# External Environment and Risks & Opportunities

We are aware of the risks and opportunities posed by changes in the business environment during the Medium-Term '21 Plan period and the predicted transformative trajectory of the mobility field through 2030. We will work to create value by adapting our products, services, and targeted initiatives to reflect these changes.

## External environment

### Politics and economics

- Expansion of geopolitical risks
- Accelerated nationalism caused by economic disparity, decline of international cooperation
- Fluctuating resource prices
- Aligning of economic interests with social & environmental interests accelerated

### Environment

- Accelerating decarbonization
- Transition to a circular economy
- Measures to prevent plastic pollution
- Growing interest in natural capital

### Society

- Accelerated digital investment to offset declining working populations, humans expected to play increasingly sophisticated roles
- Growing interest in human capital
- Upholding human rights in business
- Quality governance in manufacturing

### Changes in the mobility field

- Reducing $CO_2$ emissions to achieve carbon neutrality using various options
- Greater use of IT (mobility-related data linking)
- Diversification of functions to meet the needs of individual users and offer greater convenience
- Increased use of driverless transport and alternative transport services

## Opportunity

- Expanding demand inspired by technological innovations progressing the environmental performance of automobiles, and unique added features
- Expanding demand for commercial vehicles that help solve environmental and social issues in the logistics industry
- Demand for maintenance-free features in next-generation transportation services
- Generating innovation through enhanced talent development

## Risk

- Stricter environmental regulations on automobiles and business activities
- Increasingly intense competition for securing talent
- Environmental impacts and human rights violations in the supply chain
- Progress of stronger product safety-related regulations

## Products and services

- Products that focus on reducing $CO_2$ emissions and circulating resources during their lifecycle (passenger/commercial vehicles)
- Highly durable (wear resistant)/ maintenance-free tires, airless tires
- Sensing, tire wear diagnoses

## Strengthen platforms

- Human capital management, health management
- Technological development to promote resource circulation and recycling

## Risk management

- Improve energy efficiency, expand renewable energy use
- Responsible raw material procurement and traceability
- Supplier engagement
- Strengthen quality throughout the value chain
  (a process assurance system, an individual product management system in the market, and tire safety awareness programs for users)

# Toyo Tire Materiality

At the Sustainability Committee meeting in June 2021, we decided our Group's material issues as key challenges that we need to address, which were approved by the Executive Committee in July 2021. Along with strategically investing our internal resources into initiatives related to the material issues, we also use this opportunity to foster a corporate culture where each employee addresses sustainability issues by connecting materiality to their own duties, as well as strengthen materiality-focused stakeholder engagement.

## Process of identifying material issues

**Determine the Toyo Tire approach to sustainability**

**Investigate how sustainability impacts business opportunities and social value**

- Extract key themes to address — based on specific products and services, target customers and future social change — in order to realize the Toyo Tire corporate philosophy
- Determine the value created in society through theme initiatives and evaluate their priority

**Investigate sustainability and business risk**

- Confirm risks in the tire and auto parts industry that have been identified by international groups, ESG rating organizations and other bodies, and risks we are aware of through our corporate activities
- Determine their potential to hinder achievement of our corporate philosophy and social value creation, and the status of existing Group efforts, and evaluate their priority

**Identify material issues based on the results**

| | | | | SDGs | KPI (targets) | Key achievements of 2024 |
|---|---|---|---|---|---|---|
| I Value creation | Unique value provided to customers and society through our products and services | 1 | **Help create a society of sustainable mobility**<br>We will contribute to a society of mobility that achieves net-zero environmental impact and zero accidents while providing efficient transportation by offering unique products and services. | | ● Product development based on plan to upgrade fuel efficiency at each model change<br>● Launch products for commercial EVs in Japan that conform to environmental regulations and address issues in logistics<br>● GHG emissions reduction targets<br>Scope3 By 2030: Contribute to 20% reduction per tire against 2019 | ■ Launched PROXES CF3, OPEN COUNTRY H/T Ⅱ*<br>* Launch in 2025<br>■ Launched NANOENERGY M151EV, M951 EV<br>■ GHG emissions reduction targets<br>Scope3 Contribute to 1.6% reduction per tire against 2019 |
| | | 2 | **Support the enjoyment of mobility for all**<br>We see it important to offer creative added value that supports the diversity of sustainable mobility by meeting the varied expectations people have for their own mobility through our unique products and services. | | ● Develop products with added value in both environmental performance and good design | ■ Launced OPEN COUNTRY R/T TRAIL* utilizing sustainable raw materials<br>■ Launched OPEN COUNTRY H/T Ⅱ* with design and quietness features<br>* Launch in 2025 |
| Ⅱ Foundation for value creation | The base for value creation | 3 | **Support diverse talent withmotivating challenges and jobsatisfaction**<br>We will secure a foundation for diverse talent who support our company's business management and create high added value in these rapidly changing and uncertain economic and social times. | | ● Promote organic teamwork and job satisfaction among diverse talent<br>● Cultivate individuality, quality and ability through talent development<br>● Improve health management indicators | ■ Engaged in industry-academia partnership with Doshisha University through comprehensive partnership agreement<br>■ Updated level-specific company philosophy training program<br>■ Implemented specialized educational curriculum for R&D function<br>■ Selected as a KENKO Investment for Health 2025 company |
| | | 4 | **Continue innovating next-generation mobility technology**<br>We believe it is vital to engage in technological innovation that supports the evolution in mobility being demanded in this new era and make continuous advancements that meet the needs of society. | | ● Ratio of sustainable raw materials per products<br>40% by 2030 and 100% by 2050<br>● Expand application of tire wear diagnosis technology | ■ Ratio of sustainable raw materials per products: 28%<br>(By weight in products produced at the end of 2024)<br>■ Participated in Dakar Rally with tires made of 55% sustainable raw materials<br>■ Acquired ISCC PLUS certification at two plants in Japan<br>■ Developed digital application to manage truck and bus tire conditions, and began test marketing toward logistics providers |
| Ⅲ Risk management | Responsible business practices that protect the means of value creation | 5 | **Pursue decarbonization in all corporate activities**<br>We aim to reduce our environmental impact through our products and services and decarbonize our entire manufacturing process and supply chain while leveraging these measures to increase our cost competitiveness. | | ● Reducing greenhouse gas (GHG) emissions<br>Scope1, Scope2 Reduce GHG emission by 46% by 2030 compared to 2019<br>Carbon neutrality by 2050<br>Scope3 By 2030: Contribute to 20% reduction per tire against 2019<br>● Percentage of electricity from renewable sources used at production sites<br>By 2030: 90% or more | ■ Acquired SBT certification for 2030 GHG emissions reduction targets<br>■ Reducing greenhouse gas (GHG) emissions<br>Scope1, Scope 2 Reduce 46% compared to 2019<br>Scope3 Contribute to 1.6% reduction per tire against 2019<br>■ Percentage of electricity from renewable sources used at production sites<br>85.5% (on a purchased electricity basis)<br>■ Began full operation of internal carbon pricing (ICP) 10,000yen/t-$CO_2$ in 2024 |
| | | 6 | **Promote supply chain sustainability**<br>We understand that the sustainability of the Company's operations, as well as the genuine enjoyment of mobility we endeavor to provide, depend on a healthy supply chain. We are therefore committed to addressing environmental and social issues in the supply chain. | | ● Expand supplier sustainability<br>By 2025: Conduct risk assessment for 95% or more of primary suppliers<br>● Promote sustainable use of natural rubber<br>● Percentage of truck use*1 in mainline transportation*2 in Japan<br>By2033: 50% reduction against 2019<br>*1 During the fiscal year starting in April and ending the following March<br>*2 Transportation related to tire products from plants to area warehouses or to export ports in Japan | ■ Percentage of suppliers assessed for environmental and social risks: 90% of total transaction amount of raw materials for tires<br>*100% of primary suppliers of natural rubber<br>■ Conducted assessment of manufacturing contractor and distributor progress in addressing human rights<br>■ Identified 40% of natural rubber harvest areas<br>■ Percentage of truck use*1 in mainline transportation*2 in Japan<br>33% reduction against 2019 |
| | | 7 | **Ensure the fundamentals of manufacturing: quality and safety**<br>Quality and safety are fundamental to any product or service. The value our products and services offer will mean little to society if their quality or safety is in doubt, as the lessons from our past have taught us. Quality and safety are therefore our top priority in all of our operations. | | ● Meeting the quality standards of each country<br>● Establish process assurance system by visualizing product quality in manufacturing processes<br>● Increase users' safety awareness | ■ Continued conforming to ISO 9001/ IATF 16949<br>■ Launched MES* at Serbia Plant<br>* Manufacturing Execution System<br>■ Conducted tire safety awareness activities with stakeholders |

Domain I

# Value creation

## 1 Help create a society of sustainable mobility

## 2 Support the enjoyment of mobility for all

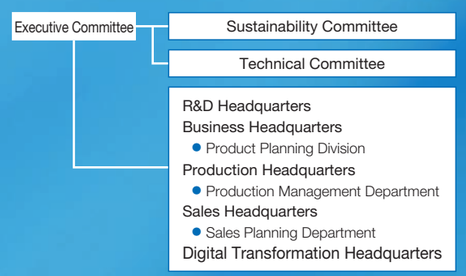
- Environmental contribution ($CO_2$ emissions reduction): Reducing tire rolling resistance, improving EV compatibility, saving resources
- Ultimate enjoyment of driving and sophisticated features
- Safety: Maintenance-free products, diagnosis of tire wear

### Our policy

We know that the sustainable future for tire and automotive parts manufacturers will only be ensured once a society of sustainable mobility has been created. That's why we are working to help establish a society of sustainable mobility that reduces environmental impact, prevents traffic accidents, and facilitates efficient transportation and mobility. In addition to providing the necessary elements for promoting sustainability, we believe that using our unique products and services to satisfy the various features that people expect from superior mobility life will create added value designed to support a diverse mobile society, so that is what we intend to do.

