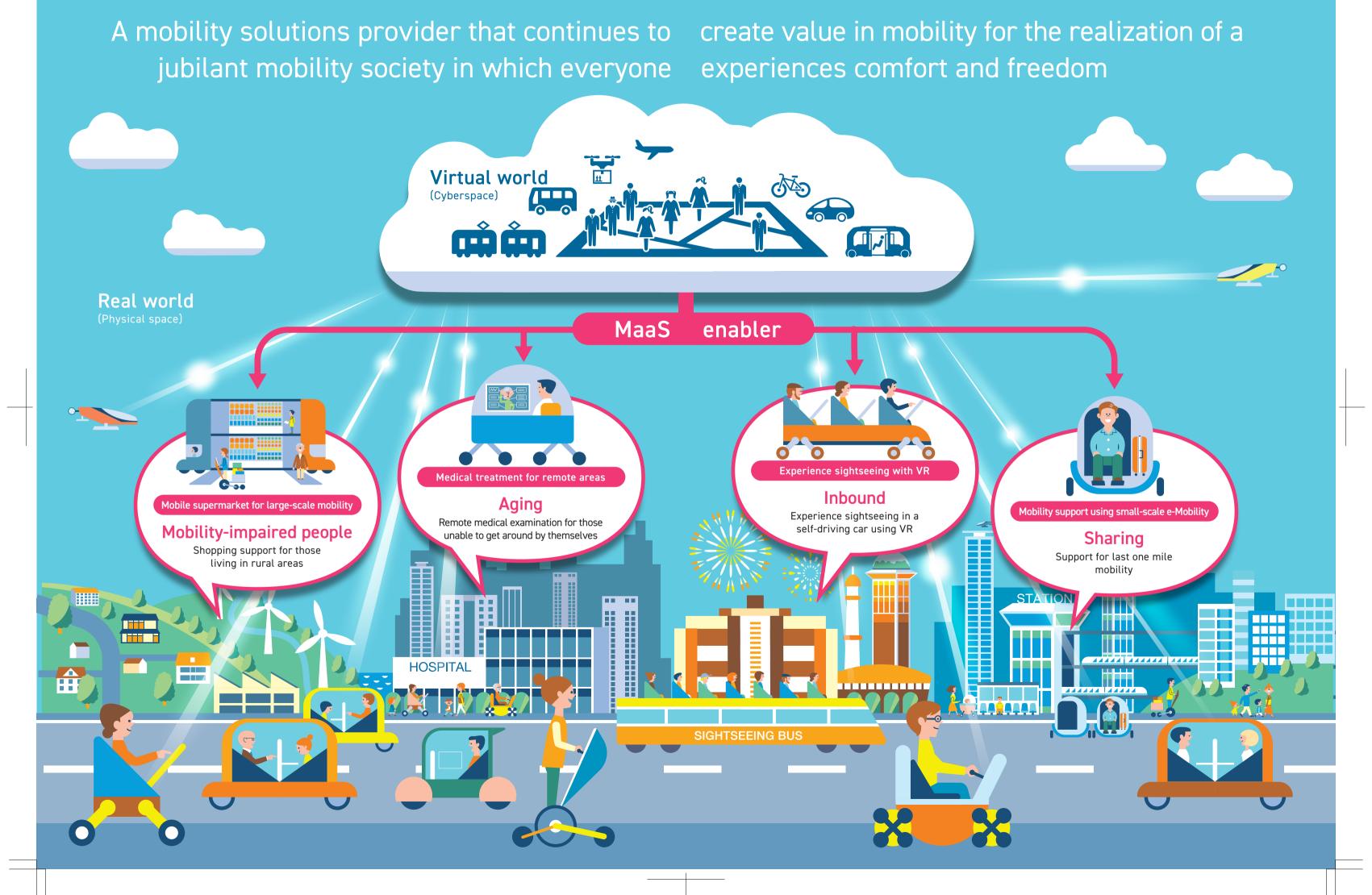
## **DENSO TEN Limited**

Headquarters: 1-2-28 Gosho-dori, Hyogo-ku, Kobe City, Hyogo 652-8510 Phone: +81-78-671-5081 www.denso-ten.com











