DENSO Integrated Report 2023 Overview by Product

# **Business Portfolio and Value Creation**

DENSO operates seven core businesses in a broad range of domains, with particular emphasis on the mobility domain. The Company has built its business portfolio with a view to creating new value for the future and maximizing the value created by each business. Moreover, at present reweighting the business portfolio is a priority strategy. Even in a volatile operating environment, a reweighted business portfolio will allow us to market products and services that reflect demand and to continue to arow.

### **Business Composition**

In its automotive businesses, DENSO supplies an extensive lineup of products and systems as a Tier 1 supplier that is trusted by car manufacturers around the clobe. We have five automotive businesses: the Electrification Systems Business, which is pivotal to the popularization of electric vehicles; the Powertrain Systems Business, manufacturing powertrains for an array of different vehicles: the Thermal Systems Business, engaged in the manufacture of in-vehicle air-conditioning systems that account for the largest share of the global market; the Mobility Electronics Business, which aims to eliminate traffic accident fatalities: and the Advanced Devices Business, essential for mobility-related development going forward. These five businesses are contributing to electric vehicle popularization, advanced safety, automated driving, and connected driving. Meanwhile, our non-automotive businesses are leveraging technologies fostered in the automotive businesses to advance growth in the fields of factory automation (FA) and agricultural technology (AgTech).

#### Introduction of Sustainability KPIs

To further promote initiatives aimed at maximizing green value and peace of mind value, we introduced sustainability KPIs in fiscal 2023. One such KPI is a target for revenue from green and peace of mind products, which corresponds to the proliferation of these products. We have begun monitoring results in relation to this new KPI. DENSO's green and peace of mind lineup is steadily growing revenue and providing value throughout society.

#### Relationship between Companywide Strategy and **Business Strategies**

Business strategies linked to the Companywide strategy are key to realizing the Mid-term Policy for 2025 and achieving green and peace of mind strategies. We are maximizing the value we provide to society by steadily reweighting our business portfolio based on a Companywide strategy—which entails ensuring growth through the de-emphasis and discontinuation of internal combustion engine products—and by accelerating the development and sales growth of green and peace of mind products. In light of the current business

environment and the progress of business strategies, DENSO annually reviews, deliberates, and revises specific short-, medium-, and long-term scenarios that envision leveraging the distinctive advantages and capital of each business to realize the Companywide strategy. The following pages focus on the progress of business strategies linked to the Mid-term Policy for 2025 as well as specific green and peace of mind strategies.

## Fiscal 2023 Summarv

Global economy: The global economy trended toward modest recovery with the easing of COVID-19 pandemic-related restrictions on economic activities. On the other hand, the prolonged invasion of Ukraine by Russia and other factors led to worldwide shortages of energy and in-vehicle semiconductors as well as hikes in the prices of various goods and services. In addition, uncertainties persisted due to concerns that monetary tightening in the United States and Europe would lead to an economic recession and to turmoil caused by China's zero-COVID policy.

Revenue and operating profit: The Company posted record revenue and operating profit. Revenue increased 16.1%, or ¥885.8 billion, year on year, to ¥6,401.3 billion, as higher sales in the vehicle electrification and advanced safety fields coupled with a recovery from the impact of the operational restrictions imposed during the COVID-19 pandemic outweighed lower vehicle production, which resulted from a semiconductor shortage and other factors. Operating profit rose 24.9%, or ¥84.9 billion, year on year, to ¥426.1 billion, thanks to sales growth, rationalization that included R&D efficiency improvements, and the passing on of cost hikes to prices, which absorbed the effect of external factors such as the soaring cost of materials, logistics, energy, and components, particularly electronic components.

