

Our Cultivated Strengths

Over its 70-year history, DENSO has cultivated various unique strengths. Since the founding of the Company, these strengths have been augmented and passed down to become part of its DNA—the DENSO Spirit—which permeates the actions of all DENSO employees around the world. The connections between these strengths have driven DENSO's growth over the years. Amid a challenging business environment going forward, DENSO will further enhance these strengths as the driving force behind value creation that is uniquely DENSO.



Robust Business Foundations

DENSO's business activities are supported by robust foundations built over many years, giving the Company an advantage that cannot be easily replicated. The driving force behind all our business activities is our relationships with diverse stakeholders, including customers, suppliers, and business partners, as well as the expertise of our approximately 170,000 employees and 200 Group companies worldwide. By evolving and increasing such relationships and expertise, we will realize further growth.



Advanced R&D

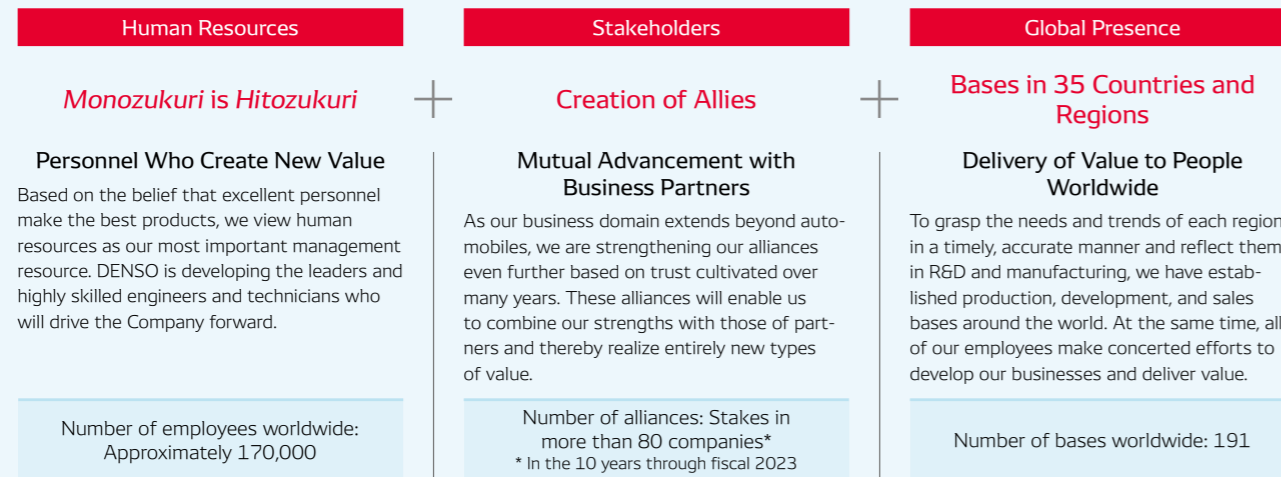
With a commitment to world-first and world-best offerings, DENSO has contributed to mobility by creating an array of competitive products that accurately cater to social needs. Amid increasingly complex social issues and diversifying values, we aim to extend the scope of our contribution beyond mobility to encompass society as a whole. To this end, we have defined priority fields in accordance with our green and peace of mind principles. Moreover, we are planning technologies and strengthening R&D capabilities with an eye on the future.

We will continue creating new value through our technical centers and laboratories around the world as well as through collaborative initiatives that transcend Group boundaries and include external research institutions and universities.

Roots of Our Strengths

- 1954 Established the Technical Training Center. This center fostered the principles of "Monozukuri is Hitozukuri (Our performance relies on our people)" and "Engineering and technique go hand in hand." These principles continue to be passed down within the Company.
Began establishing a network of service stations (centers) to enhance quality for end-users in each region across Japan
- 1959 Deepened cooperation with suppliers by establishing the DENSO Cooperative Association (currently DENSO HISHOKAI), which currently accounts for annual procurement of ¥2.7 trillion from approximately 7,360 suppliers
- 1966 Opened a Chicago sales office and a Los Angeles branch office. Anticipated trade liberalization and other global trends through the establishment of this first overseas sales office
- 2016 Formulated Eco Vision 2025. Accelerated concrete measures aimed at addressing environmental and energy issues and thereby helping realize a sustainable society
- 2020 Opened the Hirose Plant, which together with the Electrification Innovation Center established outstanding development and production capabilities and became the core of our electrification domain

