



**GD 2020**

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Grand Design 2020 Medium-Term Management Plan

February 19, 2018  
The Yokohama Rubber Co., Ltd.

Good afternoon. Thank you for your interest in our company, in our recent performance, and in our direction. I will take this opportunity, to outline our new medium-term management plan, Grand Design 2020 (GD2020).

Grand Design 2020  
Medium-Term Management Plan



Themes  
for Today's  
Presentation

1. Our Second Century
2. GD100 in Review
3. The Business Environment
4. GD2020 Positioning
5. Strategy
6. Consumer Tires
7. Commercial Tires
8. MB
9. Technology
10. Branding
11. Corporate Social Responsibility
12. Human Resources
13. Corporate Governance
14. Risk Management
15. Finance
16. Financial Targets

Here are the main themes that I will cover in my presentation.

## Reaffirming our Founding Spirit in tackling new challenges

### The Founding Spirit

1. Production business is a social service. Its purpose is to make people's lives more convenient and enjoyable. Its aim should be to offer good, useful products at moderate prices.
2. There must be a basic commitment to delivering quality products unrivaled by those of competitors.
3. Management should adhere to the principles of fairness and consideration. The mission of a fair, honest management is to ensure capital, share the fruits of endeavor with its workers, and fulfill its responsibilities to consumers to act, in other words, rationally.
4. A company should have as few employees as possible and make the best use of the productivity of machines. This is the great secret for improving efficiency.
5. The success or failure of a business depends on how much one is willing to study, and with how much determination, to mutually improve and grow. Accordingly, one must make a great effort.

We at Yokohama marked our corporate centennial last year. We continue to cherish the founding spirit implicit in the Suekichi Nakagawa, who played a central role in founding our company.

As you can see here, our founding spirit highlights the social role of manufacturing and the importance of offering superior products, of displaying fairness in management, of achieving high productivity, and of striving continuously to grow. In our 101<sup>st</sup> year, we are renewing our commitment to the basics of our business as we tackle new challenges.

## We pressed ahead with globalization and achieved steady growth during the 12 years of Grand Design 100 (GD100)

### Progress in Globalization

- Expanded networks of platforms for manufacturing, marketing, and R&D
- Expanded original equipment business
- Raised brand awareness through global marketing activities such as partnership with Chelsea FC

### Advances in environmental technologies

- Increased percentage of environmentally friendly products in product portfolio to 100%
- Launched low-rolling resistance tires in global aftermarket
- Won approvals from automakers for low-rolling resistance tires

### Expanded business portfolio

- Acquired manufacturer of tires for agricultural and forestry machinery Alliance Tire Group
- Acquired manufacturer of tires for industrial machinery Aichi Tire Industry

	2005	2017	
Net sales	¥451.9 billion	¥668.0 billion	+48%
Operating income	¥21.9 billion	¥51.9 billion	+¥30 billion
Operating profit margin	4.8%	7.8%	+3.0 points

Overseas ratios	2005	2017	
Net sales	23%	56%	+33 points
Production capacity*	21%	60%	+39 points
Original equipment sales*	0.3%	50%	+50 points

\*tire

Let's take a look back at our previous medium-term management plan, Grand Design 100 (GD100). An especially important result of that plan was progress in globalizing our operations. That has included expanding our global networks of platforms for manufacturing, for marketing, and for research and development. It also included expanding our original equipment business outside Japan. Our globalization has also included raising the visibility of the Yokohama brand worldwide. Our increased visibility has benefited from the partnership agreement that we concluded in 2015 with the English Premier League's Chelsea Football Club.

Another result of GD100 was progress in infusing our product portfolio with environmentally attentive technologies. Last year, the percentage of our products that feature environmentally friendly technologies reached 100%. And we began offering our low-rolling-resistance tires globally in the original equipment market and aftermarket.

A third result of GD100 was progress in strengthening our business portfolio. That included acquiring Alliance Tire Group, a manufacturer of tires for agricultural and forestry machinery, in two thousand sixteen. It also included acquiring Aichi Tire Industry, a manufacturer of tires for industrial equipment, in two thousand seventeen. Those moves have helped increase the percentage of commercial tires in our total sales. Our net sales increased 48% under GD100. Our operating income increased by ¥30 billion. Our operating profit margin rose three points.