## Principal Changes in the Business Environment (Future Opportunities and Risks)

Proliferation of electric vehicles: The pace of initiatives, regulatory implementation, and rulemaking that are aimed at realizing carbon neutrality is increasing. Meanwhile, large amounts of CO2 are

Operating Profit: Breakdown of Positive and Negative Factors (Billions of ven)



emitted not only when conventional vehicles are used but also when vehicles are manufactured. Given these factors, interest is growing in the automotive industry's initiatives to popularize electric vehicles. According to the International Energy Agency, electric vehicles accounted for less than 10% of vehicle sales in 2021 but are projected to account for 36% by 2030. In 2030, approximately 80% of electric vehicles sold are expected to be BEVs. Further, China and Europe are likely to lead the growth in sales of electric vehicles. Accordingly, BEV-related product development and production capacity increases are being accelerated. (Electrification Systems, Powertrain Systems, and Thermal Systems P.54–59

Rising demand for in-vehicle semiconductors: Currently, the global semiconductor market accounts for revenues of approximately ¥50 trillion. This market is expected to grow steadily and reach ¥100 trillion by 2030. As a struggle for supremacy continues to unfold in the global semiconductor market, the in-vehicle semiconductor market is likely to see new growth due to the advent of a decarbonized society and technological innovation in mobility. Mainly reflecting increased demand accompanying the popularization of electric vehicles and automated driving, the growth rate of the in-vehicle semiconductor market continues to outpace that of the semiconductor market as a whole. (Advanced Devices P.62–63)

Industry-wide **De-Emphasis and** Discontinuation of Internal Combustion Engine Products

with the aim of continuing to provide society with new value.

Increased utilization of in-vehicle software: As vehicles become more sophisticated due to the popularization of electric vehicles and the development of advanced driver assistance systems (ADAS), invehicle software is increasing in quantity and complexity. As for connected vehicles, which link with a range of objects, the use in recent years of over-the-air systems will enable wireless, remote software updates and performance improvements on an ongoing basis. In addition, due to the entry of IT companies into the automotive industry, competition with companies from other industries is becoming fierce. (Mobility Electronics P.60–61)

Intensification of labor shortages: Since 2019, the number of people facing hunger worldwide has increased by approximately 122 million due to the COVID-19 pandemic, frequent climate-related crises, and conflicts in various regions, including Russia's invasion of Ukraine. Food insecurity is more pronounced among those living in rural areas, and the need for stable, large-scale agricultural production is only increasing. Also, labor shortages are becoming more serious, particularly in developed countries. A conspicuous example of this trend is the "2024 problem"\* in Japan's logistics industry. In establishing a society that can sustain production activities, expectations are growing with respect to the comprehensive automation of plant production functions. (Factory Automation and Social Solutions; Food Value Chain TP 64-65

\* The "2024 problem" in logistics refers to the logistical delays that are expected to result from two regulations related to truck driver working hours, both set to take effect in April 2024.

Since fiscal 2022, DENSO has been optimizing its business portfolio to maximize green value and peace of mind value. Our aim is to focus management resources on fields that contribute to profits and the realization of our management philosophy. To this end, we are considering the de-emphasis and discontinuation of internal combustion engine products in certain businesses. To establish a favorable model for DENSO and its customers and suppliers, as well as the companies assuming its businesses, the disposal of businesses will be premised on continuing to safely and reliably provide customers with products of the same high quality. Based on this premise, we have been de-emphasizing and discontinuing internal combustion engine products. To date, we have decided to dispose of type III alternator and fuel pump module businesses. In fiscal 2024, we announced our plan to begin examining the disposal of certain ceramic product businesses (as of the end of July 2023). Ceramic products are core components of internal combustion engines. The aim of transferring businesses engaged in the manufacture of these components to Niterra Co., Ltd., which has some of the world's leading technological capabilities in the ceramics field, is to integrate the technological and Monozukuri capabilities of both companies and thereby enable the realization of enhanced internal combustion engine components. In addition, DENSO will accelerate the development of products for electric vehicles in preparation for their full-scale popularization. At the same time, we will work on the development of energy management systems for entire vehicles, which will become increasingly important with the proliferation of electric vehicles. Through such initiatives, DENSO will offer products that are appealing to customers in terms of both performance and price across the entire auto motive market, including internal combustion engines and electric vehicles, and contribute to the early realization of a carbon-neutral society. Going forward, the Company will optimize its business portfolio even more vigorously