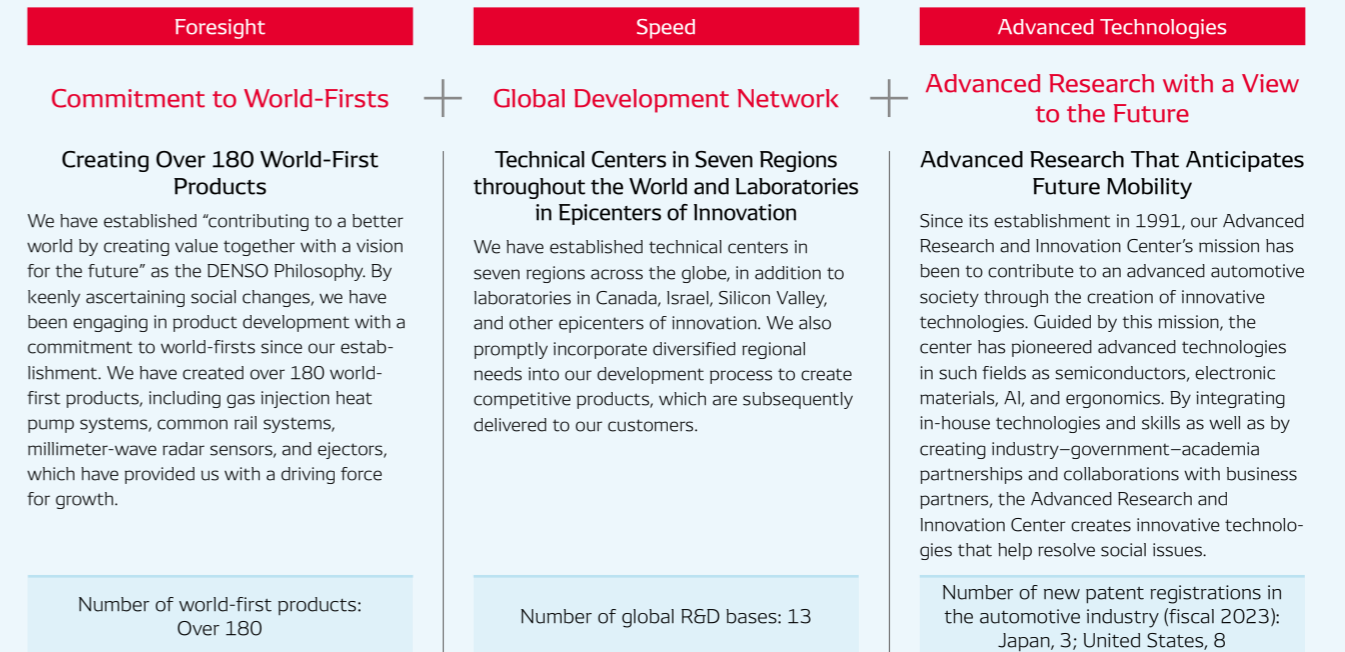
The Key to Our Strengths



Roots of Our Strengths

- 1953 Commenced a technical cooperation agreement with Robert Bosch GmbH. Under this agreement, we established a technological and production base with the aim of becoming a comprehensive manufacturer of automotive parts that can keep pace with global companies.
- 1985 Established Nippondenso America, Inc., with which we jointly created our first overseas technical center. Through this center, we built an optimized structure for the development, production, and supply of local products.
- 1991 Established the Fundamental Research Center (currently the Advanced Research and Innovation Center), which conducts R&D on future technologies that cover a wide range of fields
- 2014 Completed the establishment of technical centers in seven regions across the globe. Through these centers, we have set up a structure to create competitive products that can promptly meet diversifying local needs.
- 2020 Established the Electrification Innovation Center (EIC), which strengthens our capabilities in the development and production of electric vehicle components. Accelerated R&D activities in the green and peace of mind domains
- 2022 Received IEEE Corporate Innovation Award in recognition of our development of the QR Code® and our contribution to its global popularization

The Key to Our Strengths



Further Enhancing Our Strengths

Developing Secure Industry-wide Data Linkage for the Electric Vehicle Age

In addressing increasingly complex social tasks, such as the realization of a resource-recycling society and carbon neutrality, the establishment of systems that facilitate accurate transmission of data throughout the supply chain is becoming increasingly important.