### Organizational responsibilities (April 2025)

Spearheaded by our R&D Headquarters, we are working together with product planning, production management, sales planning and digital transformation (DX) functions and promoting sustainability-related activities based on various themes that correlate with the aims of our medium-term business plan. The Technical Committee oversees the overall implementation of those activities and reports progress to the Sustainability Committee.




## Toward a society of sustainable mobility

### Reducing the environmental impact of mobility

#### Improvements in fuel efficiency with each new model release

Reducing vehicles' $CO_2$ emissions is a challenging issue that needs to be addressed throughout the supply chain in order to achieve carbon neutrality by 2050. At Toyo Tire Corporation, our goal is to help reduce $CO_2$ emissions per tire by 20% by 2030 compared to 2019 levels and our functional organizations collaborate to develop products.

When planning model changes for priority, or core, products based on our medium-term product development plan, the product planning function works closely with the sales function to monitor trends in individual markets and also incorporates performance and functions that can also be applied to EVs, including fuel efficiency, into its product development requirements. In anticipation of potential trends in the automotive market and required levels of tire performance and functionality, our R&D function has established a technology development framework that collates repeated refinements of platform technologies over a medium-to long-term time span and achieves a high-level of product planning. We will continue to improve fuel efficiency across our product lineup to help reduce the environmental impact of mobility.

In April 2025, we launched the OPEN COUNTRY H/T II highway terrain tire*1 in the Japanese market that complements the OPEN COUNTRY series' renowned designability with added quietness and fuel efficiency. After initially launching the OPEN COUNTRY series in Japan to coincide with the expansion of the SUV market, we received multiple requests from dealers and other channels to enhance the product lineup by offering an aggressive pattern design and performance that was more attuned to city driving. That feedback inspired the development of the OPEN COUNTRY H/T II. Nano Balance Technology was used to increase the amount of silica, thus improving rubber strength, and super active polymer was added to enhance silica dispersion, allowing us to optimize fuel efficiency, wet performance, and wear resistance to a high degree. Rolling resistance has been reduced by 17% *2 compared to the conventional OPEN COUNTRY A/T EX tire, boosting fuel efficiency.

*1 A category of quieter tires that are better suited to driving on paved roads and highways and offer higher degree of driving comfort than the all-terrain category.
*2 (Location) Toyo Tire Corporation indoor drum-type rolling resistance testing equipment
[Test conditions] ●Tire size: OPEN COUNTRY A/T EX225/65R17 102H, OPEN COUNTRY H/T II 225/65R17 102H ●Rim size: 17 x 6.5 ●Tire pressure: 210 kPa ●Load: 6.67 kW ●Speed: 80 km/h
* There is no guarantee that the exact same results would be generated even if the test was repeated under similar conditions.
* Detailed data from the above-illustrated test have been delivered to the Tire Fair Trade Council.

OPEN COUNTRY H/T II

#### Our unique EV strategy

The global shift toward EVs may be slowing down, but they still represent one of the most effective ways of reducing automobile $CO_2$ emissions, so we expect the spread of EVs to continue as energy conditions and automobile usage in different countries and regions evolve.

For example, if we break down $CO_2$ emissions in Japan by sector, the transport sector accounts for roughly 20%*3 of total emissions, and modal shifts and other efforts to promote decarbonization are being pursued in earnest across the transportation industry. The shift toward EVs for transportation vehicles is also progressing, and commercial vehicle manufacturers have begun enhancing their EV truck lineup. Furthermore, now that major shipping and transportation companies are required to switch to non-fossil energy, demand for EV trucks will likely increase further going forward.*4

To address these trends, Toyo Tire Corporation introduced the NANOENERGY M151 EV ribbed tire specifically for light EV trucks into the Japanese market in June 2024, followed by the NANOENERGY M951 EV tire, the first studless model for light EV trucks in September of the same year.

Considerable emphasis is being placed on EV cruising range on a single charge, and tires are expected to achieve a level of fuel efficiency (energy efficiency for EV tires) that helps extend that cruising range. Furthermore, we have to develop specific tire performance elements exclusively for EVs. This is because EVs exert a heavier load on tires due to their heavier weight when equipped with batteries and the increased acceleration performance generated by powerful EV driving force. The use of regenerative braking*5 can also affect the manoeuvrability of EVs.

When developing the necessary products, we designed an optimal compound using nano composite polymer (see P27), a material developed through our proprietary Nano Balance Technology, which reduced rolling resistance and improved wear resistance. With the NANOENERGY M151 EV in particular, we optimized the tire's aerodynamic characteristics*6 by using our proprietary aerodynamic simulation, which derives advance predictions of the level of air resistance that tires and vehicles will likely be subjected to during driving and incorporates those data into the product design. This is the first time this simulation has been used in truck and bus tire design.

These two NANOENERGY EV tires were recognized at the 2024 Good Design Awards sponsored by the Japanese Institute of Design Promotion. They were highly praised for addressing the shift toward EVs in the transportation industry from a design perspective and for generating high-level improvements in both performance and durability.

*3 National Institute for Environmental Studies, Japan
National GHG Inventory Document of JAPAN (P2-4)
https://www.nies.go.jp/gio/archive/nir/ua88o20000099s22-att/NID-JPN-2025-v3.0_gioweb.pdf
*4 Japan Trucking Association 2024 (P6)
https://jta.or.jp/wp-content/themes/jta_theme/pdf/aboutjta2024eng.pdf
*5 A form of electric braking that uses shaft rotation power to convert kinetic energy into electrical energy that can be captured and reused, as opposed to, under normal conditions, using a motor to convert electric power into a driving rotational force
*6 Special characteristics associated with air resistance and air flow exerted on an object that is moving or being propelled through air

GOOD DESIGN AWARD 2024

NANOENERGY M151 EV

NANOENERGY M951 EV

## Ensuring safety and security in mobility

### ●Balancing safety and environmental performance

Demand for small deliveries and other logistics has been increasing in Japan as the e-commerce market grows, but, at the same time, the enactment of the Work Style Reform Act in April 2024 has capped overtime hours for truck drivers leading to greater hiring of less experienced drivers. We recognize this situation and the broader requirements for even higher safety performance of transport vehicles and tires.

In June 2024, we launched the DELVEX M135 tire for the Japanese market, a ribbed tire for light trucks that offers both impressive wear resistance and fuel efficiency, while maintaining a high level of wet performance. The tire's unique pattern design ensures strong tire grip over a wide range of truck loads, from fully loaded to near empty. Furthermore, the special wear-resistant LT compound developed using Nano Balance Technology has improved not only wear resistance and wet performance, which are considered to be the most important features for light trucks tasked primarily with small-lot deliveries, but also fuel efficiency. The estimated wear life on the DELVEX M135 tire has been improved by 32%*7 compared to the conventional DELVEX M134 tire, and rolling resistance reduced by 16%*8.

*7 [Test conditions]
- ●Evaluated size: 205/85R16 117/115N
- ●Location: General roads near the Toyo Tire Corporation tire test course
- ●Distance traveled: 12,000 km
- ●Vehicle used: 3-ton truck (Isuzu Elf TRG-NPR85AR), Engine capacity: 2.99 L, Axle arrangement: 2-D
- ●Rim size: 16X5 1/2J
- ●Tire pressure: 600 kPa
- ●With tire rotation
- ●Evaluation method: Comparison of total average estimated wear life of rear axle (calculated using a minimum remaining tread depth of 1.6 mm)

*8 (Measurement method) Measure rolling resistance values on the Toyo Tire Corporation indoor drum-type rolling resistance testing equipment
[Test conditions]
- ●Evaluated size: 205/85R16 117/115N
- ●Location: Toyo Tire Corporation Tire Technical Center
- ●Testing equipment: Drum-type rolling resistance testing equipment
- ●Test method: UN R117 force-type
- ●Rim size: 16X5 1/2J
- ●Tire pressure: 600 kPa
- ●Load: 10.71 kN
- ●Speed: 80 km/h

* There is no guarantee that the exact same results would be generated even if the test was repeated under similar conditions.
* Detailed data from the above-illustrated test have been delivered to the Tire Fair Trade Council.
* The rolling resistance test reduction rate does not match the actual fuel consumption reduction rate.

### ●Adapting to changing weather patterns and road surfaces

The warmer winter weather observed in Japan, Europe, and other regions over recent years has changed winter road surface conditions. More surfaces are getting slippery due to large temperature differentials and the repeated freezing and thawing of snow, with snow melting during warmer daytime temperatures, turning into slush, and then freezing again at night when temperatures drop, turning to ice. The performance of studless tires needs to be improved to address these changing conditions.

The Toyo Tire Group has especially been focusing on improving tire performance on ice because that has a significant impact on automobile driving safety. In August 2024, we launched the OBSERVE GIZ3 studless tire for the Japanese market with improved and longer-lasting braking performance and start-up traction on icy roads. Tire adhesion on icy road surfaces has been improved by using T-MODE snow prediction technology to design new tire patterns, along with rubber compounds that stay soft even in low temperatures thanks to a blend of new materials such as sustainable high adhesion gel and sustainer grip polymer. This has helped achieve a 22% improvement*9 in braking performance on icy roads over the previous model, the OBSERVE GIZ2.

