

# Yokohama Rubber's History

Established in 1917, the Yokohama Rubber Co., Ltd., opened its Hiranuma Plant in Yokohama in 1920 and began selling Japan's first corded tire, the Hama Town Cord, a year later. After World War II, in 1950 Yokohama opened its Hiratsuka Factory, which remains one of the company's core manufacturing facilities. Responding to diversifying needs during Japan's postwar reconstruction, Yokohama developed not only tires and belts but a wide variety of products and grew into a comprehensive rubber products manufacturer. Yokohama has a history of pioneering that has kept it at the forefront of its industry throughout its more than 100-year history. Since its foundation, Yokohama has continually accepted new challenges, thus ensuring its position as an industry leader.

## Start of Radial Tire Development 1956-

The history of radial tires in Japan began in 1956, when Yokohama developed the first wire radial tire for trucks and buses (that tire was eventually marketed as Japan's first domestically produced radial tire in 1963). We also began developing radial tires for passenger cars, and in 1964, succeeded in trial production using a flat profile mold. In 1966, ahead of other tire makers, Yokohama opened Japan's radial tire era when the company began marketing Japan's first radial tire for passenger cars, the G.T. SPECIAL.



In 1971, launched sales of G.T. SPECIAL STEEL, Japan's first steel radial tubeless tire.

## MB Operations Contributing to Social Infrastructure and Industrial Fields 1952-

Yokohama's pioneering spirit has not been limited to its tire business. Yokohama's Multiple Business (MB) operations also have a long history of developing technologies and products that have contributed to social infrastructure and industrial fields. From industrial products, such as industrial and automotive hoses as well as conveyor belts, to marine products, such as pneumatic fenders and marine hoses, and even aerospace products, Yokohama has worked on a wide range of products, achieving a number of Japan and world first achievements.



In 1970, installed German-made equipment for producing a 3.2-meter wide steel cord conveyor belt at the Hiratsuka Factory.

## From ADVAN Driving Tires to a Global Strategic Brand 1978-

In 1976, European tire product reviews stated that the wet performance of passenger car radial tires from Japan was poor. Yokohama accepted this technical challenge and developed the ADVAN-HF, a tire with the world's highest level of wet performance, which was then introduced to the market in 1978. The first tire in the ADVAN series, the ADVAN-HF, was designed to provide superior grip in wet and dry conditions and became Japan's first sports radial tire, opening up a new genre in Japan's tire market.

In 2005, Yokohama began promoting ADVAN as its global strategic brand. Yokohama has continually enhanced the brand's image by building an expansive brand lineup, promoting the tires' use as original equipment in high-performance cars around the world and supplying the tires to cars competing in the world's major motorsports events. As a result, ADVAN has become the company's global flagship brand that represents high-performance, high quality, and high technologies for which Yokohama has become known.



In 1988, the high-performance passenger car tire YOKOHAMA A008P receives technical certification from Porsche.



In 2005, launched ADVAN Sport V103 worldwide, making ADVAN the global flagship brand.



In 1920, completed construction of the Hiranuma Plant, the company's first production facility.



In 1952, the Hiratsuka Plant (current Hiratsuka Factory) started production.



In 1961, construction of the new corporate headquarters, the Yokohama Rubber Building, was completed.

1917 1920

1952

1961

### PRGR, Pioneering the Use of Science in Golf Gear Design 1983-

In 1983, Yokohama entered the golf gear market with our PRGR brand. We have marketed a steady stream of unique golf gears, including drivers with carbon heads and carbon shafts that were developed using our specialty carbon and resin technologies.



Yokohama's PRGR golf gears have made golf more enjoyable by using science to maximize golfers' power. As a result, PRGR have become popular with golfers and become a golf gear brand known for constantly coming up with innovative ideas.

### Ahead of the Times, Developed Fuel-Efficient Tires Emphasizing Environmental Performance 1996-

In 1996, a project was launched to add further value to the image of "YOKOHAMA with excellent driving performance" established by ADVAN. This project was named the "DNA Project" because its goal was to develop tires that would become the new nucleus (DNA) of Yokohama.

The DNA Project's guiding phrase for tire development was "Environmental performance" ahead of the times. The top priority was to develop tires that would improve fuel efficiency and reduce CO<sub>2</sub> emissions.

The result was the DNA series, Japan's first fuel-efficient tires, which improved fuel efficiency by reducing rolling resistance without sacrificing grip performance, thus maintaining high standards for these two conflicting conditions.



In 1998, launched sales of ES01 and ES02 as first offerings of new fuel-efficient DNA series of passenger car tires.

In 2001, launched sales of DNA ECOS, a fuel-efficient tire for passenger cars.

### "Caring for the Future" Yokohama's CSR Activities 2007-

Yokohama's initiatives are not limited to manufacturing. Our CSR activities are also expanding. Under YOKOHAMA Forever Forest Activities, we have been continuing with efforts based on a 2030 target of 1.3 million trees, including planted trees and saplings provided at 14 sites in Japan and 21 overseas sites in eight countries. The YOKOHAMA Magokoro Fund established in 2016 is made up of employees who wish to make donations as its members, and accumulates funds by deducting 100 yen per unit every month from the salaries of those employees. The funds raised are donated to provide financial support to NPOs and NGOs working on environmental conservation, the protection of human rights and other causes, and as relief donations in the wake of major disasters.



In 2007, commenced YOKOHAMA Forever Forest Activities.



In 2016, established in YOKOHAMA Magokoro Fund.



In 2017, Yokohama celebrated its 100th anniversary.



In 2016, Alliance Tire Group, which manufactures and sells tires for agricultural and construction machinery in the Netherlands, became a subsidiary.



In 2006, under the GD100 long-term management plan running up to 2017, the 100th anniversary of Yokohama, CSR management was enhanced with the aim of becoming a top-level company contributing to the environment based on the GD100 guidelines for action on the environment.