With a view to building an industry-wide ecosystem for electric vehicle batteries, NTT DATA JAPAN CORPORATION and DENSO have begun studying the establishment of a data space that will enable data management throughout battery life cycles. The companies will build the data space by leveraging DENSO's traceability technologies—which utilize in-house-developed QR Code® and in-vehicle blockchain technology—as well as the Company's expertise in the automotive industry together with NTT DATA JAPAN's know-how and extensive track record in building and operating large-scale platforms.

NTT DATA JAPAN and DENSO have concluded a basic agreement on studying a joint venture. Also, to create an industry-wide ecosystem for electric vehicle batteries, the companies made a joint application to a solicitation of proposals under the subsidy program of the Ministry of Economy, Trade and Industry, officially receiving approval as business operators in September 2022.

Our goal is for the ecosystem's platform to serve as a next-generation information infrastructure that allows the secure use of data not only among companies in industries related to electric vehicle batteries but also companies in other industries. With the aim of commercializing services by the end of fiscal 2024, NTT DATA JAPAN and DENSO will launch a study on a common platform for the automotive and manufacturing industries.

Further Enhancing Our Strengths

Accelerating Global Expansion of the Agricultural Production Business to Address Global Food and Agriculture Issues

With the climate change-related instability of agricultural production and a decrease in the number of farmers emerging as issues in recent years, the establishment of stable, sustainable agricultural production capabilities is needed. Aiming to address such issues in the food and agriculture field, in August 2023 DENSO announced its acquisition of all shares of Certhon Group, a Dutch horticultural facility operator. With a history of more than 125 years, our new acquisition is a leading corporate group renowned for world-class advanced technologies related to horticulture. The group excels not only in the development of solutions tailored to diverse customers but also in integration capabilities that combine multiple systems to realize optimal solutions. By combining the process design and automation technologies that DENSO has developed in the automotive field with Certhon Group's cultivation and horticultural system technologies, the companies will develop innovative farm models and globally roll out solutions that meet regional characteristics and needs.