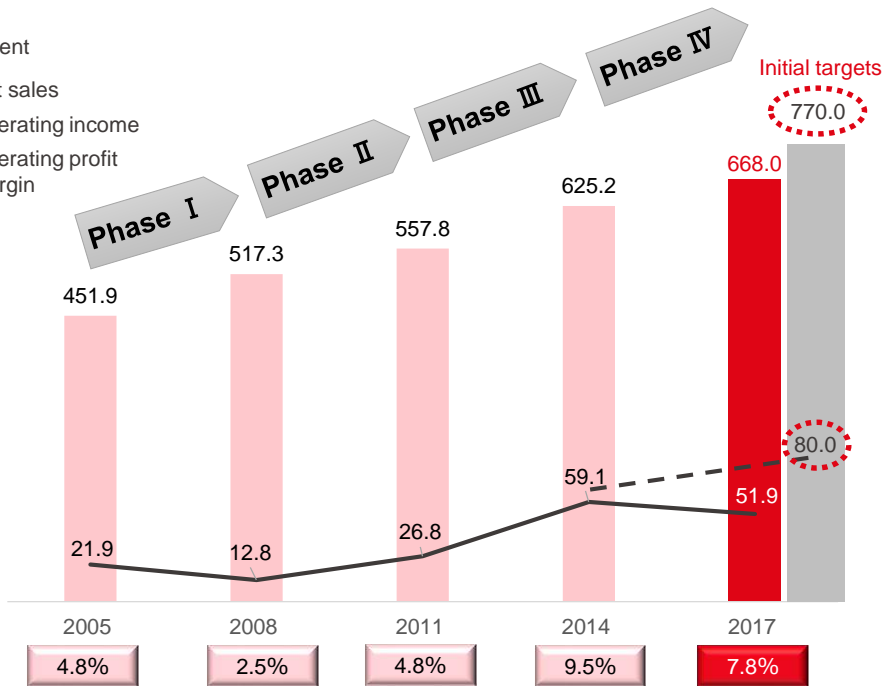
Meanwhile, the overseas weighting has increased in each principal indicator. That verifies the strides that we have taken in globalizing our operations.

# GD100 in Review (cont'd.)

We achieved steady growth despite falling short of our initial targets

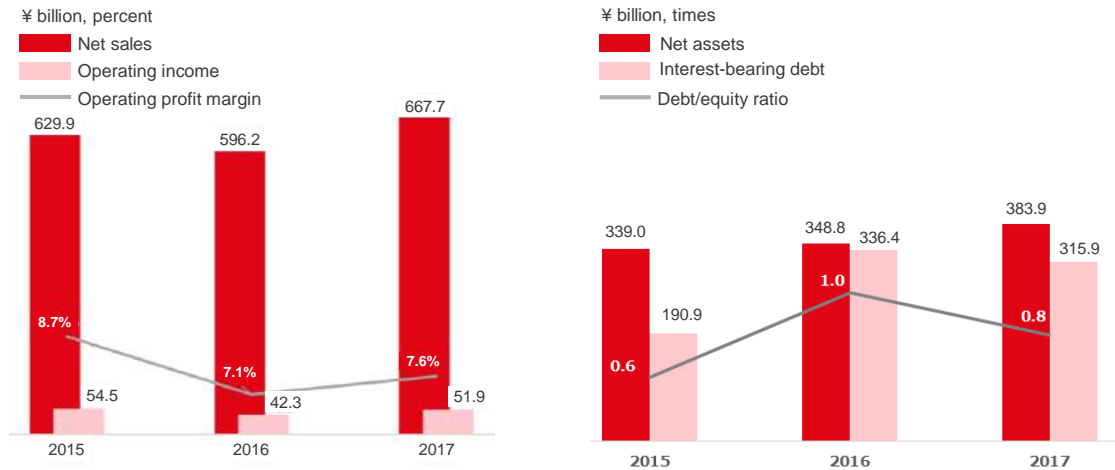
¥ billion, percent

- Net sales
- Operating income
- Operating profit margin



Despite the generally positive growth trends, we fell short of our overall targets for GD100. As we announced earlier, our net sales in two thousand seventeen totaled ¥668.0 billion, and our operating income totaled ¥51.9 billion. Those totals were short of our GD100 targets of ¥770 billion for net sales and ¥80 billion for operating income.

## Escalating price competition and surging investment depressed earnings and increased debt



### Challenges for GD2020

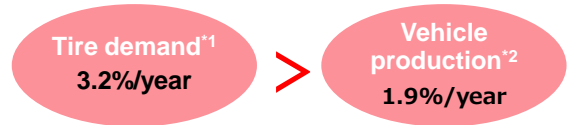
- Improve product mix by concentrating on value-added products
- Secure sound returns on the capital spending and acquisitions of Phase IV
- Strengthen our financial position

Growth in earnings was sluggish in Phase IV on account of escalating price competition and a surge in capital spending and corporate acquisitions. And our interest-bearing debt increased. We will strive in GD2020 to achieve improvement in those indicators. Our efforts will include working to improve our product mix by concentrating on high-value-added products, to secure sound returns on the capital spending and the corporate acquisitions that we undertook in Phase IV of GD100, and to strengthen our financial position.

## Good prospects for global growth in automobile and tire markets

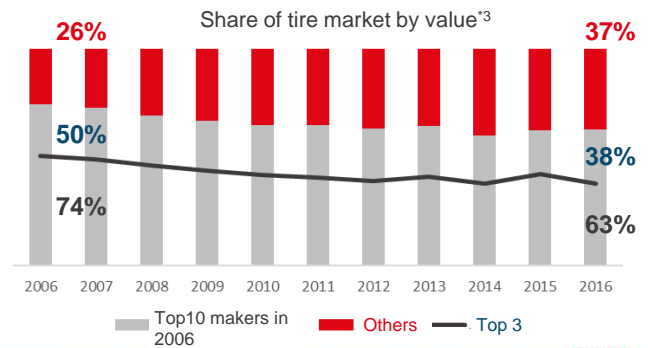
- Unit vehicle production growing 1.9%/year worldwide
- Tire demand growing 3.2%/year

Projected growth: 2016–2024



## Escalating competition in tires

- Inroads by tire makers from emerging economies and resultant decline in market share of market leaders



Sources:

1. IHS Global Light Vehicle Production Summary
2. LMC and Yokohama Rubber
3. Rubber and Plastics News

Let's next take a look at the business environment in which we operate. We expect vehicle production to continue growing worldwide, and we expect demand for tires to grow even faster. In preparing GD2020, we have assumed the rates of growth that you see here: 1.9% a year in unit vehicle production and 3.2% annually in tire demand.

