

Research and Development (R&D)

In order to realize our new vision, we will further reinforce our core tire business and leverage its strengths to expand the solutions business, our growth business. Technology innovation is what will support this evolution. We will work on R&D activities with a focus on technology innovation and accelerate innovation by combining our strength in the physical domain, which we have long accumulated on site (genba), with the digital domain. Through this, we will develop Dan-Totsu products and Dan-Totsu solutions.

In our core tire business, we have developed ENLITEN, a tire technology that balances light weight and driving performance at a high level. ENLITEN is designed to reduce CO₂ emissions through less resource utilization and increased fuel efficiency, while improving safety and peace of mind through enhanced driving performance, contributing to society and our customers. Tires with ENLITEN technology have already been selected as the original equipment on certain domestic and international vehicle manufacturers' vehicles, including electric vehicles. For our construction and mining vehicle tires, we have developed the Dan-Totsu product Bridgestone MasterCore tire line, which offers optimal performance that is customized to various mine

sites and to the operations of customers. Combining our unique new technologies, including a new type of steel cord and other advanced materials, structures, and process engineering, the MasterCore tire line has realized superior durability without sacrificing performance in other areas.

Our solutions business, which is our growth business, includes aircraft solutions. We are collaborating with Japan Airlines Co., Ltd. to begin co-creating new value. Our tire wear prediction technologies will enable us to realize greater accuracy in systematic tire replacements, reduce wheel and tire inventories, and improve the efficiency of aircraft maintenance programs. To help realize safer automobiles, we have collaborated with Microsoft Corporation to develop the world's first monitoring system that can detect tire problems caused by exterior tire damage in real time while driving. Furthermore, in Japan we have also begun offering Tirematics, a digital solutions tool that can remotely monitor internal tire pressure, for truck and bus business operators.

We have been renovating our R&D base in Kodaira, Tokyo, to establish Bridgestone Innovation Park, a global innovation hub. Here, we will start interaction with empathy with society, our customers, and partners, and



ENLITEN, a new innovative lightweight tire technology



MasterCore tires installed on surface mining equipment

deepen relationships with them through co-ideation, co-R&D, and co-creation. We will accelerate innovation in the areas of technology, business model, and design to ultimately create new value for society and our customers. The first of the facilities, the Bridgestone Innovation Gallery, was opened to the general public in November 2020. The gallery features Bridgestone's history and corporate activities. We also have innovation sites in Rome, Italy, and in Akron, Ohio, in the U.S. These bases function as a Center of Excellence (CoE), leveraging their respective strengths and collaborating globally while leading innovation and solutions initiatives.

The Group promotes co-creation of value with diverse stakeholders, both inside and outside the Company, to support the evolution of mobility and contribute to the realization of a sustainable society. In the domain of new mobility, the Group has been participating in an international space exploration mission together with the Japan Aerospace Exploration Agency (JAXA) and Toyota Motor Corporation. As part of this initiative, the Group has begun researching tires for crewed, pressurized rovers required for moon exploration activities. Bridgestone also jointly established a social cooperation program titled "Open Innovation of

Mobility Technologies to Achieve the SDGs" with the Graduate School of Frontier Sciences at the University of Tokyo, DENSO Corporation, NSK Ltd., and ROHM Co., Ltd. The goal of this program is to conduct R&D on technologies for the electrification of mobility and make it more resource-efficient and sustainable. The program will also test a mechanism for making part of its results publicly available to support open innovation. The program promotes research on tires for wireless charging systems with the aim of commercializing wireless charging for in-wheel motors that can be used while the vehicle is in motion. Additionally, the Group has jointly developed a high-precision technology for diagnosing Para rubber tree diseases using artificial intelligence image analysis with Information Services International-Dentsu, Ltd. This technology aims to achieve a stable, sustainable supply of natural rubber, a key material in the manufacturing of tires, and contributes to increasing the productivity of rubber plantations. We will continue to fuse our unique expertise in rubber with digital technology, cooperating with various partners to accelerate technology innovation and co-create new value.



Bridgestone Innovation Park



Supporting research on tires for crewed, pressurized rovers required for lunar surface mobility