*9 [Test conditions]
- ●Location: Winter tire test course
- ●Size: 195/65R15 91Q
- ●Vehicle used: Toyota Corolla HB (with ABS)
- ●Engine capacity: 1800 cc
- ●Driving system: 4WD
- ●Rim: 15x6
- ●Tire pressure: 250 kPa/240 kPa
- ●Road type: Icy road surface
- ●Testing method: Measure the distance when driving straight at a speed of 20 km/h between the brake being fully applied and the vehicle coming to a complete stop.

* This test is conducted on an ice-covered road so performance may vary depending on the environmental conditions

DELVEX M135

OBSERVE GIZ3

## Ultimate driving enjoyment and a diverse range of mobility-related lifestyles

Our fundamental purpose is to support rich, high-quality mobility-related lifestyles by developing technologies and commercializing products that offer ultimate driving enjoyment and exquisite design features, while also fulfilling basic tire performance and sustainability requirements.

We are expanding the range of products on offer in our pillar OPEN COUNTRY series to address the diversifying needs of users in the SUV market in Japan.

The OPEN COUNTRY R/T TRAIL tire that we introduced for the Japanese market in March 2025 is a rugged terrain tire that sits between mud-terrain tires designed for full off-road use on uneven or muddy terrain and all-terrain tires that focus on achieving a good on-road/off-road balance. Being the first company to develop a pattern design for this tire category is a unique strength that sets us apart from other competitors. The tire offers both impressive designability and a high degree of comfort thanks to high traction performance and noise suppression qualities acquired using pattern technology refined through participation in off-road races. Furthermore, the bead wire and other components have been made from race-verified sustainably recycled materials. At the BAJA1000 held in Mexico in November 2024, TEAM JAOS competed in a LEXUS LX equipped with these tires and won its class in the Stock Full Size category.

The OPEN COUNTRY H/T II released in April 2025 offers quiet, fuel-efficient performance for on-road driving on paved roads and highways, while also carefully heeding the need for exemplary designability. (see P38)

OPEN COUNTRY R/T TRAIL

**TOPIC**

### Open Country R/T receives Minkara PARTS OF THE YEAR 2024 Hall of Fame Award (SUV/4X4 tire category) for the third year in a row*

Operated by LY Corporation, Minkara (short for "Everyone's Car Life" in Japanese) is one of Japan's largest specialist automobile social media platforms where car lovers post and discuss various car-related topics. Minkara aggregates the number of parts user reviews and the scores, and ranks parts with the highest support in its PARTS OF THE YEAR survey announced twice a year in the middle and the end of the year. OPEN COUNTRY R/T has been in the top rankings since the 2017 first-half awards, and was inducted into the Hall of Fame for the first time at the 2022 annual awards. 2024 marks its third consecutive year in the Hall of Fame. Going forward, we will continue to accurately grasp market trends and attentively incorporate user insights to help develop highly unique and attractive products.

OPEN COUNTRY R/T


* This award is presented for parts that have garnered unwavering support in PARTS OF THE YEAR rankings over the past several years.

# Providing value for evolving mobility in a changing society

As society changes and mobility technology advances with a wider use of IT and data and development of autonomous vehicles, we are beginning to see how the mobility landscape is reshaping. We are committed to developing technologies, products and services to provide safety that meets the needs of the evolving mobility environment.

### ●Supporting safe driving

Tires are the only components of a vehicle that actually come into contact with the road surface. We are developing sensing technology that can collect various types of information from tires and turning the concept of using tires themselves as devices for acquiring information into a reality.

In December 2024, we developed the Tire SAPRI digital application that clearly grasps and manages the usage environment and conditions for truck and bus tires. We have already begun test marketing the app to some customers. We first built a model capable of estimating a tire's state of wear without actually measuring it using a system that automatically collects and amasses changes in installed tires and other driving environment information according to the individual vehicle operational status and uses AI to analyze the data. The model has since undergone repeated demonstration experiments with the help of logistics companies, and is now in the test marketing stage. We will continue to refine our technology to promote the efficient management of vehicle operations by logistics operators and preempt operational issues by detecting and conveying any abnormalities through tire wear prediction and tire pressure and temperature monitoring.


### ●Maintenance-free airless tires

A likely effect of changes such as self-service gas stations, home charging of EVs and wider adoption of car sharing is that there will be fewer opportunities for drivers to get tires serviced by experts. Also, cars need to be lighter in order to save energy and resources, and tire manufacturers face the challenge of providing safety in the next generation of mobility without the need to carry a spare tire. We aim to use airless tires to create maintenance free tire solutions with no need for a spare tire.

Our "noair" airless concept tire achieves the level of durability and maneuverability close to that of pneumatic tires and can be fitted on passenger vehicles for driving. As part of the path to commercialization, we are currently trialing the "noair" tires on last-mile delivery vehicles.

We also provided electric cart vehicles equipped with "noair" tires as mobility vehicles designed to shorten the time spent moving about the venue for people involved in the holding and operation of the 2025 International Exposition, and to help make the whole process more efficient. We are conducting demonstration experiments and improving performance for practical use in areas such as green slow mobility, while remaining attentive to any legal and regulatory trends related to driving on public roads.

"noair" airless concept tire


Demonstration experiments

Domain Ⅱ

# Foundation for value creation

## 3 Support diverse talent with motivating challenges and job satisfaction

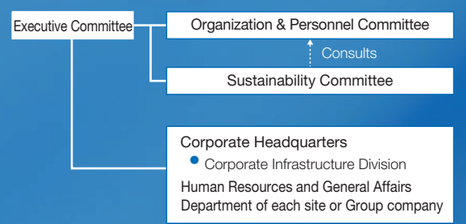
- ●Demonstrating ability and fostering motivation (developing talent)
- ●Securing diverse human resources (promoting diversity)
- ●Creating healthy working environments (reforming working styles)

### Our policy

As part of our efforts to build a management foundation to support sustainable growth, we stipulated the development of a framework in the Medium-Term '21 Plan that would enable diverse human resources to work together organically and play an active role based on enthusiastic job satisfaction, as well as a training system that upholds individuality, quality and ability.
We are committed to our human capital through medium- to long-term resource investment in developing talent, promoting diversity and creating healthy working environments.

### Organizational responsibilities (April 2025)

The Organization & Personnel Committee, which is under the jurisdiction of Executive Committee, discusses and determines policies and important measures for strengthening the Group's human resource base, and the Corporate Headquarters is directly responsible for supervising the measure execution of these policies. The areas of activity relating to human resources that are entrusted to the Sustainability Committee are also based on these policies, and the committee will consult with the Organization & Personnel Committee when necessary.




# Human resource base

### Demonstrating ability and fostering motivation (developing talent)

Human resources are the source of the value we create for society through our business activities, and our most important form of capital that supports continuous business growth. We thus recognize the importance of human capital development. In unpredictable and uncertain business environments, our growth is supported by talent that continually strives to overcome increasingly complex and diverse issues and difficulties, and that can take on challenges using originality to solve problems, enabling us to create new value for society. Our policy is to build a human resource base by establishing a cycle of human resources measures and investments that fosters this kind of talent.

Based on this policy, in 2021 we launched a new human resources evaluation system for employees in career-track positions, and in 2023 expanded it to cover talent corresponding to technical and regional positions at production bases. This system defines a clearer picture of the type of talent we seek and role expectations at each level, enabling us to conduct evaluations and adjust treatment in a way that motivates each employee to achieve better results and to develop themselves. A survey conducted after its launch confirmed that the new system and related measures are increasing employee motivation as anticipated. In addition, we have been striving to increase talent retention for positions that have had issues with working environments or treatment and revise our human resources system.

Furthermore, as part of developing a training system that upholds individuality, quality and ability, in 2022 we reviewed our training system and restructured the content. We incorporated this into level-specific training to deepen understanding of the corporate philosophy that underpins our management, the role expectations defined by our human resources system, and the fundamental knowledge that should be held by core employees, such as digital transformation and ESG. Our programs run over several months in order to ensure focused learning and workplace application of the mindset and skills required to fulfil role expectations at each level. In our training for general managers and divisional general managers, we aim to encourage personal transformation to strengthen management ability and improve leadership to facilitate

medium- to long-term problem solving. To further develop future globally-minded business management candidates, for selected mid-career employees, we conduct selective training, cross-border training at universities, and planned personnel transfers that include overseas assignments.

So that employees are motivated to achieve future goals, we have also defined an internal career education policy, regularly review employee career development, and conduct meetings between employees and their line managers. We also create personnel plans that include human resource rotation with a medium- to long-term focus, which we use to promote human resource transfers at a company-wide level.

