestic production
- ·Categories 6 and 7: Mazda Motor Corporation
- \*1 Scope 1: Direct emissions from consumption of fuels and industrial processes
- \*2 Scope 2: Emissions associated with consumption of purchased heat/ electricity (indirect emissions from energy consumption)
- \*3 Scope 3: Other indirect emissions excluding Scope 1 and 2
- \*4 Energy consumption and greenhouse gas emissions are calculated using the energy conversion factor and carbon emission factor based on the standards of the Japan Automobile Manufacturers Association, Inc. (JAMA) (Carbon Neutrality Action Plan).
- \*5 CO<sub>2</sub> emissions resulting from power consumption by overseas companies are calculated by applying the factor shown in the IEA Emission Factors 2019 issued by International Energy Agency (IEA).
- \*6 Calculated using Mazda's own calculation method, based on the Ministry of the Environment's Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain.
- \*7 Figures for consolidated Group companies and equity-method Group companies are prorated based on the percentage equity stake held by Mazda.
- \*8 The total figure is rounded and may not match the sum of individual items.
- \*9 FY March 2018 and FY March 2019: 15 companies; FY March 2020: 14 companies; FY March 2021: 15 companies; FY March 2022: 16 companies
- \*10 The factor used to calculate emissions was changed from FY March 2022 results.

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★The figure of each item verified by a third party ( ➡P128 ) is shown in ( ).

## Earth

#### GHG emissions intensity (Scope1 and 2): Global\*1\*2\*3\*4\*5

On unit sales bas	(t-CO	₂e/100 million yen)		
FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
20.8	18.9	18.2	18.5	17.1

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#### Scope of coverage

 Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies, and 16 overseas consolidated Group companies\*6 and five overseas equitymethod Group companies

#### Energy consumption (by type): Global\*3\*5

					(1))
	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
Electricity	9,757	9,398	9,063	7,835	7,755
Fuel oil A	27	32	30	26	21
Fuel oil B	0	0	0	0	0
Fuel oil C	6	5	3	10	1
Kerosene	44	29	26	20	21
Diesel	55	42	42	38	38
Gasoline	69	68	67	54	62
LPG	115	115	110	116	97
City gas	1,406	1,305	1,160	967	1,020
Coal	0	0	0	0	0
Coke	342	379	320	205	197
Industrial steam	1,257	1,173	1,157	1,065	1,067
Total	13,078	12,548	11,977	10,337	10,278 (8,789)

#### Scope of coverage

•Energy consumption within the premises of Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies, and 16 overseas consolidated Group companies\*6 and five overseas equity-method Group companies

#### Scope of third-party verification

•Energy consumption within the premises of Mazda Motor Corporation's four domestic production sites and five overseas production companies (two consolidated Group companies and three equity-method Group companies)

# Amount of electricity generated from renewable energy (by region): Global $^{\star_5}$

(MWh)

	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
In Japan	86	87	101	89	1,297
Overseas	0	0	0	60	2,656
Total	86	87	101	149	3,953

#### Scope of coverage

(TI)

•Amount of renewable energy generated and consumed within the premises of Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies, and 16 overseas consolidated Group companies\*6 and five overseas equity-method Group companies

#### CO<sub>2</sub> emissions from logistics: Mazda Motor Corporation\*7\*8 (Thousands of t-CO<sub>2</sub>)

FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
68.1	73.7	69.1	59.3	58.6

#### Scope of coverage

Mazda Motor Corporation

- \*1 Scope 1: Direct emissions from consumption of fuels and industrial processes
- \*2 Scope 2: Emissions associated with consumption of purchased heat/electricity (indirect emissions from energy consumption)
- \*3 Energy consumption and greenhouse gas emissions are calculated using the energy conversion factor and carbon emission factor based on the standards of the Japan Automobile Manufacturers Association, Inc. (JAMA) (Carbon Neutrality Action Plan).
- \*4 CO<sub>2</sub> emissions resulting from power consumption by overseas companies are calculated by applying the factor shown in the IEA Emission Factors 2019 issued by International Energy Agency (IEA).
- \*5 Figures for consolidated Group companies and equity-method Group companies are prorated based on the percentage equity stake held by Mazda.
- \*6 FY March 2018 and FY March 2019: 15 companies; FY March 2020: 14 companies; FY March 2021: 15 companies; FY March 2022: 16 companies
- \*7 The total amount of CO<sub>2</sub> emissions generated by the transportation of completed vehicles, production procurement parts, and service parts.
- \*8 CO<sub>2</sub> emissions from logistics are calculated using factors such as the "Joint Guidelines for Calculating CO<sub>2</sub> Emissions in the Logistics Sector" issued by the Ministry of Economy, Trade and Industry (METI) and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

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# Earth

# Consumption of raw materials (steel, aluminum, etc.): Mazda Motor Corporation (Thousands of t)

FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
953	971	938	721	700

#### Scope of coverage

•Mazda Motor Corporation's four domestic production sites

#### Total amount of waste (by region): Global\*1

(t) FY March FY March FY March FY March FY March 2018 2019 2020 2021 2022 270,718 265,392 242,108 188,205 180,569 (16,579) ★ In Japan Overseas 47,168 42,868 38,828 32,589 32,259 317,886 308,260 280,936 220,793 212,828 Total

#### Amount of landfill waste, amount of recycled materials, recycling ratio: Global\*1 (t)

	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
Amount of landfill waste	1,902	1,422	1,619	1,144	1,073
Amount of recycled materials	298,270	289,019	264,702	208,331	202,006
Recycling ratio	94%	94%	94%	94%	95%

#### Scope of coverage

 Mazda Motor Corporation's four domestic production sites and the production sites of four domestic consolidated Group companies and four domestic equity-method Group companies and two overseas consolidated Group companies and four overseas equity-method Group companies

#### Scope of third-party verification

•Industrial waste emissions from Mazda Motor Corporation's four domestic production sites

#### Amount of recycled parts: In Japan

(Bumpers)

	FY March				
	2018	2019	2020	2021	2022
Damaged bumpers	63,852	62,920	57,126	46,515	47,939

# Scope of coverage

•Dealerships (excluding some) with which Mazda has an exclusive dealership agreement in Japan

#### Consumption of wrapping and packaging materials: Mazda Motor Corporation\*2 (t)

		0 0		•
FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
28.6	31.0	29.7	20.3	21.6

#### Scope of coverage

·Mazda Motor Corporation

<sup>\*1</sup> Figures for consolidated Group companies and equity-method Group companies are prorated based on the percentage equity stake held by Mazda.

<sup>\*2</sup> Total materials used for packaging and wrapping of parts procured for production from Japan to overseas plants and for repair parts for domestic and overseas markets.

