

# MID-LONG TERM BUSINESS STRATEGY



# Sustainability as a Core Business Driver; Evolving the Business to Create Social and Customer Value

As the Bridgestone Group works toward its vision to become a sustainable solutions company, it recently introduced its Mid-Long Term Business Strategy. The Group’s Mission, “Serving Society with Superior Quality,” based on the philosophy of its founder, remains foundational to its business and goal to create social and customer value toward 2050 and beyond. The Group has marked 2020 as the start of its third foundation — Bridgestone 3.0 (see pages 3-4) — and its Mid-Long Term Business Strategy demonstrates how it is embarking on this new chapter.

The Bridgestone Group intends to drive innovation that provides solutions, taking full advantage of its strengths and core competencies to solve customer issues and contribute to improving people’s quality of life. The Group will create new value for society by addressing social issues and positively contributing to the achievement of the SDGs, “a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere.” By creating, balancing and expanding its social and customer value, the Group will gain its competitive advantage. It will continue to grow with its partners and further contribute to a sustainable society. This is the Bridgestone Group’s exciting

new growth strategy, where sustainability is embedded as a core business driver.

To achieve these ambitious goals, the Bridgestone Tire and Diversified Products as a Solution (T&DPaaS) is its unique, core solutions platform to support the evolving world of mobility. Through Bridgestone T&DPaaS, the Group will expand its solutions business while also strengthening its core tire and rubber business. The Group’s new brand message, “Solutions for your journey,” explains this commitment.

Mid-Long Term Business Strategy with Sustainability at its Core Y2020–Bridgestone 3.0 (The 3rd Foundation)



# Creating and Amplifying Value Through Bridgestone T&DPaaS

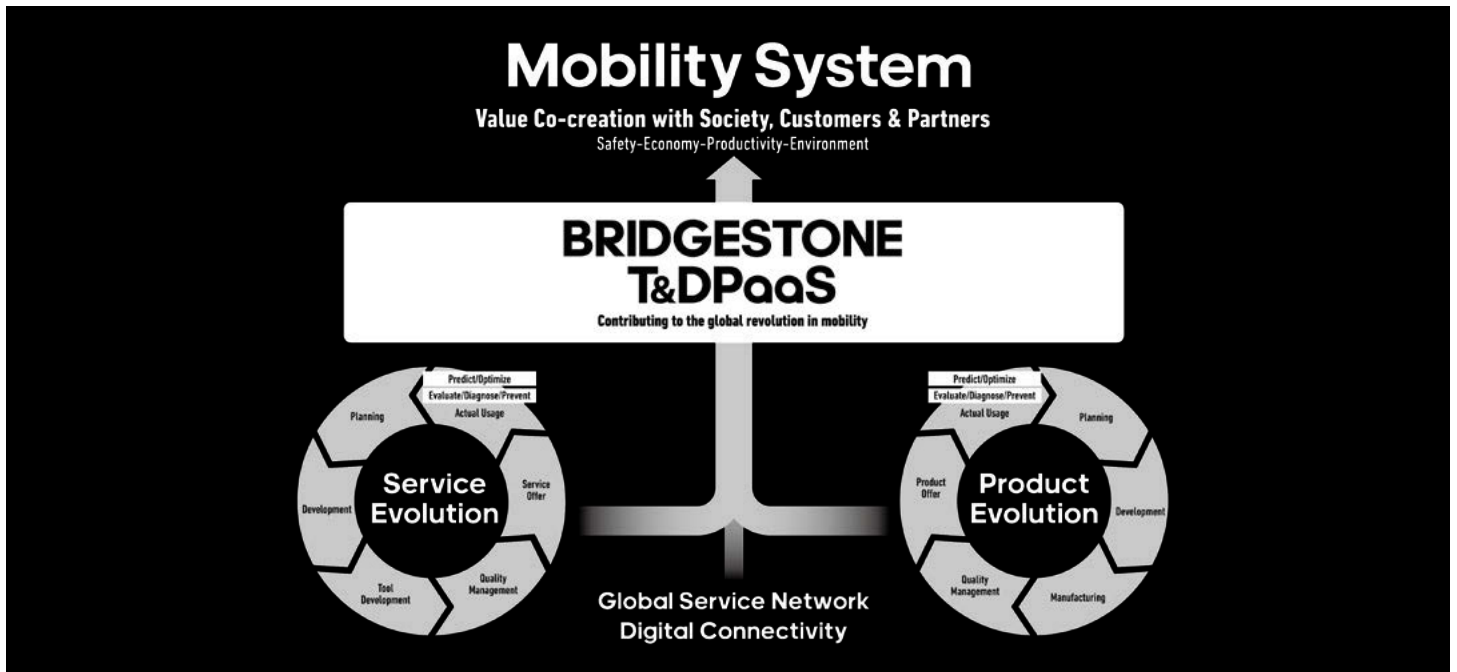
## LEADING A GLOBAL REVOLUTION IN MOBILITY

Tires have unique value. As the only part of a vehicle that touches the road, tires impact the critical functions of driving, turning, braking and transmitting desired vehicle performance to the road. Tires have evolved significantly from their origin as a way to propel

vehicles. Vehicles continue to progress and so do tires. As cars become smarter and more connected with information by digital technology, tire systems will connect with mobility systems and support enhanced performance.