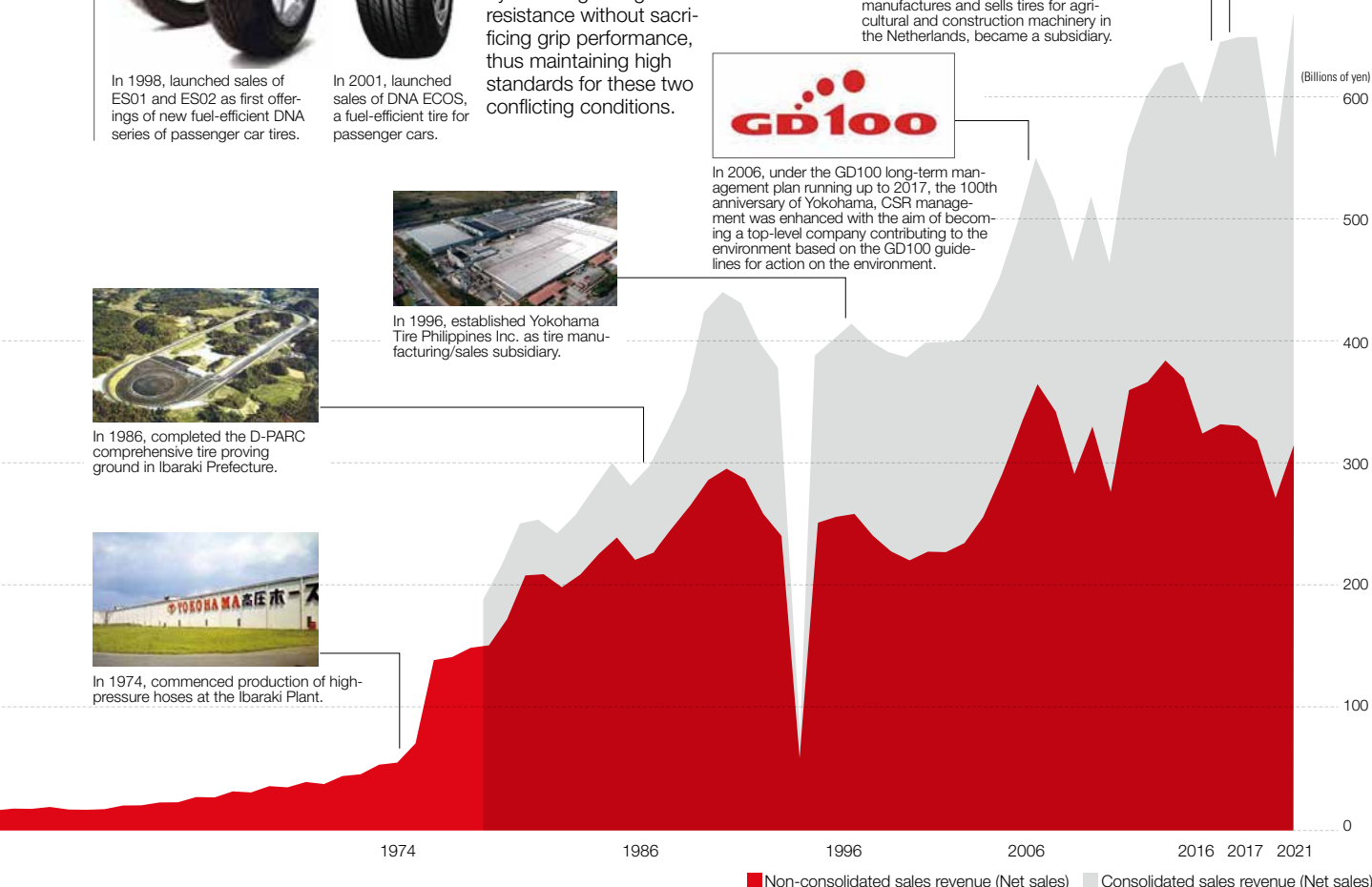
In 1996, established Yokohama Tire Philippines Inc. as tire manufacturing/sales subsidiary.



In 1986, completed the D-PARC comprehensive tire proving ground in Ibaraki Prefecture.



In 1974, commenced production of high-pressure hoses at the Ibaraki Plant.



# Value Creation Process

## Social Change and Issues

### Business Environment

- Decrease in the number of privately owned vehicles and increase in the number of infrastructure-related vehicles due to the expansion of CASE and MaaS
- Distribution using electric vehicles and automation
- Intensifying price competition for tires

### Society

- Improvement of occupational health and safety and prevention of infectious diseases
- Changing values with regard to work styles
- Prevention of complicity in child and forced labor in the company and suppliers
- Social impacts on suppliers

### Environment

- Climate change challenges
- Changes in/impact on the natural environment by our production bases and suppliers
- Dependence on natural resources
- Switch from fossil resources to sustainable resources

### Corporate Governance

- Maintenance and strengthening of foundation for proper organizational governance
- Demanding effectiveness and diversity within the Board of Directors and organization

## Management Capital

\*As of December 31, 2021

### Financial Capital

#### Consolidated total assets

**¥985 billion**

#### Ratio of equity attributable to owners of parent

**53.3%**

### Manufactured Capital

#### Manufacturing sites

**40 sites**

#### Capital expenditures

**¥38.8 billion**

### Intellectual Capital

#### Patents

**6,009**

#### R&D expenses

**¥15.3 billion**

### Human Capital

#### Number of employees (Consolidated)

**27,222**

#### Percentage of women employed in comprehensive work positions (non-consolidated)

**41%**

### Social and Relationship Capital

#### Major regions of operation

**28 countries and regions**

#### Number of consolidated subsidiaries

**109**

### Natural Capital

#### YOKOHAMA Forever Forest Activities Tree planting and provision of saplings

**1.09 million trees  
and saplings to date**

## Yokohama's Business Activities

### Management Policies



### Products and Services Provided

#### ◆ Tires

##### (Consumer Tires)

In addition to tires for passenger vehicles and motorsports, Yokohama produces and sells tire tubes, aluminum wheels and other automotive components.

##### (Commercial Tires)

Yokohama produces and sells tires for trucks and buses, agricultural machinery, industrial vehicles, construction vehicles and more.

#### ◆ MB

##### Multiple Business

The Multiple Business (MB) segment comprises two businesses for hose and couplings and industrial materials, and includes the manufacturing and sale of various high-pressure hoses, conveyor belts, fenders, marine hoses, aircraft lavatory modules and water tanks.

#### ◆ Others

We manufacture and sell PRGR brand golf goods and provide services within the Yokohama Group.

## Basic Philosophy

Based on its basic philosophy, to enrich people’s lives and contribute to their greater happiness and well-being by devoting our wholehearted energies and advanced technology to the creation of beneficial products,” Yokohama Rubber is working on the exploitation and exploration of business and contributions to social issues linked to its business activities through the Yokohama Transformation 2023 (YX2023) Medium-Term Management Plan and striving to create diverse value.

## Value Creation Initiatives

## The Value We Create

**Medium-Term Management Plan: YX2023** **YX** **Exploitation** and **Exploration**

Implement a growth strategy for the next generation based on two approaches: “Exploitation” of existing businesses and “Exploration” in response to changes in the market.

