Value Creation Process

— Our Mission —
To create excitement and surprise with our products that exceed customer expectations and enriches society.

Inputs (FY2024)

Financial capital
- Total assets: 722,666 M yen

Manufactured capital
Production processes that accurately capture and optimally respond to changing market needs and demand-supply conditions
- Capital expenditure: 25,589M yen
- Number of production sites: 13
  (Japan: 5, International: 8)

Intellectual capital
A technological base that encourages differentiation through a combination of basic performance and design features
- R&D expenditure: 13,587M yen

Human capital
Diverse human resources that can generate added value
- Number of consolidated employees: 11,202
  (In Japan 5,566; Outside Japan 5,636)

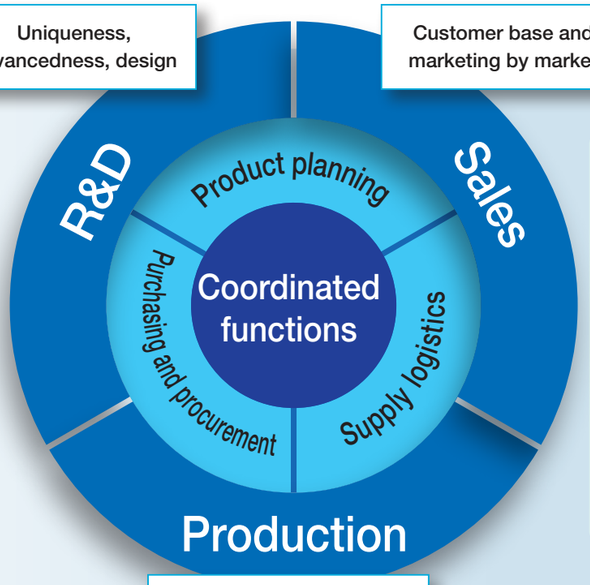
Social and relationship capital
Partnerships for value creation
- Consolidated subsidiaries: 34 firms in 14 countries
- Firm customer base (distributors) and unique marketing activities
- Universities and other external research organizations

Natural capital
- Total energy consumption: 7,328.5 thousand GJ
- Total volume of raw materials: 547.0 thousand t
- Total water discharges: 3,166.0 thousand kl

Business processes

Uniqueness, advancedness, design

Customer base and marketing by market



Materiality

Global production framework / supply chain

Creating Management Foundation to Support Sustainable Growth
- Human resource base
- Financial base
- Digital transformation platform

Sustainability Policy

Enterprise risk management

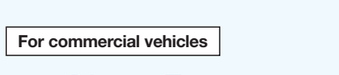
Corporate governance

Our philosophy

Outputs

Unique products and services
Embodying manufacturing that contributes to social sustainability and products that bring joy to the people who use them

OPEN COUNTRY



PROXES

For commercial vehicles

NANOENERGY

R&D	Expanding the use of sustainable raw materials
Human talent	Creating environments that enable diverse talent to work with enthusiasm and to their full potential
Decarbonization	Acquisition of SBT certification of GHG targets and reducing emissions
Supply chain	Conduct risk assessment for primary suppliers
Quality	Visualizing manufacturing quality Promoting improved awareness of tire safety

Outcomes

2024 Results

Consolidated operating income	94.0B yen
Consolidated operating income margin	16.6%
ROE	17%
Shareholder returns Dividend payout ratio	25%

Safety, peace of mind, and comfort
- Inbuilt safety performance that adapts to social and mobility changes

The ultimate enjoyment, excitement, and surprise of driving
- Satisfied with the quality of life that mobility brings, the ultimate joy of connecting society through mobility

Mobility with reduced impact on the environment
- Contribution to a carbon-neutral society by consider the whole life cycle of products when planning and developing them