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★The figure of each item verified by a third party ( P128 ) is shown in ( ).

## Earth

Water withdrawal a	mount (by r	egion): Glob	al*1*2		(1,000 m <sup>3</sup> )	
	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022	
In Japan	8,170	8,021	7,576	6,659	6,424 (4,558)	
Overseas	1,237	1,282	1,051	976	949	
Total	9,406	9,303	8,627	7,635	7,373	

Water withdrawal a	mount (by w	vater source)	: Global*1*2		(1,000 m <sup>3</sup> )
	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
Water for industrial use	7,623	7,531	7,126	6,148	5,870
Clean water	1,237	1,214	1,149	1,079	962
Subsurface water	527	535	329	386	514
Lake water	19	22	23	21	27
River water	1	1	1	1	1

9.303

8,628

7,635

7,374

#### Scope of coverage

Total

 Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies, and 16 overseas consolidated Group companies\*3 and five overseas equitymethod Group companies

#### Scope of third-party verification

•Mazda Motor Corporation's four domestic production sites

9,407

Wastewater (by reg	ion): Global				(1,000 m <sup>3</sup> )
	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
In Japan	7,090	7,133	6,580	5,874	5,517
Overseas*4	-	-	805	668	770
Total	7,090	7,133	7,385	6,542	6,287

#### Scope of coverage

•Mazda Motor Corporation and production sites of domestic production companies (four consolidated Group companies and four equity-method Group companies) and overseas production companies (two consolidated Group companies and four equity-method Group companies)

<sup>\*1</sup> Figures for consolidated Group companies and equity-method Group companies are prorated based on the percentage equity stake held by Mazda.

<sup>\*2</sup> The total figure is rounded and may not match the sum of individual items.

<sup>\*3</sup> FY March 2018 and FY March 2019: 15 companies; FY March 2020: 14 companies; FY March 2021: 15 companies; FY March 2022: 16 companies

\*4 Data not available for FY March 2018 and FY March 2019.

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# Earth

NOx emissions and SOx emissions: In Japa	NOx emis	ssions an	d SOx	emissions:	In la	ıpan'
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TOX CITIOSIONS UNA	00% 011110011	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•		(-)
	FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
NOx	304	334	326	292	301
SOx	104	106	103	97	94

#### Scope of coverage

•Production sites of Mazda Motor Corporation, four domestic consolidated Group companies and four domestic equity-method Group companies

#### VOC waste emissions: Mazda Motor Corporation

FY March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
2,582	2,394	2,225	1,664	1,536

#### Scope of coverage

•Body-painting lines of Mazda Motor Corporation's Hiroshima Plant and Hofu Plant (Nishinoura District)

#### Emi

nissions of PR	IR-listed substai	nces: In Japan		(t)
Y March 2018	FY March 2019	FY March 2020	FY March 2021	FY March 2022
1,192	981	876	726	711

#### Scope of coverage

•Mazda Motor Corporation, 22 domestic consolidated Group companies and eight domestic equity-method Group companies

<sup>\*1</sup> Figures for consolidated Group companies and equity-method Group companies are prorated based on the percentage equity stake held by Mazda.

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## Earth

Environmental Protection Costs (million yen)

	Protecting the global and Recycling resources Effective Analogement activity Systems of the global and Recycling resources and Recycling resources Effective Analogement activity Systems of the global activities Protection and Recycling	Major activities		da unconsolid	ated	Mazda Group		
		Major activities	Investment	Cost	Total	Investment	Cost	Total
_	Preventing pollution	Conforming to legal limits for air and water pollution, odor abatement, etc	1,332	2,511	3,843	1,459	3,257	4,716
iess area	Preventing pollution  Protecting the global  Recycling resources  Upstream/downstream  Management activity  Research and development	Preventing global warming, conserving energy, preventing destruction of the ozone layer, and other environmental protection activities	5,764	879	6,643	6,486	1,014	7,500
Busin	Recycling resources	Effective resource use, recycling waste, processing and disposing of waste	228	2,335	2,563	252	4,368	4,620
U	ostream/downstream	Container recovery, recovery of end-of-life vehicle bumpers	0	138	138	0	152	152
М	anagement activity	Employee environmental education, creating and operating environmental management systems, monitoring and measurement of environmental impact, other activities	2	1,116	1,118	2	1,651	1,653
Re	search and development	R&D for products, production methods and distribution, to contribute to reduced environmental impact	1,820	44,440	46,259	1,910	46,039	47,950
		Greening, beautification, and environmental improvement; support of community residents and organizations; information disclosure; and other activities	0	42	42	0	91	91
En	vironmental damage	-	0	0	0	8	230	238
		Total	9,145	51,462	60,607	10,119	56,802	66,920

#### **Overall Environmental Protection Effects**

Category Environmental protective effect Economic effect Economic	Mazda Group					
	у	Environmental prote	ective effect		Economic effect (million yen)	
	Global warming	Production	CO <sub>2</sub> emissions volume (on unit sales basis) 14.9 t-CO <sub>2</sub> /100 million yen		-	-
the global Glob environment pro-	prevention Distribution An	Annual shipping volume	454,870 thousand (ton-km/year)	-	-	
Recycling resources		Effective use of resources,	Shell sand	9,180 t (year)	26	1,237
Recycling	resources	recycling	Steel scrap	17,913 t (year)	1,211	1,237
Upstream/o	downstream	Product recycling	Number of discarded bumpers collected	47,939 (bumpers/year)	-	20
			Metals	75,110 t (year)	2,667	
the global environment prevention  Recycling resources  Upstream/downstream	h	Sale of items with commercial	Paint thinner, effluent	569 t (year)		2,694
	Other value		Empty drums, wheels, discarded tires	15,298 (units/year)	27	2,074
			Recovered sand, plastics, cardboard scraps	5,260 t (year)		
			Total		3,931	3,951

# **Environmental Accounting**

Mazda is carefully assessing the costs and benefits of its environmental activities and is working constantly to improve their efficiency.

Data collection period: April 2021 through March 2022
Basis of data collection: Calculated according to Mazda's own guidelines in line with Environmental Accounting Guidelines.
Boundary of data collection: Mazda Motor Corporation, 21 domestic consolidated Group companies and 16 overseas consolidated Group companies, and eight domestic equitymethod Group companies and five overseas equity-method Group companies

<sup>\*</sup>The total figure is rounded and may not match the sum of individual items.