## BRIDGESTONE T&DPaaS



To succeed in its rapidly changing industry and truly transform the Bridgestone Group for the next generation, its Mid-Long Term Business Strategy will accelerate growth by creating new value for society and customers. The Bridgestone Tire and Diversified Products as a Solution (Bridgestone T&DPaaS) platform takes full advantage of the strength of the Group’s knowledge and experience in tires and rubber to develop solutions that fully link the “Real x Digital” worlds.

With this knowledge, the Group delivers Dan-Totsu (the clear and absolute leader) products and offerings like innovative tire design, predictive maintenance service and strong service channels. This unique combination of in-person and digital approaches allows the Bridgestone Group to analyze and utilize large volumes of data to co-create new value for society, customers and partners.

## EVOLVING TO A SOLUTIONS BUSINESS BY LEVERAGING THE STRENGTHS OF THE TIRE AND RUBBER BUSINESS

The Bridgestone Group is committed to actively addressing societal and tire industry issues on its journey to become a sustainable solutions company. It sees tremendous opportunity in the many changes business and society face. To create these

opportunities, the Group is focused on developing advanced solutions that contribute social and customer value, while further strengthening its tires and rubber business.



### • CORE BUSINESS: THE TIRE & RUBBER BUSINESS AS A BASE OF THE BRIDGESTONE GROUP'S BUSINESS STRATEGY

The Group continues to further strengthen its business of producing and selling products.

- (Business-A) Tire & Rubber business: Business to produce and sell high-value added products (Dan-Totsu products)

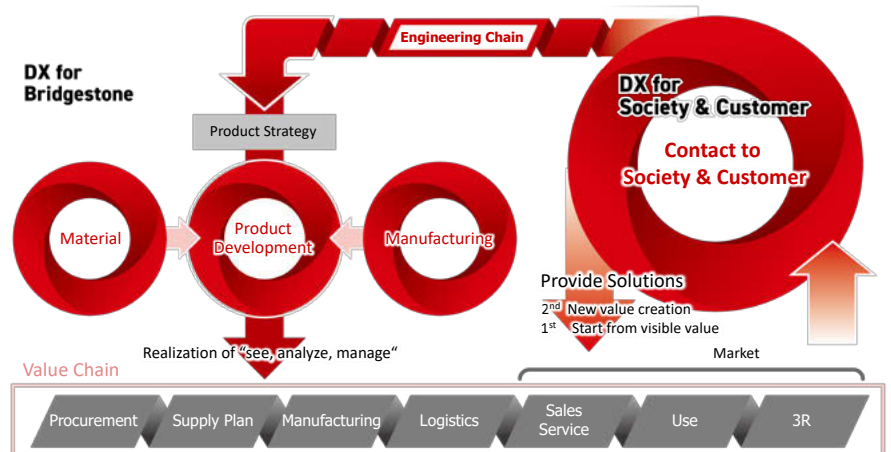
### • GROWTH BUSINESS: EVOLVING TO SOLUTIONS BUSINESS TO CREATE AND SELL "VALUE" BY LEVERAGING TIRE- AND MOBILITY-RELATED DATA

The Group is transforming into a solutions business that creates and sells new "value" by utilizing tire- and mobility-related data, leveraging the strengths of the tire and rubber business.

- (Business-B) Tire Centric Solutions business: Business to provide value-added products through products and tire-related data.
- (Business-C) Mobility Solutions business: Business to provide new value through products, tire-related data and mobility-related data

### AMPLIFYING THE VALUE OF EACH BUSINESS

Through digital transformation (DX), the Bridgestone Group analyzes the data gained through its solutions business and combines it with information gained through its "Genbutsu-Genba" decision-making process based on verified, on-site observations. By doing so, the Group creates knowledge it will use to innovate and grow its tire and rubber business by addressing challenges faced by society and customers. This powerful combination amplifies the value of each business. Together, they lead the business and growth strategies of the Group.



# Creating Social and Customer Value

Creating social and customer value through the Business-A “tire and rubber business”

## THE HISTORY AND VALUE EVOLUTION

Over the years, tires have evolved to improve mobility. From early wooden wheels used on horse-drawn wagons, to smoother riding pneumatic tires, to radial tires that support higher speeds and enhanced performance, the safety and economy of tires has continued to advance. In recent years, tire production and design have improved even further to reduce CO<sub>2</sub> emissions and better conserve natural resources as society moves to a more sustainable and circular economy.