**Raise high-value-added tire sales ratio**

**ADVAN GEOLANDER WINTER**

**Consumer Tires: Exploitation**

- Raise high-value-added tire sales ratio (AGW strategy)
- Strengthen core products and brands by leveraging original technologies and superior quality
- Strengthen return sales in the return market
- Promoting product and regional business strategies

**Respond to market changes**

<b>Costs</b>	<b>Product lineup</b>
<b>Services</b>	
<b>DX: Digital Transformation</b>	

**Commercial Tires: Exploration**

- Strengthening cost competitiveness
- Strengthening our system of services (tire change and maintenance)
- Promoting Digital Transformation (DX) (IoT tires and TMS)
- Expanding our product lineup

**Strengthen/expand by allocating resources to core product areas**

<b>Hose and couplings</b> Growth driver	<b>Industrial products</b> Stable earnings
Business restructuring	
<b>Hamatite</b> Business transfer completed	<b>Aerospace products</b> Structural reforms

**MB Business: Focusing Resources in Areas of Strength**

- Hose and couplings (growth drivers)
- Industrial products (stable earnings)

- Tackle carbon neutrality
- Develop safe and pleasant workplaces
- Tackle the circular economy
- Revitalize partnerships with communities

### Contribute to Solving Social Issues through Business Activities

#### CSR Slogan “Caring for the Future”

Make life more fulfilling for people everywhere.

<b>Products</b> Deliver fun and peace of mind.	
<b>For the Earth</b> Leave a sound environment to future generations.	
<b>People</b> Build on each other’s strengths.	
<b>Community</b> Coexisting and building trust	
<b>Corporate Governance</b> Lay a solid foundation for fulfilling social expectations.	

To enrich people’s lives and contribute to their greater happiness and well-being by devoting our wholehearted energies and advanced technology to the creation of beneficial products

### Economic Value (Medium-Term Management Plan Targets)

Results achieved through “Exploitation” and “Exploration”

	Targets	2021 results
Sales revenue	¥700 billion	¥670.8 billion
Business profit	¥70 billion	¥62.2 billion
Business profit margin	10%	9.30%
D/E ratio	0.4 times	0.34 times
ROE	10%	13.9%
ROIC	7%	8.2%
Operating CF	¥250 billion (3-year total)	¥222.0 billion
Capital investment (excluding strategic investments)	Within depreciation	¥38.8 billion
Payout ratio	30.00%	15.94%

### Social Value (Value Provided to Stakeholders)

Delivering fun and peace of mind through driving

Making life more fulfilling for people everywhere

\*As of December 31, 2021

<b>Customers</b>	To enrich people’s lives and contribute to their greater happiness and well-being by devoting our wholehearted energies and advanced technology to the creation of beneficial products
	Number of cases where rules and regulations or voluntary rules have been violated regarding safety of products, labeling, or supply/use of products (consolidated) <b>0</b>
<b>Shareholders and Investors</b>	Grow businesses and enhance corporate value.
Economic performance (Total, Non-consolidated basis)	<b>¥354.9 billion</b>
<b>Employees</b>	Create a workplace that values, improves and energizes people.
Rate of lost-worktime injuries (consolidated/per 1 million work hours)	<b>0.20</b>
<b>Business Partners</b>	Promote CSR activities throughout the value chain.
Number of companies that responded to the CSR procurement questionnaire	<b>1,151/100%</b>
<b>The Earth</b>	To protect the blue earth and its people, we will take on the challenge of developing a sustainable society in harmony with the environment.
Percentage of total production yielding environmentally friendly products (consolidated)	<b>100%</b>
<b>Community</b>	We will contribute to the prosperity and development of local communities and become a company that contributes to the earth and earns the unwavering trust of society.
Implementation percentage of community activities and dialogues at production sites (consolidated)	<b>100%</b>



# Responding to the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Yokohama has identified climate change mitigation and adaptation as an important management issue for contributing to a sustainable society and ensuring sustainable corporate growth, and expressed its support for the recommendations of the TCFD\* in January 2022. Going forward, we will actively disclose information related to our action on climate change in line with the TCFD recommendations.

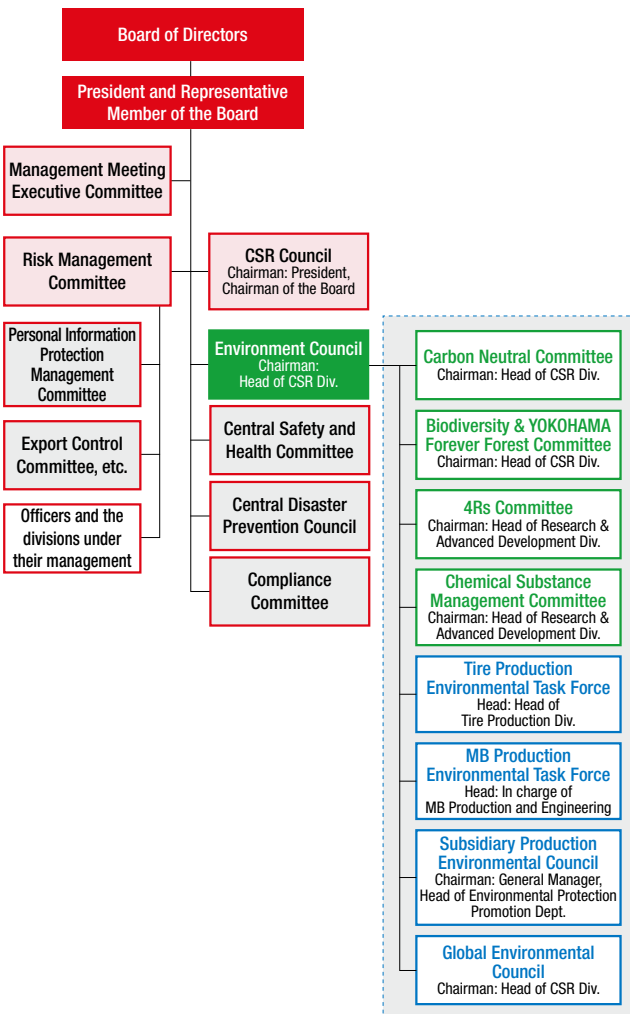


\* TCFD stands for Task Force on Climate-related Financial Disclosures. The TCFD was established in 2015 following a request from the G20 for the Financial Stability Board (FSB) to consider climate-related disclosures and actions to be taken by financial institutions. The TCFD recommends that companies and other organizations evaluate and disclose the financial impact that climate-related risks and opportunities have on management.

## Governance

The CSR Council, which is chaired by the President, Chairman of the Board, convenes twice a year (in May and November), and is positioned to draft and consider challenges related to climate change mitigation and adaptation, as well as other CSR challenges to be tackled by the Yokohama Group. Regarding climate change mitigation and adaptation, an Environment Council has been established. Environmental activities are pursued with the establishment of two task forces, two councils and four committees as subordinate bodies to the Environment Council. With an officer in charge (head of the CSR Div.) as its chairperson, the Environment Council deliberates and makes decisions regarding various issues such as carbon neutrality and oversees the environmental activities of the Yokohama Group.