Competition will escalate in our industry, however, as tire makers in emerging economies increase production. And the market share of the industry leaders will decline in terms of value.

# GD2020 Positioning

GD 2020

Fortify our business foundation by redefining **Yokohama strengths** and deploying growth strategy through **original approaches**



2006–2017

2018

2019

2020

2021–

YOKOHAMA

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As our new medium-term management plan, GD2020 presents a framework for addressing the challenges and opportunities that we face. It calls for fortifying our business foundation by redefining Yokohama strengths and by deploying a growth strategy based on original approaches. We are counting on that framework to support new strides for our company in the decade of the 2020s.



## Growth measures

### Consumer Tires

Expand our presence in the premium tire markets

### Commercial Tires

Make commercial tires a pillar of revenue driven by OHT\*

### MB (Multiple Business)

Allocate resources on a priority basis to business fields of strength

## Business foundation

- Strengthen our financial position by reducing debt and idle assets
- Revitalize our corporate culture through human resources measures
- Minimize corporate risk through systematic risk management

\*Off-Highway Tire (an inclusive term for tires used on agricultural machinery, construction machinery, industrial machinery and forestry machinery)

Here is an overview of our strategy for redefining Yokohama strengths and translating them into growth and for buttressing our business foundation. Our strategy in consumer tires includes working to expand our presence in the market for premium-grade tires. We envision commercial tires, meanwhile, as a pillar of sales and earnings in our second century, and we are positioning off-highway tires as a pillar of that growth. Our strategy in MB operations calls for allocating resources on a priority basis to sectors of strength.

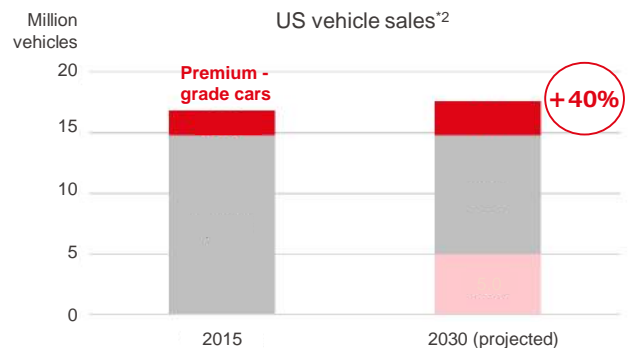
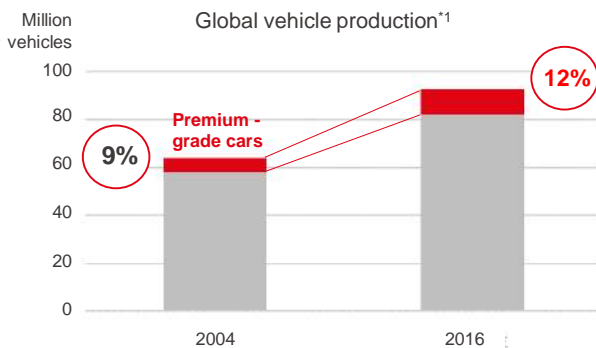
In addition, GD2020 presents three priority emphases for fortifying our business foundation. Those emphases are as follows: One, strengthen our financial position by reducing interest-bearing debt and idle assets. Two, revitalize our corporate culture through human resources measures for energizing our organization. And three, minimize corporate risk through systematic management.

Automotive demand is polarizing between premium and commodity vehicles

## The automotive industry is in midst of profound change

- Electrification, autonomous technologies, sharing economy
- Commoditization

## The premium car market is outpacing overall demand



\*Sources: 1. Marklines Co., Ltd., and Yokohama Rubber  
2. Roland Berger Ltd.



I'll start with our growth strategy in consumer tires. We contend in that sector with the profound change that is transforming the automobile industry. That change includes the rapid progress underway in electrification, in autonomous technologies, and in the sharing economy. Those trends are highlighting the role of cars as a means of transport, rather than as physical possessions. They are thereby spurring the commoditization of the automobile.

On the other hand, premium-grade cars account for a growing share of vehicle production. Their share of unit production increased from 9% in 2004 to 12% in 2016. Survey findings suggest that unit sales of premium-grade cars in the United States will increase some 40% by 2030, compared with 2015. So we have a polarization between the commoditization underway at one end of the market and growth in demand for premium-grade cars at the other end.