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☆Subject to independent third-party assurance ( 📴 P129 )

# People

Data

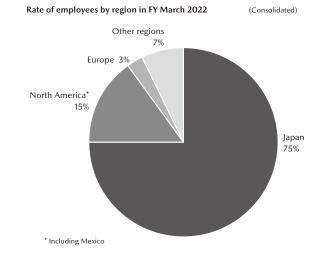
mployee Data					(Non-consolid	date
		Unit	FY March 2020	FY March 2021	FY March 2022	
	Male		20,947	20,906	20,917	ħ
Number of Employees*1*7	Female	Employees	2,256	2,301	2,349	Z
	Total		23,203	23,207	23,266	Z
	Male		40.7	41.0	40.9	7
Average age* <sup>2*7</sup>	Female	Age	37.7	38.0	38.3	7
	Total		40.4	40.6	40.7	7
Number of workers aged 60 and over*7*8 (Expert F	amily)	Employees	909	961	1,276	Z
	Male		17.5	17.7	17.7	7
verage years of employment*2*7 lumber of female employees hired*8	Female	Years	13.9	14.1	14.3	Z
	Total		17.1	17.4	17.3	Z
Number of female employees hired*8		Employees	172	139	127	7
	Administrative	. %	56	58	45	
Percentage of female new graduates hired	Engineering		12	12	10	
	Production		13	13	11	
8789	Assistant manager and above		248	277	298	7
Number of female managers*7*8	Middle management and above	Employees	52	52	55	7
D	Assistant manager and above*3		5.9	6.5	7.2	7
Percentage of female managers*7*8	Middle management and above*4	%	3.6	3.6	3.9	7
Number of male managers*7*8	Middle management and above	Employees	1,389	1,380	1,349	1
Average age of managers*7*8		Age	52.8	52.8	52.6	Z
			2.22	2.37	2.38	7
Percentage of employees with special needs*5*8		%	(Legal requirement: 2.2%)	(Legal requirement: 2.3%)	(Legal requirement: 2.3%)	)
Number of employees with special needs*5*8		Employees	365	389	394	7
Employee turnover rate*2*6*8		%	4.6	4.3	5.1	7
Number of new graduates hired	Male		520	504	444	. 7
(University, college and high school graduates)*8	Female	Employees	114	90	76	7

<sup>\*1</sup> The "Non-consolidated" numbers exclude the number of employees dispatched to Mazda Motor Corporation from other companies, but include the number of Mazda Motor Corporation employees dispatched to other companies.

#### Remuneration (Non-consolidated) Unit FY March 2022 Average yearly salary Yen 6,375,000 Non-consolidated, in April 2022 Unit 638,835 Male Middle management and above positions 599,791 Female Male 308,379 General employees 295.038 Female

Global Employee Data		(Consolidated)
	Unit	as of March 31, 2022
Number of Employees*	Employees	48,750 🌣

<sup>\*</sup>The "Consolidated" numbers exclude the number of Mazda Group employees dispatched to companies outside the Group, but include the number of employees dispatched to Mazda Group companies from outside the Group.



<sup>\*2</sup> Exclude the number of employees hired under the Expert Family system.

<sup>\*3</sup> Number of female managers (assistant manager and above)/Number of managers (assistant manager and above)

<sup>\*4</sup> Number of female managers (middle management and above)/Number of managers (middle management and above)

<sup>\*5</sup> Average number in each fiscal year

<sup>\*6</sup> The employee turnover rate increased because the Company actively accepted people from overseas Group companies and suppliers as temporary employees, to provide them with training and opportunities (these temporary employees, after leaving Mazda, returned to their original workplaces). The employee turnover rates excluding those dispatched to Mazda from other companies are as follows: 3.3% in FY March 2020, 3.7% in FY March 2021, and 4.8% in FY March 2021.

<sup>\*7</sup> Results as of the end of each fiscal year.

<sup>\*8</sup> For third-party assurance obtained for FY March 2020 and FY March 2021 figures, please refer to the Sustainability Reports for the respective years.

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# People

#### Major Measures and Results to Promote Work-Life Balance and Diversity in the Workplace

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(Non-consolidated)