### Climate Change-Related Governance Support System



## Strategy

We have classified climate-related risks into two categories, specifically risks associated with the transition to a low-carbon economy (transition risks) and risks associated with the physical impacts of climate change (physical risks). We have also assessed the magnitude of the financial impacts to be affected and summarized the risks and opportunities for our business. In addition, we conducted scenario analysis using the scenarios presented by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) regarding temperature increase, and examined adaptation measures and financial impacts based on the risks and opportunities of the 1.5°C and 4°C scenarios, respectively. We will continue to examine risks and opportunities and refine our scenario analysis.

### Major Risks and Opportunities Related to Climate Change

	Material Factors	Category	Potential Financial Impact	Impact	
Risks	Transition to a decarbonized society	Policy and Regulations	Introduction and rise of carbon pricing	Large	
		Markets	Resource (raw material) price hikes and supply instability	Large	
			Increase in renewable energy and fuel prices (crude oil, natural gas)	Large	
		Technology	Capital investment to improve manufacturing process efficiency	Medium	
		Reputation	Impact on customer evaluation of emission reduction efforts and stance, and on stock prices Response to the global movement to promote the use of renewable energy (reputation among stakeholders)	Small	
	Physical risks	Change in demand for products and services	Markets	Product selection based on evaluation of CO <sub>2</sub> emissions during manufacturing (competition within the same products)	Large
		Response to changes in the automotive industry	Markets	Decline in car sales due to MaaS	Large
		Intense weather disasters due to rising temperatures	Acute	Raw material procurement difficulties and higher procurement costs due to supply chain disruptions	Large
				Equipment damage or shutdown due to extreme weather	Large
		Intense climate change	Chronic	Depletion of natural rubber (natural resources) due to climate change, making procurement difficult	Large
Decline in demand for winter tires due to reduced snowfall, etc. Increased R&D investment required to improve product performance	Large Medium				
Opportunities	Transition to a decarbonized society	Energy Sources	Reduce energy costs by improving manufacturing process efficiency	Medium	
		Products and Services	Increase market share by responding quickly to changes in demand (carbon neutral compliance and performance requirements for electric vehicle (EV) installation) and stricter regulations.	Large	
	Change in demand for products and services	Products and Services	Improve competitiveness and profitability by offering environmentally friendly products using renewable/recycled raw materials and fuel-efficient, low-carbon products	Large	
	Response to changes in the automotive industry	Products and Services	Increased demand for products and services that support next-generation mobility (CASE and MaaS compliance, new business opportunities through hydrogen utilization)	Large	
	Climate change	Products and Services	Increased demand for products and services that contribute to disaster prevention, recovery, temperature change, food and nature (e.g., tires, oil fenders, etc., which contribute to crop/forest growth)	Large	

■ Summary of Scenario Analysis Results

Scenario Conditions		1.5°C Scenario	4°C Scenario
Scenario Overview		Limit the increase in the global average temperature to 1.5°C above pre-industrial levels by 2100 through stringent climate policies and technological innovation for sustainable development.	Failure of strict climate policies and technological innovation, and rapid intensification of the physical effects of climate change, resulting in a 4°C increase in average temperature by 2100 relative to pre-industrial levels.
Reference Scenario	Transition Risk	IEA Net Zero Emissions by 2050 Scenario (NZE)	IEA World Energy Outlook 2021 (WEO2021)
	Physical Risk	IPCC 6th Report SSP1-1.9	IPCC 6th Report SSP5-8.5
Analysis Results		<p>Mainly transition risks/opportunities are manifested.</p> <p><b>[Risks]</b> Increased energy cost burden and capital investment to improve manufacturing process efficiency due to the need to comply with strict climate change regulations, procurement of renewable energy and introduction of carbon pricing Increased R&amp;D and procurement cost burdens for renewable/recycled raw materials due to the increase in the number of products with reduced environmental impact</p> <p><b>[Opportunities]</b> Competitiveness and profitability will be enhanced through carbon neutral compliance, early response to EV-mounted performance requirements, and provision of environmentally friendly, fuel-efficient, and low-carbon products</p>	<p>Mainly physical risks/opportunities manifested.</p> <p><b>[Risks]</b> Increased occurrence of serious natural disasters at bases and in the supply chain. In addition, extreme weather conditions will deplete natural resources, making raw material supplies unstable. Product demand changes due to chronic climate change, such as lower demand for winter tires due to reduced snowfall, etc.</p> <p><b>[Opportunities]</b> Increased demand for products and services for disaster prevention, recovery, and temperature fluctuations</p>

■ Risk Management

Regarding risks related to climate change, subordinate organizations to the Environment Council, including the Carbon Neutrality Promotion Committee and other task forces, councils and committees identify and assess each risk and engage in activities to mitigate them. For the material risks identified by each task force, council or committee, the Environment Council deliberates and decides on countermeasures. For physical risks such as natural disasters, the Central Disaster Prevention Council is working on disaster prevention and BCP and promoting risk reduction. Matters of great seriousness and urgency are deliberated by the Risk Management Committee (chaired by the head of the Corporate Administration Div.), which was established to strengthen our defensive posture against the various risks that surround Yokohama and are appropriately evaluated and handled. The activities of the Risk Management Committee are regularly reported to the Board of Directors.

■ Metrics and Targets

Yokohama has declared three medium-to-long-term targets regarding its environmental activities, namely carbon neutrality, circular economy and co-existence with nature, in order to minimize the risks related to climate change.

■ Medium-to-Long-term Environmental Target

Carbon Neutrality	<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions from company activities by 38% by 2030 compared to fiscal 2013</li> <li>Achieve net zero CO<sub>2</sub> emissions (carbon neutrality) in our activities by 2050</li> </ul>
Circular Economy	<ul style="list-style-type: none"> <li>At least 30% renewable/recycled raw material usage by 2030</li> <li>100% sustainable raw materials usage by 2050</li> </ul>
Coexistence with Nature	Cumulative 1.3 million trees planted and saplings provided by 2030 as part of Forever Forest activities

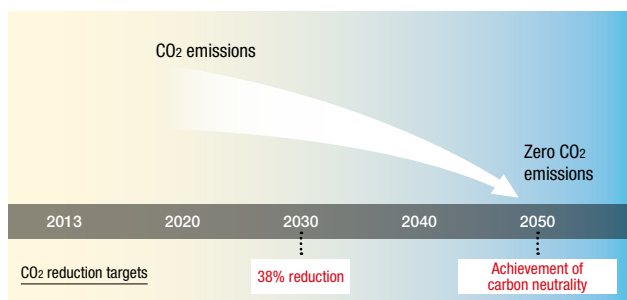
In addition, the results of various metrics, including GHG emissions, water usage, waste volume, the Yokohama Forever Forest and biodiversity conservation activities are disclosed on the Yokohama CSR website. Please refer to the below link for data.