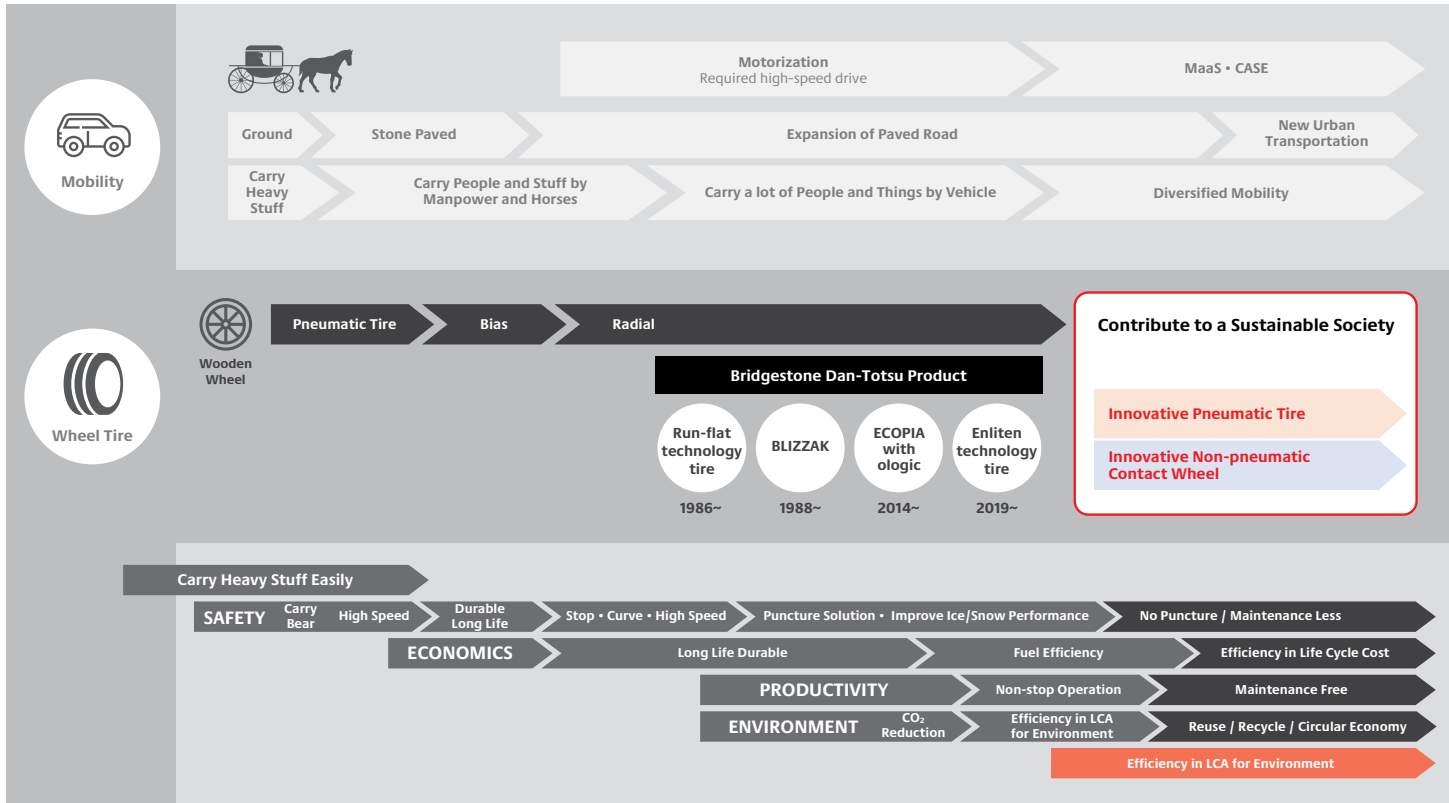
As tires have continued to evolve, the Bridgestone Group has continued to strengthen the value it delivers to society and customers by improving the safety, environmental performance, economy and productivity of its tires. These improvements have been and continue to be driven by the Group’s commitment to Dan-Totsu (the clear and absolute leader) products and its long-established Mission of “Serving Society with Superior Quality.” For example, run-flat technology allows vehicles to move and stop safely even when tires are punctured. BLIZZAK tires perform exceptionally well on snowy and frozen roads. And ECOPIA with ologic and ENLITEN achieve high-level fuel efficiency with light weight.

