

Realization of Mid-Long Term Business Strategy with Sustainability at the Core

Progress toward Realizing the Sustainability Business Framework

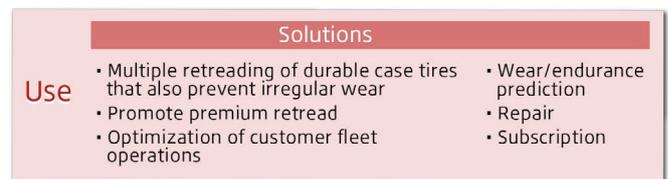
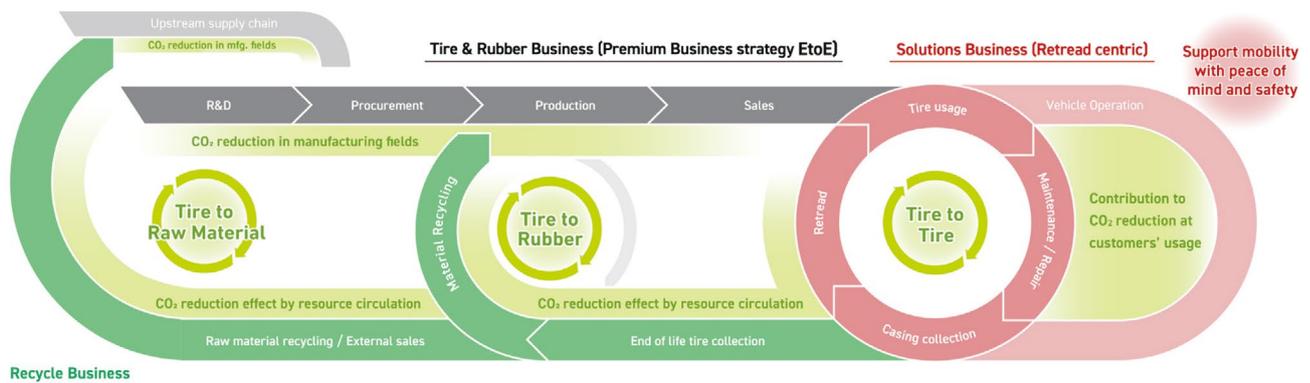
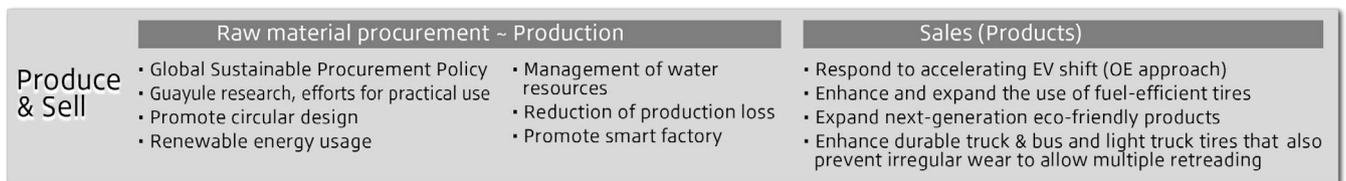
Sustainability Business Framework

The Bridgestone Group is accelerating efforts toward the realization of a Sustainability Business Framework that links business models with efforts toward carbon neutrality and a circular economy throughout the value chain – across all of “produce and sell,” “use,” and “renew” its Dan-Totsu Products.

The Group has realized tire-to-tire recycling, which is based on retreading, where the tread of the tire is replaced, and the casing is reused. This is contributing to CO₂ emissions reduction and resource circulation. Toward 2030, it will create opportunities in the recirculation of tire-to-rubber and tire-to-raw material through its

recycle business. By contributing to resource circulation and CO₂ reduction throughout its value chain, the Group is committed to the “Bridgestone E8 Commitment” of “Energy: Committed to the realization of a carbon neutral mobility society” and “Ecology: Committed to advancing sustainable tire technologies and solutions that preserve the environment for future generations.”