WEB

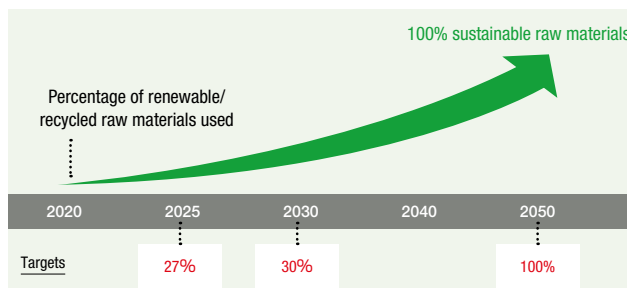
■ Progress on Material Initiatives  
<https://www.y-yokohama.com/global/csr/materiality/#04>



■ Roadmap to Carbon Neutrality by 2050

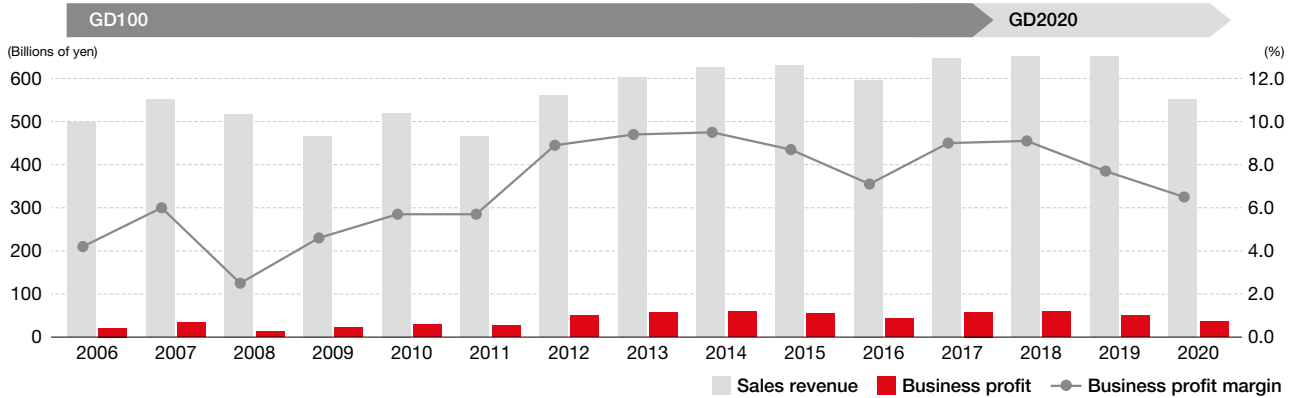


■ Roadmap to a Circular Economy



# Looking Back on Past Medium-Term Management Plans

## Financial Results



## Review of Past Medium-Term Management Plans



GD100 (Grand Design 100) Fiscal 2006 – Fiscal 2017

### Promoting Global Expansion and Achieving Steady Growth across Four Phases and 12 years

#### Progress of Global Expansion

- Enhanced network of production, sales and technology sites
- Expanded overseas business of tires for new vehicles
- Enhanced global brand recognition (Partnership agreement with English Premier League Club Chelsea FC since 2015)



Entered into a partnership agreement with English Premier League Club Chelsea FC in 2015

#### Improvements to Technologies That Contribute to the Environment

- Achieved a 100% ratio of products that contribute to the environment
- Global rollout of fuel efficient replacement tires
- Expanded adoption and delivery of fuel efficient tires for new vehicles



Released the BluEarth AE-01 in 2010, the first iteration of the BluEarth series of fuel efficient tires for passenger vehicles

#### Strengthening of the Business Portfolio

Increased Percentage of the Commercial Tire Business

- Tire manufacturer for agricultural machinery and construction vehicles
- Acquisition of Alliance Tire Group (ATG)
- Acquisition of Aichi Tire Industry, a manufacturer of tires for industrial vehicles



Alliance Tire Group (ATG), a dedicated manufacturer of off-highway tires, acquired in 2016



GD2020 (Grand Design 2020) Fiscal 2018 – Fiscal 2020

### Executing a Growth Strategy That Redefined the Strengths of Each Business

#### Consumer Tire Business

Expanding Our Presence in the Premium Tire Markets

- Premium tire strategy Adopted in 13 car models
- Winter tire strategy Introduction of three new products
- Hobby tire strategy Introduction of six new products
- Communications strategy Participation in Hoonigan Gymkhana 2020



ADVAN V105, the global flagship tire used Porsche's Cayenne, BMW's X3 and other premium vehicles



BluEarth-4S AW21 all-season tire

#### Commercial Tire Business

Making Commercial Tires as a Pillar of Revenue in the Next Century

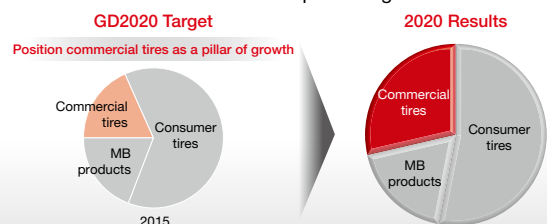
- ATG driving the business
- Improved supply from the North American TBR (truck and bus tires) plant

#### MB Business

Concentrating Resources in Fields of Expertise

- Automotive parts business: Expanding deliveries of automotive hose & couplings in North America
- Marine products business: Delivery of the world's biggest ultra-large pneumatic fenders

Commercial tire business as a percentage of sales revenue



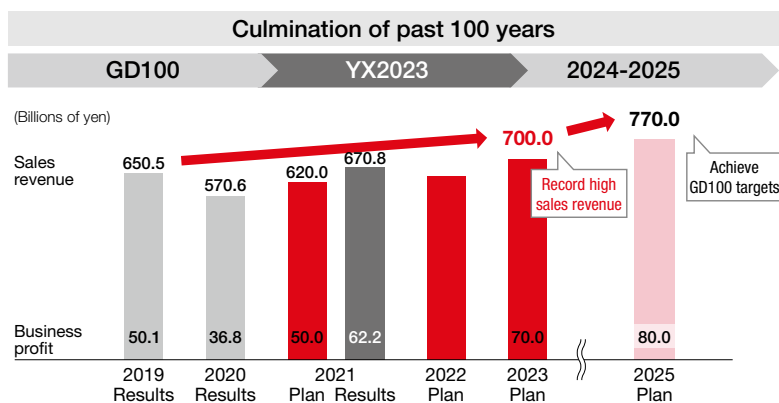
# Medium-Term Management Plan— Yokohama Transformation 2023

Under the Yokohama Transformation 2023 (YX2023) Medium-Term Management Plan that runs to the fiscal year ended 2023, the Yokohama Rubber Group is tackling transformation aimed at next-generation growth. In this section we share an overview of YX2023, including a report on the progress made in fiscal 2021.