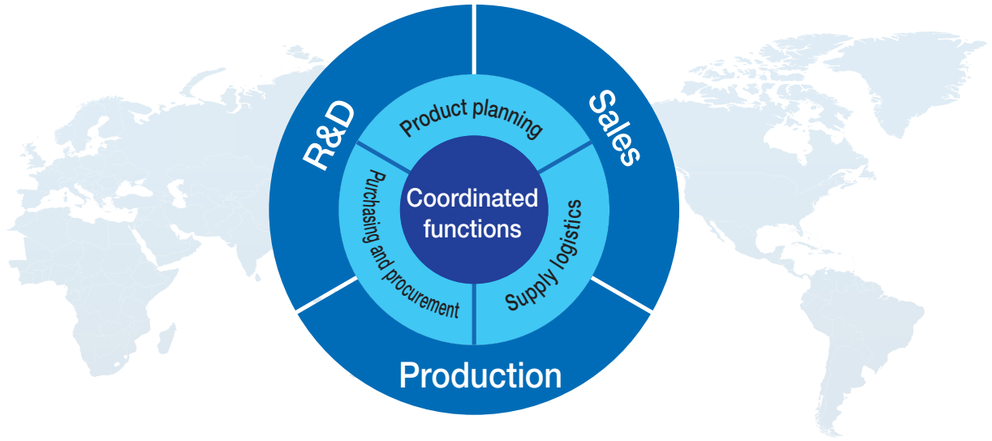
2024 Results

Ratio of sustainable raw materials per products	28%
Reducing emissions Scope1, Scope2	Reduce 46% compared to 2019
Reducing emissions Scope3	Contribute to 1.6% reduction per tire against 2019

Our Vision
(The vision of how we want our Company to be in order to keep our promise to society (=our mission))

High-quality business management through the strengthening of collaboration in functional organizations

In 2017, Toyo Tire Corporation reformed the individual business-based organization that had been in place since its founding and shifted to a flat, function-based organizational structure. Then, in 2018, we decisively transformed ourselves into a management structure that positioned the mobility-related fields of automotive tires and automotive parts at the core of our business. This helped establish a solid foundation for promoting high-quality business management by coordinating all production, sales, R&D and corporate functions. Some negative factors were pointed out regarding the function-based organizational structure, such as the possibility of unclear responsibilities and lack of comprehensive perspective. However, we set ourselves the task in the Medium-Term ’21 Plan to bolster our ability to promptly and flexibly respond to changes through global collaboration, and have worked to promote business based on management that offsets any negative factors and fully capitalizes on the positive elements of a function-based organizational structure.



Product Strategy

Product planning that facilitates differentiation

We plan new and updated products based on individual regional growth strategies and the annual rolling over of a medium-term product plan that runs on a five-year cycle. When executing the plan, the product planning function conducts proactive market research together with the technical services and sales functions, plans and formulates new product direction by heeding information acquired from industry participants at various car events and other gatherings, and conceptualizes and creates products after showing the ideas to dealers and holding repeated discussions. This proposal-based style helps drive the creation of highly differentiated products. The product planning function propels this differentiation strategy by embracing both the R&D function’s focus on next-generation mobility trends and the sales function’s focus on market trends and championing the company’s commitment to creating and realizing plans that make mobility more fun and interesting.

In particular, when planning products for our major North American market, local sales subsidiaries gain an attentive grasp of user trends through customer workshops and other means, which they swiftly share with relevant departments in Japan and the U.S. to facilitate timely commercialization. Since we do not have any directly managed dealerships, we build relationships of trust and customer loyalty by steadily lending shape to the ideas of our dealers. These efforts have helped establish our current presence and profits in the North American market. As customer needs continue to diversify, we will aim to further enhance our brand value by creating unique products inspired by earnest customer engagement.

Main Brands

OPEN COUNTRY

The OPEN COUNTRY brand has been available in the North American market since 1983 and is one of our oldest tire brands. Capitalizing on the fashion for custom SUVs and pickup trucks that swept through North America around 2000, the OPEN COUNTRY M/T tire series, launched in 2003, was highly praised for its designability and robustness, and earned the support of many users as one of the most installed tire on vehicles exhibited at the SEMA Show, one of the top three global trade shows. The OPEN COUNTRY brand has subsequently developed into one of the company’s best-known brands thanks to various strategies, including the early introduction of the rugged terrain* category and the release of OPEN COUNTRY R/T tires with aggressive pattern designs, and the securing of stable supply and improved quality through the establishment of local production and supply frameworks in North America and the development of proprietary manufacturing technologies. Spearheaded by the launch of the OPEN COUNTRY R/T series for light motor vehicles in Japan in 2016, we have also been developing and launching products geared toward the Japanese market under the same brand.