Building on its legacy of tire industry leadership, the Bridgestone Group continues to innovate to support an evolving mobile society such as MaaS (Mobility as a Solution) and CASE (Connected, Autonomous, Shared, Electric). Today, it is developing an entirely new concept in pneumatic tires and a non-pneumatic resilient contact wheel to best support mobility in the emerging sustainable, circular economy.

## TIRES THAT PROVIDE SOCIAL AND CUSTOMER VALUE

Tires play an essential role in driver, passenger and vehicle safety. “Tires carry life” — this is a fact that we take extremely seriously and with great responsibility. The Bridgestone Group is proud of its brands that conveys safety, peace of mind, trust and innovation. By maximizing its tire and rubber expertise, along with its Dan-Totsu products and global maintenance service network, the Group will continue to innovate in ways that deliver social and customer value, including tire safety, improved environmental performance, economy and productivity.

## EVOLUTION OF MOBILITY AND TIRE





## ECOPIA



ECOPIA is one of the Bridgestone Group's Dan-Totsu tire products that contribute to a sustainable society. It's high-dimension performance reduces rolling resistance, which improves fuel efficiency and results in fewer CO<sub>2</sub> emissions. It has superior braking performance in wet and dry conditions. ECOPIA tires also have a long-life and promote a stable, silent and superb ride. ECOPIA with ologic technology further improves fuel efficiency and has been adopted for use in BMW's evolutionary i3 electric vehicle. It also is used in solar cars that won the Bridgestone World Solar Challenge.

## Run-Flat Technology<sup>1</sup>



Run-flat technology tires can operate at a set speed over a pre-determined distance, even after air pressure has been lost due to a puncture or other cause. Not only do these tires contribute to improved vehicle safety, they also reduce resource use by eliminating the need for spare tires, which are often disposed of after having never been used. In addition, eliminating spare tires makes vehicles lighter and more fuel efficient. The Bridgestone Group introduced DriveGuard tires, which are equipped with next generation run-flat technology for mass-produced vehicles and can be changed from normal tires<sup>2</sup>, ahead of the market.

<sup>1</sup> The technology can safely drive on for up to 80km at 80km/h after a puncture (Drivable distance under conditions based on ISO technical standard or specific vehicle tests).

<sup>2</sup> DriveGuard tires are designed for vehicles equipped with a Tire Pressure Monitoring System (TPMS).

## BLIZZAK



BLIZZAK studless winter tires use Bridgestone's acclaimed foamed rubber technology to deliver safe and sure handling on icy roads. Combined with various other technologies, these tires provide peace of mind on slippery winter roads. Because of their long-lasting safety performance, BLIZZAK tires are economical to use and beneficial to the environment.

## AirFree Concept

### AirFree Concept



The Bridgestone Group's AirFree Concept has a unique structure of spokes stretching along the inner sides of the tire that support the weight of the vehicle. There is no air in the tires, so they require less maintenance. The worry of punctures is also eliminated, resulting in improved safety. In addition, some of materials used this concept are recyclable. The tires set a new standard for environmental friendliness, safety and comfort. The Bridgestone Group continues listening to customers to develop practical uses for these concept tires.

The Bridgestone Group's products support mobility by providing the right solutions for everything from personal mobility to the lunar rover currently in development.

# Creating Social and Customer Value

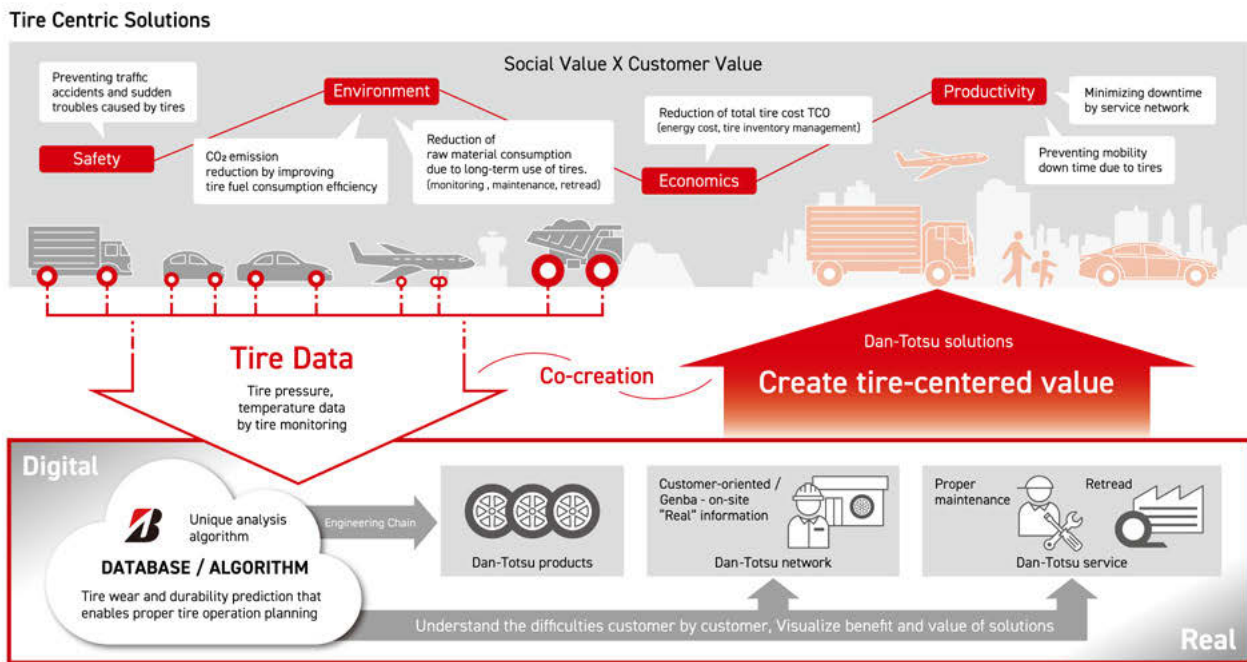
## Creating social and customer value through the Business-B “tire centric solutions”

