





CENTRAL JAPAN RAILWAY COMPANY Integrated Report 2021



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Editorial policy

JR Central strives to enhance dialogue with many stakeholders, including shareholders and investors, in order to contribute to sustainable growth and increase corporate value over the medium to long term. The objective of this report is to deepen readers' understanding of our company's financial information and non-financial information such as business strategies and ESG information. This report is edited with reference to the ternational <IR> Framework" issued by the Internationa Integrated Reporting Council (IIRC) and the "Guidance for Collaborative Value Creation" issued by the Ministry of Economy, Trade and Industry. For ESG information, we refer to the "GRI Standrds" issued by the Global Reporting Initiative.

[Remarks regarding forecasts, etc.]

Future plans, forecast figures, etc., in this report are an outlook based on the information that is currently available to JR Central and may contain risks and uncertainty. Examples of potential risks and uncertainty include economic trends, business environment developments, consumption trends, the competition situation for JR Central and subsidiaries, and changes in relevant laws and legal provisions. This report is compiled based on information available as of the end of June 2021 in principle. In this report, figures of financial information are truncated. statistical data and all percentages are rounded. FY2020 signifies the fiscal year ended March 31, 2021

Japan's Main Transportation Artery

JR Central's mission is to undertake high-speed, large capacity passenger transport between Tokyo, Nagoya, and Osaka. "Japan's main transportation artery" refers to this passenger transport. Since the artery runs through this area of Japan, which plays an important role as the center of the country's economy and culture, it is possible that stagnancy in the main transportation artery will cause Japan's economic and societal movement in general to also stagnate. JR Central will continue to carry out its mission of managing Japan's main transportation artery today and in the future through operation of the Tokaido Shinkansen and the Chuo Shinkansen.

Social Infrastructure

On a broader perspective, JR Central also undertakes the mission of supporting the social infrastructure. That is, along with the management of Japan's main artery, we take a locally oriented approach in operating a network of conventional lines in the Tokai Region, centered on the Nagoya and Shizuoka areas, and manage affiliated business focused on the local communities, thereby supporting the people in these areas. We will remain committed to operating conventional lines while managing and further enhancing affiliated businesses.

Management Philosophy

Contribute to the development of Japan's main transportation artery and social infrastructure



JR Central's Operating Revenues Composition



*1 Consolidated operating revenues composition is based on revenue from external customers.

*2 Operating revenues and transportation revenues for FY2019 and FY2020 have decreased because of the impacts of the COVID-19 pandemic.









Includes real estate leasing business, such as station building leasing, and real estate sales in lots. Major Affiliated Companies Central Japan Railway Company IR CENTRAL BUILDING CO., LTD.

Major Affiliated Companies

Central Japan Railway Company

JR Tokai Bus Company

Includes a department store in JR Central Towers,

Major Affiliated Companies

JR Tokai Takashimaya Co., Ltd.

JR-CENTRAL PASSENGERS Co., Ltd.

Tokai Kiosk Company

retail sales in trains, stations, and others.

Includes hotels in our main stations, travel, advertising, rolling stock production, and construction which are not included in other repotable segments.

Major Affiliated Companies

JR Tokai Hotels Co.. Ltd. IR Tokai Tour JR TOKAI AGENCY CO., LTD. NIPPON SHARYO, LTD.

CHUO LINEN SUPPLY Co., Ltd. The Japan Mechanised Works and Maintenance of Wav Co., Ltd. Tokai Rolling Stock & Machinery Co., Ltd.



Japan's population and economic activity are concentrated in our market area covering the Tokyo Metropolitan area. the Nagoya region, and the Osaka region

Percentages of our market area in Japan as a whole



[Source]

JR Central's market area is calculated taking the following prefectures into account Tokyo, Kanagawa, Chiba, Saitama, Ibaraki, Shizuoka, Yamanashi, Nagano, Aichi, Mie, Gifu, Shiga, Osaka, Kyoto, Hyogo, Nara

Population: Ministry of Internal Affairs and Communications "Population, Demographics and Number of Households Derived from Basic Resident Registration" Total production by prefecture: Cabinet Office "Report on Prefectural Accounts"

Within this market, we provide overwhelming transportation capacity that is incomparable to other modes

Changes in daily transportation capacity

(Comparison between the Tokaido Shinkansen and airline transportation services operating between the Tokyo Metropolitan area and the Osaka region)



'07.3 '08.3 '09.3 '10.3 '11.3 '12.3 '13.3 '14.3 '15.3 '16.3 '17.3 '18.3 '19.3 '20.3 '21.3

*1 Tokaido Shinkansen: The number of passenger seats provided (including extra train services) on through-service "Nozomi" and "Hikari" lines operating between Tokyo Station and Shin-Osaka Station in each respective fiscal year. *2 Airlines: Calculated by JR Central based on information pertaining to specified Japanese air

carriers (Ministry of Land, Infrastructure, Transport and Tourism) for FY2006 to FY2020. *3 Numbers for FY2020 have decreased because of the impacts of the COVID-19 pandemic.

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JR Central's market area equals the economic size of major countries

Comparison with GDP of each country



* Calculated at a rate of 112.19 yen per dollar.

[Source] United Nations database, Cabinet Office "Report on Prefectural Accounts"

JR Central has established an overwhelming market share within its market area Market Share^{*1}(against Airlines)



*1 Market share is calculated by IR Central based on the Interpretectural data of the inter-Regional Passenger Mobility Survey, published by the Ministry of Land, infrastructure, Transport and Tourism for FY2019.

*2 Tokvo area: Tokvo, Kanagawa, Chiba, Saitama, Ibarak Nagoya area: Aichi, Gifu, Mie Osaka area: Osaka, Kyoto, Hyogo, Nara



* 1 Figures for the period between 88.3 and 89.3 are non-consolidated figures of JR Central as the period is before the announcement of consolidated financial results. * 2 Numbers for 20.3 and 21.3 have decreased because of the impacts of the COVID-19 pandemic

Established by the Privatization and breakup of JNR

JR Central was born on April 1, 1987, following the privatization and breakup of Japan National Railways (JNR).

JNR, the predecessor of JR Central, took over Japan's railway business, which was then a national enterprise, as a public enterprise in 1949. JNR supported the development of Japan as a means of transportation for the Japanese people, but due to poor management of the public corporation, it incurred debts of over 30 trillion yen, including the creation of new lines with unclear management responsibilities and disregard for profitability. At the same time, it fell into a serious state of being unable to respond quickly to global trends.

Under these circumstances, the "JNR reform" was an effort to review the role of the railway business operated by JNR for the future. In 1987, as part of administrative reforms, the operations of JNR were passed on to 11 succeeding corporations with the aim of carrying out sound corporate management by

privatizing and breaking up the transportation operations of JNR, rebuilding the railway business as a means of transportation for the people, and further developing it for the future.

Since the privatization and breakup of JNR. JR Central has steadily progressed as a private company, inheriting the public and social missions of JNR.



Photographs from the time of privatization "Hida #1" departure ceremony (April 1, 1987, at Nagoya Station)

Consistently Improve Transport Services on the Tokaido Shinkansen

With the inauguration of the Tokaido Shinkansen in 1964, the time required to travel between Tokyo and Osaka was shortened to 3 hours and 10 minutes (4 hours at the time of inauguration) from 6 hours and 30 minutes. Furthermore, with the introduction of the "Nozomi" in 1992, that time was shortened to 2 hours and 30 minutes.

In October 2003, the investment in rolling stock and ground facilities that we had continuously engaged in for approximately 15 years culminated with the upgrading of the maximum speed of all trains to 270 km/h and the drastic timetable revision that resulted in a maximum of seven Nozomi services operating each hour.

With the introduction of the "10 Nozomi

Timetable (operating up to 10 Nozomi services in both directions)" in 2014, and the increase in maximum speed to 285 km/h in 2015, the shortest travel time between Tokyo and Osaka has now been reduced to 2 hours and 21 minutes. With the timetable revision of March 2020, we realized the "12 Nozomi Timetable" that runs up to 12 services (1 every 5 minutes on average) per hour during busy hours. In July, we began commercial operation of the new Shinkansen rolling stock N700S, which incorporates the results of our accumulated technological development, and we are making use of the Tokaido Shinkansen even more convenient.