Description (as of March 31, 2022)  ystem allows female employees who are pregnant and have difficulty performing their duties due to morning sickness or other feelings of mfort to take paid leave for the necessary amount of time.	Started Aug.		Unit	FY March 2020	FY March 2021	FY March 2022
	Διισ					TT THAT CIT LOLL
more to take paid leave for the necessary amount of time.	2008	Number of beneficiaries		43 (853)	23 (600)	28 (555)
ystem allows employees to take up to five consecutive working days off, following childbirth or for child-rearing.	Aug. 2008*1	Number of beneficiaries (days taken) Male Female	person (days)	550 (2,541) 459 (2,094) 91 (447)	600 (2,762) 492 (2,240) 108 (522)	576 (2,691) 483 (2,239) 93 (452)
			person			317
ystem supports unpaid leave for child-rearing for children up to 3 years old. It is possible to take leave in installments.	Jan.	Male	person	29	45	69
I requirement: Up to one year old.)	1991	Rate of reinstatement Rate of retention one year after child-rearing leave	%	99 95	98 98.7	98.1 97.7
ystem allows employees to take a leave in order to nurse their children under school age when they become sick or injured, granting them to up to five working days off per year if there is only one applicable-age child and up to ten working days off per year if there are two or more able-age children.	Jan. 2020	Number of beneficiaries (days taken) Male Female	person (days)	-	-	15 (51) 4 (12) 11 (39)
ystem allows employees involved with nursing or childrearing (until end of child's sixth year of primary school) to reduce work hours, be ed from overtime and holiday work, etc.  requirement regarding work hour reduction: until the child reaches 3 years old.)	Apr. 1999	Employees with reduced working hours: For child-rearing Employees with reduced working hours: For nursing care	person	475 22	595 22	523 17
ystem allows employees to take a leave in order to nurse or take care of their family members requiring nursing care, granting them to take five working days off per year if there is only one applicable family member and up to ten working days off per year if there are two or more able family members.	Jan. 2020	Number of beneficiaries (days taken) Male Female	person (days)	_	-	7 (34) 5 (20) 2 (14)
ystem allows employees with eligible family members requiring nursing care to take a leave of absence (maximum length of 1 year.) requirement: up to total of 93 days per eligible family member.)	Jan. 1992	Number of beneficiaries Male		11 7	5 4	8 7
with the measures to prevent the spread of COVID-19, the Company expanded the scope of its existing work-from-home system in October and established the remote-work system to allow employees to perform their work in locations, other than company facilities, determined employee's discretion. While the former system enabled employees to perform up to 25% of their work hours at home for the purpose of rearing or nursing care, this restriction has been removed and an allowance of 200 yen per day is provided as cost assistance to employees work remotely all day.	Oct. 2020*1	User	person	1,012*2	10,406*2	11,351*2
I-leave system that covers nursing care for relatives, including those in need of long-term care, volunteer work, functions at one's child's oil, infertility treatment, and disaster relief and assistance for affected relatives "Volunteer work" here refers to the following: all welfare (welfare services for children, for edderly people and for people with disabilities, etc.) onmental protection (forest preservation, recycling activities, etc.) activities, etc.) activities of children's associations, crime prevention activities, etc.)	Aug	Number of beneficiaries (days taken) Male Female  Number of beneficiaries for nursing care for relatives	person (days)	772 (4,177) 394 (1,877) 378 (2,300) 679 (3,102)	644 (5,902) 345 (3,166) 299 (2,736) 452 (3,510) 249 (2,138)	679 (2,953) 379 (1,606) 300 (1,347) 562 (2,646) 322 (1,461)
national friendship activities (welcoming home stay guests, interpretation service, etc.) th and medical volunteering (health care instructions, donor activities, etc.) ster relief uisition of qualifications, skills and knowledge that are useful in volunteer activities oort for sports activities (sports coaching, organizing sports events, etc.) e that activities related to specific political and religious beliefs are not included in volunteer work.	2008*1	Female  Non-regular employees	person	323 (1,442) 50	208 (1,372)	240 (1,185)
aycare center was established for employees' children who have not yet entered school. A permanently stationed nurse is available to look children who become ill.	Apr. 2002	Preschoolers		47	44	43
er to increase future career potential, employees can use this system to take leave for up to three years while attending a school or other ng facilities.	Oct. 2003	Number of beneficiaries		1	1	0
ystem allows employees to take a fixed-term leave in order to accompany a spouse who has been transferred, allowing the employee to the their career at Mazda later on.	Oct. 2003	Number of beneficiaries	person	19	21	25
ystem provides an opportunity for former Mazda employees who left the Company due to marriage, child-rearing, nursing care, or other ns to return to work if they desire.	Aug. 2008	Number of rehires		1	2	4
ystem enables interested individuals who meet a certain standard of abilities and experience to be rehired as engineers, advisors to younger eers (to pass on their knowledge), specialists or in other positions following their retirement at the mandatory retirement age.	Apr. 2006	Number of hires through reemployment		227	293	529
ystem was introduced to maximize results by supporting a balance between each employee's private life and working life. Under this flextime ng system, the employees can setup days of not showing up to their workplace.	Oct. 2000	Rate of deployment		Used at 80% of administrative and engineering field workplaces	Used at 80% of administrative and engineering field workplaces	Used at 80% of administrative and engineering field workplaces
eamlining operations, the Company has reduced the long working hours for divisions not directly connected with production. Examples of this ive include no-overtime days and setting mandatory lights-out times. (Information about the overtime hours is reported back to management h division, once in three months to implement the PDCA cycle.)	Sep. 2007	Status of Implementation	_	Ongoing	Ongoing	Ongoing
oyees participating in Japan International Cooperation Agency (JICA) volunteer activities are entitled to take paid leave for these activities.	Apr. 2007	Number of beneficiaries	person	_	-	_
a selective benefit system. Individual employees can seek the type of assistance that most suits them by choosing from a number of preset	Oct. 2001	Scope of application	_	All employees	All employees	All employees
it options within the points they have. Livelihood support, capacity development, childrearing, nursing care, social contributions, hobbies, etc.	2001					
it options within the points they have. Livelihood support, capacity development, childrearing, nursing care, social contributions, hobbies, etc.  rt of the Mazda Flex Benefit System, employees can apply their points toward compensation for the costs incurred during volunteer ties they perform. This system is also extended to employees who take a leave of absence to participate in JICA activities.	Oct. 2001	Number of applications  Amount applied	case	10 221,800	22 312,600	8 316,700
ys y	stem supports unpaid leave for child-rearing for children up to 3 years old. It is possible to take leave in installments. requirement: Up to one year old.)  stem allows employees to take a leave in order to nurse their children under school age when they become sick or injured, granting them to to five working days off per year if there is only one applicable-age child and up to ten working days off per year if there are two or more bible-age children.  stem allows employees involved with nursing or childrearing (until end of child's sixth year of primary school) to reduce work hours, be d from overtime and holiday work, etc. requirement regarding work hour reduction: until the child reaches 3 years old.)  stem allows employees to take a leave in order to nurse or take care of their family members requiring nursing care, granting them to take we working days off per year if there is only one applicable family member and up to ten working days off per year if there are two or more bible family members.  stem allows employees with eligible family members requiring nursing care to take a leave of absence (maximum length of 1 year.) requirement: up to total of 93 days per eligible family members.  with the measures to prevent the spead of COVID-19, the Company expanded the scope of its existing work-from-home system in October and established the remote-work system to allow employees to perform their work in locations, other than company facilities, determined employee's discretion. While the former system enabled employees to perform their work in locations, other than company facilities, determined employee's discretion. While the former system enabled employees to perform up to 25% of their work hours at hore for the purpose of earing or nursing care, this restriction has been removed and an allowance of 200 yen per day is provided as cost assistance to employees onk remotely all day.  -leave system that covers nursing care for relatives, including those in need of long-term care, volunteer work, functions at o	stem allows employees to take up to nive consecutive working days oil, rollowing children or for child-rearing.  Jan. 1991  stem allows employees to take a leave in order to nurse their children under school age when they become sick or injured, granting them to to five working days off per year if there is only one applicable-age children under school age when they become sick or injured, granting them to be to five working days off per year if there are two or more blob-age children.  Apr. 1999  stem allows employees to take a leave in order to nurse their children under school age when they become sick or injured, granting them to take leave to the working days off per year if there are two or more blob-age children.  Apr. 1999  stem allows employees to take a leave in order to nurse or take care of their family members requiring nursing care, granting them to take working days off per year if there are two or more blobe family members.  Stem allows employees to take a leave in order to nurse or take care of their family members requiring nursing care, granting them to take working days off per year if there are two or more blobe family members.  Jan. 1992  stem allows employees to take a leave in order to nurse or take care of their family members requiring nursing care, granting them to take working days off per year if there are two or more blobe family members.  Jan. 1992  Jan. 1999  Jan.	term allow employees to take up to five consecutive working days off, following childbirth or for child-rearing.    Personal	term allows employees to take up to five consecutive working days off, following childbirth or for child-rearing, the management of the properties of the pr	Second   S	Semilar   Semi

<sup>\*1</sup> Operated under a different system before the commencement of this system.
\*2 The number of beneficiaries increased due to the effect of special measures against COVID-19.

