



## R&D and Manufacturing Transformation: BCMA (Bridgestone Commonality Modularity Architecture)

Bridgestone E8 Commitment

- Energy
- Ecology
- Efficiency
- Extension
- Economy

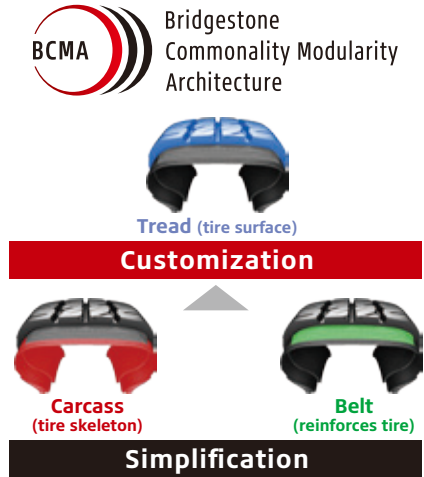
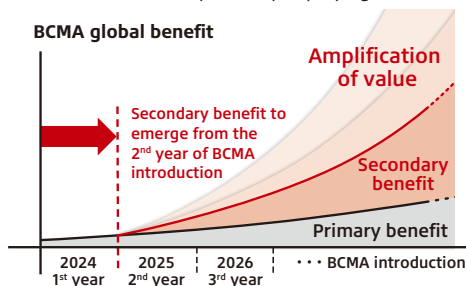
BCMA, supporting “ultimate customization” consolidates tire parts into three modules and shares them among different products, simplifying the supply chain including development and production. It is Bridgestone’s base technology for R&D and manufacturing which shortens development and production lead times to agilely provide value to customers while also aiming to reduce business cost including environmental impact.

In promoting BCMA during the 24MBP, we pursue the essence of R&D and manufacturing based on Genbutsu-Genba (respect for being on-site) to start creating benefit, focusing on value creation. Direct benefits, or the primary benefits from BCMA are generated from the first year of BCMA introduction in 2024. These consist of manufacturing cost down related to reducing changeover in production by sharing parts between products, and development cost reduction due to module sharing. Secondary benefits plan to be created mainly from the second year of BCMA introduction in 2025, in which we expect the reduction in direct material cost and in conversion cost from productivity improvement. These include benefits from the evolution of R&D and manufacturing such as improved capacity in production process and reduced workload at production sites in BCMA deployment.

These benefits will be adjusted according to each plant’s R&D and manufacturing power. Plants in the EAST regions (Japan and Asia), that already have high R&D and manufacturing power and have high productivity, tend to have smaller room for improvement through BCMA. On the other hand, plants in the WEST regions (U.S. and Europe), that face challenges in manufacturing, tend to have greater room for improvement. We lead to create value by specifying the benefit in each plant according to the roles and responsibilities of each of the 45 new tire plants clarified in 2023. Four tire plants globally, two each from Bridgestone EAST and WEST, have been designed as model plants and lead benefit creation. (Model plants: Burgos plant in Spain; Joliette plant in Canada; Nong Khae plant in Thailand; Tochigi plant in Japan.) During the 24MBP period, we will switch approximately 50% of our global PS tire production to BCMA.

### ● BCMA global benefit amount

Accelerate value creation by steadily deploying BCMA in each plant



### Link Steady Productivity Improvement and Shift to Green & Smart

Linked with BCMA deployment, we drive steady productivity improvement as well as the shift to Green & Smart to amplify value and reinforce earning power. In terms of steady productivity improvement, we are pursuing streamlined production based on Genbutsu-Genba (respect for being on-site). In addition, we accelerate this spiral up of “standardizing craftsperson skills that have been cultivated on-site over many years by leveraging digital capabilities, and reinforcing the entire R&D and manufacturing power by ensuring and improving the standards, and then evolving the standards as craftspeople enhance their own skills.” Combining this with automation leveraging smart technology will accelerate productivity improvement. We concretize and execute improvement in each plant, aiming to improve productivity by more than 10% level in 2026, compared to 2023.

Moreover, when it comes to the shift to Smart, we aim to connect the entire production process through digital sensing, AI, and automated control to achieve highly accurate and efficient R&D and manufacturing. In the 24MBP, we plan to introduce MES (Manufacturing Execution System) as a digital platform that digitally captures the production process and to automate the inspection process. We will also promote technological development, looking ahead to implementation in the 27MBP. Regarding the shift to Green, we reduce energy Gentan-i (energy consumption per unit) continuously.