Ra



Net income (Loss) attributable to owners of the parent (billion yen)

Establishment of a Solid Management Base

	FY1987	FY2019	FY2020
ilway operation accidents (incidents per year)	60	17 Substantially reduced	19
Passenger volume (10,000 people per day)	27.9	45.8 1.6 x	17.4
Number of services (trains per day)	231	378 1.6 x	342
Maximum speed (km/h)	220	285 (+65km/h)	285
perating revenues (billion yen)	874.6 ^{*1}	1,844.6 2.1 x	823.5
Operating income(billion yen)	71.5 ^{*1}	656.1 9.2 x	△ 184.7
Net income attributable to wners of the parent(billion yen)	16.5 ^{*1}	397.8 24.1 x	△ 201.5
Long-term debt (trillion yen)	5.5 ^{*2}	1.8 *3 -3.6 trillion yen	1.9 ^{*3}

*1 Non-consolidated figures *2 Figures for FY1991 *3 Excluding long-term debt for the Chuo Shinkansen

Creating a positive cycle of "ESG Management" guided by a clear management philosophy

"ESG Management" is becoming more and more important these days. This is a management style where a company grows by simultaneously generating "economic value" such as profits and cash flows, and by creating "social value" such as the realization of a sustainable and prosperous society. That's what I perceive. In light of the aforementioned understanding, we have been practicing "ESG Management" based on its management philosophy of "Contribute to the development of Japan's main transportation artery and social infrastructure" while simultaneously generating "economic value" and creating "social value" with solid governance where JR Central establishes a corporate culture that places the highest priority on safety, ensure's the soundness of management, and pursues long-term development to increase the trust of all stakeholders.

Specifically, on the Tokaido Shinkansen, the main transportation artery of Japan as well as conventional lines in the Tokai region, punctual and comfortable railway transportation services have been thoroughly refined with safety as the top priority. At the same time, we have been tirelessly developing highly synergistic affiliated businesses with railway business, working to reduce costs and improve efficiency, and steadily increasing revenues and profits to secure cash flows, generating "economic value."

The Tokaido Shinkansen service grew 38% in terms of transportation revenues from FY2002, before the opening of Shinagawa Station, to FY2018, before the COVID-19 pandemic. This was especially due to the opening of Shinagawa Station and the shift to a Nozomi-centered schedule, a further improvement in the transportation service of the Tokaido Shinkansen, and the subsequent extra Nozomi trains and the maximum speed to 285 km/h. This is much higher than the 14% real GDP growth rate for the same period, and as a result, our consolidated operating cash flows have grown by 57% during the period.

At the same time, we consider it important to pursue safe, punctual and comfortable services in our business activities centered on the mainstay Tokaido Shinkansen. In so doing, we are contributing to the realization of a more comfortable society and the development of local communities.

Reinforcement of earning power

In the midst of the COVID-19 disaster that has been continuing since last year, the JR Central Group has experienced substantial financial damage. Against this background, we are fulfilling the mission as a transportation service operator for those who need JR Central's transportation while preventing the spread of infection. We are also striving for efficient operations. However, profits are declining due to a decrease in the number of passengers, and the ability to generate economic value is temporarily impaired. As such, we must make great efforts to overcome this hardship.

The situation, in which contact between people has been significantly restricted due to the spread of COVID-19, will be expected to run its course as everyone is vaccinated and treatment drugs are developed. However, the changes that have emerged during the COVID-19 pandemic, including greater use of telework, web conferencing, etc. and a major shift of travel reservations to online channels, will remain even after the outbreak runs its course, provided they are reasonable. Undoubtedly, COVID-19 has accelerated these kinds of changes. JR Central will face these changes squarely in order to recover from the damage incurred amid the pandemic through its own

Business Strategy TOP MESSAGE

President and Representative Director

Shin Kaneko

"Contribute to the development of Japan's main transportation artery and social infrastructure." COVID-19 has brought about a challenging business environment, but our mission remains unwavering. We are committed to strengthening our management base by efficiently providing safe and good services to as many customers as possible, and therefore we must practice "ESG Management" to develop JR Central while powerfully contributing to the society.

5

Also, we have been tirelessly promoting the use of railway transportation, which has originally great environmental performance, while also incorporating the latest technology to improve our environmental superiority. The results of these business activities are linked to the achievement of the "sustainable development" that the SDGs aim to achieve through the construction of safe and resilient infrastructure, the promotion of innovation, and the mitigation of climate change effects. Furthermore, we have been working tirelessly to create "social value" by focusing on the human resources development to support the operation of the railway business, and by making daily efforts to achieve the SDGs from the perspective of promoting gender equality and rewarding employment, etc.

The abovementioned cash flows, i.e., "economic value," are the source of our funds for creating "social value" such as developing safe, resilient, and environmentally superior infrastructure, improving our services, and promoting human resource development and innovation to support these efforts while providing better services. As a result, we have been attracting more people to use our services, which leads to a positive cycle. This positive cycle has made it possible to realize the Chuo Shinkansen Project that is currently under way.



effort, will continue to powerfully fulfill its social mission into the future, and must work to reinforce our earning power by increasing passenger use through its creativity and ingenuity to reconstruct the positive cycle of "ESG Management".

So now, once again, JR Central is facing its own challenges. With regard to the way work will be done in the future, we are working on "Reform of Business Operations" to strengthen our ability to work more efficiently across the boundaries of lines of operation and departments by mobilizing all available technologies, including ICT. In the midst of those challenges, we anticipate that the entire Group will face future labor shortages and other problems, but must overcome them without delaying solutions.

We are working to expand revenues from fresh perspectives and using flexible ideas by identifying and analyzing customer trends and needs more carefully than before. The proposal for "a workcation plan (Tokaido Shinkansen + Hotels along the line)" as announced in April 2020 is one example. We are also undertaking an initiative to enhance the working environment in stations and trains on the Tokaido Shinkansen, like the "S Work Car" to support the "working in any location" style popularized amid the pandemic. In addition, we are preparing to launch "EX-MaaS



(tentative name)" by the summer of 2023, which will allow users to seamlessly reserve and make payments for their entire trip, including for Shinkansen trains, hotels, transportation for the journey, sightseeing plans, through the EX Service members-only website. Furthermore, each Group company should take advantage of synergies with railways to increase their revenues, and it is important to strengthen the managerial ability to maintain steady revenue growth even if the use of railways declines. For this reason, each company will work on its respective challenges in cooperation with JR Central, aiming for the development of the Group as a whole.



Chuo Shinkansen Project as a growth strategy that contributes to the further development of Japan's economy and society

We must continue to give top priority to safe and reliable transportation, and fulfill our mission of maintaining and developing Japan's main transportation artery. In order to achieve this, the Chuo Shinkansen Project that we are currently working on needs to be strongly promoted. The Chuo Shinkansen Project (assuming that we, as a private company, will pay for it ourselves) will be implemented through the use of the Superconducting Maglev System that we have been developing as a drastic measure to address the need for largescale renovation of the Tokaido Shinkansen, which has been operating for more than half a century, and major disasters. Therefore, we will manage the Tokaido Shinkansen and the Chuo Shinkansen in an integrated manner. For example, by shifting users of the Tokaido Shinkansen "Nozomi" to the Chuo Shinkansen, the number of "Hikari" and "Kodama" services can be increased on the Tokaido Shinkansen. We hope to construct the most desirable transportation system as a whole by combining the two high-speed railways. By constructing the bypass, we will be able to ensure stable management, reduce its risk, and continue to forcefully fulfill our mission.

I therefore believe that the opening of the Chuo Shinkansen will have a big impact on the Japanese economy as well as on people's lifestyles. The government has also proposed the "Super Mega Region" concept, and hopes are high that the opening of the Chuo Shinkansen will have an extremely significant effect, just as the Tokaido Shinkansen did in the past, realizing the integration of the three urban cities of Tokyo, Nagoya and Osaka. Due to the overwhelming time-saving effect of the Chuo Shinkansen, it will bring significant benefits and potential for development to the Japanese economy and society, for example, by encouraging people to meet each other, which leads to creation of innovation and expansion of business opportunities.

Furthermore, as society is rapidly changing through the development of ICT and other factors, the opening of the Chuo Shinkansen will broaden various possibilities in people's lives. The development of ICT

in recent years has been remarkable. ICT has the aspect of accelerating and strengthening the connections between people and creating new demand for travel. In addition, new ways of working, such as telework, have become popular recently, and many people are moving to areas with abundant nature, for example. The premise for this is the existence of railways and other transportation services that provide immediate access to the city center when needed. ICT and transportation services are complementary, and we believe that the overwhelming time-saving effect of the Chuo Shinkansen will bring a variety of choices to people's lifestyles and contribute to the realization of a more prosperous and sustainable society.

We will continue to make every effort to carry out the Chuo Shinkansen Project, sufficiently examining costs, maintaining sound management and stable dividends, while focusing on construction safety, environmental protection, and cooperation with local communities, with the aim of opening the line as soon as possible.