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# People

<b>Education/Training Results</b>		(Non-consolidated)
	Unit	FY March 2022
Average days of training per person	days/year	43.8
Average training cost per person	yen/year	93,184
Number of employees that received training	employees/year	15,893

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#### **Major Education and Training Programs**

Name of education and training program	Duration, frequency, etc.	Target	Objective	Content of training	Remarks	
Mazda Business Leader Development (MBLD)	Once a year	All Group employees in Japan and overseas	•To communicate the intention of the top management •To cultivate business leaders at all levels who have a company- wide perspective •To reform the corporate culture and climate	Regarding management issues and the future direction of the Company, message from the management team is delivered. The understanding and the future execution of the message through active participation by all employees is promoted	Commenced in 2000. Since FY March 2013, the program has been annually implemented on the theme of "Brand Value Management.	
Global Business Leader Program	As needed	Employees selected from Mazda Group companies around the world	To hone skills in areas including leadership, broadness of vision, and the ability to think strategically, and train the next generation of business operators to take the lead in global business	The program features practical activities such as communication with top business leaders and engagement as a team on management issues	Inaugurated in FY March 2016	
Human Resource Development at Global Production Sites	As needed	Management and production staff at overseas production sites	To provide basic training by level to employees working at overseas production sites	Management training Supervisor education program Training for key players in three fields (production, maintenance and improvement) Technical skills training Karakuri Kaizen training	-	
Training by level*1	As needed	Administrative and engineering staff	To encourage employees to reconfirm their roles at each level, and consider how they can help improve the organizational strength of the Company	Training for new employees Training for third-year employees Training for band 6 employees Training for managers and team leaders Training for general managers Each training program is designed to promote changes in the employees' ways of thinking, through group discussion among members from different departments.	-	
Management skill training*1	When newly appointed	Newly appointed senior managers, new band 5 employees (assistant manager level)	To develop trainees' awareness and sense of responsibility as managers and urge them to acquire a companywide perspective, thereby altering their mindset toward their own roles	Mazda Way, sustainability, compliance, internal controls, personnel management, human rights, safety and health, etc.	-	
Production Leader Training Program* <sup>1</sup>	As needed	Foreman/Assistant Foreman/Team Leader candidates	To develop trainees' abilities to recognize and resolve problems, management improvement skills, and leadership capabilities and other skills required to work as a leader at each level	Super leader training Senior leader training Team leader training Junior leader training Junior leader training	-	
WorldSkills Competition Training Program* <sup>1</sup>	Two years/29 employees	Selected employees in the production field who are under 21 years old	Systematic training of young engineers     Training participants to compete in the regional, national and international WorldSkills competitions	Employees are trained in special skills so as to participate in the WorldSkills competition	Results of FY March 2022 Gold and Silver medals in Sheet Metal Technology 1 of each Gold and Silver medals in Autobody Repair 1 of each	
Advanced Technical Skills Training course*1*2	As needed	Selected highly skilled employees	To preserve the advanced technical skills necessary for manufacturing and hand them down from one generation of craftspeople to the next	• During the two-year program, one expert trains two apprentices • After completing the course, the expert is awarded the title of Production Engineering Meister and receive the Meister Badge	Cumulative Results since 1996 Number of employees completing the course 138 Production Engineering Meisters 67 Monotsukuri Meisters 28 Hiroshima Prefecture award-winning skilled workers 21 Contemporary Master Craftspeople 17 Medal with Yellow Ribbon recipients 19	
Welding Skills Training Program*1	As needed	Welding technicians	To train technicians to compete in the regional and national competitions To promote the growth of individual technicians, pass on skills within Mazda and raise standards	Specialized training is conducted with the goal of sending welding technicians to complete in the national championships	Inaugurated in 1982 (Figures below are the cumulative numbers) National competition winners 11 Prize recipients 39	

<sup>\*1</sup> Initiatives at Mazda Motor Corporation
\*2 Twenty-four courses comprising skills to pass on to new engineers are available in 13 fields: iron and casting, die casting, powder alloys, heat treatment, machining, engine assembly, axle assembly, transmission assembly, press, chassis, painting, and vehicle assembly

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# People

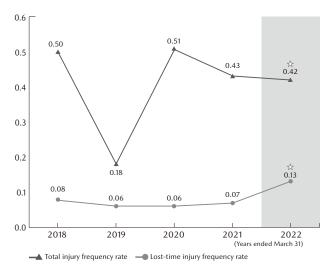
#### Global Lost-Time Injury Frequency Rate

FY March 2022	0.13

 $^*$ Lost-time injury frequency rate: The number of lost-time accidents per million person-hours worked.

Scope of data collection: Mazda Motor Corporation, eight Group companies in Japan, and five overseas production sites (Subsidiaries and equity-method Group companies that promote safety and health initiatives are included in the scope of data collection.)

Injury Frequency Rate ☆Subject to independent third-party assurance( P129) (Non-consolidated)



<sup>\*</sup> Total injury frequency rate:

The number of lost-time and non-lost-time accidents in Mazda Motor Corporation per million person-hours worked.

Lost-time injury frequency rate:

The number of lost-time accidents in Mazda Motor Corporation per million person-hours worked.

\* For third-party assurance obtained for FY March 2018 to FY March 2021 figures, please refer to the Sustainability Reports for the respective year.

## Number of Participants in Education and Training Programs Concerning Occupational Safety and Health

(Non-consolidated)

Contents	Unit	FY March 2020	FY March 2021	FY March 2022
Safety and health training prescribed by the Occupational Safety and Health Law		4,665 (including 649 from Group companies and suppliers)	3,896 (including 332 from Group companies and suppliers)	4,623 (including 391 from Group companies and suppliers)
Training for achieving zero accidents (prediction trainer training, etc.)		415	275	440
Capacity-building training for dangerous or hazardous work engaged persons (forklift operation, etc.)	person	442	797	493
Training for safety and health managerial and supervisory personnel (for newly appointed personnel)		138	170	121
Practical first aid training (including AED use)		855	209	175

#### Number of Participants in Mental Health Training

(Non-consolidat

Number of Participants in Mental Health Haining (Non-consolidate					
	Unit	FY March 2020	FY March 2021	FY March 2022	
Training for newly appointed managers		186	214	228	
Training for managers (advanced)		76	104	104	
Training for third-year employees (Self-care seminar)	person	256	(postponed by infection prevention)	461 (including previous year's target person)	
Training by division (at the division's request)		357	328	150	

#### Organizational Diagnosis in Vitality Checkups (Comprehensive Health Risk and Comprehensive Health Degree of the Organization)

(Non-consolidated)

	FY March 2020	FY March 2021	FY March 2022
Comprehensive health risk*1	87	87	86
Comprehensive health degree of the organization*2	52.5	52.5	52.9

<sup>\*1</sup> An indicator of health effect (risk), based on workload/discretion/support conditions. The above figures are calculated assuming the national average value (announced by the Ministry of Health, Labour and Welfare) to be 100. (A smaller value indicates a smaller risk.)