## **Business Outline**

## Our Business





















Mobility products

Energy use

**Environment** 

## Contributing to the realization of carbon neutrality by 2035

The DENSO TEN Group recognizes coexisting harmoniously with the environment and economy as a crucial management issue. By aiming to solve environmental and energy problems and achieve coexistence with nature through all of our corporate behavior, we will promote better relationships between people, cars, and the environment. In addition, in light of the acceleration of carbon neutral initiatives around the world to move from low carbon to decarbonization, the Group will promote initiatives in the three areas of manufacturing, mobility products, and energy use to contribute to our goal of realizing carbon neutrality in production activities by 2035.

The DENSO TEN Group contributes to society in the areas of environment and security through people- and environment-friendly automotive electronics and services.

We continue to pursue the realization of a carbon-neutral society to bring about a society where everyone can enjoy safe and secure mobility without traffic accidents.

Zero traffic accidents

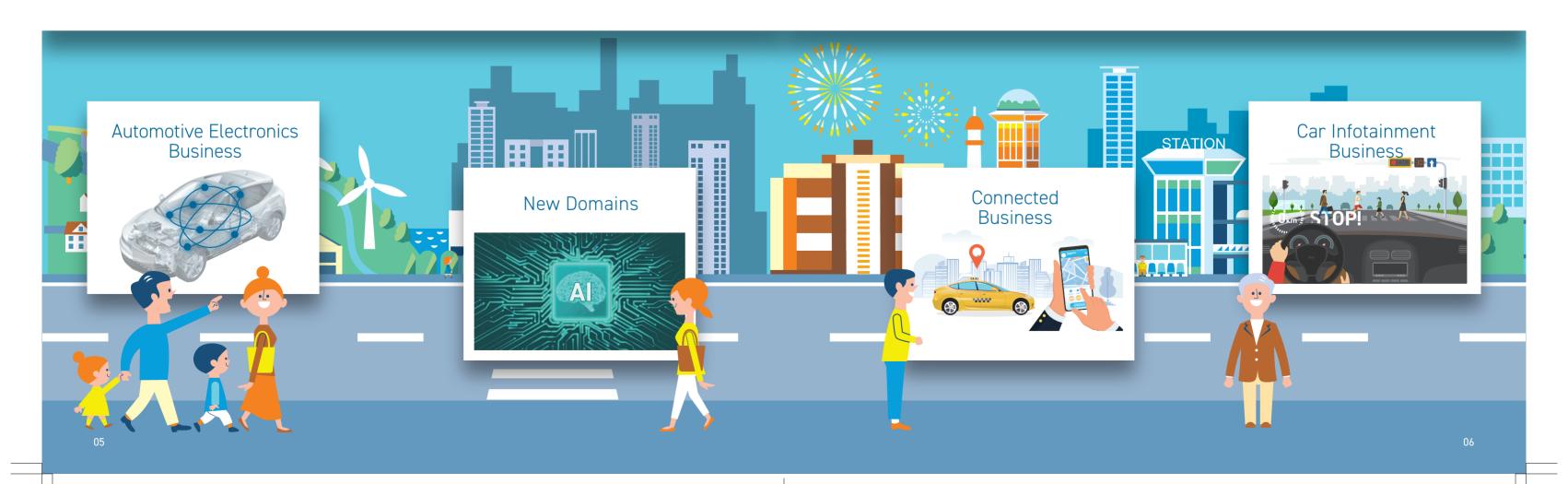
Comfortable spaces

Support for workers

Security

## Realizing comfortable and secure mobility to enrich people's lives

The DENSO TEN Group seeks to enrich people's lives by realizing comfortable and secure mobility. The Group will contribute to the realization of the three pillars of zero traffic accidents, comfortable spaces, and support for workers set forth by the DENSO Group. We will do so under our commitment to peace of mind by resolving the problems of fatal or serious traffic accidents and the mobility of mobility-impaired people in an aging society with a declining birthrate.



## **Connected Business**

[In-vehicle communication equipment]

Taking on the growth areas of connected services and MaaS, we aim to realize a safe, secure and comfortable mobility society through connected functional products (incorporating advanced information processing using IT/IoT technology).