### Training by level held in FY2024 (Toyo Tire Corporation)

| Name | | Hours to complete | Training aim |
|---|---|---|---|
| New recruit training | | 93 | To gain understanding of our management policy and strategy necessary for workplace application, and acquire social skills |
| Follow-up training | | 12 | To review new recruit period and foster a mindset for the next fiscal year |
| Training for new senior-level administrative staff | | 11 | To acquire the skills and outlook needed to apply specialized expertise as mid-career employees |
| New assistant manager training | | 34 | To acquire the skills necessary for a position responsible for executing tasks as an entry-level manager |
| New manager training | | 34.5 | To foster talent that can understand the roles and achievements required of managers, deliver organizational results, and contribute to business performance |
| New general manager training | | 18.5 | To foster talent capable of leading organizational management, driving business innovation and creating higher added value |
| New section leader/assistant supervisor/ assistant manager training | | 8 | To foster talent that can act as workplace leaders and appropriately manage subordinate employees |
| Mandatory programs*1 | Corporate philosophy | 2.5 | To promote the application and integration of our philosophy-based business thinking across all levels |
| | Digital transformation | 1.5 | To foster awareness of digital transformation by understanding our DX initiatives and reflecting on their application in employees' own duties |
| | ESG | 1.5 | To promote understanding and practice of ESG perspectives in the workplace, recognizing its link with the environment surrounding the company and employees' own duties |

*1 Included in the training hours of the training by level

## Securing diverse human resources (promoting diversity)

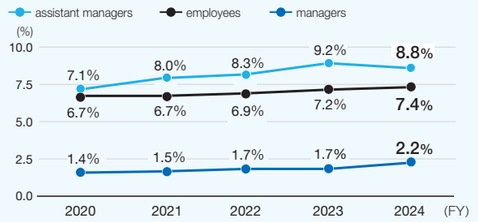
In our promotion, we have added aspects such as identification with and embodiment of our corporate philosophy as assessment items in addition to ability, suitability and track record, and strive to achieve optimal allocation of human resources by assessing each individual's motivation. We are also creating workplaces where diverse talent can flourish regardless of nationality, gender or age.

For new graduate hiring, we work with universities to open our doors to both foreign students studying at Japanese universities and Japanese students studying overseas, while actively seeking to attract individuals with strong practical potential, including those with doctorate degrees. At the same time, we are striving to increase our proportion of mid-career hires with experience at other companies, who are important in supporting our growth stage. We are also actively working to provide diverse opportunities for people to thrive in the workplace, including employing people with disabilities and rehiring employees at retirement age. In 2024 we made our employment system more flexible to retain employees who are approaching retirement age but possess valuable strengths.

These include individuals with outstanding management skills and strategic driving power, as well as experts in specialized fields who can contribute to the transfer of technology and skills. This promotes motivation in older employees and helps prepare successors. We also expect this to have a positive impact within the company and lead to organizational vitality.

While the Group has a uniform compensation system for men and women with the same job qualifications and the same level of responsibility, our analysis shows that the differing ratios of men and women in management positions affect wage performance. In efforts to change this, we have a number of measures in place including diversity and inclusion e-learning to improve employee awareness, and lectures by external experts to promote women's empowerment. In addition, we are actively promoting the development and promotion of women employees to enable us to ultimately eliminate wage disparities. In specific terms, over five years from 2016 to 2020, we doubled the percentage of women at the junior management level (assistant managers who become candidates for managerial positions) from 2.0% in 2016 to 4.7% in 2020. In further efforts to promote more women into management, since 2021 we have set a target for promotion from junior management level to manager level or higher, with the ratio of women promoted to be 0.8-1.2 times that of men.

### The ratio of women employees / assistant managers / managers (Nonconsolidated)




### Employee diversity (Toyo Tire Corporation, full-time employees)

| | |
|---|---|
| Total | 3,705 (+0.9% y/y) |
| By age | Under 30 17.9%<br>30-50 60.8%<br>Over 50 21.3% |
| By gender*2 | Male 92.6% (-0.2 pts y/y)<br>Female 7.4% (+0.2 pts y/y) |
| People with disabilities | 79 / 2.58% (As of June 1, 2024) |
| Employees from countries other than Japan*3 | 20 |
| Management by gender | 367 |
| Employees from countries other than Japan*2 in management | Male 97.8% (-0.5 pts y/y)<br>Female 2.2% (+0.5 pts y/y) |

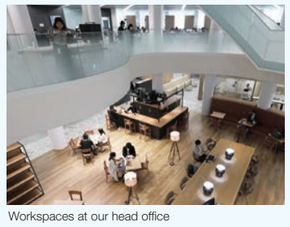
*1 Data by gender: Refers to data based on the sex assigned at birth. We do not have quantitative data on gender identity because it is difficult to obtain, but we aim to create workplaces where all employees can take an equal active part.
*2 Data on employees from countries other than Japan: Refers to data on foreign nationals as defined in the Nationality Act of Japan.

## Creating healthy working environments (reforming working styles)

We believe that our unique work styles and working environments maximize the capabilities and vitality of diverse human resources and organizations.

In 2023, we introduced a new working style system with a remote work option, which had been established during COVID-19 pandemic. At our head office, we also renovated our work spaces so that employees can choose their own seat each day, allowing them to concentrate and be more productive while also fostering better collaboration with colleagues. Survey results show that over 90% of employees are satisfied with these broader working style options and our new office style where they can work freely and autonomously. Our renovated head office also received an encouragement award from Nikkei Inc. and the New Office Promotion Association.

In 2024, we recommended employees work 100% remotely during heat waves to reduce the stress of commuting. We confirmed that this decision led to a high level of employee satisfaction from a work-life balance perspective, so in November of the same year, we added the 100% remote work option to our permanent system.


Workspaces at our head office

Regarding the need to help employees achieve a good work-life balance, we seek to improve our understanding of any changes in our employees' lives caused by different life events and to provide ways to help them achieve a healthy work-life balance. We support employees in their childcare and nursing care responsibilities through systems such as leaves that enable employees to concentrate on raising children up to two years of age and caring for family members. We have also established systems and a workplace environment that are more conducive to men taking childcare leave, and established a system that allows employees to reinstate and use annual paid leave that expired from two years ago in the event of an injury or illness, childcare or nursing care, volunteer activities, hospital visits, hospitalization, pregnancy, infertility treatment, or other reasons. Meanwhile, following labor-management consultations, our administrative and technical bases have designated several promotional days a year for encouraging employees to take their annual leave and achieve a better work-life balance. At the same time, we encourage employees at production sites to systematically take annual paid leave in line with the annual production plan. In fiscal 2024, the annual leave utilization rate stood at 71.4%, an increase of 17 points over the past three years.

The action plan formulated based on Japan's Act on Advancement of Measures to Support Raising Next-Generation Children was revised in 2024 to help expand our childcare support systems and improve working environments. The revision is designed to boost childcare leave utilization rates to 100% for both men and women by, for instance, offering paid parental leave to care for a sick child and possibly expanding the number of eligible paid childcare leave days.

**Childcare leave utilization update**

| | FY2021 | | FY2022 | | FY2023 | | FY2024 | |
|---|---|---|---|---|---|---|---|---|
| | Utilization rate | Number of employees | Utilization rate | Number of employees | Utilization rate | Number of employees | Utilization rate | Number of employees |
| Male employees | 16.9% | 22 | 35.4% | 34 | 50.5% | 51 | 66.7% | 62 |
| (No. of employees taking over one week's leave) | | (7) | | (12) | | (38) | | (42) |
| Female employees | 100% | 3 | 100% | 7 | 100% | 12 | 100% | 14 |

## Employee opinion survey

It is important that our employees should feel proud of what they do and are motivated to create value.

We have been conducting an employee awareness survey once every two years since 2021 to capture a snapshot of our organizational culture. The survey results and detailed analysis are shared with the Executive Committee and feedback is provided to each department. Our efforts to create and implement improvement action plans based on deep reflection are starting to bear fruit as the cycle takes hold. Each department is encouraged to implement autonomous and proactive initiatives based on their individual strengths and weaknesses. The Human Resources Department regularly monitors the progress of each department, and incorporates common issues into the development of company-wide policies and system reviews. The 2023 survey pinpointed issues relating to shift workload in the production department so we set up a project to promote improvements together with labor and management.Linking our philosophy, systems, events, and communication will enable us to form a unique culture and increase employee job satisfaction.

## Joint human resource development program with Doshisha University

In March 2024, we entered into a five-year comprehensive partnership agreement with Doshisha University, and began a joint project to develop next-generation technologies and human resources.

In the first year, 26 employees — primarily junior members and those from our next-generation leader class — joined a graduate school education program that is part of the university's integrated humanities and sciences curriculum. By learning together through active discussions with graduate students from a variety of research disciplines, our employees can foster perspectives that enable them to consider how our technologies and products can be utilized for sustainable development around the world. We expect a similar number of participants for 2025, and will proactively utilize this as a recurrent educational opportunity for employees.

TOPIC

### First selection as a Health & Productivity Stock

For the first time, we were included in the 2025 Health & Productivity Stock* by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange in recognition of our health management initiatives. In 2024, all of our Group bases became smoke free, and we made the recommendation of 100% remote work to reduce the stress of commuting during heatwaves a permanent option at our head office and other office sites. We are also working to improve comfort and safety at our production bases.

We will continue creating sound and healthy working environments where everyone can thrive, based on the belief that ensuring employees can carry out their duties in good health and well-being increases productivity and organizational activity, which as a result leads to business development and creation of social value.

* Certified as a Health & Productivity Management Outstanding Organizations (White 500) company, selected from listed companies that fulfil requirements such as no serious legal violations, taking into account ROE trends and dialogue with investors.

## 4 Continue innovating next-generation mobility technology

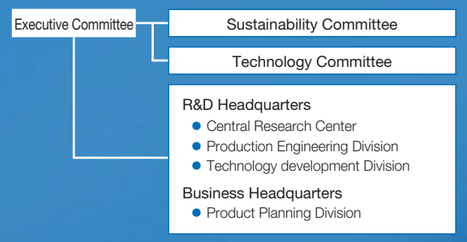
- Developing products, materials and technology for a society of next-generation mobility
- Creating recycling technologies for products and raw materials
- Innovating low-impact alternatives to substances of concern

### Our policy

The Toyo Tire Group believes that the value we provide through our products and services must support the evolution of mobility required for a new age. We will continue to challenge technological innovation to help build a society that exists in harmony with the environment and supports safe driving.