Environmental superiority goes beyond the current situation

As I mentioned earlier, we have been working tirelessly to preserve the global environment based on the recognition that it is an important issue for our sustainable growth. Railways have always had the advantage of being more energy efficient and less harmful to the global environment than other modes of transportation. Directly, JR Central has been striving to reduce the load on the environment by further improving the energy efficiency of its railway operations through such

measures as lowering power consumption in rolling stock. Furthermore, in line with the "Carbon-neutrality by 2050" policy formulated by the Japanese government, we are committed to further reducing CO₂ emissions, and endorsed the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in May 2021. Rather than maintaining the existing circumstances, we aim to realize a sustainable society.

Of the CO₂ emitted by JR Central, about 95% is indirectly emitted during the generation of the electricity we purchase, and the remaining 5% is directly emitted by our diesel railcars, etc. As for the future, we will first consider the electrification of internal combustion trains for approximately 5% of direct emissions from business activities. As for the remaining indirect emissions, in addition to carbon-neutrality efforts across the entire Power generation sector, we will actively strive to reduce CO₂ emissions by adopting

Initiatives to reduce CO₂ emissions



Keep fulfilling our mission to "Contribute to the development of Japan's main transportation artery and social infrastructure

Severe financial conditions continue due to the impact of COVID-19. However, the JR Central Group's mission remains unwavering even into the future: to refine the safe, punctual, fast, frequent and comfortable characteristics of the Tokaido Shinkansen, which forms the main transportation artery of Japan, and to strengthen the conventional lines in the Tokai region that form the network with the Tokaido Shinkansen, as well as affiliated businesses. At the same time, the construction of the Chuo Shinkansen will be promoted to further strengthen the realization of this mission henceforth. JR Central must overcome the current difficulties by its own superiority.

Respond to the trust and mandate of all stakeholders and pursue the mission of "Contribute to the development of Japan's main transportation artery and social infrastructure" to recreate the positive cycle of "ESG Management" once again.

new technologies, such as improving the energy efficiency of rolling stock and facilities, and considering the use of renewable energy. Furthermore, in order to realize a recycling-oriented society, we are making effective use of limited resources, including the promotion of material recycling of recycled aluminum for Shinkansen rolling stock. We will continue to contribute to the realization of an environmentally sustainable society by establishing a system and promoting these initiatives.

Organization for environmental measures



Therefore, we will always return to our management philosophy of "Contribute to the development of Japan's main transportation artery and social infrastructure." And in order to achieve this at a higher level, we are determined to tirelessly strengthen the three abilities of each division: the "ability to work safely," the "ability to provide better service," and the "ability to work efficiently." We are committed to achieving sustainable growth by firmly maintaining sound management and stable dividends, and by increasing the trust of all our stakeholders, including our shareholders, customers, employees, and business partners.



Business Strategy Positive Cycle of "ESG Management"

Business Strategy ositive Cycle of ESG Management"



Cash flow generation

Future investment

- Human Resources Development
- Technological Development
- Capital Investment

Shareholder return

(long-term stable dividends)

Foundation building

Business partners



JR Central's Key Business Activities

JR Central sets the highest priority on ensuring safe and reliable transportation from a medium- to long-term perspective under its management philosophy of "Contribute to the development of Japan's main transportation artery and social infrastructure." JR Central integrally maintains and develops the Tokaido Shinkansen, which serves as Japan's main transportation artery, and the conventional line network in the Tokai region through continuous efforts, as well as operating the "three generations of railways" by constructing the Chuo Shinkansen to make Japan's main transportation artery a dual system. In addition, our basic policy is to work together with Group companies to develop affiliated businesses that have synergies with railways.

Through business strategy based on the basic policy, we have

1Safety measures

The primary mission of the railway business is to ensure safety at all times and in all circumstances. Regardless of past achievements, once a major accident occurs, trust in JR Central will be lost at once, and even its very existence will be threatened. With this frame of mind, we have been concentrating its greatest energy into safety assurance from both the hardware and software perspectives ever since its establishment. In terms of non-physical measures, we have been tirelessly building systems to protect safety, mainly by establishing rules and regulations. Furthermore, human resource development is indispensable to put these systems into practice. Therefore, we promote initiatives to deepen employees' understanding of the nature of duties and rules by proactively thinking about them, in addition to raising their awareness of discipline so that they can comply with the rules themselves. Additionally, we are repeatedly performing practical training so as to be able to respond to various conditions expected in the event of extraordinary situations such as natural disasters or contingencies

In terms of equipment, capital investment is also important to ensure safety. The majority of JR Central's capital investment to date has been safety-related, totaling more than 4.0 trillion yen since its establishment. For example, in the Tokaido Shinkansen, we have been upgrading the ATC (Automatic Train Control) and CTC (Centralized Traffic Control) systems, implementing earthquake countermeasures such as derailment prevention guards and the earthquake prevention system, and carrying out large-scale

'social value" to realize a sustainable and prosperous society. We have also achieved sound management, stable dividends, and sustainable growth as a company under solid governance in order to increase the trust of all our stakeholders. The JR Central Group, whose core is the railway business, has a long-term vision. Competitiveness enhancement is thus essential,

been practicing "ESG Management" to generate "economic value"

such as profits and cash flows, while at the same time creating

with top priority placed on ensuring safe and reliable transportation through human resource development, capital investment, and technological development. To this end, our business activities are focused on (1) Safety measures, (2) Measures to improve services, (3) Greater efficiency, and (4) Pursuit of environmental superiority.

renovation to maintain and improve the integrity of Shinkansen infrastructure. On conventional lines, we have been upgrading CTC, replacing ATS (Automatic Train Stop) with ATS-PT, making various structures anti-earthquake, taking measures against heavy rainfall and falling rocks, and improving safety devices on grade crossings. In addition, we are working tirelessly on security measures at railway stations, trains and important facilities, and technology development is also focusing on safety-related themes to enable such equipment. Also, the Chuo Shinkansen Project, which we are currently working on, is a project as a drastic measure against the need for large-scale renovation and major disasters of the Tokaido Shinkansen. Looking ahead, we will continue to work on both physical or non-physical measures to hone our "ability to work safely," which is the key to the railways business.



Crew pointing and calling

Large-scale renovation

⁽²⁾Measures to improve services

Since its establishment, JR Central has been working tirelessly to improve our railway services. In the mainstay Tokaido Shinkansen, safety is of course the top priority, and we are working to improve transportation services, focusing on speed and frequency, while introducing new types of rolling stock and improving ground facilities. In 2003, with the opening of Shinagawa Station, all trains reached a maximum speed of 270 km/h, allowing us to shift to a Nozomi-centered timetable, and in 2020, all trains achieved a maximum speed of 285 km/h with the "12 Nozomi Timetable." In addition to increasing the speed and frequency of the services, we are also working to improve the convenience of our "EX Service" ("Express Reservations" and "smartEX"), an online reservation and ticketless boarding service. On conventional lines as well, we have been working to improve our services by, for example, launching new types of rolling stock and increasing the frequency of services. We are also working to provide barrier-free and support for overseas visitors to make it easier for them to use our services.

On the other hand, in the non-railway business, we are striving to strengthen our competitiveness and sales capabilities by enhancing our store assortments, improving services, renovating commercial facilities at stations, and continuing to make effective use of company-owned land, focusing on areas where synergies with railways can be expected, such as the uniform management

3 Greater efficiency

We will increase revenue by promoting the use of our services Furthermore, with regard to the Chuo Shinkansen Project, we will through safety measures and service improvement measures. continue to hone our "ability to work efficiently," for example, by Furthermore, we have been working on improving efficiency and continuously reducing costs while ensuring safety in all aspects of lowering costs in all aspects of business execution, including capital construction, operation and maintenance. investment, by utilizing the knowledge and technical capability Changes in operating revenues/expenses before pandemic (non-consolidated) cultivated and thoroughly pursuing the rationality of business (Billion ven) practices, without being bound by traditional ways of working. As a 1.600 1 464 8 result, we have been able to steadily improve our operating profit margin by reducing fixed costs even when operating revenues were 1.400 increasing, as in the decade or so before the pandemic.

Today, the pandemic impact has caused considerable business damage. However, in addition to temporary cost control for the time being, we are promoting "Reform of Business Operations" to build the most desirable operational system by actively utilizing ICT in order for the JR Central Group to strongly fulfill its social mission well into the future. Over the next 10 to 15 years, we aim to reduce non-consolidated expenses for the Shinkansen and conventional lines by about 80 billion ven, or about 10% of our regular costs.