* A tire category that sits between mud-terrain tires suitable for uneven, muddy or gravel road surfaces and all-terrain tires suitable for all surfaces.


OPEN COUNTRY M/T


OPEN COUNTRY R/T


OPEN COUNTRY R/T TRAIL


OPEN COUNTRY A/T II

PROXES

PROXES is a global flagship brand inspired by the philosophy of demonstrating strong performance in all conditions based on high-speed driving stability (flexible handling and uncompromising stability). PROXES tire performance has won high praise primarily as a representation of concentrated Toyo Tire technological capabilities designed to achieve the high-level driving experience that drivers expect, and complement the features of different on-road vehicles.


PROXES LuK II


PROXES Sport 2


PROXES Comfort II s

Improving product functionality through motorsports activities

We work hard to improve not only aesthetics but also the functionality that meet the needs of users who place greater emphasis on performance, and we consider our motorsports activities as a key opportunity for verifying the effectiveness of this technological research. That is why we concentrate resources primarily on competing in races held in the toughest conditions. In off-road racing, we supply OPEN COUNTRY series tires (including racing models) to the SCORE BAJA 1000, which is said to have a roughly 50% completion rate due to the majority of the course being on desert sand, and the Dakar Rally, which is considered the world’s toughest motorsports competition. This motorsports experience is then used to develop rubber compounds and tire structures


Dakar Rally

that ensure strong durability even on rough road surfaces, as well as designs and the structure of the bead area to minimize any damage to tires caused by jolts when driving at high speed. Successful participation in the Dakar Rally is vital for establishing the Open Country brand as a leading off-road tire brand in global markets, so we are working, together with the R&D function, toward entering the top purpose-built category and winning the overall championship. With regard to circuit racing, we participate in the 24h Nürburgring race, which is considered one of the world's toughest, and the Nürburgring Langstrecken Serie, which is the precursor to the 24-hour race, using cars equipped with special PROXES racing tires. Lap times on the North Course are an especially important tire performance measurement indicator because the large altitude difference and multiple corners render it an extremely difficult course. We utilize the data and knowledge acquired through our racing experiences to develop high-quality, high-performance products.

The results are measured through test evaluations conducted by specialist Germany magazines, which are said to have a significant impact on consumer behavior in Europe, thus leading to continuous improvements.

Evaluation of tire tests by German magazine Auto Bild allrad, the German ADAC automobile association, the Swiss TCS automobile association, the Austrian ÖAMTC automobile association on PROXES Sport 2 tires (manufactured at the Sendai Plant)

Tire test evaluation by German Auto Bild magazine on PROXES Comfort tires (manufactured at the Serbia Plant)

BAJA

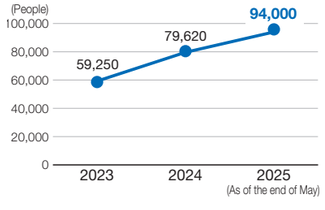
Nürburgring

Marketing activities

Our marketing activities are tailored to the interests of a wide range of users. For car and motorsports fans, we try to appeal tire performance and improve brand recognition by advertising our multiple racing achievements. We also use promotional activities featuring famous rally drivers as brand ambassadors. This helps build brand trust more effectively by encouraging respected individuals to communicate the appeal of our products along with their feelings as a driver.

We adopt a unique approach to users who are sensitive to latest trends and whose tastes and preferences tend to be reflected in their choice of tires. For example, we have been focusing on camping, which has attracted much more attention in recent years, and using social media to promote high designability off-road tires to people who want to use vehicles for these outdoor activities. In Japan, an Instagram post of a car with OPEN COUNTRY brand tires encouraged a community for women who enjoy customizing their beloved cars. We have been able to steadily expand our fan base by holding regular meetings and other meetings that enable fans to directly sense the appeal of the OPEN COUNTRY brand.