To realize this unique Sustainability Business Model, the Group is accelerating efforts to achieve carbon neutrality and a circular economy as priorities in the Mid Term Business Plan (2021–2023).



	2021-2023	~2030	~2050
Carbon neutrality	Consolidate foundation and clarify roadmap towards carbon neutrality Optimize manufacturing footprint & business portfolio, enhance renewable energy use, explore new energy. Contribute to CO ₂ emission reduction and gain competitive advantage through eco-friendly products & solutions business	Reduction of CO₂ emissions: -50% Contribute to reducing more than 5x our emissions	Carbon neutrality
Circular economy	Transition to a circular business model Explore and commercialize recycle business Enhance and expand recycled & renewable resources & expand retread business. Maximize value through light weight products, durable, wear-resistant Dan-Totsu Products + Dan-Totsu Solution	Recycled & renewable material ratio: 40%	100% sustainable material

Contribution to carbon neutrality

The Bridgestone Group believes the demands of society and customers to reduce CO₂ emissions will continue to increase in the future, given the need to respond to climate change. Toward its goal of carbon neutrality for 2050 and beyond, the Group is working to concurrently enhance its contribution to CO₂ reduction and to minimize CO₂ emissions.

The Group will contribute to CO₂ reduction in the processes of raw-material procurement, distribution, customer use, and reuse and recycling, while providing solutions based on Dan-Totsu Products and Dan-Totsu Service. Together with its customers and partners, the Group will contribute to the reduction of CO₂ emissions in society as a whole and will also differentiate itself and strengthen its competitiveness by helping its customers reduce their CO₂ emissions and become carbon neutral.

● Expanding contribution to CO₂ reduction

The Group has set a goal to contribute to global CO₂ emissions reductions across the lifecycle and value chain of its products and services that exceed by five times the CO₂ emissions from its operations by 2030¹.

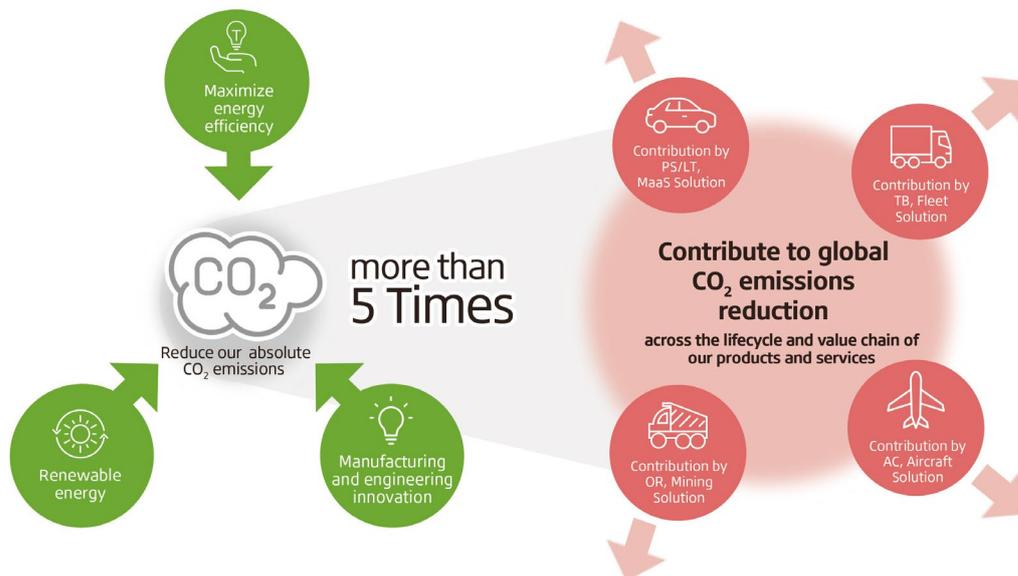
Looking at the entire lifecycle of a tire, CO₂ emissions during product use account for the largest proportion, approximately 90% of the total². As a provider of products

and services that contribute to the reduction of CO₂ emissions from customer use, the Group is developing and expanding fuel-efficient tires equipped with ENLITEN, an innovative tire technology that combines environmental and driving performance, and mobility solutions that provide fleet management services.