⁽⁴⁾Pursuit of environmental superiority

Global environmental preservation is a monumental challenge (TCFD) recommendations established by the Financial Stability for JR Central to achieve sustainable growth while earning Board (FSB). We will understand the financial impact of climate the trust of society. Originally, railways have the outstanding change on risks and other factors, and promote information characteristic of being highly energy efficient compared to other disclosure based on the TCFD recommendations. transportation modes and having a minimal adverse impact on the global environment. However, in order to further reduce the load on the environment, JR Central is working to further improve the energy efficiency of its railway operations, such as by making its rolling stock more energy efficient. In addition to the above, we will continue to make efforts to further reduce CO₂ emissions in line with the "Carbon-neutrality by 2050" policy formulated by the Japanese government. Specifically, we will consider electrification of trains to reduce direct CO_2 emissions from business activities, which account for approximately 5% of our total emissions. As for the remaining indirect emissions, which account for about 95% of the total, while considering the carbon-neutrality efforts across the entire Power Generation sector and technological trends, we will actively strive to reduce CO₂ emissions by adopting new technologies, such as further improving the energy efficiency of rolling stock and facilities and considering the use of renewable energy. In addition, we have endorsed the Task Force on Climate-related Financial Disclosures HC85 Series, the next generation of hybrid express trains (testing vehicle)

of the JR Central Towers and the JR Gate Tower. Leveraging fresh perspectives and flexible ideas, we will continue to hone the "ability to provide better service" in the railway and nonrailway businesses, including the Chuo Shinkansen now under construction.



N700S





Positive Cycle of "ESG Management"

JR Central both generate "economic value" and create "social value" by practicing the above key business activities. The creation and generation of these two "values" are not independent, but mutually reinforce each other, contributing to the positive cycle of "ESG Management".

As mentioned earlier, we have been generating "economic value" in the form of profits and cash flows by striving for efficient business operations, while significantly increasing revenues by refining our services with safety as the top priority.

And then using the value, we have been concentrating on strengthening the foundation for our business operations by investing generously in human resource development, technological development, and capital investment from a long-term perspective, to enhance our management capital for developing our sustainable business. We will use the management capital accumulated to re-invest it mainly in key business activities to implement various measures. For example, by tirelessly strengthening the three abilities - the "ability to work safely," the "ability to provide better service," and the "ability to work efficiently" - we are further honing our business and generating greater

"economic value."

At the same time, honing our business by focusing on key business activities is directly related to the creation of "social value." With the highest priority on ensuring safe and reliable transportation, we will build a resilient infrastructure to support Japan's main transportation artery and regional transportation as social infrastructure and develop affiliated businesses, which will itself contribute to the sustainable development of the Japanese economy and local communities [S]. In addition, railways have the advantage of higher energy efficiency compared to other transportation modes, and lower impact on the global environment. In other words, we believe that promoting the use of railways while pursuing environmental superiority will greatly contribute to the preservation of the global environment [E]. In addition, by conducting such corporate activities under appropriate governance [G], we believe that we can achieve sustainable growth as a company while increasing trust from all stakeholders by maintaining sound management, returning profits to shareholders based on our basic policy of maintaining stable dividends, and building long-term stable relationships with employees and business partners.

Generating "Economic Value"

We have used the "economic value" generated through our business to create even more "economic value" by strengthening the profitability and improving the operational efficiency while tirelessly honing our business, especially the Tokaido Shinkansen. Comparing FY2002, before the opening of the Shinagawa Shinkansen Station, to FY2018, before the COVID-19 pandemic, operating cash flows (consolidated) grew 57%.

Such cash flows will be used to reduce the long-term debt that has been incurred since its establishment. By further enhancing investment in human resources, technology and equipment while reducing the interest burden, we have also promoted the construction of the Chuo Shinkansen since FY2014. In the meantime, we have paid in parallel stable dividends to shareholder return.

We are able to maintain sound management and stable dividends, increase the trust of all stakeholders, and manage our business based on a long-term outlook, including that of the Chuo Shinkansen. There is no doubt that the basic premise of this is our ability to generate such "economic value." JR Central is currently experiencing

significant management difficulties due to the COVID-19 infection, but working to reinforce our earning power so that we can continue to fulfill our social mission into the future.

Strong growth in operating revenue and operating cash flows (consolidated)



Creating "Social Value"



Building a safe and resilient infrastructure

Since its inauguration in 1964, the Tokaido Shinkansen has supported the growth of the Japanese economy for more than half a century, with approximately 6.6 billion people using it as the main transportation artery connecting Tokyo, Nagoya and Osaka, the three largest metropolitan areas in Japan. This region comprises about 20% of the land area of Japan, but it is an unparalleled area globally in terms of its concentrated population and production of more than 60% of Japan's GDP. The Tokaido Shinkansen plays a role in providing transportation services, which are the basic elements of the economy and society, in the region and, as a result, is an indispensable infrastructure that boasts an overwhelming presence over other modes of transportation. And we are aiming to build a safe and resilient infrastructure that can protect Japan's main transportation artery at all times.

To this end, we have been concentrating our greatest energy in accident prevention from both the hardware and software perspectives ever since its establishment, establishing rules and systems to prevent accidents, nurturing employees and improving their skills through training, and tirelessly upgrading various safety equipment. As a result, the Tokaido Shinkansen has had no accidents resulting in fatalities or injuries of passengers on board since operations commenced, and the number of railway accidents, including on conventional lines, has decreased significantly since its establishment. In response to the current COVID-19 pandemic, we have maintained sufficient transportation capacity to allow our customers can use the railways with peace of mind. We are also taking counter-infection measures, including ventilation of train cars, regular sterilization of parts of stations and trains that customers are likely to touch, and wearing of face masks by staff servicing customers.

Of course, Japan is a major earthquake country, and in the market area of JR Central, there are concerns about the imminence of earthquakes with epicenters directly under the Tokyo metropolitan area and the Nankai Trough. In recent years, it has also become an urgent concern to respond to the intensification of natural disasters. We have been taking sufficient countermeasures against earthquakes and natural disasters from both the hardware and software perspectives ever since our establishment. By working

Providing accessible transportation infrastructure

Based on relevant laws, such as the so-called Barrier-Free Act, JR Central has been cooperating with governments and municipalities to jointly establish and improve rolling stock and facilities to enable all passengers to use our services safely and with a sense of security. We will make continuous efforts to address the ever-changing demands of society as appropriate.

We also believe that providing overseas visitors with a chance to visit the rich tourist attractions along our railway lines is an important issue from the perspective of increasing railway revenues and revitalizing local regions along the lines. Therefore, JR Central is implementing a variety of sales measures to encourage overseas tourists to Japan to enjoy the areas along our railway lines casually and conveniently. In addition, we are also working on the expansion of facilities and services to ensure smooth rides for overseas visitors to our stations and railways. We will continue to make every effort to ensure that our stations and trains are safe and accessible.



the provision of services to customers and the execution of internal operations will not be disrupted due to earthquakes or other natural disasters, or system failures. Furthermore, we have taken all possible measures to protect against cyber attacks, including setting up an independent system structure that eliminates any contact with the outside world for systems that are vital for train operations.

Additionally, we are promoting the Chuo Shinkansen Project using the Superconducting Maglev System to make Japan's main transportation artery a dual system, as a drastic measure against the need for large-scale renovation and major disasters of the Tokaido Shinkansen. This project will allow us to further reduce management risk and thus stabilize our management base, then in the future, JR Central will continue to carry out its mission of managing Japan's main transportation artery since its establishment.





N700S wheelchair spaces (image)

Local community revitalization

In addition to the Tokaido Shinkansen, which supports Japan's economy and society, JR Central also undertakes the mission of supporting the social infrastructure. It supports people's daily lives by operating conventional lines mainly centered on Nagoya and Shizuoka, and by developing affiliated businesses in these areas in an integrated manner. The conventional lines operated by JR Central, encompassing 12 railway sections, cover approximately 1,400 km in operating kilometers, which is approximately 2.5 times the distance of the Tokaido Shinkansen, and play a role as a means of transportation for daily life, including commuting to work and school. While increasing the frequency of services and launching new types of rolling stock, we have been working to maintain its transport network and provide services that are convenient, complementing each other in combination with the Tokaido Shinkansen. We are also working to revitalize the region through sales and marketing in coordination with local communities along the line.

History of development around Nagoya Station



At the time of establishment of JR Central

Stations, where many people gather, including railway passengers, are important nodes of the local community, and at the same time, they are important management resources for JR Central. By making the most of these management resources, and developing the office. commercial, hotel, and other businesses in good locations at stations will enliven stations and expand the use of railways. On the other hand, if railway use increases due to improvements in transportation services, it will also contribute to the growth of our affiliated businesses developed at stations. By working together with our Group companies to realize synergies between railway and affiliated businesses, we believe that we will be able to revitalize people's travel and economic activities in the region. In the past 15 vears or so, skyscrapers have been built around Nagoya Station, and the Nagoya region's traffic line has changed dramatically, as one example. With the opening of the Chuo Shinkansen, further development is expected.



resources and maximize their capabilities, driving corporate growth.