## Expand our presence in premium tire markets

- Introduce high-performance tires aggressively in every category
- Step up consumer communication

### 1. Premium car tires

Become a “go to” tire maker for high-end quality and technology



### 2. Winter tires

Assert performance leadership in winter tires in Japan, Europe, and Russia



### 3. Hobby tires

Build a product line that serves the diverse needs of car enthusiasts



### 4. Consumer communication

Help consumers get more out of motoring lifestyles



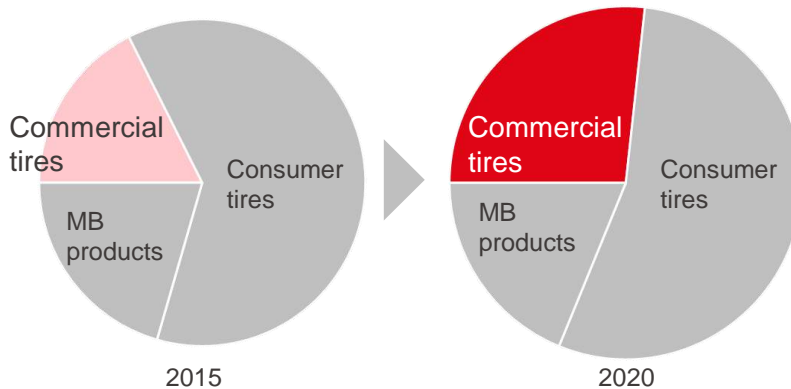
Our emphasis in consumer tires on premium-grade products is thus a matter of focusing on a growth sector. We are addressing that emphasis in four ways. One, we are working to position our company as a “go to” tire maker for high-end quality and technology. Two, we are working to build leadership in performance in winter tires and to assert that leadership in studless snow tires for Japan, studded snow tires for Northern Europe and Russia, and in winter tires for other European nations.

Three, we are working to build a product line that serves the diverse needs of car enthusiasts, including racing, rallying, off-road driving, and classic car enjoyment. And four, we are stepping up our customer communication to help customers get more out of their motoring lifestyles.

## Foster off-highway tires as a driver of growth

- Make the most of our strengthened product portfolio
- Use ATG's cost competitiveness to expand business in agricultural tires
- Hone our competitive edge further in special-application tires

### Position commercial tires as a pillar of growth



We are underpinning our strategy in commercial tires with measures for positioning off-highway tires as a driver of growth. That has included acquiring Alliance Tire Group, which manufactures tires for agricultural and forestry machinery, and Aichi Tire Industry, which manufactures tires for industrial machinery. Those acquisitions and our established business in tires for construction machinery give us a solid platform for broad-ranging growth in off-highway tires. Alliance Tire Group's Indian plants provide a compelling edge in cost competitiveness, and we will make the most of that edge in working to expand sales. We will also continue working to build on our position in special-application tires where we assert special strengths. We are counting on these and other efforts to help increase the weighting of commercial tires in our sales portfolio and to position commercial tires as a pillar of growth in our second century.

## Build on our North American business platform to expand our presence in truck and bus tires

- Use state-of-the-art plant to expand North American business with superior quality and flexible supply ability
- Aggressively deploy ultra wide base tires that employ our patented SpiraLoop® technology

### Mississippi plant for truck and bus tires



Maximum production capacity: 1 million tires/year



State-of-the-art systems for superior production efficiency and product quality

### The advantages of the ultra wide base tire

Replacing dual tires with a single tire reduces vehicle weight by reducing tire weight and by permitting more space-efficient vehicle configurations



In truck and bus tires, we will use our new production platform in North America to fuel growth. Our state-of-the-art plant in Mississippi strengthens our position in regard to high-quality products and flexible supply capabilities. It has greatly upgraded our capacity for serving the huge North American market.

We are bolstering our product line in truck and bus tires by promoting ultra wide base single tires that employ our patented SpiraLoop technology. Replacing dual tires with a single tire reduces vehicle weight and improves fuel economy by reducing tire weight. It accommodates larger cargoes, meanwhile, by permitting more space-efficient vehicle configurations.

Allocate resources on a priority basis to business fields of strength

**Expand our components business in the growing automotive industry**

- Invest in global business expansion
- Respond to changing business environment

**Main automotive components**

Hose assemblies for power steering systems, transmission oil coolers, turbochargers, and air-conditioners and sealants for windshields and lamps



**Assert strong leadership in marine products**

- Integrate production and marketing networks worldwide
- Translate original technologies into products



Let us turn now to our MB operations. Our strategy in this segment calls for allocating resources to sectors where we assert a competitive edge. It centers on expanding business in automotive components and asserting strong leadership in marine products.