**Organizational responsibilities (April 2025)**

R&D Headquarters is responsible for promoting initiatives in this area. The Technical Committee oversees all initiatives and reports progress to the Sustainability Committee.



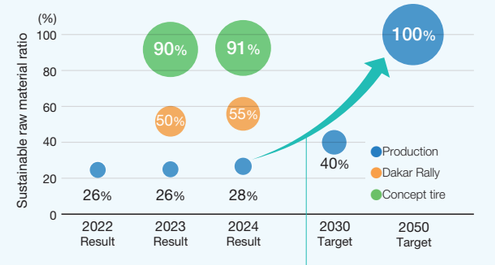

# Platform technologies

### Expanding the use of sustainable raw materials

We believe it is our mission as a manufacturing company to help promote the transition from a society that consumes resources to a society that circulates resources. We conduct research and development with the aim of increasing the ratio*1 of sustainable raw materials*2 used in our products to 40% by 2030, and 100% by 2050. That ratio reached 28% at the end of 2024. Going forward, we will continue developing technologies to increase the use of recycled raw materials such as reclaimed rubber made from used tires, recovered carbon black (rCB) and recycled bead wire, as well as renewable raw materials such as synthetic rubber made from biomass (biomass-derived butadiene rubber and biomass-derived styrene butadiene rubber) and rice husk ash silica. This would lead to a reduction in the amount of petroleum-derived raw materials used, which have a large impact on climate change, and help reduce GHG emissions over the tire lifecycle.

*1 The ratio is based on the weight of sustainable raw materials used in products at the end of each year.
*2 Toyo Tire Corporation defines sustainable raw materials as recycled raw materials and renewable raw materials.

**Ratio of sustainable raw materials: targets and actual results**




Progress with pre-commercialization technologies through concept tire prototype and participation in the Dakar Rally with the aim of achieving 100% sustainable by 2050

### ISCC PLUS Certification*3 Received

In December 2024, the Sendai Plant (located in Iwanuma City, Miyagi Prefecture), our main tire manufacturing site in Japan, received ISCC PLUS certification along with our manufacturing subsidiary Fukushima Rubber Co., Ltd.

(located in Fukushima City, Fukushima Prefecture). ISCC PLUS is one of the International Sustainability and Carbon Certification schemes for sustainable products.

The two plants that received certification can now handle certified raw materials in compliance with the mass balance approach.*4 Looking ahead, Toyo Tire will continue systematically increasing its use of sustainable raw materials including those that are certified.

*3 Estimated by the weight of sustainable raw materials included in products.

*4 An accounting method used when products contain a mixture of raw materials with differing characteristics. It enables a certain percentage of any manufactured products to be assigned a characteristic (e.g., certification as recycled) according to the input volume of raw materials with that characteristic.

## Efforts to reduce TRWP*5

Tire and road wear particles (TRWP) are dust produced by friction between the tire and the road surface that is a mixture of tire tread and road paving materials. Since the dust is discharged into the atmosphere, tire manufacturers view the need to reduce TRWP as a key issue. Any wear on tires does impact safety, comfort and fuel efficiency, so we are always striving to improve wear resistance through materials development and improved tread design. For example, we successfully improved wear resistance by designing an optimal compound polymer nanocomposite (rubber with highly uniform carbon black dispersion). This was achieved through advanced nanofabrication using Nano Balance Technology, our fundamental material design technology.

We also actively participate in industry groups, the Tire Industry Project (TIP)*6 and JATMA, to conduct research and study ways to mitigate the impact of TRWP since there are still many things about TRWP that have yet to be determined. We will continue to contribute to the industry's efforts in this area, while also using any knowledge we acquire though these industry-wide activities to improve our own initiatives on reducing TRWP.

In addition, TRWP contains 6PPD*7, a widely used anti-degradant in the global tire industry. Studies in the U.S. have highlighted that 6PPD-quinone, which can form when 6PPD reacts with oxygen or ozone, is toxic to some fish species. As a member of the tire industry, we are actively engaged in wide-ranging research and testing various alternatives.

*5 Tire and Road Wear Particles

*6 One of the sector projects of the World Business Council for Sustainable Development (WBCSD)

*7 N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine, an anti-degradant additive used to prevent the tire surface from cracking and degradation

## Intellectual property

We pursue technological innovation and product development designed to realize an environmentally friendly society and an era of safe mobility. However, we believe that the new technologies and products we create through these initiatives only truly acquire social value when they are delivered into the hands of our customers and put to use. We acquire the intellectual property rights that underpin the technical support required to enable the safe use of the products that result from our research and development into recycled raw materials, renewable raw materials, fuel-efficient rubber compounds and other areas. We believe that these ongoing intellectual property initiatives will help create value for the future era of mobility, and also secure our own presence in that arena.

TOPIC

### Developing concept tires made from 91% sustainable raw materials


We have developed a tire made of 91% sustainable materials, the highest sustainable raw material content in the industry (source: Toyo Tire Corporation), and exhibited it at the Tokyo Auto Salon 2025. The product contains 62% renewable raw materials and 29% recycled raw materials. The prototype is an Open Country R/T produced to the road-ready strength and quality specifications to demonstrate that off-road tires can be sustainably produced. Going forward, we will continue to perfect this tire's technological innovation and press for early commercialization as a product that can help realize an era of sustainable mobility.

Domain III

# Risk management

## 5 Pursue decarbonization in all corporate activities

- Responding to climate change risks and opportunities (TCFD)
- Reducing greenhouse gas emissions (GHG)

### Our policy

The impact of climate change is becoming increasingly severe and society's demands regarding mobility are increasing all the time. The mobility business lies at the very heart of the Toyo Tire Group operation and, as such, we recognize that addressing climate change is the most important issue, and one which has the power to greatly influence our growth. For that reason, we are committed to reducing greenhouse gas (GHG) emissions and expanding the use of clean energy in order to achieve the long-term goals set forth in the Paris Agreement. We also support the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and strive to disclose information based on the TCFD framework in order to stimulate dialogue, engage stakeholders and promote climate change initiatives.

### Organizational responsibilities (April 2025)

The Toyo Tire Sustainability Committee is chaired by the president and meets four times a year. The committee reports, deliberates and makes decisions on how to respond to climate-related and other sustainability issues, and what progress is being made. The Decarbonization Task Force, which sits under the Sustainability Committee, discusses climate-related activity plans, targets and KPIs, and the Sustainability Committee regularly confirms and monitors the status of those activities. Any climate-related matters that have been debated and approved in the Sustainability Committee are then reported to or debated in the Executive Committee and reflected in the formulation or review of our annual and medium-term business plans. The developments are reported to the Board of Directors in a timely and appropriate fashion.


## Decarbonization

### Responding to climate change risks and opportunities (TCFD)

We conducted scenario analysis to ascertain the impact of climate change on the Group's business activities.

**Scenario analysis process**

1. Select scenarios, understandthe outlook of each one
2. Investigate risks and opportunities
3. Assess the significance of each risk and opportunity
4. Calculate financial impact and explore countermeasures

## 1 Select scenarios to use and understand the outlook of each scenario

We selected baseline (rise of 3-4℃) and transition (rise of 1.5℃) scenarios with the following outlooks.

| Baseline scenario | Transition scenario |
|---|---|
| <Scenario outlook><br>● No new political policies or stronger regulations other than what is currently envisioned<br>● GHG emissions increase in some areas following economic growth<br>● Extreme heat, heavy rainfall and other natural disasters intensify as temperatures rise | <Scenario outlook><br>● New policies and stronger regulations are enacted to curb climate change<br>● Global GHG emissions decline to net zero by 2050<br>● Climate change causes sea level rises and changes in weather patterns, but they remain below those in the baseline scenario |
| <Main scenarios referenced><br>● IEA Stated Policies Scenario (STEPS)<br>● IPCC SSP5-8.5 | <Main scenarios referenced><br>● IEA Sustainable Development Scenario (SDS)<br>● IEA Net Zero Emission Scenario by 2050 case (NZE)<br>● IPCC SSP1-2.6 |

## 2 Investigate risks and opportunities

## 3 Assess the significance of risks and opportunities, identify those of high significance and establish measures against risks

We identified climate-related risks and opportunities for each scenario and evaluated the significance of risks and opportunities based on the probability of certain events occurring that could prove to be pertinent factors in each risk and opportunity and the degree of impact on the expected costs and other factors in our business. We also established measures against risks of high significance.