We also strive to improve the working environment by enhancing our

systems and facilities so that our employees can work with peace of

mind and fulfillment for a long time and maximize their full potential. For example, we are working to create an environment in which

employees can exercise their

abilities according to their life

stage by promoting health

management and providing

support for balancing work

with childcare and nursing

strive to build healthy labor

management relations.

We will also continue to

care

After completion of JR Gate Tower



Comfortable workplace establishment

JR Central views its employees as its greatest management resource. Many railway technologies can only be built up to a high level through accumulated experience, and human resource development needs to be planned and implemented from a long-term perspective. Given these three fundamental principles of "Discipline," "Technical

capability," and "Sense of unity," we develop human resources that undertaké JR Central's businesses. The focus is on on-the-job training (OJT) and various practical training programs. They also acquire additional knowledge and skills through group training, which is held in the General Education Center, etc., and various self-betterment opportunities, such as internal and external training programs, etc., that help employees learn knowledge and skills on their own.

In addition, enhancing the skills of employees will expand their fields of activity and ensure job satisfaction.

Also, regardless of gender, we believe that it is extremely important from the perspective of management to employ diverse human

Innovation advancement

In order for JR Central to fulfill its mission and develop in the future, it is essential to build the systems and hardware that will serve as the foundation to support daily safe, reliable and comfortable transportation services through technological development. Thus, with the aim of addressing various technological issues in an integrated and comprehensive manner, we have been systematically proceeding with technological development at Komaki Research Center established in 2002, by setting issues that contribute to company measures, such as ensuring safe and reliable

transportation, from a medium- to long-term perspective. These approaches have resulted in many advanced achievements, such as safety measures against earthquakes and natural disasters, improved services through enhancement of the functions of rolling stock and other equipment, and enhanced environmental performance. In addition, the Chuo Shinkansen Project, as a drastic measure to strengthen the main transportation artery, has been promoted through the accumulation of technological development at the Komaki Research Center as well as the Yamanashi Maglev Line.



Environment

Global environment preservation

JR Central also mitigates the load placed on the environment across the entire Transportation section, improve our environmental superiority brought about by having as many passengers as possible opt JR Central also promotes the effective utilization of to use railway services, which have a smaller environmental resources through the 3Rs initiatives, etc: Reduce, Reuse and impact compared to other modes of transport. Railways Recycle. In addition to minimizing the release of chemical account for only 6% of CO₂ emissions despite undertaking substances and waste, we are working to mitigate our 30% of Japan's overall passenger transport volume. We environmental impact by reducing food loss and material have been working on the introduction of energy-saving recycling. rolling stock to tirelessly refine these characteristics. The Shifts in the ratio of the Tokaido Shinkansen rolling stock new N700S Shinkansen rolling stock consumes 28% less and energy consumption per unit energy when operating from Tokyo to Shin-Osaka at a beed of all trains increased (to 270 km/h) (to 285 km/h) maximum speed of 285 km/h compared to the Series 300 (in commercial service from March 1992 to March 2012), when running at a maximum speed of 270 km/h. In addition, compared to an aircraft (B777-200), the Tokaido Shinkansen ******* (Series N700 "Nozomi") consumes approximately one-eighth 60 _ Series 0 / Series 100 of the amount of energy per seat when traveling between Series 300 / Series 700 Tokyo and Osaka, and discharges about one-twelfth of 40 Series N700 / N700A 40 the CO_2 emissions. We will tirelessly continue to improve our transportation services while contributing to global 20 N700S environmental preservation as a corporate responsibility. Not only that, but in line with the "Carbon-neutrality by 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 2050" policy formulated by the Japanese government, we Governance



Appropriate governance

considerable lead times, and we believe it is vital to As for the railway business, we manage our business based on the principle of steadily implementing manage our business based on a long-term outlook rather the necessary measures to ensure safe and reliable than pursuing short-term profitability. transportation, which is an issue of utmost importance. As such, JR Central will continue to work to establish

a corporate culture that places the highest priority on We are also working on the Chuo Shinkansen, a largescale, long-term project that will further reduce our safety, and ensures the soundness and transparency management risk, stabilize its management, and secure the of management while aiming for long-term corporate interests of all stakeholders, including shareholders. development. By doing so, we will engage in business These initiatives require long-term massive capital activities under solid governance that increases the trust of investment and technological development with all stakeholders.

Relationships with stakeholders

JR Central's railway business is highly public and has multifaceted array of stakeholders, including customer shareholders, employees, business partners, and loca communities. Therefore, we believe it is important to maintai an overall balance in our relationships with our stakeholders rather than focusing on just one facet.

We believe that improving the convenience of many user contributing to the economic and social development of th region and Japan, securing stable profits, returning profits to shareholders, and building long-term stable relationships wit employees and business partners will increase the trust of al





	Stakeholders
Customers	 Safe and comfortable service for everyone Innovative reduction of travel time by the Chuo Shinkansen
Shareholders	• Sustained increase of cash flows • Long-term stable dividend
Employees	Long-term stable employment environment Active and rewarding work
Business partner	S Building long-term, stable, fair and equitable business relations
Local communities	• Expansion of the Japanese economy • Revitalization of local communities • Building a resilient socie
Global environment	 Preservation of the global environment by expanding the use of environmentally friendly railways



Ensuring Safe and Reliable Transportation

Ensuring Safe and Reliable Transportation is the foundation of railway business.

JR Central strives to ensure that internal rules, etc. based on relevant laws, etc. are in place, works to develop structures to help promote safety measures systematically, and promotes a variety of efforts from both physical and non-physical perspectives, in the belief that safety is the top-priority mission for the railway business. We aim to fulfill our responsibility as a transportation service operator by continuing to fulfill the responsibility of providing safe and reliable transportation to customer's into the future.

> Number of accidents resulting in fatalities or injuries of passengers on board since Tokaido Shinkansen began operations





General Principles of Safety

JR Central has the General Principles of Safety as the basic spirit for employees involved in transportation safety. It was established following a 1951 accident at Sakuragicho Station on the Keihin-Tohoku Line while we were operating as part of Japan National Railways. The principles specifically state that the mindset and moral awareness and attitude are needed for all employees to do their utmost to ensure safety and protect human lives' before all else, regardless of their job résponsibilities, because the railway business is an important service with the responsibility to safeguard precious lives and assets

As a result of various safety efforts, especially the Tokaido Shinkansen

Basic Approach to Safety

Under the philosophy of the General Principles of Safety, we worked out the "Basic Approach to Safety" and are abiding by it. We maintain safety through "people," "structure" and "equipment, and what forms the basis is the culture of prioritizing safety. The diagram on right describes a structure whereby a culture in which safety is prioritized above anything else is déveloped and established through the "Movement to explore the nature of safety based on the three key phases of "Why?", "What will happen?" and "What should I do?", upon which each of the three elements of "people," "structure" and "equipment" is made to function at high levels so that these three pillars can support safety.

The first pillar of "people" represents ongoing efforts to enhance the ability to carry through spontaneously and honestly, the ability to detect risks and changes and deal with them without fail, and the ability to deal with difficult situations with a sense of ownership and responsibility, etc., through effective education and training.

The pillars of "structure" and "equipment" respectively represent ongoing efforts to ensure adherence to, and review, "structures," including rules and handling, by accurately grasping situations on the ground from a correct perspective regarding safety and looking into weaknesses based on changes in the environment, signs and

Priority Execution Items for FY2021

In order to systematically and intensively promote train and labor accident prevention measures, priority execution items are determined every fiscal year. For FY2021, we designated "thorough checks," "adherence to rules." "elimination of risks." "enhancement to training," and "eradication (targeting zero)

Safety Management System

Operational system to ensure transportation safety

Based on the Railway Business Act, JR Central established the Safety Management Regulations in September 2006, which summarizes the rules to be observed for ensuring transportation safety, with the aim of maintaining and improving safety levels. These regulations specify the operational system for ensuring transportation safety and the responsibilities of safety managers. As the responsibility of key safety managers, the president

line, which has been used by abou 6.6 billion passengers, has ha no accidents resulting in death of passengers since the start of its operation in 1964. We wi continuously work to maintain saf and reliable transportation as th top priority, aiming to achieve it a even higher levels.

it d of ll e at	らなければならない。	五疑のしいときは手落ちなく考えて	一致協力しなければならない。	四安全の確保のためには職責をころで	安全の確保に最く大切である。	三確認。肋行遮路の徹底2	修練によって読きあげられる。	執務の数正かの始まっ不断の	二安全の確保の規程の遵守及び	使命である。	一安全は輸送業務の最大の	安全綱領	
		G	ier	ner	ral	Pr	in	cip	le	s c	of S	Safe	ty

Safety Report https://company.jr-central.co.jp/

lessons learned from others, and improve the safety of "equipment" by introducing new technologies, including fail-safe,*1 fool-proof* and sign-management methods. We are working to maintain safety while continuously reviewing and enhancing these two pillars, along with the pillar of "people," as "structures for safety."