Tires are essential for most means of mobility. Without tires, society has few options for moving from place to place. If a tire is damaged, the driver may be in a dangerous condition, and it may stop logistics. Fortunately, today’s tires provide unprecedented performance. However, to achieve this level of performance, appropriate maintenance is essential. This includes regularly inspecting tires for routine wear and monitoring inflation pressure to prevent tire failure. Also, low tire pressure reduces fuel economy and increases tire wear and tear.

The tire centric solutions business of the Bridgestone Group provides new, additional value to consumers by utilizing tire-

related data to help prevent performance issues, allowing customers to benefit from maximum use of their tires. Specifically, the Group will work to further reduce the total cost of tire ownership (TCO) by reducing time and labor costs, preventing downtime and supporting safe vehicle operation. Creating this safe, effective mobility infrastructure also creates social value by improving the productivity of tire resources, supporting a circular economy and reducing CO<sub>2</sub> emissions across the value chain.

The Bridgestone Group’s Dan-Totsu products, services and maintenance network of its tire centric solutions business will contribute to enhanced mobility and create important social and customer value.



### TECHNOLOGY, PRODUCTS AND SERVICES SUPPORT TIRE CENTRIC SOLUTIONS

#### Digital Technology

By developing and deploying digital technology, such as the Group’s Tirematics system that measures tire pressure and temperature and provides remote monitoring in real time, the Group can monitor and analyze data on the full lifecycle of each tire. Using its unique algorithm, this information allows the Group to accurately evaluate the condition of a tire, predict its remaining durability, determine required preventive maintenance, and prevent downtime from tire damage. Helping drivers operate

vehicles with proper tire pressure also improves fuel efficiency and reduces CO<sub>2</sub> emissions.

#### Retreading Tires

The Bridgestone Group receives tires that customers have properly maintained and retreads them for reuse. By initially developing durable tires, leveraging digital data to manage their use, and providing appropriate maintenance, it is possible to retread tires several times. This process uses less than one-third of the raw

materials needed to make new tires. Retreading reduces CO<sub>2</sub> emissions and reuses the entire tire casing, a major contribution to resource productivity in a circular economy.



## Subscription Model



In Europe, the Bridgestone Group is developing solutions for passenger cars and their owners. The Group's tire subscription service, mobox, includes new, premium tires