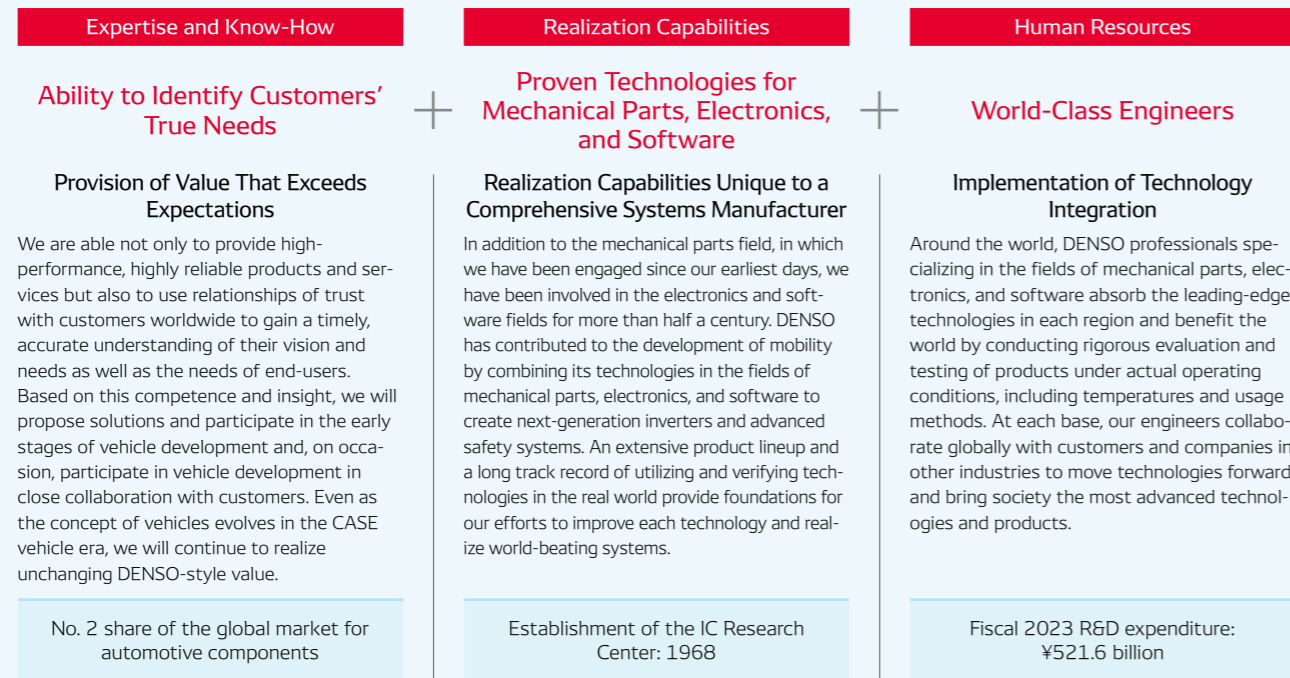
Three-pronged Solutions for Systems

DENSO has always optimized its business portfolio ahead of the times to provide society with valuable products and services that meet customer needs. For example, we expanded from our founding business in the mechanical parts field to foray into the electronics and software fields. While expanding, we enhanced our capabilities in each field and, as a result, we are now able to go beyond the manufacture of stand-alone components to offer optimal whole-system solutions that combine mechanical parts, electronics, and software. These system solution capabilities set us apart from competitors.

Roots of Our Strengths

- 1995** Became the first in the world to mass-produce an electronic fuel injection system (common rail system), a precursor to current system solutions, which are aligned with overall vehicle specifications as a matter of course
- 2007** Mass-produced an inverter with dual-side cooling. Combined our proprietary technologies from the mechanical parts, electronics, and software fields to develop a differentiated hybrid system, which was highly acclaimed by the market
- 2008** Launched the DENSO Project Companywide initiative. Adapted to stricter environmental regulations by enhancing ability to provide optimal vehicle solutions that straddle technology fields
- 2017** Developed the world's first gas injection heat pump system for mass-produced vehicles. Helped increase driving distance by managing the heat of the entire vehicle
- 2021** Began recurrent education program for software engineers. Met the growing need for software development and supported employees in transfer to growth fields

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Further Enhancing Our Strengths

Evolving Our Software Capabilities—Toward Realization of a Vehicle Security Monitoring Service

NTT Communications Corporation and DENSO are collaborating to provide a security monitoring service for vehicles that will protect vehicles from cyberattacks. With the rapid proliferation of connected vehicles in recent years, cyberattacks are steadily increasing in sophistication. Utilizing their respective expertise in the IT and automotive fields, the companies will work together to provide a service that monitors connected cars, detects and analyzes attacks at an early stage, and takes appropriate countermeasures. Moreover, DENSO is actively promoting the standardization of vehicle security technologies through Japan Automotive Software Platform and Architecture (JASPAR).^{*1} Also, we are contributing to the Japan Automotive Information Sharing and Analysis Center (J-Auto-ISAC),^{*2} which enhances the security readiness of the wide range of companies in the automotive industry by expediting the sharing of information on cyberattack methods and software flaws targeted by cyberattacks.

*1 A standardization body for automotive technology

*2 A general incorporated association that collects and analyzes cybersecurity information and promotes the creation of infrastructure to protect connected vehicles