#### Results on Measures to Prevent Lifestyle-Related Diseases

(Non-consolidated)

		Unit	FY March 2020	FY March 2021	FY March 2022
Nonsmoking promotion activities	Percentage of employees who smoke	%	28.7	27.7	29.6
Walking activities	Number of participants in Mazda Active Walking	person	5,920	4,224	4,249

#### Results on Healthcare Guidance

(Non-consolidated)

	Unit	FY March 2020	FY March 2021	FY March 2022
Personal guidance on the basis of health checkup results (including specific health guidance)	case	2,041	1,488	2,307

#### Number of participants in practical disaster drills\*

(Mazda Head Office)

	Unit	FY March 2020	FY March 2021	FY March 2022
Practical disaster drills	person	12,500	8,059	7,782

<sup>\*</sup> Drill for disaster response, firefighting and first aid (using AED) in preparation for an earthquake, tidal wave, etc.

<sup>\*2</sup> An indicator of the organization's current health degree, based on the stress response and work engagement. Expressed as a deviation value.

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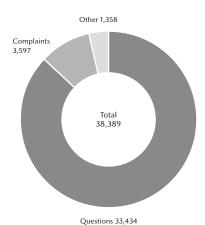
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# People • Society

# FY March 2022 Breakdown of Mazda Call Center Customer Responses by Type (In Japan)



Number of Re	Calls (In Japan)
Unit	FY March 2022
Case	5
10,000 vehicles	13.1

Expenses Related to Social Contribution Activities*		(Consolidated)
	Unit	FY March 2022
Cash donations (including advertising sponsorships)		1,525
Labor costs for employees who volunteer during working hours		423
Contribution in kind (in monetary terms)	Million yen	13
Operating expenses (voluntary program expenses, facility openings, etc.)		617
Total		2,578

<sup>\*</sup>Boundary of data collection: Mazda Motor Corporation and major domestic and overseas consolidated subsidiaries

# Breakdown of Human Rights Consultations

	Unit	FY March 2022
Harassment		24
Human relationships in the workplace	Case	8
Other	Case	3
Total		35

Number of Reports to the Mazda Global Hotline*		(Consolidated)	
	Unit	FY March 2022	
Reports regarding Mazda	Case	25	
Reports regarding Group companies		27	
Unknown		2	
Total		54	

<sup>\*</sup>Including reports and consultations related to harassment and other labor-related problems, working hours management, and suspected violations of the Mazda working regulations

#### Global Employee Survey (Positive Answer Percentage)

	Contents	Unit	FY March 2020	FY March 2021	FY March 2022	
My workplace is engaged in CSR through their day-to-day activities.*1*2	CSR		46	51	54	
I feel inspired/driven to achieve more than what is expected of me.*3		-	64	67	66	
I understand my role in helping the company be successful.*3	Work motivation		64	69	70	
l propose and implement new or better ways of working that enable me to deliver Mazda's brand philosophy and vision.*3				%	46	49
I understand my company's basic philosophy and policy for human rights.*1*2	II dalar		84	85	86	
My company takes appropriate action if there is a violation of human rights.* <sup>1+2</sup>	Human rights		77	78	78	
Legal and company policy compliance is strictly observed in this company.*3	Compliance	-	76	76	80	

(Non-consolidated)

#### Number of Suppliers

	Unit	As of March 31, 2022
Automotive parts		549
Materials, etc.	- C	139
Equipment and tools	- Company	384
Total	_	1,072

#### Purchasing Cooperative Organizations\*

		Unit	As of March 31, 2022
Parts suppliers	Yokokai		167
Materials suppliers (Raw materials, equipment, molds, etc.)	Yoshinkai	Company	78

<sup>\*</sup>An autonomous management organization, comprising suppliers that have a certain degree of transaction with Mazda, with the purpose of strengthening relationships between Mazda and its suppliers as well as promoting mutual growth and prosperity. The procurement amount from member companies of Yokokai and Yoshinkai accounts for about 90% of the whole.

<sup>\*1</sup> Percentage of positive responses from indirect employees (The survey was conducted on both direct and indirect employees.)

<sup>\*2</sup> Non-consolidated

<sup>\*3</sup> Consolidated

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# **Major Product Lineup**

# MAZDA 2



Global Sales Volume 87 thousand units

JNEO Production bases JNO

MAZDA 3



Global Sales Volume Sales markets JNECO 230 thousand units Production bases JNCO

MAZDA 6



Global Sales Volume Sales markets JNECO 61 thousand units Production bases J E C O

MAZDA CX-3



Global Sales Volume JNEO 61 thousand units Production bases JO

MAZDA CX-30



Global Sales Volume 213 thousand units

JNECO Production bases JNCO

MAZDA CX-4



Global Sales Volume 17 thousand units

Sales markets Production bases

MAZDA CX-5



Global Sales Volume 388 thousand units Production bases

Sales markets JNECO JECO

MAZDA CX-8



Global Sales Volume Sales markets JCO 28 thousand units Production bases J C O

MAZDA CX-9



Global Sales Volume Sales markets NEO 61 thousand units Production bases JE

MAZDA MX-30



Global Sales Volume 16 thousand units

Sales markets JNEO Production bases J

MAZDA MX-5 (Japanese name: Mazda Roadster)



Global Sales Volume 26 thousand units

Sales markets JNEO Production bases

# MAZDA CX-50



Launched in North America in spring 2022

# MAZDA CX-60



Launched globally starting from Europe in summer 2022

Sales markets and production bases

Japan N North America E Europe C China O Other

- \* Global sales volume is for fiscal year March 2022, sales markets and production bases are as of March 31, 2022.
- \* Vehicle specifications differ by market

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Corporate Profile (as of March 31, 2022)

Company name: Mazda Motor Corporation

Founded: January 30, 1920

Head Office: 3-1 Shinchi, Fuchu-cho, Aki-gun, Hiroshima 730-8670, Japan

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Main business: Manufacture and sales of passenger cars and commercial vehicles

Stock information: Authorized: 1,200,000,000

Share issued: 631,803,979

Number of shareholders: 142,780

Capital: 284 billion yen

Employees: Consolidated Total: 48,750\*1

Research and Head Office, Mazda R&D Center (Yokohama), Mazda North American

development sites: Operations (U.S.A), Mazda Motor Europe (Germany), China Engineering Support

Center (China)

Production sites: Japan: Hiroshima Plant (Head Office, Ujina),

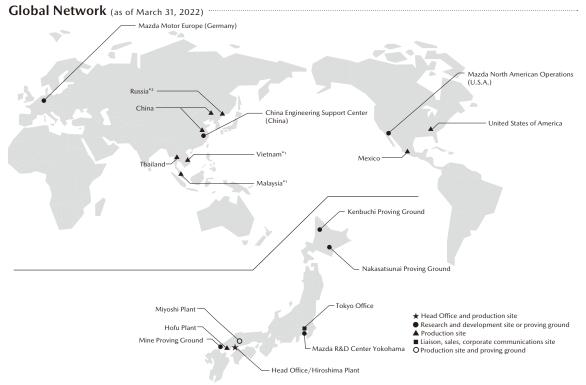
Hofu Plant (Nishinoura, Nakanoseki), Miyoshi Plant