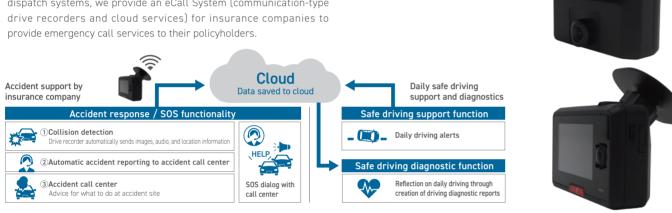
## Car Infotainment Business [In-vehicle multimedia devices]

We aim to contribute to maximizing driver safety and comfort based on people-friendly information systems, including in-vehicle multimedia systems and display audio systems.



## Emergency Call Service for Policyholders (communication-type drive recorders and cloud services)

Using the technology from our drive recorders, which we have been working on since 2005, telematics services for company cars, and cab dispatch systems, we provide an eCall System (communication-type



### Display Audio

Linking a smartphone allows the user to perform operations such as music playback and sending and receiving messages on the large, high-definition screen using the apps they are familiar with. Furthermore, software updates occur automatically and wirelessly to keep the system up to date in terms of usability and security.



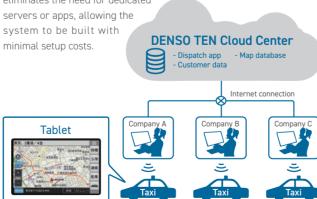
### "Offseg", a safe driving management telematics service for companies using a communication-type drive recorder

This service concept was born from the idea of "preventing" 'troubles,' 'accidents,' and 'waste' associated with company-owned vehicles. Its services support accident prevention and efficient fleet management. Vehicle management staff can manage a vast amount of information through a user-friendly dashboard that provides at-a-glance notifications such as company vehicle accidents, drive recorder malfunctions, and near-miss events.



### **Cloud-based Dispatch System for Taxis**

Vehicle location information and other data obtained via GPS are centrally managed at the cloud center using the tablet's LTE connection. When accepting a dispatch, the system quickly and automatically searches for the most suitable vehicle for the customer and sends the dispatch instructions to the tablet. This helps make dispatching faster and improve customer service. Moreover, the use of cloud computing eliminates the need for dedicated



### **Next-Generation Sound System**

We developed a high-resolution sound system consisting of an 8-channel full digital Class D amplifier and 10 speakers equipped with our proprietary digital signal processing technology in the aim of providing awe and inspiration to all people at all times. By correcting noise specific to car interiors for better sound, the system reproduces a sound space similar to that of a listening room.to be built with minimal setup costs.



#### **TOPICS**

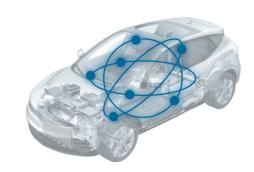
### Home Audio

Our home audio systems have been used by various artists in music production for their accurate reproduction of sound and have received high marks from audio magazines in Japan and other countries. The know-how and technology we have cultivated in home audio are also utilized in our in-vehicle sound system development.



# Automotive Electronics Business [In-vehicle electronics]

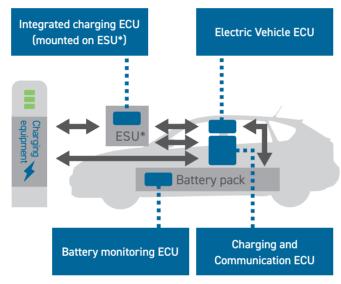
DENSO TEN aims to contribute to the realization of carbon neutrality and safe and secure transportation by providing core products (ECU) that utilize control system technology for next-generation vehicles that are increasingly going electric and autonomous.



#### **Electric Vehicle ECU**

Efficient control and utilization of energy helps improve the utility of electric vehicles. Electric vehicle ECUs provide integrated control for the safest and most efficient vehicle operation under various driving conditions.