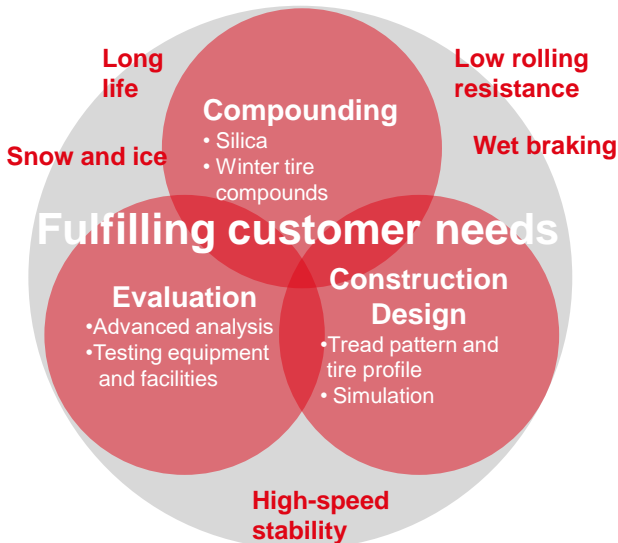
Automotive components are a sector that promises lasting growth in demand. Our business in that sector spans a growing global presence in supplying hoses for power steering systems, for transmission oil coolers, and for air-conditioning systems and supplying windshield sealants. We continue to expand that presence through the manufacturing and marketing platforms that we have built around the world. And we continue developing next-generation technologies to ensure lasting growth for our automotive components business in a fast-evolving industry.

In marine products, we marshal highly regarded technology in marine hoses for offloading oil and in pneumatic fenders for buffering contact between vessels. We will make the most of our production platforms in Japan, Indonesia, and Italy to help assert strong leadership in this product sector. And we will translate original technologies into products for supporting ever-safer logistics in distributing oil.

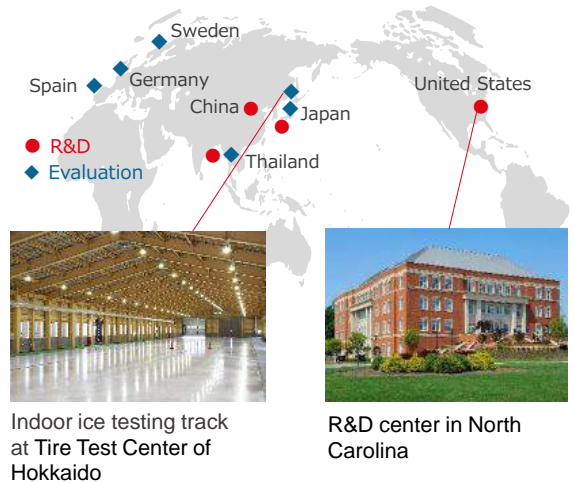


Deliver superior performance and quality through original technologies and through a global R&D network

## Technologies for controlling physical properties



## Global R&D Network



\*including contracted facilities

Our technology strategy provides for leveraging Yokohama strengths in controlling physical properties and a global network of R&D and evaluation platforms. Managing physical properties involves addressing interactions in a multidimensional context. We combine our materials technology with advanced capabilities in evaluation and in design to fulfill customer expectations for such criteria as long life, snow and ice performance, low rolling resistance, wet-surface performance, and high-speed handling.

Our global network of R&D and evaluation platforms gained an important addition this year. In Japan, we installed an indoor ice testing facility at our Tire Test Center of Hokkaido, in Asahikawa. The new facility allows for testing performance on ice under controlled conditions, and it has greatly augmented our product-development capabilities in winter tires. Two years ago, we augmented our global R&D capabilities with a new R&D center in North Carolina.

Distinctive strengths in controlling physical properties and a growing global network of R&D and evaluation platforms thus support a continuing flow of products that feature superior performance and superior quality. Those strengths underlie our GD2020 strategy for each product sector.

## Products born of original technology

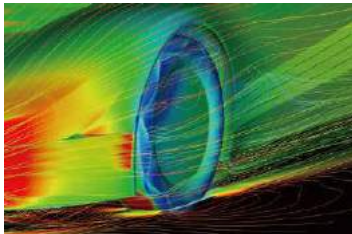
**ADVAN**  
*Sport* V105

Approved by  
BMW on M5



**Fin tire (prototype)**

Reducing air drag and vehicle lift



**iceGUARD** IG60 **6**

Best on snow, ice,  
and wet surfaces



**GEOLANDAR**  
*X-MT*

Extreme off-road  
performance and design



**HAMAHEAT**

A conveyor belt of world-class heat  
resistance



**Ultralarge floating fender**

The world's largest floating pneumatic  
fender for ensuring safety in offshore  
offloading operations



**PRGR**

Original head design to  
maximize initial head speed



Let me introduce some distinctive products based on original Yokohama technology. BMW approved our ADVAN Sport on its M5 model. Our iceGUARD 6 snow tire features unprecedented studless performance. Meanwhile, our GEOLANDAR X-MT features superior off-road performance.

Technological advances underlie the competitiveness of our marine products, too. A good example is the world's largest floating pneumatic fender, which helps ensure safety in offshore offloading operations.

Our development pipeline bodes well for continued product advances. Products under development include a fin tire for reducing air resistance and a conveyor belt of world-class heat resistance.

We also continue to deploy new technologies in our PRGR line of golf equipment. The PRGR line has won allegiance in the golfing community with original product concepts and superior performance since it debuted in 1983.