## Target Pursuits: “Exploitation” & “Exploration”

The automotive industry is entering an era of great change, driven by the CASE, MaaS and DX trends. Under YX2023, we will aim for “Transformation” that targets growth into the next generation by pursuing the “Exploitation” of strengths in existing businesses as well as “Exploration” to create new value that meets the needs of this transformative era. Through this effort, we aim to achieve record highs for sales revenue of ¥700 billion and business profit of ¥70 billion in fiscal 2023. We also aim to achieve the goals originally envisioned in GD100 as the culmination of our first 100 years, specifically, sales of ¥770 billion and profit of ¥80 billion in fiscal 2025.



### Financial Targets, Fiscal 2021 Results

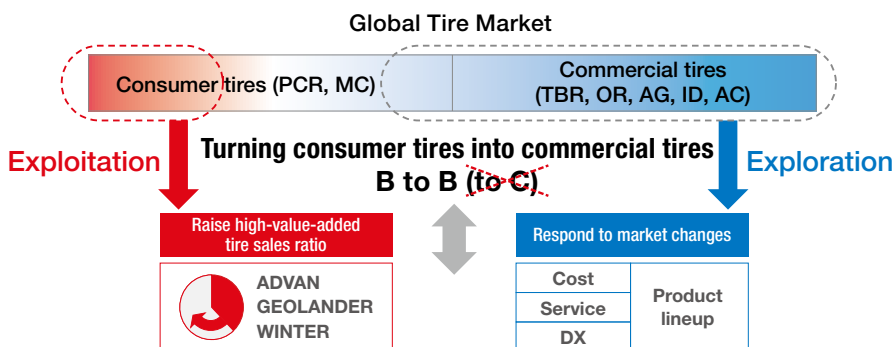
	Fiscal 2021 results	2023 targets
Sales revenue	¥670.8 billion	¥700 billion
Business profit (Business profit margin)	¥62.2 billion (9.3%)	¥70 billion (10%)
D/E ratio	0.34	0.4
ROE	13.9%	10%
ROIC	8.2%	7%
Operating cash flow	¥250 billion (3-year total)	
Capital investment	Within depreciation (excluding strategic investments)	

### Progress in Fiscal 2021

Amid a tough management environment with sharply rising raw material prices and logistics costs, declining production among auto makers and the impact of the COVID-19 pandemic, as a result of responding in a timely fashion to regional demand swings, we achieved record sales and profit, with sales revenue of ¥670.8 billion, business profit of ¥62.2 billion and profit attributable to owners of parent of ¥65.5 billion.

## Key Viewpoint: Turning Consumer Tires into Commercial Tires

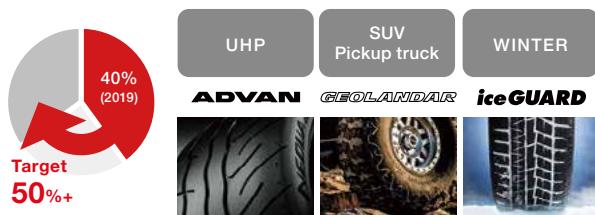
The consumer tire market centered on passenger car tires and the commercial tire market, which includes tires for trucks, buses, agricultural machinery and other commercial-use vehicles, are about equal in scale. However, we expect the CASE, MaaS and DX trends will decrease individual ownership of cars and increase the number of infrastructure-related vehicles devoted to moving people and goods, effectively turning many consumer tires into commercial tires. We plan to respond by “Exploitation” of our efforts to expand sales of our high-value-added consumer tires while “Exploration” for new opportunities created by market changes in the commercial tire business.





## Consumer Tires: “Raise High-Value-Added Tire Sales Ratio”

We will focus on the three categories of ultra-high-performance tires, tires for SUVs and pickups, and winter tires, seeking to exploit sales of our ADVAN, GEOLANDAR and WINTER tire series. In doing so, we will increase the sales of ADVAN, GEOLANDAR and WINTER tires as a percentage of total sales from the current 40% to more than 50%. To do so, we have worked on the three measures shown on the right.



1. Expand OE use of ADVAN and GEOLANDAR
2. Strengthen sales in the replacement market and expand tire sizes in each brand, including winter tires
3. Strengthen sales of tires suited to local market needs, via integrated “Product & Regional Strategies”



### Progress in Fiscal 2021

We have worked to expand the fitting of our tires on new premium cars, such as ADVAN for the Mercedes AMG GLB 35 4MATIC, and GEOLANDAR for the overseas specification Toyota Land Cruiser. In the replacement market, we positioned fiscal 2021 as the “YOKOHAMA Winter Offensive,” launching WINTER tires for passenger vehicles, vans, trucks and buses, primarily in Japan and Europe. As a result, high-value-added products in fiscal 2021 accounted for 41% of sales, demonstrating growth that outpaced fiscal 2019.

## Commercial Tires: Respond to Market Changes and Further Strengthen the Business

In the commercial tire business, we pursued “Exploration” of the value we provide as a way to capture major market changes such as CASE, MaaS and DX, and worked on the four themes of cost, services, DX and product lineups. We have also worked to strengthen the off-highway tire (OHT) business and truck and bus tire (TBR) business.

### Cost Competitiveness

To meet the expected growth in demand for lower cost tires, we are positioning Yokohama India Pvt. Ltd.'s passenger car plant as the most cost-competitive passenger car plant in the Yokohama Group, as a first step in the revision of our production network with the aim of establishing a new low-cost model in tune with the tire market of the future. We also are considering using a similar low-cost model to increase output at our truck and bus tire plant in Thailand.



India PC plant

### Service

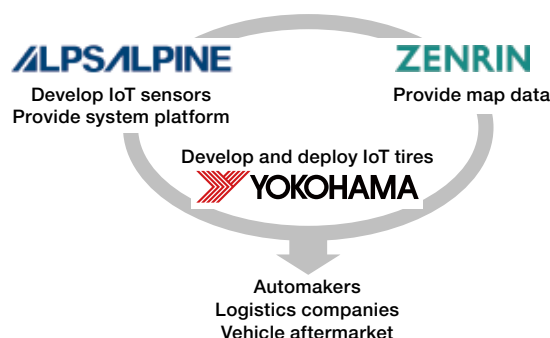
With CASE and MaaS expected to increase corporate ownership of vehicles, we believe the value demanded from tire manufacturers will expand from the tires themselves to tire-related after-sales services, including tire replacement. We already have a sales and logistics network with locations in all of Japan's 47 prefectures, and we will leverage this network to strengthen our services to corporate customers.