Safety ~Maintain safety through "people," "structure" and "equipment" ~					
People	Structure	Equipment			
 Ability to carry through spontaneously and honesity Ability to detect risks and changes and deal with them without fail Ability to deal with difficult situations with a sense of ownership and responsibility 	Enhancing struct Accurately grasp the actual Dig deeper into weaknesse bas signs, and lessons learned from on Examine, transcending or Ensure/review rules and handling	ures for safety situation using discerning eyes ed on changes in the environment, thes ganizational boundaries O failsale, toolproot, sign management, etc.			
Safety-first culture "foundation" Activity to explore the essence of safety: "Why?", "What will happen?", and "What should I do?"					

*1 A method to ensure the operation of equipment remains on the safe side so that it may not output on the hazard side when it malfunctions. *2 A method to ensure human operators are unlikely to make mistakes and, even if they do, safety will be maintained for a system involving human intervention.

of four key disasters" as the five priority execution items. Each employee is working to constantly keep these five items in mind, and all employees are working together to eradicate serious train accidents and industrial accidents (targeting zero) from both physical and non-physical perspectives.

is the first to make important decisions regarding operational safety. In addition, general safety managers, operation managers, and crew guidance managers have been designated, and their respective responsibilities have been determined. The roles of head office managers in ensuring transportation safety have been clarified, and safety measures have been systematically established and promoted under a consistent system.

Responsibility of key safety managers Title President Decide on important matters related to operational safety. General safety manager • Supervise and manage other matters related to ensuring transportation safety. Operation manager crews and maintenance and management of their qualifications. Crew guidance manager Train crew members and maintain and manage their gualifications.

Safety Promotion Committee

In order to have a focused deliberation of matters regarding the intensively deliberate on the matters assigned to them. Furthermore, each prevention of railway operation accidents, industrial accidents and Operations Division and Branch Office has a Safety Promotion Committee. disasters and design and promote effective measures, we have the Railway We make sure all staff at field offices are aware of the matters decided by Safety Promotion Committee at the Head Office, which meets once the Safety Promotion Committee through the Regional Safety Promotion every month, and set up specialized committees whenever necessary to Committée.



Safety Audit

Safety audits are conducted at JR Central's business organization verify the actual status of daily operations by checking sites where and affiliate companies to prevent train accidents and eliminate labor work is being carried out and the documents related to inspections, accidents (targeting zero). These audits are performed from three construction, etc., and share the results with the relevant departments basic policies: confirmation of the level of compliance with laws and affiliated group companies. Through these audits, we are working and regulations, etc., confirmation of measures in place to prevent to prevent violations of laws and regulations, the fading out of past train and labor accidents, and prevention of the kind of train and countermeasures in response to past accidents, and lapses of rules labor accidents whose details have been investigated. In audits, we before an incident occurs.

Initiatives for Human Resources to Ensure Safety

In order to support safety, it is important to continue to improve observe our own rules ("discipline"), to maintain and improve quality and refine facilities and to ensure the progress of work. However, as and prevent accidents ("technical capability"), and to gain a "sense the basic premise, it is essential to develop human resources with of unity," by collaborating and cooperating with related employees high technical capabilities, strong will, and correct values to support and by fulfilling personal responsibilities. Focusing on these issues, safety. In developing human resources, we believe it is important to we are engaged in employee training and education.

Technical skills training

We implement safety education and training for staff engaging in train operations and facility maintenance. We conduct education and training especially for staff engaging in train operations (such as drivers, conductors and directors) according to the content and time stipulated for each duty.

We introduce simulators, which can perform operations simulation training, etc. for emergencies, to field offices for drivers and conductors. We also conduct various training sessions using ground facilities, such as actual rolling stock and railway lines, so that employees on each system can swiftly and accurately respond to emergencies.

Emergency condition response training

We conduct various training every year as an opportunity fo us to enhance quick response to safety in the case of accidents and to learn the work of other specialized fields. We conducted practical training in FY2020, such as passenger evacuation guide training, information communication training, and line facility restoration



training sessions, based on the assumption of natural disasters and contingencies.

Business Strategy

Responsibility • Ensure that all employees are fully aware of the importance of safety and comply with laws and regulations to ensure transportation safety. • Provide opinions to the president on necessary improvements to ensure transportation safety. • Confirm the status of systems related to ensuring transportation safety as needed, and express opinions on improvements to head office managers who are in charge of the main operations related to ensuring transportation safety, as necessary. In order to ensure transportation safety, request reports and give instructions as necessary concerning the formulation of transportation plans, decisions on the operation of train crews and rolling stock, train operation control, training of train

President

ty Pro	motion Committee		
		Specialized co	mmittees
	·		
ttee	Kansai Branch Office Safety Promotion Committee Regional Safety Promotion	Construction Department Safety Promotion Committee	Chuo Shinkansen Construction Department Safety Promotion Committee
	Committee		
	Field offices		

Employee training in preparation for contingencies

We train all employees to go beyond the call of duty in working together with staff, etc., to respond appropriately in ensuring our customers' safety should employees happen to be present when unforeseen circumstances occur while commuting or on a business trip.

Other training



The General Education Center offers education on specialized knowledge and skills for each function and provides sessions for various qualifications and train conductors and drivers by using various training facilities that can simulate various events that occur in actual situations



Employee training in preparation for contingencies



Training for Shinkansen conductors

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Capital Investment for Safety

JR has actively implemented capital investment related to safety since its establishment. In the 34 years up to FY2020, we have made safety-related investments totaling over 4.0 trillion yen, including safety measures such as updating the Automatic Train Control (ATC) and Centralized Traffic Control (CTC) on the Tokaido Shinkansen, introducing and updating CTC on conventional lines, and replacing the Automatic Train Stop (ATS) with ATS-PT, as well as disaster prevention measures such as seismic reinforcement, improvements in electrical equipment, replacement of new rolling stock, and the introduction of efficient and effective inspection machines and systems

In FY2021, we will continue to place top priority on ensuring safe and reliable transportation, which is the starting point of our railway business. In order to further reinforce structures along with earthquake countermeasures, JR Central will pursue derailment and deviation countermeasures for the Tokaido Shinkansen by implementing derailment prevention guards for the entire line. We will also proceed with the seismic reinforcement of platform sheds, the implementation of measures to prevent suspended ceilings at stations from falling in the event of an earthquake and reinforcing the quake resistance of the Nagoya Workshop, viaduct pillars of conventional lines, etc. As a result of these efforts, 80% of the total capital investment in Tokaido Shinkansen, conventional lines, and affiliated businesses, or 234.0 billion yen, is planned for safety-related investment.

Trends in safety-related investment



Large-scale renovation

Tokaido Shinkansen

Our civil engineering structures are sufficiently maintained through daily and thorough inspections and repair. However, in future, it will be inevitable to replace many of the facilities due to aging. We received the approval of the Minister of Land, Infrastructure, Transport and Tourism for our allowance reserve plan for the large-scale renovation of Shinkansen infrastructure for the Tokaido Shinkansen based on the Nationwide Shinkansen Railway Development Act, and began building the reserve from 2002. Along with this, we have advanced our research on a new construction method, led by our Komaki Research Center. As a result of our R&D efforts, we developed a new construction method that allows us to significantly reduce the impact on train operations during construction work, and to considerably cut construction costs. With this method in place, JR Central began the renovation work in FY2013, ahead of the original schedule. In construction work, we begin with the implementation of measures to extend the life of structures by inhibiting the occurrence of cracking and other damage from aging (measures to inhibit aging

Railway Crossing Accident Countermeasures

Conventional Lines

A particularly important factor for improving the safety of Conventional Lines is the measures to prevent accidents at railway crossings. We are working to install crossing gates, crossing obstacle detection systems, etc., and are taking such drastic measures as eliminating crossings by, for example, elevating the tracks, for which we negotiate with local governments. As part of effort to prevent crossing accidents, we are also actively working on activities to raise awareness, including crossing accident prevention campaigns.

Improvements to crossing equipment

Crossings are classified by the equipment they have into three types: Type 1, which has crossing gates and alarms, Type 3, which has only alarms, and Type 4, which has neither gates nor alarms.

Work to upgrade Type 3 and 4 crossings into Type 1 is under way, considering such factors as the amount of road traffic, the amount of railway traffic, and the situation surrounding the crossing.

damage) and, if necessary, overall renovations such as the replacement of girders (overall renovation) are implemented.

The reserve of 350 billion yen accumulated by FY2012 is appropriated at a rate of 35 billion yen each year from FY2013. We will continue to actively incorporate the results of our R&D efforts and make improvements, etc. to our construction methods, thereby bringing down related costs in making sure steps forward are taken with our construction work.