### Highly significant risks

| Scenario | Type | Climate-related events | Impact on business | Main financial impact | Measures against risks |
|---|---|---|---|---|---|
| Baseline | Chronic | Changes in climate patterns | ● Migration of natural rubber tree crop zone, decline in quality<br>● Energy supply system instability<br>● Increase demand for fossil fuel | ● Increased raw material prices (natural rubber) | (i) |
| | | | | ● Increased R&D costs (alternative raw materials) | (ii) |
| | | | | ● Decreased sales (decreased tire production)<br>● Increased transport costs | (iii) |
| | | Temperature rises | ● Deterioration of roads<br>● Reduced areas of snowfall | ● Increased R&D costs (heat resistance) | (ii) |
| | | | | ● Decreased sales (decreased winter tire production) | (iv) |
| | | Sea level rises | ● Reduced natural rubber harvests<br>● Compromised ports and warehouses | ● Increased raw material prices (natural rubber) | (i) |
| | | | | ● Decreased sales (decreased tire production, stopped production)<br>● Inventory/product damage (flood damage) | (iii) |
| | Acute | Increase in extreme whether<br>Frequent and Severe heavy rainfall and tropical cyclones | ● Compromised infrastructure networks<br>● Transport network disruption, loss of commuting options<br>● Flooding of natural rubber plantations<br>● Marine transport delays, accidents | ● Decreased sales (business slowdown, production plan revision)<br>● Increased raw material prices (natural rubber)<br>● Increased transport costs<br>● Inventory/product damage | (v) |
| Transition | Policy | Introduction of carbon pricing | ● Increased service prices as costs are passed on<br>● Introduction of carbon border tax<br>● Introduction of environmental taxes to auto-related exports | ● Increased transport costs | (iii) |
| | | | | ● Increased costs of R&D and equipment investment (shift to low-carbon products) | (ii) |
| | | | | ● Worsened profits (tariffs)<br>● Increased costs for purchasing carbon credits | (vi) |
| | Market/ Reputation | Increase raw material costs | ● Fewer rubber plantations due to poor profitability | ● Increased raw material prices due to decreased natural rubber production | (i) |

### Measures against risks

| | |
|---|---|
| (i) | Develop technologies that reduce tire weight to minimize raw material usage (Material issue 1, 2) |
| (ii) | Develop high efficiency, high precision tires using NANO BALANCE TECHNOLOGY and T-MODE to reduce R&D costs (Material issue 1, 2) |
| (iii) | Strengthen supply capacity at production bases in Europe and the United States to create an agile and optimized global supply system and lessen the impact of reduced production and rapidly rising distribution costs (Medium-Term '21 Plan Growth Strategy: Production and Supply) |
| (iv) | Expand entry into next-generation vehicle tire market (Material issue 5: Climate change-related (TCFD) opportunities) |
| (v) | Minimize damage and loss and restore operations promptly using business continuity plans (Enterprise risk management) |
| (vi) | Promote GHG emission reduction throughout the supply chain as part of obtaining SBTi certification (Material issue 5) |

### Highly significant opportunities

| Scenario | Type | Climate-related events | Impact on business | Main financial impact |
|---|---|---|---|---|
| Baseline | Chronic | Changes in climate patterns<br>Increase in extreme weather | ● Increased competitiveness through development of differentiated products (high durability, wet performance, etc.) | ● Increased sales (Increased sales volume) |
| Transition | Market | Greater eco-conscious behavior by stakeholders | ● Acquisition of new business partners through focus on the environment<br>● Increased added value of eco-conscious products and greater demand | ● Increased sales (Expanding business partners, improving added value, and products for next-generation vehicles) |
| | Products/ services | Growth of next-generation vehicles | ● Greater demand for products for next-generation vehicles<br>● Faster development and sales | |
| | Energy | Skyrocketing fossil fuel | ● Expansion of next-generation vehicle market | |

## 4 We calculated the financial impact of any risks that are expected to have a significant impact over the medium to long term, and examined possible countermeasures.

### 1. Impact of changing climate patterns on the procurement of natural rubber [risk]

| Climate-related events/ financial impact on business | Impact amount/ impact timing | Calculation method | Countermeasures |
|---|---|---|---|
| **Changes in climate patterns**<br>Changing climate patterns will generate changes in the areas in which natural rubber plants can grow, a deterioration in quality and other issues, all of which could increase the cost of natural rubber procurement | Approx. 0.7 to 9.7 billion yen (Medium-term: 2030) | (Minimum)<br>Volume of natural rubber procurement × Increase in natural rubber prices<br>● The estimated volume of natural rubber procurement for 2030 is calculated on past trends<br>● The increase in natural rubber prices is calculated by averaging out the price increase in past months of high flooding across the whole year<br>(Maximum)<br>Increase in natural rubber procurement cost × Percentage increase in natural rubber procurement volume<br>● The increase in natural rubber procurement cost is set at the same level as the increase in procurement cost in years when large-scale flooding occurred<br>● The percentage increase in natural rubber procurement volume is the estimated percentage increase in procurement volume between the year when large-scale flooding occurred through to the year 2030 | ● Reduce the amount of natural rubber used in each tire by seeking to reduce tire weight while also paying due attention to reducing rolling resistance<br>● Continue efforts to increase the usage of sustainable raw materials and reduce consumption of natural rubber by gradually introducing products made from recycled raw materials such as recycled rubber from used tires<br>● Achieve stable natural rubber procurement by encouraging the entire supply chain to build solutions to issues faced by natural rubber production sites (deforestation, infringement of local residents' rights) |

### 2. Impact of carbon pricing mechanism(risk)

| Climate-related events/ financial impact on business | Impact amount/ impact timing | Calculation method | Countermeasures |
|---|---|---|---|
| Introduction of carbon pricing<br>Introducing carbon pricing will boost the cost of $CO_2$ emissions. | Approx. 0.5 billion yen (Medium-term: 2030) | Shortfall in $CO_2$ reduction target × Carbon tax<br>● The shortfall in $CO_2$ reduction targets is the volume outstanding supposing the Company's targeted $CO_2$ volume reduction in 2030 is lower than expected by 10%<br>● The carbon tax is the 2030 carbon tax for developed countries designed to help achieve the 2050 net zero emissions target announced by the IEA<br>● The percentage increase in natural rubber procurement volume is the estimated percentage increase in procurement volume between the year when large-scale flooding occurred through to the year 2030 | ● The Toyo Tire Group will continue to reduce $CO_2$ emissions through efficient energy use in our products and business activities inside and outside the organization<br>● Help reduce $CO_2$ emissions by promoting the procurement of renewable energy at production sites using internal carbon pricing (ICP), as well as fuel conversion and equipment upgrades |
| | Approx. 5.7 billion yen (Medium-term: 2030) | *$CO_2$ emissions × Carbon tax*<br>● *$CO_2$ emissions are the company's target for $CO_2$ emissions in 2030*<br>● *The carbon tax is the 2030 carbon tax for developed countries designed to help achieve the 2050 net zero emissions target announced by the IEA* | |

## Climate-related metrics

・Greenhouse gas (GHG) emissions (Scope 1, 2, 3)
→2019-2024 results

・GHG emissions intensity
→2019-2024 results

## Climate-related targets

●GHG emissions reduction targets

Decided by the Sustainability Committee in November 2021 and approved by the Executive Committee in December 2021. Announced on February 15, 2022

| | |
|---|---|
| Scope1, Scope2 | GHG emissions: Reduce GHG emission by 46% by 2030 compared to 2019 and aim to achieve carbon neutrality by 2050. |
| Scope3 | GHG emission per unit: Aim to help reduce GHG emissions per tire in 2030 by 20% compared to 2019. |

One of our milestones is to aim to reduce Scope 1 and Scope 2 GHG emissions by 25% by 2025 compared to fiscal 2019

## Reducing greenhouse gas (GHG) emissions

Greenhouse gas emissions are seen as a major cause of climate change so the Toyo Tire Group is working to reduce GHG emissions through its products and business activities inside and outside the organization.

### Scope 1, Scope2 initiatives

While energy consumption inevitably increases with production volume, we are striving to address Scope 1 and Scope 2 emissions with initiatives such as the following.

- Reinforcing heat insulation of steam pipes to reduce loss of heat through dissipation
- Applying radiative cooling paint to building roofs and exteriors to prevent heat penetration and reduce cooling load
- Upgrading equipment to highly efficient energy-saving models to increase energy efficiency.
- Reusing flash steam in steam drains to effectively use waste heat
- Converting forklift trucks to electric power. In 2024, 13 units were converted, achieving an annualized $CO_2$ emissions reduction of approximately 400 tons
- Converting boilers to gas fuel with fewer GHG emissions. This has been done at all bases in Japan, except where extensive gas infrastructure still needs to be built

### Scope 3 initiatives

The Toyo Tire Group aims to contribute to a 20% reduction in Scope 3 GHG emissions per tire by 2030 compared to 2019. A calculation of GHG emissions throughout the Group's value chain based on the Japan Automobile Tyre Manufacturers Association's (JATMA) Tyre LCC$O_2$ Calculation Guidelines Ver. 3.0.1 revealed that emissions from the Category 11 product use phase account for at least 80% of overall GHG emitted. According to the guidelines, fuel-efficient tires can reduce $CO_2$ emissions during use (during vehicle driving) by 95.4 kg $CO_2$e per tire for passenger car radial (PCR) and 879.0 kg $CO_2$e per tire for truck and bus radial (TBR) compared to standard tires. Our technical division is working to develop technologies to enhance fuel efficiency of tires by reducing their rolling resistance and weight. Over the medium to long term, the Group is planning to enlist the help of the Product Planning Division in upgrading fuel efficiency performance each time we change a tire model. As of 2024, emissions from PCR have been reduced by 2.2% compared to 2019, which is a reduction of 140 thousand tons-$CO_2$e.

### Increasing use of clean energy

From the second half of 2022, the Toyo Tire Group began switching electricity purchased primarily at production sites to power derived from renewable sources. We will systematically promote efforts to achieve a global 90% renewable energy usage ratio by 2030. That ratio stood at 85.5% on a purchased electricity basis at the end of 2024 (on a purchased electricity basis).