In each target goal of driving the shift to Green & Smart, we steadily move forward with the 2030 Long Term Strategic Aspiration as our North Star.

● Shift to Green & Smart: Targets

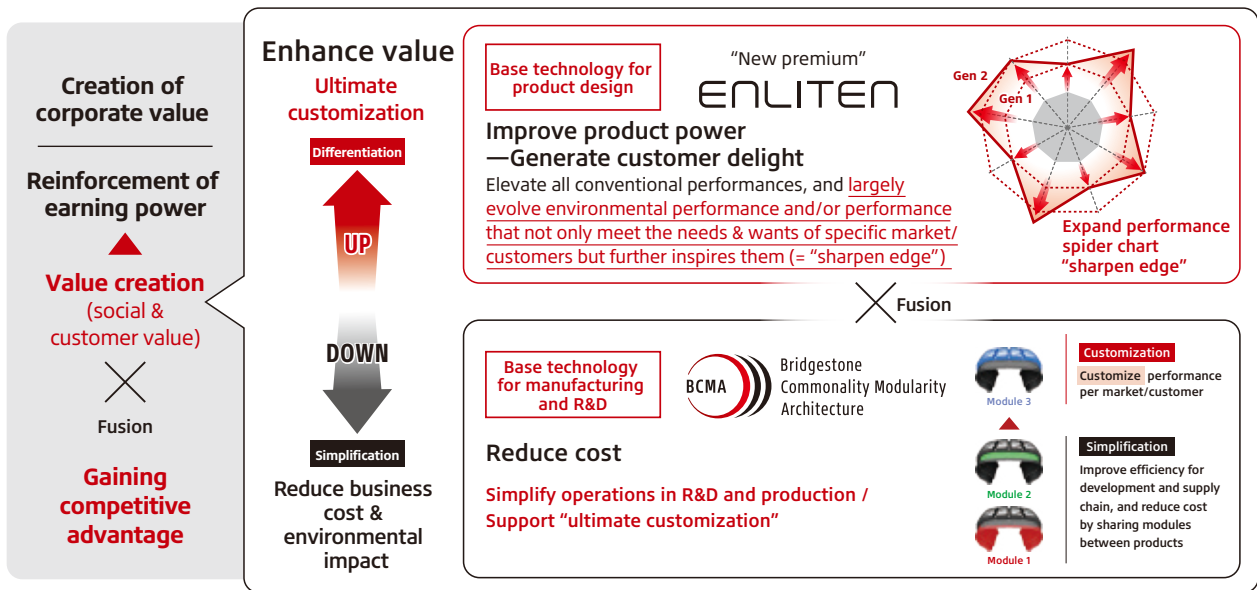
		2026 targets	2030 targets
<b>Green</b> Maximize value with minimum sustainable resources	CO <sub>2</sub> emissions	50% over reduction (vs. 2011) (Scope 1, 2)	50% reduction (vs. 2011) (Scope 1, 2)
	Renewable energy (electricity)	Over 70%	Aim for 100%
<b>Smart</b> "Strong" real (Takumi) x digital mastering manufacturing	Deployment ratio of ultimate "circle" technology (Deployment ratio for technology applicable machine)	Approx. 50%	100%
	Less skills/High efficiency labor productivity	Above 110%	130%

Value creation fusing ENLITEN and BCMA gradually starts in 2024 and will expand in 2025-2026 as the true next stage, to reinforce earning power. In the 27MBP, we will build a foundation to further reinforce business quality and expand earning power.

**Creating social value linking with business**

Bridgestone contributes to driving carbon neutrality by reducing its environmental impact through simplifying the value chain with BCMA and by reducing energy Gentan-i (energy consumption per unit) with the shift to Green.

● Accelerate value creation through the fusion of ENLITEN and BCMA



As we roll out BCMA globally, we have discussions with many teammates from each SBU, at Genbutsu-Genba (being on-site), and promote initiatives on a daily basis by performing the PDCA cycle. Although regions and positions may differ, our passions for creating good tires remain the same. We will evolve R&D and manufacturing to a new stage, supporting ENLITEN to realize ultimate customization while reducing our business costs. Through BCMA, we will also transform the individual mindset to R&D and manufacturing as well as organizational culture, which will create good business quality.

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