Large-scale renovation



Number and Type of Railroad Crossings



Crossing obstacle detection systems

In order to provide for a vehicle causing trouble at a crossing, high and that experience high we install crossing obstacle detection systems that can detect amounts of pedestrian, bicycle, stuck vehicles using infrared or laser beams, and systems that and other traffic. can issue an alert if the crossing gates do not close. If the We also have emergency buttons crossing detects an abnormality, the related signals are made to indicate "stop," and trains are made to stop before they (crossing trouble alert systems). the pressing of which causes reach the crossing. Starting in FY2021, we are introducing related signals to indicate "stop," a high-performance laser radar crossing obstacle detection thereby alerting train drivers of any system, which has better performance of detecting pedestrians, abnormality occurring at a crossing. bicycles, wheelchairs, etc., at crossings where train traffic is

Prevention of collision with obstacles; derailment and deviation countermeasures

If any abnormality is detected by crossing obstacle detection systems, related signals indicate "stop." In addition, a "crossing ATS system" that complements the brakes manually operated by the driver will be introduced in phases by FY2025. If a train passes a crossing ATS device set up on the ground after an obstacle is detected inside a crossing, the ATS function

Earthquake-Resistance Measures

Tokaido Shinkansen

Implementation of derailment and deviation countermeasures

For the Tokaido Shinkansen, we are promoting derailment and line by FY2028. "Deviation deviation countermeasures to prevent the expansion of damage prevention stoppers," which from derailment caused by an earthquake. In addition to installing prevent a major derailment a "derailment prevention guard" to prevent vehicle derailment of rolling stock in the event as far as possible, we are taking measures for civil engineering of a derailment, have already structures to make them function effectively. We expect to been installed on all of our 🚟 complete the implementation of these measures to the entire Shinkansen rolling stock.

Reinforcement of structures

JR Central has been implementing earthquake-resistance measures for various civil engineering structures and buildings so as to prevent Shinkansen services from being suspended for a long period of time in the event of an earthquake. Furthermore, starting in FY2021, we are implementing seismic reinforcement of platform sheds.

Initiatives to stop trains quickly

JR Central adopts an earthquake prevention system* that detects tremors, automatically stops power transmission, and issues orders to moving trains to make an emergency stop. We have also made improvements to the "Earthquake Brake" on rolling stock in an effort to reduce the stopping distance at the time of an earthquake. For the new model Shinkansen rolling stock N700S, which we launched in July 2020, we made improvements to the ATC and the brake system to further reduce the stopping distance by roughly 5% compared to the stopping distance of the N700A (3rd edition).

*After introducing the "Urgent Earthquake Detection and Alarm System (UrEDAS)" in 1992 ahead of other companies, we introduced the "Tokaido Shinkarsen Earthquake Rapid Alarm System (TERRA-S)" in 2005, thereby improving the system in the speed of the alarm, etc. In April 2019, we continued to further accelerate the speed of the alarm by utilizing information from the Seafloor Observation Network for Earthquakes and Tsunamis.

Conventional Lines

Reinforcement of structures

In order to also minimize the impact of earthquakes on Conventiona Lines, we are implementing earthquake-resistance measures on various civ engineering structures and buildings. Furthermore, as with Shinkansen, startin in FY2021, we are implementing the seismic reinforcement of platform sheds

Initiatives to stop trains quickly

Information from the aforementioned earthquake disaster prevention system will be used for conventional lines to detect initial weak tremors in case of a earthquake, and provide a warning to the driver's cabin of trains traveling segments that are likely to be impacted significantly by the earthquake, instructi the driver who receives the warning to apply the brakes immediately. Furthermore we have been strengthening the functions of seismometers alongside railway line since FY2016. We will be able to issue warnings to trains more quickly than before.



High-performance crossing obstacle detection system (laser radar method)

- automatically stops the train in front of the crossing.
- By FY2024, we will also install in phases a "crossing deviation" prevention stopper," which will control the deviation of a train after it collides with an obstacle on a crossing and derails, thereby preventing it from colliding with another train going in the opposite direction, in the Series 313 trains.



Derailment prevention guards

Measures taken and progress

Measures taken	Progress (as of the end of FY2020)
levated track columns, bridges and embankments	Completed * Except for some areas under discussion (Elevated track columns: Approximately 19,600; Bridge columns: Approximately 900 units; Embankments: Approximately 9.4 km)
Bridge railing (Fall prevention)	Under way (Completed 2,157 beams out of 2,215 target beams)
ation buildings / station ceilings / platform sheds	Station buildings: Completed* except for some areas under discussion Station ceilings: Under way (completed at seven out of total 17 stations) Platform shead: Under way (at 16 stations excluding Shinagawa)
Rolling stock workshops, etc.	Completed (Hamamatsu Workshop, buildings at rolling stock depots)



	Measures taken and	progress
l	Measures taken	Progress (as of the end of FY2020)
il g n n g	Elevated track columns, and bridge piers*	Elevated track columns: Under way (Completed 5,078 columns previously targeted by the end of FY2017. Since FY2019, 3,338 have been newly added and 642 have been completed for the purpose of further early recovery in the event of a disaster.) Bridges: Completed (4 target bridges)
	Bridge railing*(Fall prevention)	Completed (1,985 target beams)
	Station buildings / station ceilings / platform sheds	Station buildings: Under way (Completed 76 stations of the 78 target stations with 5,000 passengers per day) Station ceilings: Under way (Completed 16 stations of the 30 target stations with 10,000 passengers per day) Platform sheds: Under way (20 stations used by at least 10,000 passengers per day, excluding stations requiring no reinforcement and sheds constructed with rails)
	Rolling stock workshops, etc.	Nagoya Workshop: Rebuilding and reinforcement of buildings under way (Planned to be completed by the end of FY2021)
C		

caruquake-resistance reinforcements under way in sections including those where there are at least 10 departur per peak hour and where a long, strong earthquake vibration is expected, as in the case of the Tokai Earthquake

Response to Other Natural Disasters

Tokaido Shinkansen Conventional Lines

In addition to earthquakes, the prevention of accidents caused by natural disasters such as tsunamis, heavy rain, typhoons and snowfall is one of the important pillars of our safety measures, and we are implementing various measures.

Tsunami countermeasures

JR Central defines the Conventional Line segments that a tsunami is expected to reach as a "tsunami hazard expected area," based on the tsunami hazard map of each municipality. When a tsunami is expected, first of all, we make arrangements so as to not allow trains to enter the "tsunami hazard expected area." For trains already in the area, we move them out of the area or guide passengers to a safe place. In addition, a "tsunami warning sign" has been installed in the area to indicate the direction of evacuation. We also take measures to evacuate quickly by displaying the evacuation route to the nearest evacuation center on tablet devices for conventional line train drivers distributed to train crews. Furthermore, to ensure that these measures can be taken, we make sure that staff are aware of them and conduct evacuation trainings using actual rolling stock in cooperation with local municipalities.



Rain countermeasures

We are taking measures such as protecting the slopes of embankments and cut sections with concrete and other materials, laying drainage pipes to promote drainage, and installing earth and sand stoppers to prevent the inflow of earth and sand. Furthermore, rain gauges are installed along railway lines, and when the amount of rainfall exceeds the regulation value, a warning is automatically issued to the control center, train station, etc., and operation regulations such as suppressing or slowing down trains are carried out. Furthermore, in June 2020, we introduced an operation regulation using rainfall radars, which can finely capture "soil rainfall," a superior indicator for grasping the extent of sediment disaster risk, and localized heavy downpour, in all sections of Conventional Lines. These regulations are lifted after safety is confirmed.



[Previous indicator] Continuous rainfall (image) [New indicator] Soil rainfall (image)

Operation regulation using "soil rainfall"

Flooding countermeasures

For the Tokaido Shinkansen, we are working to relocate or elevate signal equipment rooms and power equipment, which are important facilities, install anti-flooding doors, etc., and take measures to maintain necessary vehicle inspection functions to ensure the stable operation of trains against flooding anticipated for railway facilities. In addition, we have plans to evacuate trains for train-parking areas exposed to risk of being flooded, and evacuate trains according to this plan if the risk of damage arises.

- 1 Anti-flooding doors Waterproofing treatment on walls

Anti-flooding doors (image)

Anemometer

Wind protection

Anemometers are installed in areas where wind is concentrated, such as on mountains and bridges, or where gusts are expected to occur. When the wind velocity exceeds a certain value, an alarm is automatically issued to the control center, train station, etc., and as in the case of rain, operation regulations such as suppressing or slowing down trains are carried out. In addition, due to geographical and other conditions, some anemometers have an additional function of automatically displaying a stop signal when the wind exceeds the standard.