The number of social media followers
(Instagram account:@teamtoyotiresjp)



Spellbinding talk by our ambassador driver at TOKYO AUTO SALON 2025 (Left: Masato Kawabata／Right: Mad Mike)

Open Country Women's Association meet

Technical Strategy

Enhance potential value-creating proprietary technologies

High-performance design capabilities

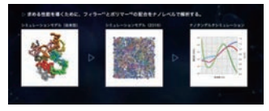
The automobile industry is undergoing a period of major change, so the tire industry is also expected to realize swift performance and functionality advancements that underpin the evolution of mobility. Toyo Tire Corporation develops products based on the tandem pursuit of two proprietary platform technologies, Nano Balance Technology for fundamental material design and T-MODE for simulations and tire design support, both of which are being constantly updated.

Rubber materials design

Tire rubber is made from a mixture of natural rubber, synthetic rubber, and various materials such as carbon black and silica, and it is the intricately related characteristics of the molecular structure and rubber formulation that determines the tire performance. We use Nano Balance Technology to analyze, design and control a tire's rubber composite materials at the nano level (one nanometer = one billionth of a meter) and develop rubber materials that can maximize required performance.

Nano-level Analysis / Prediction [Simulation]

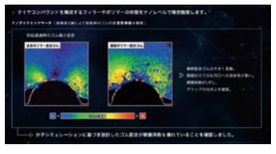
Analyze the compounding ratio of filler*1 and polymer*2 to obtain the required performance



*1 General term for substances such as carbon black and silica that are added to raw material rubber to improve strength, wear resistance and processability
*2 Molecular components that make up natural or synthetic rubber

Nano-level Research/Observation [Research]

Observe the internal deformation of rubber during braking through three-dimensional observation of rubber materials and analysis of internal rubber structures in a dynamic environment



Nano Balance Technology

Cross-integrated four systems as a tire technology foundation

Nano-level Production Control [Precision Control]

Maximize performance by processing the materials under optimal conditions

[Nano Composite Polymer: Proprietary nano-processing technology]

We have created a unique processing technology for stirring and removing water from liquid raw rubber and filler in order to achieve a more uniform and even filler dispersion. The use of nano compositive polymers enables us to both maintain tire wear resistance while significantly reducing energy loss from the rubber compound, and improve a tire's rolling resistance grade (fuel efficiency).

Nano-level Material Design [Function Creation]

Design new materials based on the results of nano-level analysis

[Elongated high-strength rubber composite design for improved wear resistance]

The main cause of tire wear is rubber separation that occurs when the surface of a tire is scratched by uneven road surfaces. So improving rubber strength, or the strength of the rubber at rupture point, is essential for improving wear resistance. For instance, one Toyo Tire approach focuses on widening and dispersing the positions of cross-linked chain ends, which are the joins in polymer chains, to create designs that are less susceptible to fracturing.

Regulations on tire wear particles are becoming increasingly strict, so we intend to invest in strengthening our own efforts to improve tire wear, including predictive tire wear diagnosis.

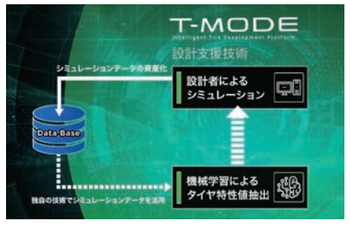
●Tire development platform

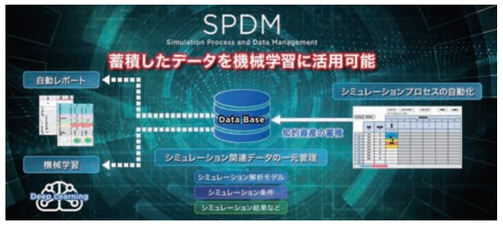
We seek to optimize desired performance and design by constantly repeating the design-simulation-prototype-evaluation cycle in our tire development process. Our associated tire development platform uses a supercomputer to integrate two simulation technologies with AI-driven design support technology, thus improving the precision and efficiency of our designs. These two simulation technologies focus on tire simulations that reproduce the behaviour of tires during driving, and driving simulations that replicate vehicle-type information, passenger numbers, volume of luggage, driving patterns, and other factors to better understand the impact of vehicle behaviour on tire performance.