We are also actively introducing photovoltaic (PV) power generation systems for in-house use. At our tire plant in Malaysia, in 2024 we expanded the PV power generation system that went into operation at the end of 2023. The rooftop system is now in full operation with a generation capacity of 15.8 MW (up from 14.0 MW at the end of 2023). It is expected to generate 21,000 MWh and reduce $CO_2$ emissions by approximately 13,000 tons per year.

### Energy Consumption

Energy consumption(thousand GJ)

| | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|
| Total energy consumption | 6,992.9 | 7,370.8 | 7,686.9 | 7,328.5 |
| Consumption of fuel from non-renewable energy | 4,735.7 | 5,130.8 | 5,302.7 | 5,133.2 |
| Purchased electricity consumption | 1,944.2 | 1,923.5 | 2,027.6 | 1,853.7 |
| Consumption of purchased electricity from renewable energy sources, consumption equivalent to procurement of non-fossil certificates | 0.0 | 114.2 | 1,442.5 | 1,584.2 |
| Percentage of purchased electricity with a renewable energy certificate | 0.0% | 5.9% | 71.1% | 85.5% |
| Consumption of fuel from renewable energy sources (photovoltaics) | 0.80 | 0.73 | 41.08 | 112.5 |
| Purchased steam consumption | 312.2 | 315.8 | 315.4 | 229.1 |

### Total energy consumption

GHG emissions (Thousand t-$CO_2e$)

| | | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| Total direct (Scope 1) GHG emissions ($CO_2$ emission derived from energy) | | 296.3 | 263.8 | 268.2 | 265.3 | 274.5 | 265.1 |
| Total direct (Scope 1) GHG emissions | | — | — | — | — | — | 3.6 |
| Total indirect (Scope 2) GHG emissions (Location based) | | 294.6 | 271.6 | 284.4 | 253.6 | 280.5 | 244.6 |
| Total indirect (Scope 2) GHG emissions (Market based) | | — | — | — | — | 105.8 | 55.2 |
| Total other indirect (Scope 3) GHG emissions | | — | — | — | — | — | 14,785.5 |
| | Category 1 | — | — | — | — | — | 2,325.0 |
| | Category 2 | — | — | — | — | — | 81.7 |
| | Category 3 | — | — | — | — | — | 106.4 |
| | Category 4 | — | — | — | — | — | 140.1 |
| | Category 5 | — | — | — | — | — | 11.1 |
| | Category 6 | — | — | — | — | — | 1.6 |
| | Category 7 | — | — | — | — | — | 5.4 |
| | Category 10 | — | — | — | — | — | 4.0 |
| | Category 11 | — | — | — | — | — | 11,879.0 |
| | Category 12 | — | — | — | — | — | 227.7 |
| | Category 15 | — | — | — | — | — | 2.5 |

### SBTi* initiatives

Toyo Tire Corporation received SBT certification from the Science Based Targets Initiative (SBTi) for its GHG emissions reduction targets set for 2030, which are based on scientific evidence to limit global warming to within 1.5°C in November 2024.

| Classification | Target |
|---|---|
| •Scope 1, Scope 2 | 46.20% reduction in total emissions by 2030 (compared to 2019) |
| •Scope 3 Category 1 | Science-based targets to be set by suppliers accounting for 89.00% of emissions connected to purchased goods and services by 2029. |

*SBTi: The Science Based Targets Initiative is designed to achieve a goal of limiting any rise in average global temperatures to 1.5°C.

## 6 Promote supply chain sustainability

- Procuring sustainable natural rubber
- Implementing supplier management, Responding to conflict minerals risks,
- Promoting efficient logistics

### Our policy

The Toyo Tire Group has established the Toyo Tire Group Basic Purchasing Policies and seeks to secure appropriate product quality and price through fair transactions.

We also formulated the Toyo Tire Group CSR Procurement Guidelines and the Sustainable Natural Rubber Procurement Policy. We work with our suppliers to further promote sustainable procurement that aims to mitigate, prevent and minimize the negative impact of our corporate activities on the environment and society and to improve our corporate value and competitiveness.

We also support sustainable logistics by improving the productivity and efficiency of truck transportation and ensuring safe cargo handling operations.

### Organizational responsibilities (April 2025)

We established the Supply Chain Task Force under the jurisdiction of the Sustainability Committee to discuss activity themes, targets and KPIs in relation to ESG issues in the supply chain. The Sustainability Committee regularly confirms and monitors the status of these activities.


# Supply chain

### Procuring sustainable natural rubber

The securing of a stable natural rubber supply into the future is an important management issue for a business group like ours that uses natural rubber as the main raw material. The natural rubber industry is facing issues relating to deforestation at production sites and the infringement of local residents' rights. We recognize the importance of striving to solve these problems across the entire supply chain from production through consumption.

#### International cooperation for building a sustainable supply chain

Toyo Tire Corporation is a member of the Global Platform for Sustainable Natural Rubber (GPSNR)* launched in 2018 under the leadership of the Tire Industry Project (TIP), which is part of the World Business Council for Sustainable Development (WBCSD). As a member, we participate in discussions designed to solve relevant issues. We are working to prevent deforestation, conserve biodiversity and water resources, uphold human rights and support local communities, improve the productivity of natural rubber and make our supply chain more transparent. We also exchange information with the civil society sector, which includes NGOs and other groupings that have specialized knowledge of environmental and social issues at natural rubber production sites.

Our aim going forward is to continue to cooperate with international initiatives and stakeholders and to build a sustainable natural rubber supply chain across our whole value chain.

GPSNR
Global Platform for Sustainable Natural Rubber

* A platform that seeks to transcend industrial boundaries and ensure that the production and use of the world's natural rubber is carried out in a way that is more conscious of the natural environment and social issues.

### Promoting sustainable procurement

Following the guidance provided by GPSNR encouraging tire manufacturers to incorporate the platform's Principles of Sustainable Natural Rubber into their business activities, we conducted a thorough review of the items related to natural rubber procurement that were determined as part of our CSR Procurement Guidelines. Then, from 2021, we strengthened our system based on the separate Sustainable Natural Rubber Procurement Policy. That policy is designed to improve the effectiveness of initiatives relating to healthy ecosystems, human rights, communities and other issues based on input from environmental NGOs. Currently, in addition to conveying this policy to suppliers and asking for their cooperation, we are promoting activities that ensure traceability and protect the environment in accordance with the medium- to long-term action plan stipulated by our Supply Chain Task Force. Of those activities, we have made steady progress in preparing for the enforcement of the EU Deforestation Regulation (EUDR), which covers natural rubber, and as of the end of 2024 we have identified harvest areas that account for approximately 40% of our total procurement volume. In addition, since 2023 we have been making annual donations to an international environmental organization to help protect forests. We have also set up a dedicated contact point specifically for the natural rubber supply chain. We received no reports in 2024.

## Supplier management

### Using guidelines to engage suppliers

We request that all of our suppliers pursue activities in accordance with the Toyo Tire Group CSR Procurement Guidelines to help address environmental and social issues across our entire supply chain. We also request their cooperation in conveying the purpose of these guidelines further up the supply chain.

To ensure the fair and objective assessment of supply chain risks, we formed a contract with EcoVadis, a third-party organization that conducts CSR assessments in 2022, and since then have been commissioning sustainability assessments of our suppliers' environmental and social initiatives, including those on decarbonization, water management, human rights, safety and anti-corruption. By the end of 2025, we aim to have fully audited suppliers accounting for 95% or more of the total transaction value of our tire-related raw materials. At the end of 2024, we finished evaluating suppliers that account for over 90% of that total transaction value, including natural rubber suppliers. For evaluation scores, we have set a benchmark of 45 points and plan to urge suppliers who score below this level to undergo annual assessments and attend seminars. For suppliers that score below 45 points for three or more years in a row, or that have yet to undergo score assessment, we are considering internally re-examining the business partnership.

With regard to our decarbonization initiatives, we have been conducting a proprietary survey of existing suppliers since 2021, and are tackling related issues to help reduce the environmental impact of our supply chain. To improve risk management, in 2025 we also expanded our previously-implemented sanctions list and legal risk checks to cover all suppliers, so that they are now in full operation.

Moving forward, we will use these methods to conduct combined evaluations as we continue promoting supplier engagement, working together to tackle supply chain issues.

### Fair and transparent transactions

We declared our commitment to free competition and fair trading in each market in the Toyo Tire Group Code of Conduct. We conduct our activities in compliance with antimonopoly and subcontracting law, pursue fair procurement activities, comply with import and export-related laws and regulations, and ensure appropriate labeling and product explanations.

For instance, the Group seeks to ensure business activities are based on fair and free competition by establishing purchasing regulations that stipulate the thorough implementation of fair and non-discriminatory business dealings and prohibit the development of personal interests with suppliers. At Toyo Tire Corporation, we have established anti-cartel regulations to prevent cartels and bid-rigging activities. In addition, we continuously perform self-inspections regarding compliance with subcontracting law and implement e-learning programs on the law.

## Responding to conflict minerals risks

### Conflict minerals response

In Europe and the United States, manufacturers are legally obliged to conduct due diligence when purchasing conflict minerals (tin, tantalum, tungsten and gold) and cobalt mined in conflict and high risk areas in light of the fact that the money from such purchases may be used to fund local armed groups and promote corrupt practices, such as human rights infringements, bribery and money laundering. When procuring minerals and raw materials mined and manufactured in such areas, the Group's policy is to ensure those materials are not linked to human rights violations, environmental destruction, conflict, or corruption, and we enlist the cooperation of suppliers to trace back to the smelters and confirm that the raw materials purchased by the Group are not linked to any such inhumane acts. We would request remediation through our suppliers if any such concerns were to emerge.