More specifically, we will expand our fleet of service vehicles, which we use to provide tire replacement, tire checkups and other tire management services to such corporate customers as car dealers and companies operating car-sharing businesses. Going forward, we aim to provide more flexible and mobile services.

### DX: Digital Transformation

Applying digital technologies to tires to support enhanced information services is becoming an important trend. We are developing cutting-edge sensor-equipped tires and plan to add functions to the sensors to gradually increase the services and customers that can make use of these tires.

Toward that end, we are forming alliances with companies in different industries. For example, we are working with Alps Alpine and Zenrin on a trial operation of a system that links data obtained from tire sensors equipped with a road surface detection system with map information. We are considering using this system to create a new tire-related business.

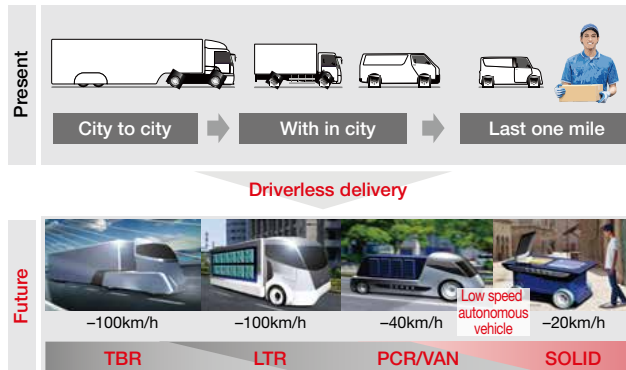


### Product Lineup

Today, deliveries are made by drivers operating a range of vehicles, from large trailer trucks to small trucks and vans. However, as vehicles become electric and self-driving, the transport of goods over long and short distances as well as the last one mile to the recipient's door could well be accomplished without drivers. The diverse lineup of vehicles to reach this in the future will need different types of tires. For example, last-mile vehicles may be fitted with puncture-resistant tires.

One of our strengths is being one of the few tire manufacturers that has a full lineup of tires, from truck and bus tires to airless resilient tires, which will be required by the expected change in the types of vehicles used to distribute goods in the future. Also, we will continue to broaden our product lineup to further strengthen this competitive advantage.

### Expected transformation of vehicles used in each stage of the distribution process

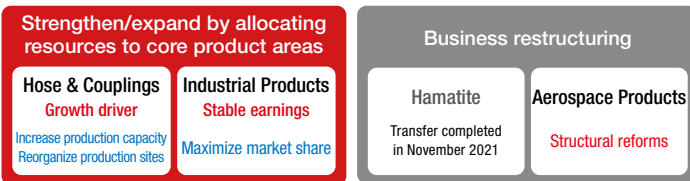


#### Progress in Fiscal 2021

As DX initiatives, we have been supporting the transportation business with TMS (Tire Management System) and validating our business model through demonstrative testing of the Tire air Pressure Remote access System (TPRS) for passenger cars. We have been collecting and analyzing data obtained through these initiatives to expand our services. On the product front, we will advance the development of sensor tires while strengthening our service network for customers who require tire services.

## MB Business: “Shift Portfolio to Products with Highly Stable Earnings and Strong Growth Potential”

We will solidify the MB segment's ability to generate stable earnings by concentrating resources in its two core product areas—Hose & Couplings and Industrial Products. We will improve the Hamatite business by focusing on its core product areas. In the Aerospace Products business, we will make structural reforms targeted at bringing the business more in line with today's market.



#### Progress in Fiscal 2021

In the Hose & Couplings business, we will make capital investments to triple the production capacity of our plants in China. In the Industrial Products business, we have consolidated our marine hose production bases in Hiratsuka and Indonesia to strengthen and expand our business by focusing our resources. In November 2021, the Hamatite business was transferred to Sika AG and made steady progress on business restructuring.

## Strengthening Management Foundations: “Human Resources Strategy” and “ESG Initiatives”

### Human Resources Strategy

Personnel system reforms will strengthen management and administration at all levels, build a stronger organization and promote workstyle reforms.

### ESG Initiatives

We engage in ESG initiatives under the slogan of “Caring for the Future.” In addition to eco-friendly products and carbon neutrality initiatives, we are also working on activities to support local communities, the strengthening of corporate governance and the development of comfortable workplaces.



Ultra-lightweight concept tire



Hydrogen filling hose



YOKOHAMA Forever Forest tree-planting activities

#### Progress in Fiscal 2021

As part of our human resources strategy, we are looking to expand the ratio of performance-linked remuneration for job-typed managers and appointed talented young human resources to managerial positions at an early stage. With the integration of the head office and Hiratsuka scheduled for completion in March 2023, we aim to achieve speedy decision making by unifying production, sales, technology and logistics sites, and also promote workstyle reforms.

As part of ESG initiatives, we established medium-to-long-term environmental targets. In terms of carbon neutrality, we will reduce CO<sub>2</sub> emissions by 38% compared with fiscal 2013 levels by 2030, and achieve net zero CO<sub>2</sub> emissions by 2050. With regard to the circular economy, we will achieve at least 30% renewable/recycled raw material usage by 2030, and aim for 100% sustainable raw materials by 2050.

# Risks and Opportunities in Sustainability Management

Materiality (Important Issues)	Issues to Be Recognized
 <div data-bbox="343 526 486 593">   </div> <p data-bbox="343 638 486 672"><b>Products</b></p> <p data-bbox="343 683 638 705">Deliver fun and peace of mind.</p>	<ul data-bbox="813 515 1420 649" style="list-style-type: none"> <li>• The spread of CASE*<sup>1</sup> and MaaS*<sup>2</sup> in the automotive industry</li> <li>• Innovation through the utilization of technology</li> <li>• Increasingly diverse customer needs (cost, performance, quality, environmental and social contributions)</li> <li>• The safety and security of customers</li> </ul> <p data-bbox="813 728 1396 772"> <small>*1 CASE: An acronym for Connected, Autonomous, Shared &amp; Services, and Electric                      *2 MaaS: Mobility as a Service. A new concept of integrating various types of transportation services into one and providing them to users</small> </p>
 <div data-bbox="343 851 710 918">      </div> <p data-bbox="343 963 486 996"><b>The Earth</b></p> <p data-bbox="343 1008 702 1064">Leave a sound environment to future generations.</p>	<ul data-bbox="813 884 1396 1041" style="list-style-type: none"> <li>• Climate change issues</li> <li>• Achieving carbon neutrality</li> <li>• Promoting a circular economy</li> <li>• Preserving biodiversity</li> <li>• Sustainable use and management of natural resources</li> <li>• Prevention of pollution and chemical substance management</li> </ul>
 <div data-bbox="343 1176 638 1243">     </div> <p data-bbox="343 1288 454 1321"><b>People</b></p> <p data-bbox="343 1332 646 1355">Build on each other's strengths.</p>	<ul data-bbox="813 1220 1117 1355" style="list-style-type: none"> <li>• Respect for human rights</li> <li>• Diversity &amp; inclusion</li> <li>• Workstyle reforms</li> <li>• Human resources development</li> <li>• Occupational health and safety</li> </ul>
 <div data-bbox="343 1500 710 1568">      </div> <p data-bbox="343 1612 518 1646"><b>Community</b></p> <p data-bbox="343 1657 710 1680">Earn the confidence of our neighbors.</p>	<ul data-bbox="813 1523 1412 1702" style="list-style-type: none"> <li>• Regional environmental issues, such as water and air pollution, and environmental destruction</li> <li>• Regional social issues such as respecting the land rights of indigenous peoples, human rights violations, disasters, healthcare, trading irregularities and conflict minerals</li> <li>• Revitalizing local communities, creating economic effects</li> <li>• Communication with local communities</li> </ul>
 <div data-bbox="343 1825 566 1892">    </div> <p data-bbox="343 1937 694 1971"><b>Corporate Governance</b></p> <p data-bbox="343 1982 678 2038">Lay a solid foundation for fulfilling social expectations.</p>	<ul data-bbox="813 1859 1420 2016" style="list-style-type: none"> <li>• Maintenance and strengthening of foundation for proper organizational governance</li> <li>• Sustainable improvement of corporate value</li> <li>• Effectiveness and diversity of meeting bodies such as the Board of Directors and committees</li> <li>• Dialogue with stakeholders and disclosures</li> </ul>