In 2021, the Group continued to reduce the tire rolling resistance, and the contribution to CO₂ reduction combined with the activities of the entire value chain is equivalent to approximately 1.6 million tons³. This is 0.5 times the amount of CO₂ emissions from its operations. The Group will continue to improve its monitoring of the amount of CO₂ reduction contribution of each SBU and expand its contribution to CO₂ reduction.

Furthermore, with regard to CO₂ reduction throughout the supply chain, the Group's [Global Sustainable Procurement Policy](#) requires environmentally responsible procurement practices, including reductions in energy use and greenhouse gas (GHG) emissions. To ensure the Policy is fully understood, the Group holds annual conferences for suppliers in several regions. At the 2021 conference, the Group asked for suppliers' cooperation in reducing CO₂ emissions, introducing renewable energy, and otherwise becoming carbon neutral.

The Group will continue to accelerate its efforts to contribute to the reduction of CO₂ emissions in society as a whole, together with its customers and business partners.



¹ Baseline year: 2020

² Source: "Tyre LCCO₂ Calculation Guidelines Ver.3.0.1," Japan Automobile Tyre Manufacturers Association, Inc.

³ Calculated using Bridgestone's proprietary calculation method based on the "Tyre LCCO₂ Calculation Guidelines Ver. 3.0.1" (The Japan Automobile Tyre Manufacturers Association, Inc.)

● Minimizing CO₂ emissions

Regarding the reduction of CO₂ emissions, the Group aims to achieve its target of reducing absolute CO₂ emissions (Scope 1 and 2)¹ by 50% by 2030, compared to 2011. The Group has set an interim goal of reducing Scope 1 and 2 emissions by 30% or more by 2023, compared to 2011.

To achieve these aggressive targets, the Group has increased the use of renewable energy sources and, in 2021, switched all electricity purchased to renewable energy sources at all of BSEMIA's Europe locations, four plants in Japan (Hikone, Shimonoseki, Tosu, and Kitakyushu) and two plants in China (Tianjin and Wuxi). The Chonburi plant in Thailand installed 2,160 photovoltaic panels on its roof and started supplying 1 MW of solar power in 2021. Also, a large 9.2 MW solar power system will be in operation at the Burgos plant in Spain in 2022. In addition, the Group is introducing renewable energy at its non-manufacturing sites and has switched all electricity to renewable energy at its research center in Thailand. The Group aims to expand its renewable energy ratio (electricity) to more than 50% by 2023. As a result of these initiatives, the ratio in the Group reached 16.3% in 2021. It also promotes utilization of fuels from renewable sources and in 2021 the Pune plant started to use biomass boiler



Chonburi plant in Thailand

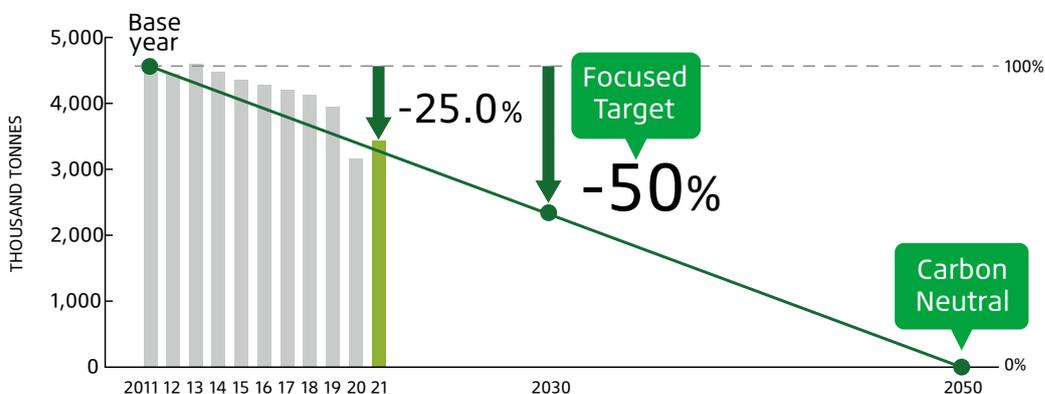
to cover 100% of the plant's steam demand². The Group will continue to expand the introduction of renewable energy while considering the local characteristics of each SBU.