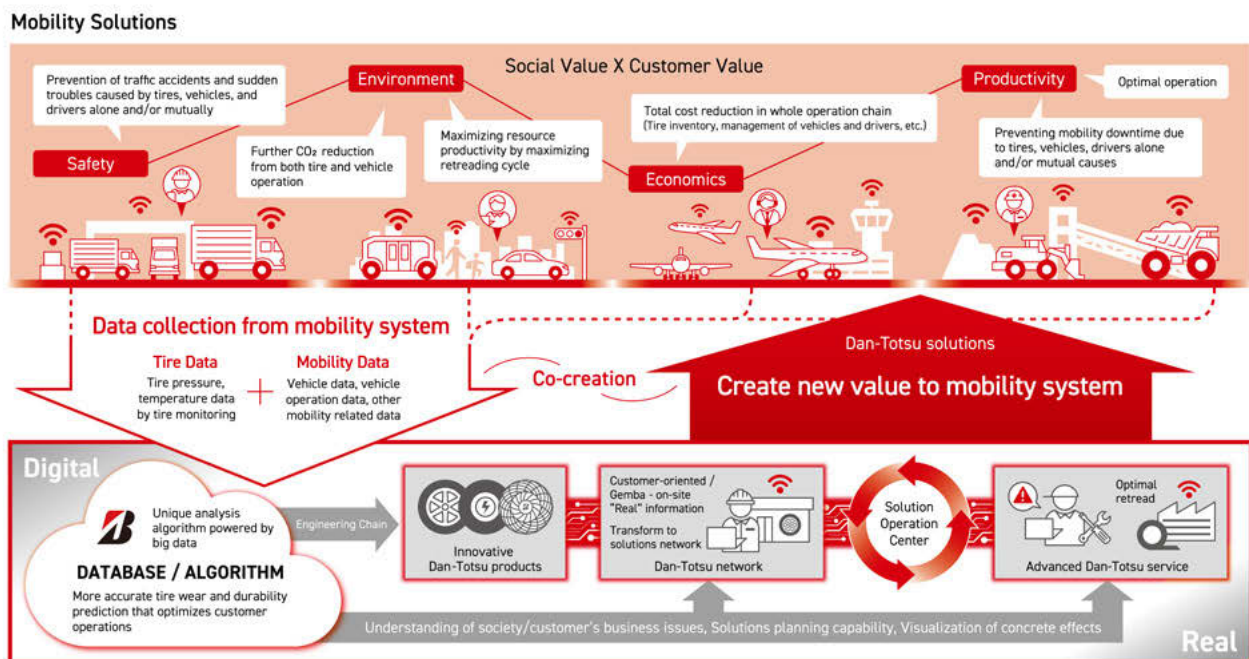
and regular tire maintenance to keep drivers safe and operating efficiently. It also includes additional vehicle-related services such as oil maintenance and summer/winter tire switching. This service will expand to other regions in the future.

## Creating social and customer value through the Business-C “mobility solutions business”

With recent developments like MaaS and CASE, the mobility industry is facing a once-in-a-century pace of change. As mobility continues to rapidly evolve, it has the strong potential to solve many of the challenges affecting society. The Bridgestone Group's mobility solutions business creates new value by combining its wealth of knowledge about tires with tire and mobility data to contribute to world mobility.

Because the tire is the only part of the vehicle that touches the road, it plays an important role supporting mobility. As the world of mobility continues to evolve, what the customer needs from tires becomes even more sophisticated, complicated and systemized — further increasing the importance and role of the tire.

The Bridgestone Group addresses these needs by creating and providing new value as it connects the real and digital worlds. For customers, the Group's solutions that maximize tire performance help optimize operations and introduce damage prevention measures that avoid downtime, improve vehicle performance and reduce the total cost of ownership (TCO). These benefits are provided by leveraging Dan-Totsu tires, unique digital tire-wear prediction technologies, and real-time monitoring of mobility or road conditions. For society, the value the Group co-creates with customers and partners reduces CO<sub>2</sub> emissions and helps realize a circular economy.





# Creating Social and Customer Value

The Bridgestone Group is creating new value by combining the real and digital worlds. It is leveraging its tire and rubber expertise, combined with tire- and mobility-related data, to solve social and customer issues with Dan-Totsu (the clear and absolute leader) products, services and service networks.

## Mining Solutions



Mining is one of the toughest jobs for a tire. Any tire failure brings operations to an immediate halt, greatly decreasing productivity. The Group can provide mines with increased tire life span, high running speed and heavier load weight with its BRIDGESTONE MASTERCORE tire. The tire's enhanced durability in this environment maximizes performance that eliminates downtime from tire-related issues. The Group also helps improve productivity by tailoring comprehensive services for each mine site, offering tire sales, maintenance and repair for mining vehicles, tire fittings and more. This results in improved mine productivity, reduced downtime and lessened environmental impact.

By attaching a sensor to the tire, the Bridgestone Group can monitor the operation of tire data from each vehicle. With this data and its years of expertise, the Group can provide solutions that optimize each mine's vehicle operations, addressing everything from vehicle-operations management to tire-asset management, replacement and rotation. The data also is helping the Bridgestone Group develop even better products. These products increase the life span of tires, improve resource productivity and further reduce CO<sub>2</sub> emissions. This is another example of the Group, together with customers, co-creating social value such as improved resource productivity and reduced CO<sub>2</sub> emissions by maximizing the usage of tires.

In Australia, with its huge mining industry, the Group has established two mining solution centers with these solutions close to customers and plans to expand this approach globally. In this way, the Group provides solutions that contribute to customers' improved safety, environment, economy and productivity by combining Dan-Totsu (the clear and absolute leader) products, maintenance services and service networks.

## Aircraft Solutions

The airline industry is another area where tires experience difficult operating conditions, supporting the weight and speed of aircraft while exposed to repeated takeoffs and landings. Creating an aircraft tire demands the utmost technological capabilities. However, aircraft tires don't always need to be replaced with new tires — it is safe and common to use retreads where tire treads are replaced after a few hundred takeoffs and landings. But, because the rate of tire wear varies based on a variety of conditions, it is crucial that airlines properly conduct regular tire inspections and maintenance and have robust tire inventory management plans.

