

RESEARCH AND DEVELOPMENT (R&D)

To fulfill its mission of “Serving Society with Superior Quality,” the Group aims to contribute to a sustainable society by creating new value through innovation and developing a solutions business aimed at solving social issues, based on the Bridgestone Essence Framework and the global CSR commitment of “Our Way to Serve.” In order to achieve its mission, the Group engages in R&D that links products and services which have achieved “Dan-Totsu” within a service network, and aligns with the Group’s own solutions platform, the Bridgestone Tire and Diversified Products as a Solution (Bridgestone T&DPaaS), which will combine the real world and digital technology to help build a new society. Moreover, the Group’s R&D organizations promote optimization on a global basis, fuse technologies for tires and diversified products, and proactively collaborate with external parties to further enhance the effectiveness of R&D activities. The Group is also working on renovating its Kodaïra Technical Center to form “Bridgestone Innovation Park,” a multi-purpose facility that will accelerate innovation in technology, business models, and design. Going forward, the Group will continue to work together with society, our customers, and partners to create value for society and our customers.

Tire

In the tire segment, Bridgestone launched “Enliten,” an innovative lightweight tire technology that balances increasing considerations for the environment with performance demands. Enliten is a lighter tire solution that maintains vehicle driving performance and wear performance, which influence tire life.

Bridgestone has developed “SUSYM,” an innovative, next-generation polymer that bonds rubber and resins at the molecular level with its own catalyzed technologies. SUSYM allows for the flexibility of rubber and the durability of resins to be expressed as needed. SUSYM also leads to new possibilities for tires such as being lightweight, durable, and energy efficient, which exceeds conventional expectations of tires. The Group expects that SUSYM will contribute to various fields in ways that exceed the scope of use as a tire material. In an effort to improve productivity at its factories in order to provide its customers with tires in a faster, better, and more-efficient manner, the Group is also using its own Information and Communications Technology (ICT) to develop analytics, prediction, high-precision processing, and sensing technologies.



Diversified Products

In the diversified products segment, the Group is advancing its development activities for the commercialization of a next-generation bicycle tire that adopts the “Air Free Concept,” a technology for creating tires that do not need to be inflated with air. The Group conducts R&D activities to deliver products that improve customer satisfaction by meeting constantly changing market needs, and to develop a business that supports social infrastructure. These activities have resulted in products such as the “Smart Siphon” drainage system that allows for flexibility of water supply equipment

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placement in buildings, and a resin pipe called “Raku-Raku corrugated coated pipe,” which can improve work efficiency at construction sites and boasts superior scratch resistance.

The Group is also fully leveraging ICT and other cutting-edge technologies in an effort to create new value for society and customers that goes beyond the scope of its existing businesses. In the area of transport solutions, the Group acquired digital fleet solutions business from TOMTOM N.V., a Dutch company, and rebranded it “Web-fleet Solutions.” The Group is combining this with its tire expertise and data to develop technologies that help improve the safety, efficiency, and productivity of drivers and transport providers.

The Group is engaged in joint development initiatives between industry, academia, and government that fuse diverse areas of technology. In the domain of new mobility solutions, the Group, along with the Japan Aerospace Exploration Agency (JAXA) and Toyota Motor Corporation, is participating in international space exploration missions. As part of this initiative, the Group has begun researching tires for mobility devices needed for manned moon exploration activities. In the domain of wireless power supplies for in-wheel motors, the Group is

participating in the Japan Science and Technology Agency’s research project (led by the University of Tokyo). As part of this project, the Group has begun researching tires that are compatible with wireless power supplies. Such tires would help commercialize wireless power supplies for electric vehicles that can be used while the vehicle is in motion. In the effort toward more barrier-free infrastructure, the Group is working with Yokohama National University, the Japan Transportation Planning Association, and ADVANCE Co., Ltd. to research and develop “Plus-Stop.” PlusStop is a barrier-free bus stop curb system that facilitates smoother boarding and deboarding for passengers by reducing the height and size of the gap between the boarding entrance and the curb at bus stops. The Athlete’s Village for the Olympic and Paralympic Games Tokyo 2020 will be equipped with this barrier-free curb system. The Group is also researching barrier-free concept tires to address curb gaps. The Group is also engaged in R&D activities to make use of recovered carbon black produced from pyrolyzed waste tires, in an ongoing initiative to help realize a circular economy, and to boost productivity for commercializing guayule-derived natural rubber, an initiative to diversify natural rubber sources.