The Bridgestone Group is also actively engaged in the continuous improvement of energy efficiency at its manufacturing sites and is working to reduce total energy consumption by 0.5% per year for the entire Group. For example, it is introducing high-efficiency equipment, implementing measures to reduce energy loss, and promoting energy conservation through visualization of energy loss. BSEMIA also is focusing on strengthening energy management, acquiring ISO 50001 certification for all its tire plants in Europe.

Furthermore, the Group is strengthening its use of internal carbon pricing and incorporating CO₂ emissions into its investment decision criteria, such as investment in energy-saving equipment, and installation of solar power generation. It will promote activities to educate and disseminate internal carbon pricing to employees and encourage investments toward carbon neutrality.

As a result of these initiatives, Scope 1 and 2 emissions in 2021 were reduced by 25.0% compared to 2011. In 2022, the Group submitted a commitment letter to the SBT (Science Based Targets) Initiative, an organization that certifies GHG emission reduction targets that are scientifically consistent with the targets set forth in the Paris Agreement, and is in the review process to obtain SBT approval. Group-wide activities will be advanced to achieve carbon neutrality by 2050.

CO₂ emission (Scope 1 and 2) reduction target in manufacturing



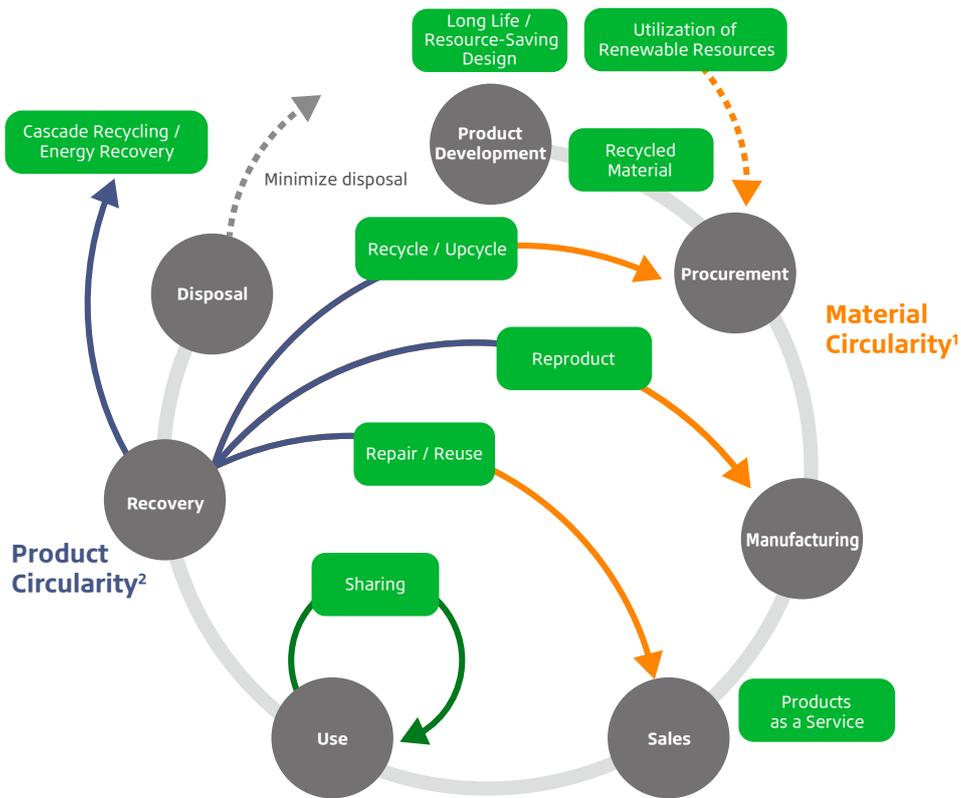
¹ Scope 1 covers all direct CO₂ emissions by a company (from boilers of manufacturing facilities, etc.). Scope 2 covers indirect energy-related CO₂ emissions (from consumption of purchased electricity, etc.). Scope 3 covers CO₂ emissions from raw material procurement, distribution, customers' use, disposal, and recycling lifecycle stages.