Bridgestone is collaborating with Japan Airlines (JAL) to realize greater accuracy in aircraft tire management and maintenance plans by combining JAL's aircraft insights and flight data with the Group's tire insights and digital tire-wear prediction technologies. In doing so, Bridgestone creates social and customer value. Customers benefit from optimizing tire assets, safe flight operations and improved maintenance efficiency. Society benefits from improved resource productivity and reduced CO<sub>2</sub> emissions from manufacturing.

This solutions business is the Group's unique model, based on the various findings the Group's field engineers identified by working closely with customers. We will continue to expand this as a business that creates social and customer value.

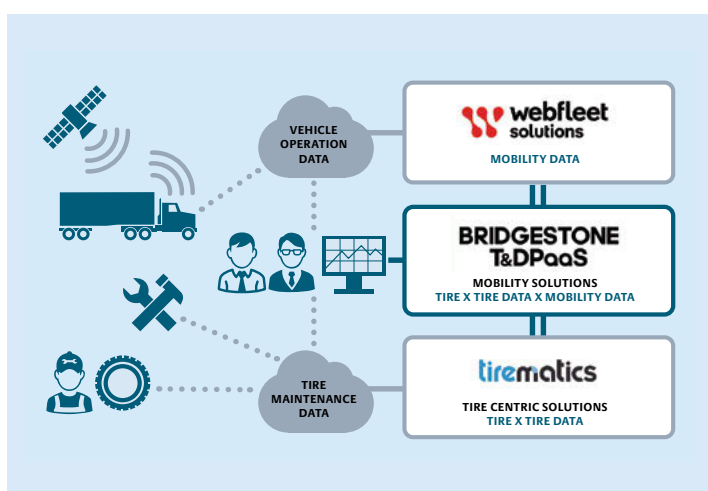


## Fleet Solutions

The Bridgestone Group supports fleet customers by considering their unique needs and providing high-quality products, services and a service network that improve safety. The Group helps operators manage new tire inventories and monitor tire maintenance during use. By using the Internet of Things (IoT) and other digital tools, customers can manage and analyze information throughout each tire's lifecycle to operate safely by preventing tire-related issues. The retreads the Group provides also reduce customers' total cost of ownership (TCO) and environmental footprints.

For example, the WEBFLEET service from the Group's Webfleet Solutions business supports transportation operation and contributes to improved safety, efficiency and productivity of drivers and operators by managing various data related to vehicle operations. The Group also contributes to improved fuel efficiency and reduced CO<sub>2</sub> emissions by streamlining operations. To date, 900,000 vehicles have used WEBFLEET.

By combining vehicle operations data with the Bridgestone Group's knowledge of tire wear and durability, it can provide a wider range of solutions, including products and services based on customers' unique operating conditions and needs. Additionally, data on vehicle operating and tire usage conditions is being deployed by R&D teams to more rapidly develop high-quality tires that meet customers' evolving needs.



## VOICE OF THE CUSTOMER

*"WEBFLEET has been a total win-win for us, our insurers, our drivers and the environment. It's one of the best investments we've ever made. The figures speak for themselves:*

- 10% reduction in fuel costs;
- 2,000 tonne reduction in CO<sub>2</sub> emissions;
- Approximately ¥171 million/\$1.6 million in insurance claims savings;
- 58% reduction in inefficient or unsafe driving; and,
- Speeding virtually eliminated."

**Peter Kelly**  
Group Compliance and Fleet Manager, [Elis](#)



## MaaS Solutions

As mobility continues to evolve, how people move is changing as more and more MaaS innovations are introduced. Companies like Bridgestone that offer mobility as a solution are helping to address transportation-related social issues and contributing to people realizing unique, diverse and fulfilling lives.

As society moves to more sophisticated and complicated on-demand, autonomous, high-occupancy rate, multipurpose and electric vehicles, significant improvement is required in tire performance. Until now, drivers often detected various abnormalities, but in the future, unattended operation will make tires a more important factor than ever. Sensors in tires will relay information to the vehicle's ecosystem, requiring a system that supports planned and safe operation. Leveraging experiences gained from mining solutions and aircraft solutions, the Bridgestone Group will continue to contribute significant value to the evolution of mobility systems by maximizing MaaS operations, integrating high-performance tires, preventive maintenance and emergency systems based on sophisticated MaaS detection prediction and optimization technologies.