We employ Simulation Process and Data Management (SPDM)* to enable our engineers to aggregate and centrally manage the information obtained from experiments and simulations within the platform. Actively encouraging the use of this knowledge has helped improve verification processes and shorten product development lead times.

In addition, integrating the simulation technology and AI-driven design support technology with a focus on SPDM enables us to develop inverse problem-solving approaches, whereby we use AI technology to design mechanisms that derive necessary design specifications from input desired performance values.

* A platform system capable of centrally managing various types of data and sharing standardized processes





●Introducing materials informatics (MI)* technology

Any reinforcing agent or other chemical mixed in with tire rubber materials will directly impact the characteristics of the end product, so complex control mechanisms are required to adjust the type, amount, and processing method of each component. We pursue material design using MI technology that is based on our accumulated stock of data assets to achieve high performance product development as well as shorter development lead times and lower costs. The introduction of MI technology has enabled us to calculate estimated values for material properties from information on material structures with different dimensions. MI technology can also be applied to inverse problem solving such as creating optimal structures from targeted characteristic values, so we are expanding its use in the realm of new materials development. These technologies are being jointly developed with SAS Institute Japan Ltd.

* A technology that facilitates the efficient exploration of new and alternative materials using AI and other tools

Customer-oriented product capabilities

●Balancing functionality and design

At Toyo Tire Corporation, we ensure that product development is firmly backed by technology, theory and data, but we also think it is extremely important to attentively heed market feedback to ascertain how best to meet customer needs. Information on market needs from frontline operations is collected by the sales function and shared with the R&D function in a timely manner. We also actively create opportunities for engineers to go directly to the market and foster a keen customer perspective, propelling the development of differentiated products. The aggressive tread patterns preferred by our primary target customers can sometimes affect basic performance and complicate development. However, we have been able to achieve a high degree of balance between functionality and design in the initial stages of virtual simulations by leveraging the platform technologies that we have updated continuously. We will continue to accumulate these types of data to further enhance customer-oriented product creation.

●A.T.O.M.: Advanced Tire Operation Module

We began mass production using A.T.O.M. in the early 2000s using a unique Toyo Tire manufacturing method in which rubber spun into a thin strip roughly 15mm wide is wound around a rotating molding drum and then bonded together to manufacture the necessary tire parts. In tire manufacturing, it is common to shape wide treads and other tire parts around a drum and glue the two ends together. However, any increase in the weight of the bonded parts can cause a shift in the tire's center of gravity, and the larger the tire, the greater the deviation, making balance adjustment an issue. A.T.O.M does not produce any large joint portion, so has a minimal impact on tire balance. Another appealing benefit of A.T.O.M. is that it makes it relatively easy to increase the thickness of the rubber on one side of the tread, facilitating the addition of grooves on the sidewall as well. Indeed, A.T.O.M could be described as the source of our strength in high design performance for large-diameter tires.

Connecting global R&D centres

We combine the results of individual research responsibilities at our R&D centres in Japan, the United States and Europe to generate market-tailored product development in cooperation with the sales and production functions.

As part of the steady consolidation of our sales functions in Europe started in 2024, we are considering transferring some of the European R&D functions to our tire production site in Serbia. We believe we will be able to better respond to increasingly stringent laws, regulations and standards in the European region by leveraging production base facilities to better direct the results of advanced materials research, traditionally managed by our European R&D center, into improving processing technology, and by speedily conducting driving tests of actual vehicles fitted with our tires on the proving ground adjacent to the factory.

Japan-R&D
- All R&D functions
- Development of high-performance technologies (research, development, evaluation, utilization of big data and AI)

Responsible for all R&D functions and updates various platform technologies

NA-R&D
- Marketing
- Development of customer-oriented products

Cooperates with the marketing department in North America, our core market, to develop customer-oriented products that respond to preferences

Europe-R&D
- Advanced materials / next-generation mobility survey
- Development of high-performance technologies

Focuses on surveys and research for the utilization of cutting-edge materials to facilitate the development of next-generation mobility technologies such as EVs.