Overseas: China, Thailand, Mexico, U.S.A., Vietnam,\*2 Malaysia,\*2 Russia\*3

Sales companies: Japan: 199, Overseas: 135

Principal products: Four-wheeled vehicles, gasoline reciprocating engines, diesel engines, automatic

and manual transmissions for vehicles





- \*1 Assembly only (Volume is not disclosed.)
- \*2 Mazda has signed a contract to transfer the entire investment of the Company in Mazda Sollers Manufacturing Rus LLC to SOLLERS PJSC in October 2022

# Other Information

Official Website

Sustainability

Mazda's sustainability initiatives and other general information

# Download Report

Mazda Integrated Report

Mazda Technical Review

(For English, Summary is available)

<sup>\*1</sup> Excluding the number of Mazda Group employees dispatched to companies outside the Group, but including the number of employees dispatched to Mazda Group companies from outside the Group.

<sup>\*2</sup> Assembly only (Volume is not disclosed.)

<sup>\*3</sup> Mazda has signed a contract to transfer the entire investment of the Company in Mazda Sollers Manufacturing Rus LLC to SOLLERS PJSC in October 2022

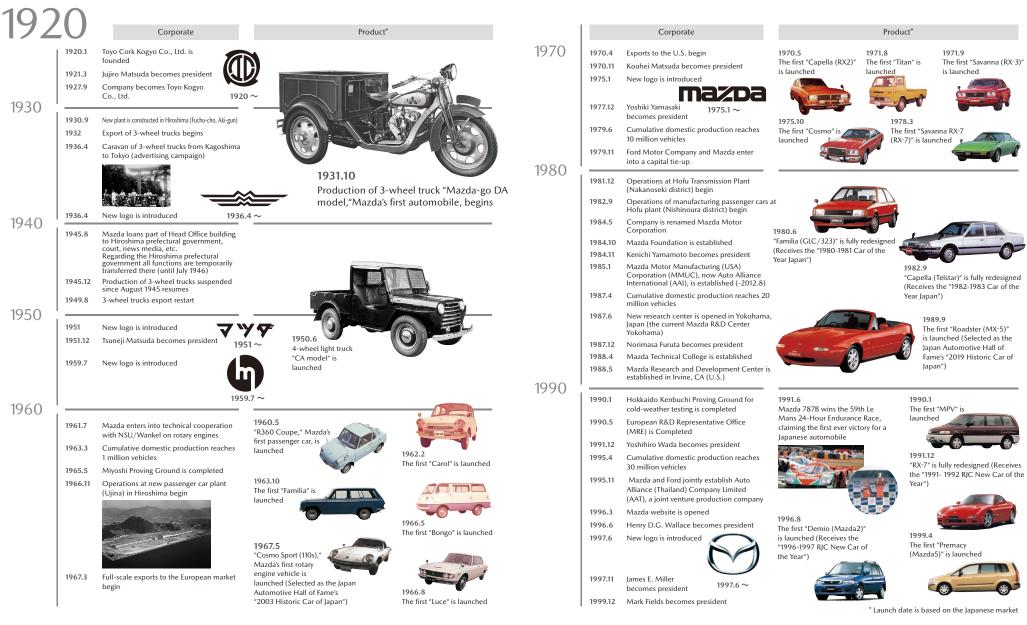
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2000

2010

Corporate		Product*		
2000.11	Mid-term plan "Millennium Plan" is announced Hokkaido Nakasatsunai Proving Ground is	2000.7 "Roadster (MX-5)" is recognized by Guinness	2002.5 The first "Atenza (Mazda6)" is launched (Receives the "2003 RJC Car of the Year	
	Completed	World Records as the world's largest productio	n	
2002.4	New brand statement "Zoom-Zoom" is introduced	of lightweight open two- seater sports car	A B	
2002.6	Lewis Booth becomes president and CEO	2003.4	2003.10	
2003.1	Production of "Mazda6" commences at FAW Car Company in China	"RX-8" is launched (Recei RJC Car of the Year")		
2003.8	Hisakazu Imaki becomes president and CEO			
2004.11	Mid-term plan "Mazda Momentum" is announced	2005.8		
2005.8	China Engineering Support Center is opened	"Roadster (MX-5)" is fully Year Japan")	redesigned (Receives the "2005-2006 Car of the	
2006.5	Mine Proving Ground is completed	2006.2		
2007.3	Mid-term plan "Mazda Advancement Plan" is announced	, ,	cle, "RX-8 Hydrogen RE," is started	
2007.3	Long-term vision for technology development "Sustainable Zoom-Zoom" is announced	2006.3 Global presentation of th "BT-50" at Bangkok Interr Motor Show		
2007.4	Operations commence at an engine manufacturing plant in China (CFME, now CME)	2006.10 Production of the first	2006.12 "CX-7" is launched	
2007.7	Cumulative domestic production reaches 40 million vehicles	"CX-9" commences		
2007.10	Operations commence at a manufacturing plant in Nanjing, China (CFMA, now CMA)	2007.7 "Demio (Mazda2)" is fully	2008.7	
2008.11	Takashi Yamanouchi becomes president and CEO	(Receives the "2008 RJC and the "2008 World Car	Car of the Year" launched	
		2009.3 Leasing of hydrogen vehic	le, "Premacy Hydrogen RE Hybrid," is started	
2010.4	"Framework for Medium-and Long-term Initiatives" is announced	2010.10	2012.2	
2012.2	"Structural Reform Plan" is announced	Skyactiv Technology is "CX-5" is launched (Receives		
2012.9	Mazda and Sollers establish Mazda Sollers (MSMR), a joint venture production		the "2012-2013 Car of the Year Japan")	

Corporate Operations commence at Mazda de Mexico Vehicle Operation (MMVO), a production facility in Mexico Operations commence at Mazda Powertrain Manufacturing (Thailand) (MPMT), a transmission plant in Thailand 2015.4 "Structural Reform Stage 2" is announced 2015.4 New Corporate Vision is established 2017.8 Agreement is entered into with Toyota on business and capital tie-up 2017.8 Long-term vision for technology development "Sustainable Zoom-Zoom 2030" is announced 2018.3 Mazda and Toyota establish a joint-venture company, "Mazda Toyota Manufacturing U.S.A." 2018.5 Cumulative domestic production reaches 50 million vehicles 2018.6 Akira Marumoto becomes president and CEO 2019.11 "Medium-Term Management Plan" is announced