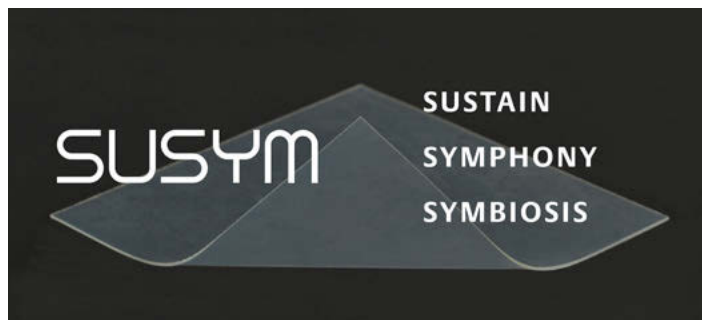
# Co-creating New Value for the Future

The Bridgestone Group will contribute to the realization of a sustainable mobile society by promoting open innovation and working with partners to fuse technologies from various fields.

## Advanced Material

### WORLD'S FIRST POLYMER THAT COMBINES THE FLEXIBILITY OF RUBBER AND TOUGHNESS OF RESIN

The Bridgestone Group created the world's first, next-generation polymer that bonds rubbers and resins on the molecular level. Named SUSYM — a combination of the words “sustain,” “symphony,” and “symbiosis,” — the polymer is a useful tire material. It also is expected to have a wide variety of other useful applications. SUSYM boasts the high levels of durability and resistance found in conventional rubber coupled with substantially higher levels of performance with regard to puncture resistance, reparability and recyclability, and resistance to low-temperature impact. The new polymer also requires fewer resources to produce, contributing to a more sustainable society. The Group is collaborating with a number of companies and organizations, through its Open Innovation Hub or other platforms, to conduct research and development on the application of the SUSYM technology to a wide variety of fields.



## Infrastructure

### CONTRIBUTING TO A LOW-CARBON SOCIETY BY CO-CREATING AN INDUSTRY-ACADEMIA-GOVERNMENT COLLABORATION FOR WIRELESS CHARGING FROM ROADS TO IN-WHEEL MOTORS

Bridgestone is participating in a project to develop practical uses for transferring the in-wheel power generated by in-wheel motors used in electric vehicles. It is collaborating with Hori and the Fujimoto Laboratory of the Graduate School of Frontier Sciences at the University of Tokyo, other companies and research institutes. The Company's role in the partnership is to develop the tire technology to transfer this energy during power charging.



## Structure

### BLAZING A TRAIL FROM EARTH TO SPACE

Together with the Japan Aerospace Exploration Agency (JAXA) and Toyota Motor Corporation, Bridgestone is conducting research and development activities for tires to be mounted on a pressurized rover required for human exploration activities on the moon. The Company is contributing to the mission by developing flexible and strong tires that perform in the harsh environment of the lunar surface. Like all tires, these must perform four essential roles:

1. Supporting the lunar rover's load;
2. Transmitting driving force and braking force;
3. Changing and maintaining direction; and,
4. Performing on a variety of surface conditions, including slopes and rocky sand.

This technology, developed for the harshest conditions experienced on the surface of the moon, is expected to have wide-ranging applications in the future.



Courtesy of Toyota Motor Corporation

## NEW PLACES FOR CREATING VALUE THROUGH INNOVATION

The Bridgestone Group promotes co-creating new value with communities, customers and partners to encourage new solutions. To do so, it is establishing a new base of innovation with a series of significant construction projects designed to accelerate the Group's transformation into a global leader in advanced mobility and sustainable solutions for future generations.

### Bridgestone Cross Point

Bridgestone Cross Point (BXP) at Museum Tower Kyobashi in Tokyo is a place where people, ideas, companies and society intersect to create new value. BXP, which opened June 2020, was designed to foster open collaboration among the Group, its customers and its partners to help drive innovation, design and brand projects that will deliver advanced, sustainable solutions for a world in motion.



Photography: Tomooki Kengaku

### Bridgestone Innovation Park

Bridgestone Innovation Park in Tokyo is a multiyear project that involves a major reconstruction of the Company's existing operations and includes four new facilities set to open over the next four years. It has been designed to foster the flexibility and creativity needed to support a more inclusive and connected society. The first facility is scheduled to open in 2020. The four facilities include B-Innovation, Bridgestone Active Healthy Lifestyle (AHL) Arena, Bridgestone Innovation Gallery, and B-Mobility.



#### Overview of Bridgestone Innovation Park



**B-Innovation:** Next-generation innovation and collaboration lab empowering joint creation with various internal and external stakeholders.



**Bridgestone AHL Arena:** Barrier-free activity center providing access to sports for people of all ages and abilities, designed to promote a more diverse and inclusive society.

**Bridgestone Innovation Gallery:** Museum dedicated to Bridgestone history and innovation initiatives.

**B-Mobility:** Demonstration and testing facility to promote agile product development.