Fostering technical talent

Toyo Tire Corporation emphasizes basic knowledge training, external exchanges and technology transfers in the development of human resources with the capacity to fuel technological innovation. In addition to our company-wide training systems, we have also set up a specialized educational curriculum for young engineers run by the R&D function in which senior employees serve as instructors to help improve specialist capabilities. They also pass on knowledge and expertise that can be difficult to standardize or verbalize. In 2020, we added lectures on sustainable development goals (SDGs) designed to promote awareness of the role that technological development plays in solving social issues and to incorporate SDG considerations into R&D workflows.

Going forward, we will need even more human resources who can use their machine learning, deep learning and other AI-related knowledge and skills to transform our operations and overall business. To avoid over-reliance on AI-generated results, we will strive to train engineers who can design products and systems based on an accurate understanding of the fundamental principles of why things are the way they are, and who can use AI to expand their own thinking skills and capacities.

Production and Supply Strategy

High-mix, low-volume production

As of the end of 2024, we currently manufacture tires at seven plants in five countries – Japan, U.S., China, Malaysia and Serbia – and sell them in more than a hundred countries and regions. The need for the limited number of plants to meet the diverse needs and demands of different markets has honed the unique strength of our production setup: competence in high-mix, low-volume production. While we continue our efforts to increase sales volumes in the markets where the plants are located, we are continuously working to improve the productivity of our plants and optimize the product mix at speed through a range of measures such as minimizing changeover* time and implementing precise production control through close communication with the R&D function and quality assurance divisions. These efforts ensure that our products are supplied to our customers on time as required.

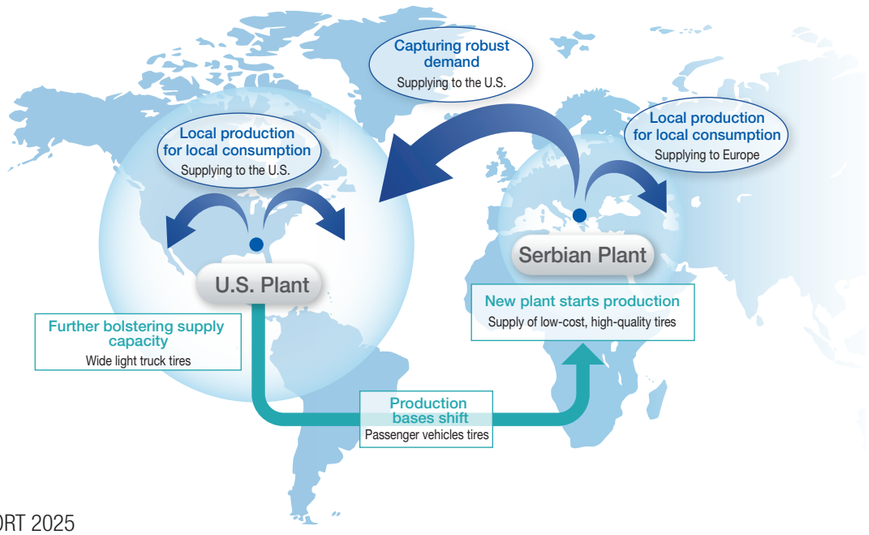
* Changeover: the process of changing machines, tools, fixtures and materials and setting them up in order to produce a different product on the same production line

Allocations aligned to market trends

While each plant supplies its local market as a priority, our production setup is designed in such a way that multiple plants can produce and supply some of the products intended for markets in other regions. Since we established our first tire production plant outside Japan in the U.S. in 2004, we have been building our new plants and refurbished existing plants so that their production processes are able to ensure equivalence in the specifications and performance of certain product lineups between different plants no matter what differences there were in terms of facilities, equipment and materials used. For example, large-diameter tires for large SUVs and pick-up trucks, a product category in which we have a strong competitive edge, can be produced not only at our U.S. plant but also at our Japan and Serbia plants for shipments to the North American market.

On top of that, the SCM Division in Japan links up and coordinates the production and other relevant functions to adjust supplies between markets based on market trend data provided by the sales function. By centralizing the control of different functions in Japan, we are ensuring smooth operations on the global level and enabling adjustments to ensure balanced levels of profitability across the plants. This way we are able to maximize our plants' know-how in high-mix, low-volume production and create a highly profitable production setup that is resilient in the face of demand fluctuations.