² Except for maintenance periods

Contribution to a circular economy

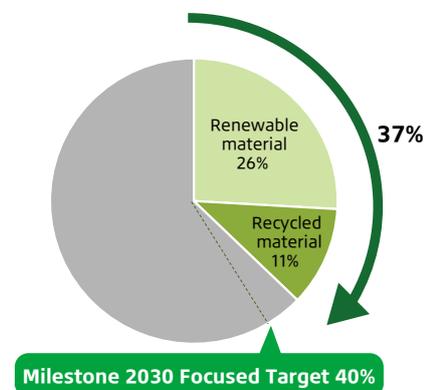
A circular economy not only helps mitigate pressures on the environment, but it also provides an opportunity to transform the Group's business model to increase the business value of its tires and gain competitive advantage by using resources more wisely and sustainably. To this end, the Group is integrating circular economy concepts into its Sustainability Business Model. It is also making comprehensive efforts to contribute to the attainment of four important social and customer values: safety, environment, economy and productivity.

The Bridgestone Group's approach to achieving a circular economy



To promote its contribution to a circular economy, the Group has set a target to increase its ratio of recycled and renewable material³ to 40% by 2030. It is accelerating various initiatives throughout the entire product lifecycle, such as long-life design, use of renewable resources, retreading, recycling, repairing, sharing, etc. The ratio of recycled and renewable material in 2021 was 37%.

Material circularity ratio (2021)



¹ A concept to show circularity of raw materials. The Bridgestone Group uses the ratio of recycled materials and renewable materials to total raw materials as the indicator for material circularity.

² A concept to show circularity of used products. The Bridgestone Group uses the ratio of beneficial next use of used tires collected by its shops/stores (based on the number of shops/stores and contracts with processing companies) as the indicator for product circularity.

³ Within total material weight for tire products including tire casing for retreading

● **Retreading**

The Bridgestone Group is developing a global retread service in which it collects worn out tires from customers, replaces the worn tread, and delivers tires that are again ready for use. Retreading tires can contribute to improved resource productivity and reduced CO₂ emissions. Based on the premise that Bridgestone retreaded tires are used three times by a customer, versus the use of three new tires, raw materials used and CO₂ emissions generated during the entire life cycle, excluding the use phase, can be reduced by half. By providing solutions that combine multiple retreads based on the Group's unique technology, Dan-Totsu Products, and appropriate maintenance, the Group maximizes the asset value of tires, as well as provides social and customer value of safety, cost efficiency, productivity and environmental sustainability.

● **Collection and effective use of used tires**

To improve product circularity, the Group complies with the laws and regulations of each country and region in effectively utilizing and disposing of used tires collected at dealerships. Of the approximately 3,700 directly managed shops/stores worldwide, 96% excluding some countries and regions have stipulations in their contracts with processing companies regarding effective utilization after collection. The Group is working to create new value through increased tire recycling, including the effective use of collected used tires in its recycle business.

● **Collaborative effort for a circular economy**

The Group has been a member of the [Ellen MacArthur Foundation's Network](#) since 2018. By learning from the Ellen MacArthur Foundation's extensive knowledge and the best practices of other member companies, the Group can incorporate the concept of the circular economy into its business model and aims to create new social and customer value throughout the tire lifecycle, including recycling, and effective use of resources and energy. The Group also uses Circulytics, developed by the Ellen MacArthur Foundation, to measure circular economy performance across its operations and to improve its efforts to achieve a circular economy.