Hone our competitive edge in the vanguard of tire technology through participation in motor sports

**SUPER GT GT500 : Supplying tires for cars from all three participating automakers**



**SUPER GT GT300 : Series champions in 2016 and 2017**



**SUPER FORMULA series: Control tire supplier with 2 specifications**



**WTCR: Control tire supplier for 2018-2019**



2018 WTCR races in 9 nations

Participating in motor sports is a valuable opportunity for honing our competitive edge in the vanguard of tire technology. We supplied tires last year for cars from all three automakers in the GT 500 class in Japan's Super GT racing series. In the GT 300 class, teams equipped with Yokohama tires won the season championship in each of the past two years. We are the exclusive tire supplier for Japan's Super Formula Championship racing series, and we will supply tires in two sets of specifications for each Super Formula Championship race this year.

On the global stage, we were the exclusive tire supplier for World Touring Car Championship racing from 2006 to last year. And we will remain the exclusive tire supplier for the series this year under its new name, World Touring Car Cup.

Our commitment to motor sports is a lasting commitment. And we look forward to honing our technological edge further through competition on racetracks worldwide.

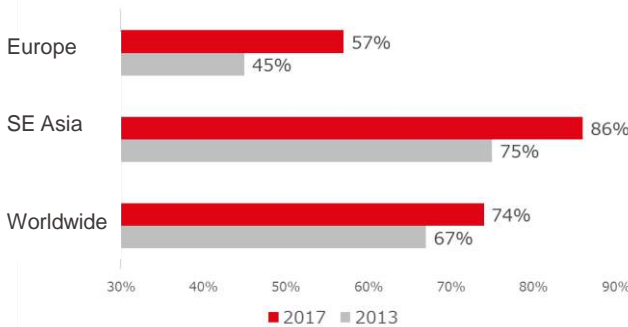
## Strengthen the Yokohama brand worldwide

### Shirt sponsor for Chelsea FC

- Global exposure for “YOKOHAMA TYRES” on Chelsea jerseys
- Sharing our dynamism through digital media, such as Facebook

#### Brand Recognition

#### Rising worldwide, especially in Europe and Southeast Asia\*



\*Source: Yokohama Rubber

#### Chelsea FC jerseys emblazoned with “Yokohama Tyres”



#### Popular video streaming worldwide



Left: Collaboration with Dude Perfect (more than 18 million views)  
 Right: #Push the Limit short movies in 12 languages (more than 16 million views)



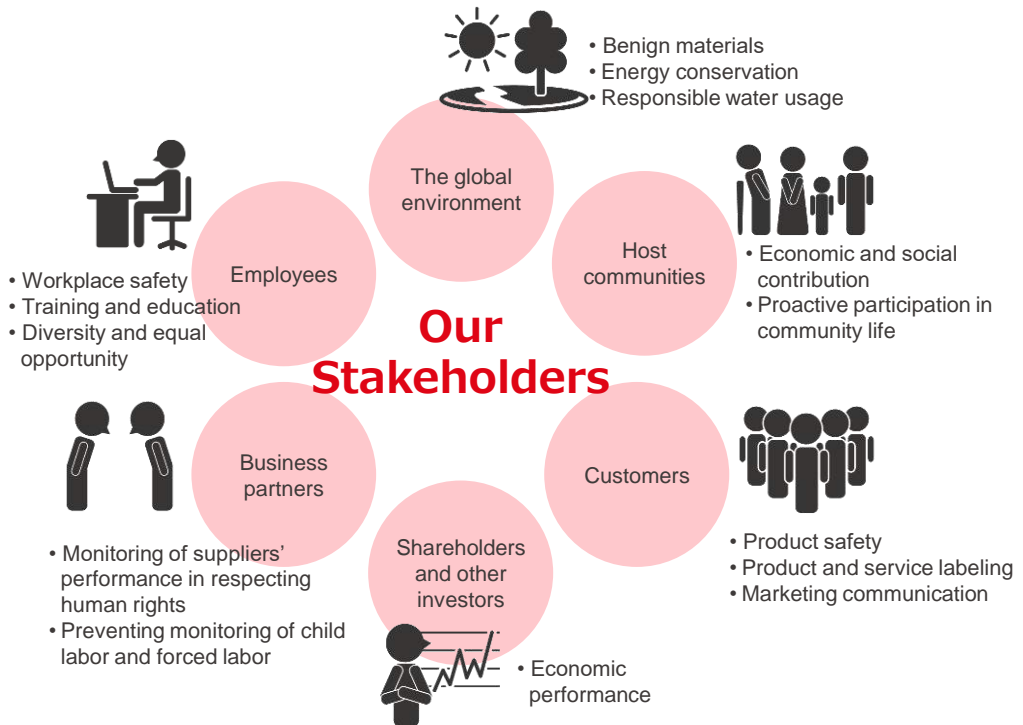
Branding is a strategic emphasis that we will address worldwide under GD2020. A highlight of our global branding is a partnership agreement concluded in 2015 with the Chelsea Football Club, of the English Premier League. The agreement spans five years and provides for displaying “Yokohama Tyres” on the chests of the team’s jerseys. That has earned high visibility for our brand name through the extensive media coverage of the Chelsea Football Club, and it has raised our profile greatly in Europe, in Southeast Asia, and in other regions.

The chest placement that we have secured on uniforms in a major European sports league is rare among tire manufacturers, and we will make the most of that asset in our branding strategy. That will include fostering a dynamic identity for our company through effective promotion on Facebook and other social networking services.