Highly Efficient, High-Quality *Monozukuri*

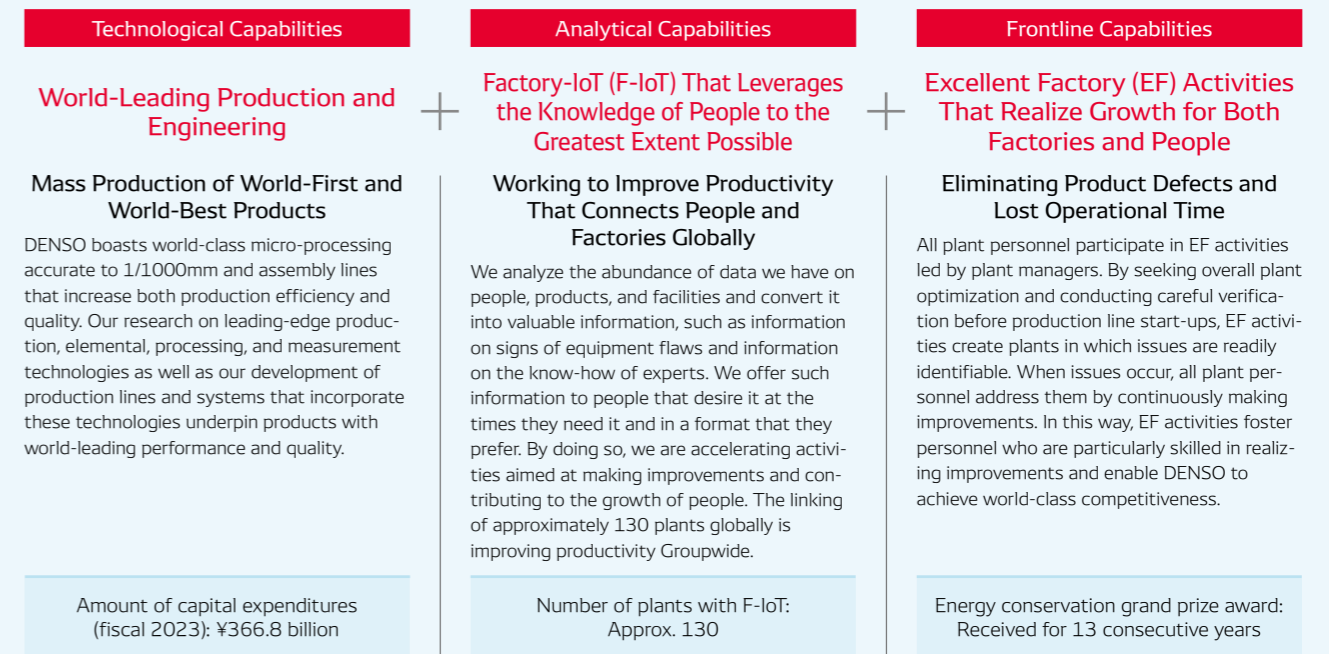
Since its inception, DENSO has consistently emphasized the creation and utilization of in-house technologies. We design and manufacture equipment, production lines, materials, and processing methods. This emphasis on in-house *Monozukuri* (manufacturing) has enabled us to provide society with products that give concrete form to the leading-edge technologies conceived by our R&D team. Having our own production technologies has also allowed us to develop high-speed, efficient production lines and compact facilities as well as streamline distribution and inspection. Moreover, in recent years we have been digitalizing know-how accumulated over many years of manufacturing and utilizing it as explicit knowledge. Such initiatives are enabling us to realize highly efficient, high-quality *Monozukuri* that adds even more competitiveness and value to our products.

Roots of Our Strengths

- 1968** Created the IC Research Center to establish a structure for the production of semiconductors completely in-house in anticipation of the shift to the electronic control of automotive parts in the future
- 1972** Established our first overseas production company. Since then, we have accelerated the establishment of additional overseas production companies and conducted production activities that meet the needs of each region.
- 1979** Received the Okochi Memorial Production Prize. This prize was received in recognition of our highly accurate, high-quality *Monozukuri* that was realized through our comprehensive in-house manufacturing of production lines and equipment.
- 1984** Launched a project for the practical application of robots. Furthermore, the development of such technologies as barcode readers and RFID,* which we pursued in a similar manner as robots, helped establish the foundation of our current factory automation (FA) business.
- 1997** Commenced Excellent Factory (EF) activities. Through plant improvement led by frontline production personnel, globally developed a *kaizen* (improvement) culture, which is the source of our ambitious improvement activities
- 2019** Began operating Factory-IoT, which networks plants worldwide to enable the accumulation, analysis, and utilization of various data. Took advantage of digital technologies to accelerate long-standing improvement activities

* RFID (radio frequency identification): A non-contact system that reads data from RF tags using electromagnetic waves

The Key to Our Strengths



Further Enhancing Our Strengths

Saving Energy by Utilizing Data and Mobilizing All Personnel

To save energy in frontline *Monozukuri* operations, DENSO is incorporating data utilization expertise it acquired when improving the efficiency and quality of production activities.

- (1) Converting veteran employee insights into explicit knowledge so that anyone can benefit from the veterans' understanding and wisdom
 - (2) Using dedicated tools to visualize normal and abnormal conditions, automatically calculate effects, and facilitate the data-driven flagging of situations requiring attention
 - (3) Calculating the energy required for the manufacture of a single product to establish management indicators that can evaluate improvement efforts regardless of production fluctuations
- By incorporating the above three features of data utilization into the management of energy-saving activities and systematizing them, we have realized data-driven energy-saving activities that are not dependent upon particular individuals and to which all employees can proactively contribute. More specifically, we created energy loss analysis models based on veteran employee insights, standardized data analysis results into "diagnostic tables," and then introduced KPIs that were acceptable to all personnel. As a result, production line personnel are now able to manage energy savings themselves.

The aforementioned efforts have led to the discovery of new measures, which are enabling energy savings of between 1% and 5% on each production line. Moreover, personnel continuously pursue a 4% annual improvement in energy savings—DENSO's ambitious energy-saving target. In recognition of its advanced data-driven energy-saving initiatives, in fiscal 2023 DENSO received an energy conservation award—the Director-General Prize of the Agency of Natural Resources and Energy.