The precisely controlled allocation of production and supply enables us to meet the increasingly diverse needs of customers and expand opportunities by improving customer satisfaction. It is also a powerful tool for avoiding or minimizing geopolitical risks and negative impacts of national governments' economic policies.



Recruiting and training skilled workers

Retaining and passing on skills and know-how are important challenges when it comes to maintaining flexible production. We have a range of measures to retain and nurture human resources based on the nature of each plant and the trends in the labor market of the country.

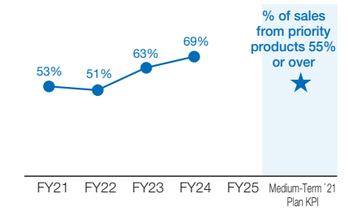
In Japan, where there are clear signs of a decrease in working population causing labor shortages, we make planned investments to improve the working conditions in the plants that have been in operation for a long time in order to increase human resource retention rate. Equipment weight reduction and automation as well as work standardization as part of Group-wide digital transformation reduce the burden on workers and make it easier for older employees and women to work with us, as well as eliminating reliance on specific personnel and their skills. Conversely, at our plant in North America, where the labor market is highly dynamic, we work from the assumption that the labor retention rate cannot be improved significantly and provide short-term training and skills development programs instead. In addition to the standard operating procedure videos designed for all production sites, we also provide a full range of on-the-job training, with trainers assigned to each production process, to promote efficient and effective job readiness.

Sales Strategy

Sales strategies for priority products

We have been implementing a priority product sales strategy since deciding in the Medium-Term '21 Plan not to actively expand across all areas of our business, but to maximize profits by thoroughly managing profitability in target markets. Priority products is an original tire product category that epitomizes Toyo Tire strengths and is vital for achieving the operating income and profit margin targets stated in the medium-term plan. The category includes new, core and differentiated products. Our sales function uses the sales composition ratio of priority products designed to suit the characteristics of different target regions and markets as a key indicator when developing sales activities.

Changes in sales composition ratio of global priority products



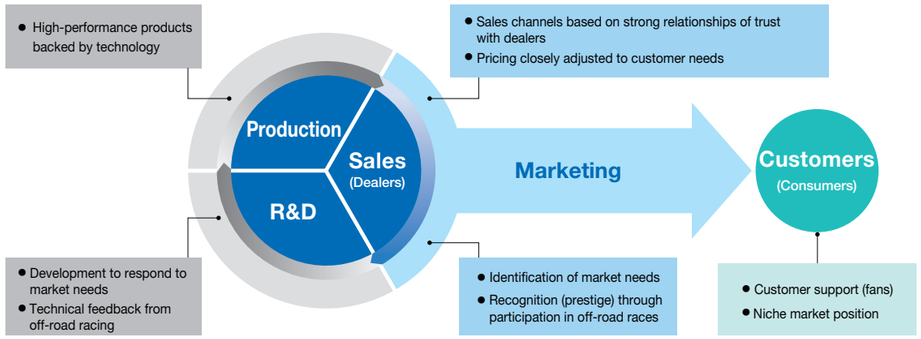
North American business model

The Toyo Tire Group has invested various management resources in the North American market since establishing its tire production base in the State of Georgia in 2004. In the United States, where automobiles are not just a means of transportation, but an integral part of cultures and lifestyles, we have focused on large-diameter tires for light trucks (large SUVs and pickup trucks) because those products are in high demand in the Sun Belt region, the southwestern part of the United States. More specifically, we have targeted users that prize individuality, consistently promoting and introducing tires that offer the volume, robustness and design that those users expect.