# Corporate Social Responsibility (CSR)

GD 2020

Generate value for all our shareholders under GD2020



We focus on six categories of stakeholders in managing our efforts for fulfilling our corporate social responsibility. You see those categories here: the global environment, host communities, customers, shareholders and other investors, partners, and employees. We will continue to serve those stakeholders through diverse initiatives under GD2020. Today, I will describe some examples of initiatives that we are undertaking in connection with environmental stewardship and community engagement.

## The global environment

- Make all our products environmentally friendly
- Reduce output of greenhouse gases
- Use water resources responsibly
- Preserve biodiversity

**Achieved 100% environmentally friendly ratio in product portfolio in 2017\***

**BluEarth-air**  
E21



An advanced-concept tire that incorporates state-of-the-art technology for reducing tire weight



Ongoing improvement of hoses that support next-generation air-conditioning refrigerant

## Host communities

Foster dialog with our host communities and take part in promoting community development



A public-interest initiative in conjunction with our Chelsea FC partnership: a football clinic for youths in New York



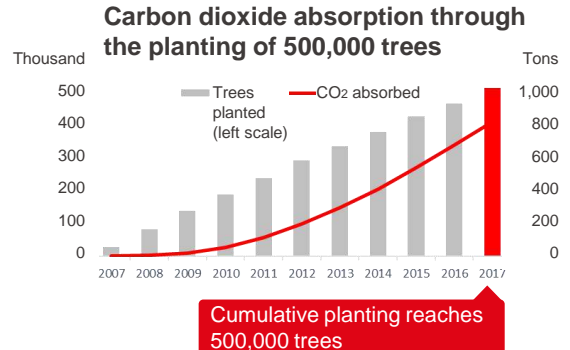
An eco-themed hands-on event at our Hiratsuka Factory—part of our commitment to interacting with our host communities

Our goals for GD100 included increasing the percentage of environmentally friendly products in our product portfolio to 100%. And we achieved that goal last year. Community engagement is another important part of our work in fulfilling our corporate social responsibility. And we undertake diverse initiatives for fostering dialog with our host communities and for promoting community development.

## YOKOHAMA The Forever Forest: Eleven Years of progress

### Basic approach

- Start with preparing soil and gathering seeds at the hands of employees
- Plant trees of mixed species native to region\*
- Achieved initial goal of planting 500,000 trees in 2017



### Lifesaving sylvan barriers

Use the know-how accumulated through the Yokohama Forever Forest project in building lifesaving sylvan barriers on the coast in an earthquake-prone region (*photo: planting in Otsuchi-cho, Iwate Prefecture*)



\*Miyawaki Method



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GD100 called for us to become a leader in environmental stewardship. An especially noteworthy project for tackling that goal has been the Yokohama Forever Forest. We launched that project in 2007 with the target of planting 500,000 trees by 2017.

The Yokohama Forever Forest project has mobilized employees, their family members, and neighbors of all ages in the community. They grow saplings from seeds and plant the saplings at sites around Yokohama operations worldwide. This project exemplifies the commitment to bettering the world that is fundamental to the Yokohama corporate culture. That is a commitment that we carry on in our second century. We carry it on, for example, in a spinoff project of the Yokohama Forever Forest.

In our new project, we are planting lifesaving sylvan barriers on the coast in the earthquake-prone Tohoku community of Otsuchi-cho in Iwate prefecture. We will continue working to maximize our contribution to environmental and social sustainability through such undertakings.



## Revitalize our organization through human resource initiatives

- Adopt work reforms proposed by Japanese government
- Employ diverse human resources
- Conduct thorough training



**A newly established task force that is enriching opportunity for women in the workplace**



Introduce a work-at-home option and other measures for supporting employees in caring for young children and elderly parents (*photo: task force members*)

**A contract with Prop Station to create job opportunities for persons with disabilities**

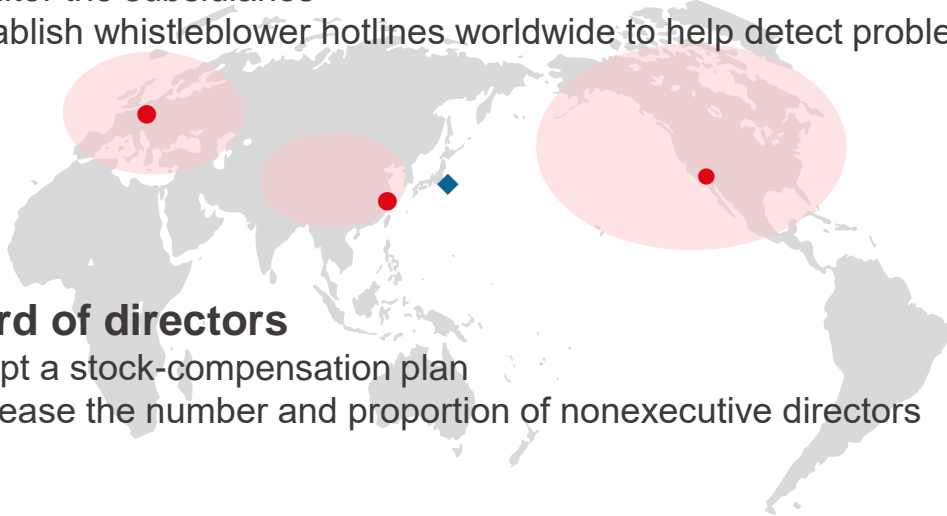


An initiative for providing disabled individuals with work they can do at home (*photo: disabled young people who attended a Prop station seminar to learn about vocational opportunities*)