While environmental destruction and social issues pose significant risks to business continuity, working to solve social issues can also lead to new business opportunities. Yokohama Rubber is aware of the risks and opportunities in sustainability and wishes to contribute to the richness of the earth and society through our business activities.

Medium- and Long-Term Business Risks and Opportunities		Yokohama Rubber's Initiatives and Vision
<p><b>Risks</b></p> <ul style="list-style-type: none"> <li>● Risk of accidents and lawsuits due to poor product safety, recalls and damage to brand value</li> <li>● Decline in product demand due to changing customer needs</li> <li>● Decrease in demand for winter tires due to decrease in snowfall</li> <li>● Sharp rise in resource prices</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● New business opportunities through adapting to CASE and MaaS</li> <li>● Responding to changing customer needs and stricter regulations at an early stage</li> <li>● Improvements in competitiveness and profitability through reuse and recycling</li> </ul>		<ul style="list-style-type: none"> <li>● Manufacture and sale of tires and industrial materials with high levels of safety, quality and environmental performance</li> <li>● Manufacture and sale of carbon neutral products</li> <li>● Development of biomass rubber and promotion of retread tires</li> <li>● Development of products and services that utilize AI and IoT technologies (wear detection, road surface detection, tire management, damage prediction)</li> <li>● Manufacturing and selling tires for industrial and construction vehicles that support social infrastructure, agriculture and forestry machinery that contribute to sustainable production in the agriculture and forestry industry</li> <li>● Manufacturing and selling industrial products that contribute to greenhouse gas reduction</li> </ul>
<p><b>Risks</b></p> <ul style="list-style-type: none"> <li>● Environmental laws and regulations and litigation risks</li> <li>● Impact on climate change and air pollution, increase in energy costs</li> <li>● Environmental impact of waste and emissions</li> <li>● Depletion and shortage of water resources</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● Reduction of energy costs by improving manufacturing process efficiency</li> <li>● Reduction of resource price fluctuation risks and improvements in operational efficiency through reuse and recycling</li> <li>● Reduction of environmental protection costs</li> </ul>		<ul style="list-style-type: none"> <li>● Achieve carbon neutrality in Yokohama activities by 2050</li> <li>● Sustainable material usage rate of 100% by 2050</li> <li>● Reach 1.3 million cumulative trees planted in YOKOHAMA Forever Forest Activities by 2030</li> <li>● Sustainable natural rubber procurement</li> <li>● Coexistence and shared prosperity with agroforestry farming method promotion and rubber farmers</li> <li>● Roll out activities to preserve biodiversity at production sites</li> </ul>
<p><b>Risks</b></p> <ul style="list-style-type: none"> <li>● Human rights violations in the supply chain</li> <li>● Losses and business impact due to occupational accidents, natural disasters, infectious diseases, etc.</li> <li>● Work absences due to poor mental health, lost productivity due to decreased satisfaction</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● Work style reform emphasizing diversity and lifestyles</li> <li>● Establishing traceability for the sustainable procurement of natural rubber</li> <li>● Improving skills and developing pleasant workplaces through human resources development</li> <li>● Retaining talented human resources through health and productivity management</li> </ul>		<ul style="list-style-type: none"> <li>● Prevent and mitigate the risk of human rights abuses through human rights due diligence</li> <li>● Implementation of procurement in accordance with CSR procurement guidelines</li> <li>● Strengthening activities in the Diversity Promotion Taskforce</li> <li>● Expanding system for flexible workstyles</li> <li>● Developing and selecting value-added human resources</li> <li>● Strengthening of safety and disaster preparedness initiatives</li> <li>● Health management initiatives</li> </ul>
<p><b>Risks</b></p> <ul style="list-style-type: none"> <li>● Local community opposition to operations due to the environmental impact of waste and emissions</li> <li>● Risk of legal action and reputational risks due to social issues such as human rights violations occurring</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● Revitalization of local communities by solving environmental and social issues</li> <li>● Contributing to economic development by creating jobs in local communities</li> <li>● Provision of products and services tailored to changes to mobility services in the era of an aging population, depopulated areas and the new normal</li> </ul>		<ul style="list-style-type: none"> <li>● Supporting biodiversity conservation activities, health-care and education in local communities</li> <li>● Disaster prevention and disaster relief activities in local communities</li> <li>● Collaboration with the YOKOHAMA Magokoro Fund and NPOs</li> <li>● Implementation of procurement in accordance with CSR procurement guidelines</li> <li>● Creation of employment in regions where our business is developed</li> </ul>
<p><b>Risks</b></p> <ul style="list-style-type: none"> <li>● Compliance with laws and regulations, responding to systemic changes</li> <li>● Social demands to strengthen corporate governance</li> <li>● Violations of antitrust laws, bribery, price cartels, export controls, etc.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● Practicing offensive management to enhance corporate value</li> <li>● Strengthening the risk management system</li> </ul>		<ul style="list-style-type: none"> <li>● Clarifying commitment to business plans through medium-term performance-linked compensation scheme</li> <li>● Diverse executive personnel with the skills necessary for management strategy</li> <li>● Strengthening the governance system</li> <li>● Strengthening business continuity plans (BCPs)</li> <li>● Developing systems to promote compliance</li> </ul>