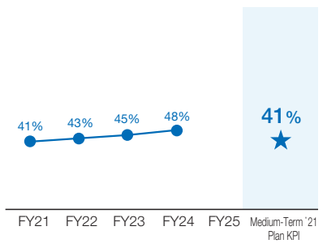
Since the Toyo Tire Group does not operate any directly managed dealerships, our dealers are our closest customers, and it is through them that we gain a firm grasp of market trends and needs. Instead of simply ascertaining our dealers' actual needs in terms of the products they want to offer end users, our sales function also conducts various marketing-type sales activities that explore latent needs for added value such as the kind of proposals and services each individual dealer really wants us to offer. We have built a unique and powerful customer base by pursuing sales activities that intricately link the things our customers desire and what we can and should deliver. We are also working with our R&D function and product planning function to increase brand awareness through our ongoing participation in America's

biggest off-road races. The synergies generated by these activities have enabled us to capture and retain a dominant share in the niche market of tires over a certain number of inches in the United States, which is generating a significant revenue stream. However, far from becoming complacent, we have been taking steps to significantly reorganize our sales channels, while also assessing structural changes in the broader market and customer expectations of the company.

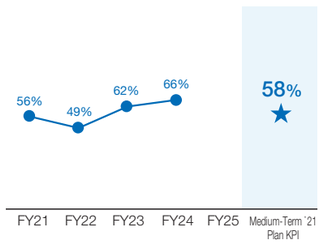
In recent years, we have seen a string of new competitors enter this segment, and a steady flow of low-priced products enter the North American market as a whole. However, our product capabilities and brand power, which are backed by firm bonds of trust with dealers cultivated over more than 20 years, have proved key strengths for the Toyo Tire Group and true assets for upholding our presence in the North American market. To translate these strengths into even stronger results, we will continue to invest in our production capacity and technological capabilities, strengthen branding, and refine our business model to build stronger resilience in fluctuating market conditions.



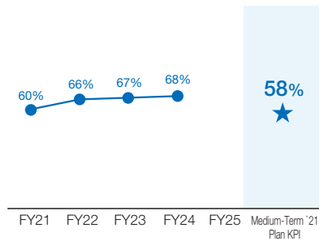
% of North America region against total unit sales



% of North America region against total sales among priority products



% of North America region against total sales



Reorganizing sales structures in Japan and Europe

In Japan and Europe, we are also moving forward with our basic policy of pursuing quality, rather than quantity, and we are shifting sales activities to focus on the sales composition ratio of priority products designed to satisfy regional market trends as a key indicator of success. Using the North American business as role model is helping us develop win-win relationships with sales partners who share our approach and can deliver products to users.

In Japan, we are starting to see the benefits of structural reforms to consolidate and close sales bases that started in 2023, and are establishing a solid profit base.

In 2024, we also embarked on a bold restructuring in Europe to consolidate disjointed sales functions across the region under a new sales company based in Serbia, where our production base is located. The ultimate aim is to unify the management of production and sales across the entire European region and strengthen our management platforms, while also improving customer satisfaction and Toyo Tire brand presence through flexible and speedy business development.

Strengthening business resilience worldwide

To ensure we can leverage our superior capabilities and better compete with larger companies, we have nurtured a deep shared awareness of the importance of establishing and implementing measures to address changing business environments with a strong sense of urgency. Based on that awareness, we share information on sales conditions and dealer activities at daily company-wide meetings attended by sales, R&D and production function representatives to identify new business opportunities. Each function then aligns various factors and implements any necessary measures in a timely manner. We believe that close inter-functional coordination and agility are key strengths that have enabled us to promote parallel structural reforms in Japan and Europe, as mentioned above. We will strive to complete those reforms and strengthen profit structures, not only in North America, but also on a consolidated basis, and fortify our business on a global scale.

Developing talent with sales associates and tire technicians

The Group's tire sales subsidiaries are striving to improve the job skills of tire technicians and the level of service provided by sales associates and front office staff. Sales companies provide jobspecific training to sales associates and front office staff to equip them with the awareness required to convey product value to customers clearly and correctly on a day-to-day basis and to develop the skills required for their respective roles. We also hold a Truck and Bus Tire Servicing Contest for technicians, at which technicians selected from all over Japan compete with each other to demonstrate their skills. The contest aims to improve the skills and service level of technicians responsible for exchanging tires, performing inspections, and providing after-sales services, as well as to help prevent wheel detachment accidents of large vehicles, which are recognized as a social issue. This contest illustrates to staff how their own jobs contribute to the safety of our customers, which in turn fosters a sense of duty and motivation toward their work.

Truck and Bus Tire Servicing Contest