\*ESU: Electricity supply unit; a device with both charging and power distribution functions for electric vehicles (made by DENSO)

#### **Battery Monitoring ECU**

Battery monitoring ECUs are used to monitor the status of batteries, including estimating remaining battery capacity and detecting abnormalities to ensure safe and effective use of high-efficiency, energy-dense lithium-ion batteries. Accurately tracking the status of the vehicle in detail makes it possible to maximize energy use.

## Charging and Communication ECU

This is an ECU that communicates with charging stations with standards that vary by country. The high level of security against hacking from the charging inlet ensures user safety. We are also developing products that are compatible with various charging stations around the world.



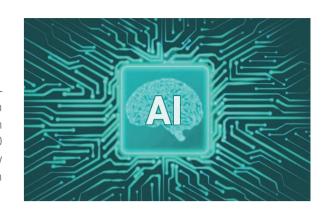
#### Integrated Charging ECU

This ECU communicates with charging stations via the charging communication ECU to control optimal charging according to the remaining battery level. Supporting both normal and fast charging, it helps increase user convenience. Moreover, miniaturization of the ECU also contributes to the reduction of vehicle weight.



## **New Domains**

We will open up various possibilities not only through the high quality of each product but by combining the know-how we have cultivated over many years in each business domain with the latest technology. That is what makes DENSO TEN products and services so appealing. We have also begun to cultivate new business domains, starting with the MaaS, which is attracting attention within the automotive industry.



### Edge Al

We are developing lightweight, high-performance edge Al algorithms that can be processed in real time by low-power, low-cost Al chips installed in in-vehicle devices such as drive recorders.



## Integrated Vehicle Control Electronics for Ultra-Compact EVs

This single ECU controls the vehicle's power supply, drive power, and body. Not only does it help reduce size and weight compared to the conventional combination of individual ECUs but it also contributes to lower system costs.



## Migration improvement services to encourage movement and consumption in the city

We have developed an app/service that allows users to obtain discount coupons by exploring the city. In cooperation with local governments, we conduct demonstration experiment for citizens. We aim to realize services that promote the flow of people (migration) by increasing the added value of moving around, and that lead to the revitalization of the city.



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## **Company Information**

## **Our Initiatives**

## Corporate Philosophy

## "Sincerity is the way of Heaven."

We will work with the utmost sincerity to support our customers and contribute to society.

• Customer Focus, Highest Possible Quality

We always think first how to best serve our customers, to create products of the highest quality that exceed our customers' expectations.

• Coexisting Harmoniously with Society

Recognizing we are a part of society, we shall fulfill our social responsibilities and contribute to our society through our corporate activities

Work Values

Each and everyone shall take pride in their work, and utilize their own abilities to share our achievements



The "TEN" in our company name DENSO TEN means "heavenly," in the sense of "ultimate" or "supreme." We have always followed the ideal that "sincerity is the way to heaven," as stated in the classic Confucian text, *The Doctrine of the Mean.* 

#### The Origin of DENSO TEN

The origin of DENSO TEN can be traced back about 100 years. Kawanishi Machine Works was established in 1920 centered on the textile machinery and aircraft business. At the time, the Company was attempting to domesticate production of vacuum tubes and communication equipment related to the aircraft business, and in 1946, it established the trademark "TEN" for vacuum tubes.

#### What are vacuum tubes?

Vacuum tubes are electronic components for amplifying voltage and current. They were put to practical use in the early 20th century in television and radio receivers. These electronic components were used widely until around the 1960s when semiconductors such as diodes and transistors came onto the scene.



## Sustainability Management

The DENSO TEN Group is pursuing sustainability management that aims to improve corporate value by contributing to the solution of social problems while growing our business. Sustainability management is the very practice of our corporate philosophy, which states, "We will work with the utmost sincerity to support our customers and contribute to society." Through our business activities, we will continue in our aim to be a company that is trusted by society by contributing to the solution of social problems.

















## Acceptance of Diversity

We believe that the acceptance and utilization of diversity by all our employees will lead to the development of individuals and enhancement of the competency and growth of our company. Based on this belief, we are working to develop a corporate culture that respects diversity, promote work-life balance, and support the independence and success of individuals.