Product\* 2014.9 2015.2 "Demio (Mazda2)" is fully redesigned "CX-3" is launched (Receives the "2014-2015 Car of the Year Japan") 2015.5 "Roadster (MX-5)" is fully redesigned (Receives the "2015-2016 Car of the Year Japan," the "2016 World Car of the Year," and the "2016 World Car Design of the Year") 2016.2 Production of "Mazda BT-50" at "CX-9" is fully redesigned and Thailand commences production commences 2016.4 "CX-4" makes its world debut 2016.7 A series of Mazda's vehicle motion control technologies "Skyactiv Vehicle Dynamics" is announced "CX-5" is fully redesigned New-generation gasoline engine "Skyactiv-X" is announced 2017.12 "CX-8" is launched

2010.4	"Framework for Medium-and Long-term Initiatives" is announced
2012.2	"Structural Reform Plan" is announced
2012.9	Mazda and Sollers establish Mazda Sollers (MSMR), a joint venture production company in Russia
2012.9	Mazda and Bermaz establish Mazda Malaysia (MMSB), a joint venture company
2013.1	Business agreement is concluded for the development and production of Fiat brand two-seater convertible sports car
2013.6	Masamichi Kogai becomes president and CEO

2012.11 "Atenza (Mazda6)" is fully redesigned (Receives the "2014 RJC Car of the Year") 2013.6 Commenced public road test of leased hydrogen vehicles, "Premacy Hydrogen RE Range Extender EV"

2013.11 "Axela (Mazda3)" is fully redesigned

2020.1 Mazda marks the 100th anniversary of its founding Medium-Term Management Plan is revised 2020.11 Endeavor for Carbon Neutrality by 2050 is

> 2021.11 "CX-50" makes its world

"Mazda3" is launched (Receives the "2020 World Car Design of

"MX-30" is launched (Receives "Design

Mazda's first mass-production electric

vehicle "Mazda MX-30" is launched

the Year")

2020.10

the Year Japan")



2019.9 "CX-30" is launched



\* Launch date is based on the Japanese market

2022.9

2020

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# Third-Party Verification

The Mazda Sustainability Report 2022 was verified by a third party to improve the reliability of the data disclosed in the report.

Items verified by the third party are indicated by a star mark  $(\bigstar)$ .



No.1811004542-2

## **Independent Verification Report**

To: Mazda Motor Corporation

#### 1. Objective and Scope

Japan Quality Assurance Organization (hereafter "JQA") was engaged by Mazda Motor Corporation (hereafter "the Company") to provide an independent verification on whether the GHG emissions (energy-derived CO₂ emissions from Scope 1, 2 and four categories of Scope 3 [Category 3, 5, 6 and 7]), water use and waste emissions for FY 2021 (hereafter "the Environmental data") were correctly indicated in the "Mazda Sustainability Report 2022" (hereafter "the Report") created by the Company. The Environmental data is included in the Company's calculation report assured by an independent third party on its verification report, and is indicated with the "★" mark in the "Earth" in "Data / Materials" of the Report. The content of our verification was to express our conclusion, based on our verification procedure, on whether the Environmental data was correctly indicated in accordance with the "Publish process of Mazda Sustainability Report. Environmental data which is Third party assured (dated November 15, 2022)" (hereafter "the Rules"). The purpose of the verification was to evaluate the Environmental data indicated in the Report objectively and to enhance the credibility of the Report.

\*The fiscal year 2021 of Mazda Motor Corporation ended on March 31, 2022.

#### 2. Procedure Performed

JQA conducted verification in accordance with "ISO 14064-3" for GHG emissions and with "ISAE3000" for water use and waste emissions, respectively. Each boundary of the environmental information for this verification assignment are:

- For Scope 1, 2 GHG emissions (energy-derived CO<sub>2</sub> emissions) and Scope 3 GHG emission (Category 3), four domestic
  production sites of the Company and five overseas production companies.
- . For Scope 3 GHG emission (Category 5), water use and waste emissions, four domestic production sites of the Company.
- For Scope 3 GHG emissions (Category 6 and 7), the Company.

It should be noted that four domestic production sites of the Company are Hiroshima Plant, Miyoshi Plant, Nishinoura district and Nakanoseki district of Hofu Plant, and five overseas production companies are Mazda Powertrain Manufacturing (Thailand) Co., Ltd., AutoAlliance (Thailand) Co., Ltd., Changan Mazda Engine Co., Ltd., Changan Mazda Automobile Co., Ltd., and Mazda Motor Manufacturing de Mexico, S.A. de C.V. The verification was conducted to a limited level of assurance and quantitative materiality was set at 5 percent each of the total emissions and total amount of water use in the Report. Our verification procedure included checking the Environmental data indicated in the Report against that included in the Company's calculation report, at the JQA office.

#### 3. Conclusion

Based on the procedure described above, nothing has come to our attention that caused us to believe that the Environmental data in the Report is not materially correct or has not been prepared in accordance with the Rules.

#### 4. Consideration

The Company was responsible for preparing the Report, and JQA's responsibility was to conduct verification of the Environmental data in the Report only. There is no conflict of interest between the Company and JQA.

Sumio Asada, Board Director

For and on behalf of Japan Quality Assurance Organization 1-25, Kandasudacho, Chiyoda-ku, Tokyo, Japan January 11, 2023 Data | Major Product Lineup

Corporate Profile /

History of Mazda | Third-

Third-Party Verification 1

Third-Party Assurance

# Third-Party Assurance

The Mazda Sustainability Report 2022 was assured by a third party to improve the reliability of the data disclosed in the report. Items assured by the third party are indicated by a star mark (\$\forall n\).

# Independent Assurance Report

To the Representative Director, President and CEO of Mazda Motor Corporation

We were engaged by Mazda Motor Corporation (the "Company") to undertake a limited assurance engagement of the social performance indicators marked with "☆" (the "Indicators") for the period from April 1, 2021 to March 31, 2022 included in its MAZDA SUSTAINABILITY REPORT 2022 (the "Report") for the fiscal year ended March 31, 2022.

## The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

#### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.

- Examining, on a test basis, evidence supporting the generation, aggregation and reporting
  of the Indicators in conformity with the Company's reporting criteria, and recalculating the
  Indicators.
- •Making inquiries and reviewing materials including documented evidence of the Company's headquarters selected on the basis of a risk analysis, as alternative procedures to a site visit.
- Evaluating the overall presentation of the Indicators.

#### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

# **Our Independence and Quality Control**

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Shinnosuke Kayumi, Director KPMG AZSA Sustainability Co., Ltd. Osaka, Japan January 20, 2023

Mazda Motor Corporation
Communication Supervisory Department
Corporate Communications Division