In human resources management, we are working to revitalize our organization by training and mobilizing human resources effectively. We established a task force two years ago identify ways of promoting fuller participation by women in the workplace. That initiative was in keeping with new Japanese legislation. And it has included studying ways to permit employees to work at home as necessary to care for young children and elderly parents. In another human resources initiative, we have contracted with the nonprofit organization Prop Station to provide fulfilling employment to persons with disabilities.

## Global scope

- Position our regional management companies as holding companies to strengthen governance at subsidiaries
- Appoint internal auditors at the regional management companies to monitor the subsidiaries
- Establish whistleblower hotlines worldwide to help detect problems early



## Board of directors

- Adopt a stock-compensation plan
- Increase the number and proportion of nonexecutive directors

We will upgrade our corporate governance globally by positioning our regional management companies as holding companies and by exercising strengthened governance at our subsidiaries through those companies. That will include appointing internal auditors at the regional management companies to monitor the subsidiaries. It will also include setting up whistleblower hotlines worldwide to help detect problems early and to prevent small problems from escalating.

We will also upgrade corporate governance by making changes in director compensation and in the composition of the board of directors. As of this year, directors will receive part of their compensation in the form of shares. That is an effort to heighten sensitivity in management to the needs and expectations of our shareholders. In addition, we will change the composition of the board of directors. The change will consist of increasing the proportion of nonexecutive directors on the board.

Minimize corporate risk through systematic management



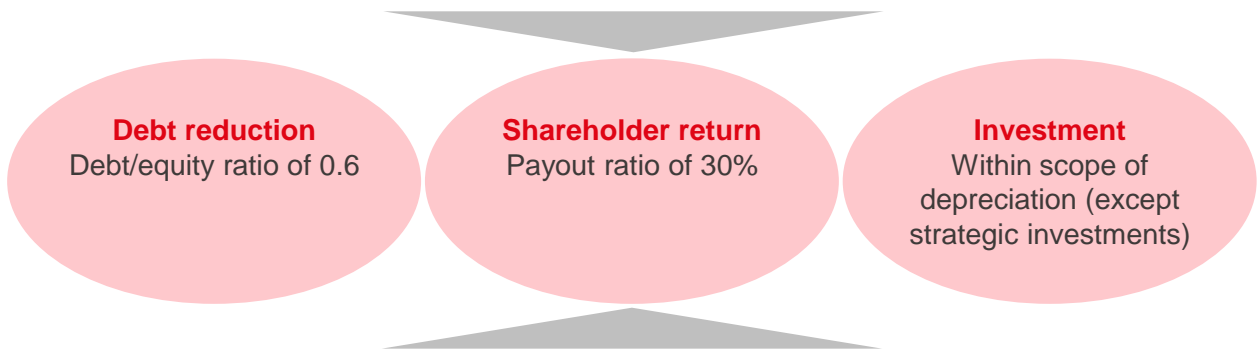
We work to minimize overall risk by managing systematically the different categories of risk that we encounter. We conduct risk management through several councils and committees, including the CSR Council, the Risk Management Committee, the Central Safety and Health Committee, and the Corporate Compliance Committee.



Fortify our financial foundation and provide sound return to shareholders by deploying our growth strategy

## Cash flow

Improve profitability through deploying growth strategy and achieve 3-year cash flow of ¥200 billion



## Fund raising

Maximize financial efficiency by conducting cash management on consolidated basis

In finance, we are counting on the growth strategy that I have explained today to raise profitability. And we hope to generate a three-year cash flow of two hundred billion yen. In addition, we will work to increase our financial efficiency by conducting cash management on a consolidated basis.

These measures will help reduce interest-bearing debt and otherwise fortify our financial position. And they will help enable us to provide sound return to shareholders. We aim to maintain a payout ratio of 30%. Investment will take place within the scope of depreciation.

# Financial Targets

Net sales	¥700 billion
Operating income and operating profit margin	¥70 billion, 10%
Debt/equity ratio	0.6
Return on equity	10%
Operating cash flow	Three-year total of ¥200 billion
Investment	Within scope of depreciation (not including strategic investments)

\*Yokohama has adopted the International Financial Reporting Standards as of 2017

Our principal financial targets are as you see here. We aim to increase net sales to ¥700 billion and operating income to ¥70 billion by 2020 and to thereby achieve an operating profit margin of 10%. We intend for our debt/equity ratio to total 0.6 at 2020 year-end, and we aim to achieve return on equity of 10% in that year.



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I hope that my remarks have provided you with a clear picture of GD2020. And I hope that you will see that we will continue to honor our founding spirit in our second century. In that spirit, our team members worldwide will work to achieve lasting growth by earning the confidence of customers everywhere. I invite your careful attention to our progress. Thank you.