## Work Style Reform

Through work style reforms, our company aims to enrich the work and life of each and every employee, achieve sustainable growth, and contribute to society. We will use the time created through flexible working styles and improved productivity for self-investment and new challenges and create new value through a virtuous cycle that leads to the growth of individuals and organizations.



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## Product Development/Security/Evaluation

We focus on developing products that are always one step ahead of the times

### **Development**

We engage in the planning and development of systems (services and on-board devices) that have global applications, such as software technologies to build next-generation vehicle platforms. In audio system development, we are developing technologies to provide a comfortable sound space like that of a listening room within the harsh environment of a car interior based on our extensive experience in all things car sound-related and our state-of-the-art





\*1. A2LA: The American Association for Laboratory Accreditation
\*2. ISO/IEC 17025: An international standard stipulating the general requirements for testing and calibration capabilities

## Security

With the increase in onboard IoT products, product security measures are needed to prevent damage from information leaks, data falsification, and attacks aimed at causing malfunctions. To give customers peace of mind while using our products, we are working to ensure product security by equipping them with technology (such as encryption) to protect them from cyberattacks, as well as by developing internal systems and rules and carrying out employee education.



#### **Evaluation**

Our EMC evaluation facility has obtained from A2LA\*1 Asia's first ISO/IEC 17025\*2 testing laboratory certification (for the automotive EMC field) to evaluate and study electromagnetic waves that affect electronic products. We are also individually certified by each automobile manufacturer and seek to provide safe and secure products with better performance. obtaining regulatory certification and supporting EMC testing according to international and automobile manufacturer standards.



Manufacturing

DENSO TEN's production network extends around the globe. We have built a production system to precisely meet the needs of our customers.

### **Production**

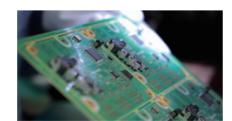
We have established a global production system to deliver to expanding automobile markets around the world. Notably, two plants in Japan, the Nakatsugawa Plant and the Oyama Plant, are positioned as mother plants within the Group. These plants develop cutting-edge production technologies, which are then deployed to plants outside Japan, strengthening our international competitiveness through manufacturing capabilities



In order to provide products to our customers that they can trust and are satisfactory to them, we have developed a global quality assurance system based on the international standard for quality management systems and implemented a cycle designed to promote product quality at domestic and overseas bases. In terms of international quality management systems, we have



obtained and operate under ISO 9001 certification as well as IATF 16949, the standard for the automotive industry. Through such efforts, we ensure product safety and quality at each stage from product planning to mass production based on the DENSO TEN Group Product Safety Charter.



## Character Development

We aim to create workplaces where the human rights of each employee are respected and they can go about their work with pride and a sense of fulfillment while reaching their potential. We also strive to maintain and improve safety and health in our working environments, providing working conditions that are fair to all employees.

### **Human Resources Development**

With a slogan of "developing people who will continue to improve themselves and to guide and nurture others," we operate a variety of education and training programs based on the belief that each person must develop their own abilities. As a part of our efforts to enhance level-specific training programs and engage in training-centered management, we are focusing on more practical human resources development, such as having the President and other executive officers act as instructors and conduct employee education themselves.



## Health and Productivity Management

Considering the promotion of employee health a management issue, we are working to enhance measures for both physical and mental health to raise employee awareness of health and promote related activities in the workplace

### Health and Productivity Enterprise (White 500) Certification

We have been certified as a "White 500" company, which is for the top 500 companies in the large enterprise category, under the 2024 Health & Productivity Management Outstanding Organization Program of the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi (Japan Health Council) for six consecutive years.

### o Priority health measures

Improving individual health awareness

We promote activities with a focus on improving nealth literacy (health awareness) and preventing disease, such as by holding various seminars disseminating health information, and providing health guidance during health checkups.

Revitalizing health-centered workplaces

We hold the "Iki Iki Health Challenge," a company-wide event in which employees select and take on a challenge to improve their daily habits.

Creating more comfortable working environments

We strive to create energetic working environment where diverse human resources shine through the ntroduction of systems that make it easier for all employees to work regardless of age, gender, or nationality and measures for work style reform

### **DENSO TEN Limited**

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Questions/ **Comments Concerning** 