## Efficient logistics

As the shortage of truck drivers grows ever more serious in Japan, the Ministry of Land, Infrastructure, Transport and Tourism is developing initiatives to improve the productivity and efficiency of truck transportation and create more comfortable working environments.

To promote efficient logistics, Toyo Tire Corporation is instigating a modal shift to ships, national railways and large trailers for the long-distance transportation of goods in Japan dispatched from our factories. We have already shifted over 50% of transportation to these new modes, and we aim to reduce long-distance truck transportation to roughly half of 2019 levels by 2033. Furthermore, ensuring safer and more efficient cargo handling operations will not only reduce the burden on drivers, but will also fuel economic growth and create higher levels of job satisfaction.

**Specific initiatives**

- Promoted a modal shift in long-distance truck transportation, where the burden on drivers is high
  1) Introduced and expanded coastal container transportation from the Kuwana Logistics Center
  2) Introduced and expanded JR large container transportation from the Sendai and Kuwana Logistics Centers
- Installed safety fences in warehouses at our Sendai and Kuwana Logistics Centers following a risk assessment (to prevent tire racks from toppling or items from falling in the event of an earthquake)
- Installed monitoring cameras at logistics centers in each plant and distribution centers in Japan to ensure safe operation; installed monitoring cameras to ensure safe forklift operation
- Improved the efficiency of truck cargo handling; visualized and reduced stand-by times

TOPIC

### Joint winner of the Low Carbon Logistics Promotion Award in the Logistics Environment Awards

Our modal shift in tire shipping within Japan, conducted in partnership with three logistics providers, won the Low Carbon Logistics Promotion Award*1 at the 26th Logistics Environment Awards. Our company was also awarded the Maritime Modal Shift Grand Prize *2 as a 2024 Eco-Ship Mark-certified business.

This modal shift involved switching part of our tire shipments from overland trucking between the Kuwana Plant (Mie Prefecture) and Hiroshima Prefecture to coastal shipping between the Port of Yokkaichi and the Port of Hiroshima. This shift reduced $CO_2$ emissions on the route by 56%.*3 As the containers used for these shipments had previously been returned empty from the Port of Yokkaichi to the Port of Hiroshima, this move also further increases transport efficiency and reduces costs. The Kuwana Plant's export conveyor is now also used for loading containers, halving the workload of truck drivers in handling cargo. Furthermore, proper inventory management conducted in warehouses around the plant and in Hiroshima Prefecture minimizes the risk of delays during sea transportation due to weather and other factors. We will continue pursuing modal shifts in efforts to reduce environmental impact and solve logistics infrastructure issues.

*1 An award presented by the Japan Association for Logistics and Transport to organizations, companies or individuals contributing to the sound development of logistics through initiatives such as promoting modal shifts, consolidating transport networks, and creating joint distribution systems that reduce greenhouse gas emissions, in order to promote environmental protection and elevate environmental awareness in the logistics sector.
*2 Under the Eco-Ship Modal Shift Business Execution Committee's Eco-Ship Mark certification system, shippers and logistics suppliers that contribute to improving transportation efficiency and reducing environmental impact by shifting to sea transport are selected as Excellent Businesses, and particularly distinguished businesses are awarded with this prize.
*3 Percentage of $CO_2$ emissions reduced compared to transporting the same quantity of goods by truck.

# 7 Ensure the fundamentals of manufacturing: quality and safety

- Improving quality and increasing customer satisfaction
- Promoting improved awareness of tire safety

### Our policy

Our principle for manufacturing is to provide high-quality and safe products and services that are useful to society, and we state our basic policy for product quality and code of conduct in the Toyo Tire Group Global Product Safety Policy.
The policy clearly states that product safety and global environmental protection must be taken into consideration throughout the value chain, from the product planning, development and design stages to production, sales, use and after-use.
We operate a quality management system based on IATF 16949 (or ISO 9001 at some production sites) predominantly at our production bases, and take measures against risk.

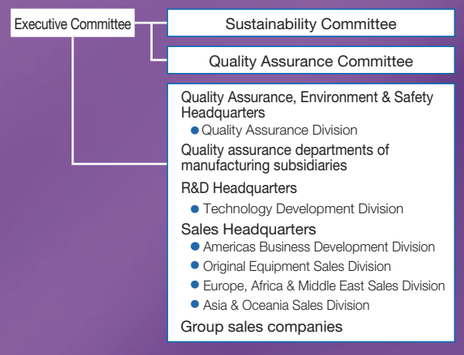
—ISO 9001 certification (as of the end of May 2025)
Production bases: 13 sites (3 Toyo Tire Corporation sites*, 10 affiliated company sites)
Sales bases (affiliated companies): 1 site

* The Kuwana Plant has independently acquired certification at two sites: its tire production plant and automobile parts plant.

—IATF 16949 certification (as of the end of March 2025)
Production bases: 9 sites (3 Toyo Tire Corporation sites, 6 affiliated company sites)

### Organizational responsibilities (April 2025)

Quality Assurance, Environment & Safety Headquarters is responsible for promoting initiatives in this area, and reports progress to the Sustainability Committee.




## Quality

### Improving product quality

#### Meeting the quality standards of each country


PERRY JOHNSON LABORATORY ACCREDITATION, INC.
Certificate of Accreditation
Toyo Tire Corporation
Technology Development Division Tire Testing Department
ISO/IEC 17025: 2017

In the face of factors such as greater climate change risks, many countries are rapidly introducing new regulations related to the environmental performance and quality of vehicles to promote higher fuel efficiency and reduce the $CO_2$ emissions. We are working to strengthen our response to quality standards throughout the Group to ensure we comply with the increasingly complex quality-related regulations in each country. Our tire and automotive parts businesses each hold annual Global Quality Management Committee (Global QMC) meetings, bringing together quality assurance managers and relevant representatives from manufacturing bases worldwide to share and discuss each site's initiatives related to product quality, improvement of quality assurance systems for production, and quality-related demand of our business partners. In addition, at the four tire testing and evaluation sites in Japan, we test our tires in compliance with ISO/IEC 17025 (general requirements for the competence of testing and calibration laboratories) since our initial certification in 2013, and have been working to improve test accuracy and reliability to continue conducting tests in accordance with standard requirements.

Participants in the global quality assurance conference
(Top left: Tire business, Top right: Automotive parts business)

Conference scene (Bottom: Automotive parts business)

**Example Efforts to Meet Quality Standards**
- Collecting information locally
- Making recommendations by participating in industry groups
- Exchanging opinions with regulatory institutions
- Sharing information on the latest legal and regulatory trends
- Giving presentations on legal and regulatory matters

### Increasing customer satisfaction

#### Improving quality and customer satisfaction

As a manufacturer, we understand that our products and services link us to both our customers and society, and we are working to improve quality throughout the entire value chain. Our production bases are constantly searching for ways to maintain and improve product quality while our technical service departments continuously investigate product satisfaction levels in the market and relay customer requests as feedback to our planning, design and production departments. Our Customer Relations Department analyzes the opinions and inquiries received from customers on a day-to-day basis and makes recommendations to the relevant departments in order to improve our products and services. Other workplaces also strive to provide services and improve the quality of our operations from a customer perspective. Such activities reflect the spirit of our Company Philosophy of continuously improving our products and creating value for everyone who we work with.

For more than 50 years, the Group has continuously held quality control (QC) circle activities to proactively raise quality control standards using employee insight from the frontlines. QC circle activities began at production sites and have now spread to sales divisions, with about 300 circles currently running within the Group. In each circle, members pool their experience and knowledge in order to solve problems, and work to improve quality by grasping the current conditions, setting goals, developing action plans, and analyzing issues. Each year, we run a Toyo Tire QC Circle Convention, at which circle representatives from Japan and overseas come together to learn from each other by giving presentations on not only quality improvement initiatives but also their day-to-day efforts to eliminate workplace waste and loss. Moving forward, we will continue supporting QC circle activities to further improve worksite autonomy and customer satisfaction.

### Visualizing manufacturing quality using manufacturing execution systems (MES)

The Toyo Tire Group aims to build a quality assurance system that can predict and prevent issues from occurring in the manufacturing process. We have introduced automatic measuring instruments into the tire manufacturing process, and are launching a system that digitally collects and visualizes quality- and production-related information from production equipment. This will ensure quality in each manufacturing process, and make it possible to analyze and monitor collected data to detect changes in process trends. We started by launching this manufacturing execution system (MES) at our Serbia Factory in 2024. We plan to expand its implementation to quality domains and analyze the results to introduce MES at other production bases.We are also working to foster data-centric talent and corporate culture.

### Tire safety awareness activities

We believe that one of our most important duties is to help drivers learn how to use tires appropriately. Since 2019, we have offered a workshop where drivers can use our proprietary driving simulator to experience the impact of a tire burst, the difference between worn and new tires when braking on wet roads, and maneuverability under different tire pressures.

In 2024, we worked with Itami City, where we are headquartered, as well as the Japan Automobile Federation (JAF) and nearby police departments to provide this experience to 3,513 people at 72 shopping centers, partner retail outlets and other locations around Japan. We confirmed the effectiveness of the workshop with 97% of post-workshop questionnaire respondents indicating that their awareness of tire safety has increased.


A participant using the driving simulator