Measures against rockslides and avalanches

For Conventional Line routes where there is a risk of falling rocks or avalanches, we have installed falling rock-retaining walls, rock cover works, and avalanche retaining walls as protective equipment. In addition, if a rock fall or an avalanche is detected by a detector, the train is stopped to prevent accidents.

Falling rock retaining walls and alarm devices

Snow protection

During winter, Tokaido Shinkansen trains may operate at a sloweddown speed to prevent the equipment below train floors from being damaged, hit by stones of ballast being lifted up when a mass of snow, formed under the train floor by drifts caused by the train's movement, drops onto the tracks. In order to provide safe and reliable transportation to customers, we use wedge plows to remove snow from tracks, install sprinklers to prevent snow drifts from sticking to train bodies, set up onboard and ground-installed cameras to monitor the situation of snow sticking to train bodies in real time and ensure trains operate at an appropriate speed, and have introduced a high-pressure washing machine to remove masses of snow formed, among other measures.



In the Sekigahara, Maibara and Kyo using ground and on-vehicle camera On-vehicle and ground cameras

Operation Management and Safety Measures

Tokaido Shinkansen

The principle of Crash Avoidance

The biggest feature of the Tokaido Shinkansen and other Japanese high-speed railway systems is the introduction of an operation control system based on the principle of Crash Avoidance. This principle has been derived to prevent the possibility of a collision by using (1) dedicated tracks for high speed passenger rail service, which completely exclude freight and commuter rail and have no grade crossings, and (2) an Automatic Train Control (ATC) system, which automatically controls the speed limit of high speed trains and prevents collisions from happening.

Shinkansen General Control Center / Operational control systems

The safe and reliable transportation of the Shinkansen is supported by established in Osaka jointly by JR West, and is equipped with the same functions as the Shinkansen General Control Center in Tokyo so that the Shinkansen General Control Center in Tokyo, where directors work in close collaboration using various systems, such as Computer Aided Traffic Control (COMTRAC*), to accurately grasp a significant amount of it can serve as an alternative control center should Tokyo's General Control Center become non-operational due to a disaster. Thus, we have information, including the operational status of trains and the utilization strengthened our crisis management in preparation for emergencies. *COMTRAC (COMputer-aided TRAffic Control): A system that controls train routes, manages train operations, and operates and manages the allocation of staff (drivers and conductors) and rolling stock. Based on input data prescribing the operational conditions for each train (such as station departure and arrival times, platforms, and order of movement) in the computer, the system can monitor the status of facilities, control overall transportation services, and manage their safety

Moreover, the Shinkansen Second General Control Center has been

The Shinkansen Multiple Inspection Train (Dr. Yellow)

We have also introduced the "Shinkansen Multiple Inspection Train (Dr. Yellow)" to test electrical facilities such as overhead wires and ground facilities such as tracks. This rolling stock, which is based on the Series 700, aids safe and reliable transportation by efficiently conducting high precision inspections at speeds of 270 km/h.

Conventional Lines

ATS-PT (Automatic Train Stop)

ATS-PT continuously checks the speed for conventional lines according to the distance between the train and the signal, the curve, and the points. It ensures safety by automatically applying emergency brakes when there is a risk that the train will exceed the safe speed. (We have completed the introduction of ATS-PT in all of our conventional lines.)

Tokai General Control Center (Nagoya) / Shizuoka General Control Center / Operation management systems

The operation of our conventional lines is managed by the Tokai General Control Center (in Nagoya) and the Shizuoka General Control Center. In these Control Centers, directors work in close collaboration using various systems, such as CTC (Centralized Traffic Control),* to accurately grasp a significant amount of information, including the operational status of trains and the utilization status of facilities, control overall transportation services, and manage their safety to support safe and reliable transportation on conventional lines.

*CTC:The CTC system not only remotely and integrally controls station signaling equipment, etc. in order to efficiently manage train operations, but also has the function of conducting real-time monitoring of the operational status of trains.

Multiple Inspection Train and Track Inspection Train (Dr. Tokai) We efficiently and thoroughly manage and maintain facilities with regard to the maintenance of railway tracks and electrical facilities on conventional lines, using the "Multiple Inspection Train (Dr. Tokai)."



status of all trains in operation at all times





Dr. Yellow





Tokai General Control Center



Initiatives for Ensuring the Safety of Employees

Structure of safety and health management system

Ensuring the safety of employees is also an important issue. At JR Central, we have established internal regulations based on the Industrial Safety and Health Act and put in place a safety and health management system. At our business organizations, etc., safety management officers and health management officers are appointed, systems are in place to ensure safety at work and to manage workplace hygiene, and careful safety and health examinations are conducted as part of our active efforts to prevent industrial accidents and improve the work environment. In addition, "safety audits" are performed to confirm the level of compliance with laws and regulations, etc., confirm systems in place to prevent labor accidents that have occurred in the past, and confirm the state of implementation of accident prevention measures.

Movement to explore the nature of safety

When we examine the causes of handling errors and labor accidents that have occurred in the past, we find that many such cases are caused by insufficient understanding of rules and basic actions. Therefore, since FY2013, the Company has been promoting the "movement to explore the nature of safety" as a company-wide effort. This movement encourages employees to think about and understand the essence of rules and basic

"Essays for the prevention of train accidents and industrial accidents"

It is important to apply the lessons learned from past train accidents and industrial accidents to our own actions as "something that can happen to oneself" rather than something that has nothing to do with oneself. Sharing the experiences of seniors, juniors and colleagues, as well as ideas and feelings based on those experiences, helps each employee to understand the essence of safety. Based on this view, in FY2014, we solicited ideas and initiatives from employees based on their experiences as railway workers, and compiled what we collected in an essay collection titled "Turning Lessons Learned into Assets." Subsequently, we published the second and third volumes respectively in FY2016 and FY2020, which are used for group training and workplace education.

In addition, we have held three recitals in which the writers of essays directly present the content published in the essay collection, including thoughts that were not written in the essay. More than 300 employees, including company executives, attended the recitals that provided an opportunity for those with experience to convey a strong desire for safety to the minds of the employees in the audience, with a sense of presence and satisfaction.



Collection of essays for the prevention of train accidents and industrial accident

Reciting the essays (Presenting safety-promoting activities)

Soliciting illustrations, photographs and slogans related to accident prevention

In order to raise employees' awareness for the prevention of train accidents and industrial accidents, we invite all employees to submit illustrations, photographs and slogans, and we create posters using items submitted and post them at relevant internal locations. In FY2020, we received Posters promoting the prevention of approximately 45,000 entries.



train accidents and industrial accidents

We are also promoting safety and health education throughout the Company. In addition to conducting the induction course on safety and health for all new employees at the General Education Center, we also provide classroom education on laws and regulations at the General Education Center and at each site in accordance with the nature, role and level of work, as well as safety and health education through necessary practical training, including the use of equipment and tools and simulations of industrial accidents

Furthermore, we are promoting various activities such as the deployment of the "movement to explore the nature of safety" and awareness raising through the use of essays for the prevention of train accidents and industrial accidents.

actions with the three key phrases of "Why?", "What will happen?", and "What should I do?" in various aspects of their daily work, on top of education, training and study sessions held at each of our field offices. This initiative has also been expanded to our affiliated companies to further deepen the activity

All JR Central Safety Promotion Conference

We have been holding the All JR Central Safety Promotion Conference yearly since 1991. With a view to enhancing cooperation among companies in preventing train accidents and industrial accidents, the president and the executive in charge of safety at our affiliated companies (approximately 150 firms) that play a major role in our railway business and the executives of the Company all gather at the conference.

In FY2020, the conference was held on the theme of "Noticing Risks, Making Others Notice Risks: Building a Culture of Eliminating Risks in Advance." The Company's executives gave addresses, while the Construction Department, Kansai Branch Office, Hamamatsu Workshop and affiliated companies gave presentations on their efforts to eliminate risks in advance

Lastly, Toru Nakata of the National Institute of Advanced Industrial Science and Technology gave a special lecture entitled, "Realization and Inquisitive Mind Prevent Human Errors," in which he discussed, among other things, the importance of realizing the presence of risks, methods for realization and measures for improvement, and risks lurking in manuals.

Through this conference, we reconfirm the importance of efforts to prevent train accidents and

industrial accidents. and the participating companies make use of the conference to improve their future accident prevention efforts.



All JR Central Safety Promotion Conference

Establishment of a safe transportation period during peak season

During the Golden Week holidays, the summer months, and the year-end and New Year holidays, we set up a "safe transportation period" to carry out comprehensive safety inspections by the president and other executives of the head office. We are also working to furthe strengthen the safe transportation system and further raise employees' awareness for safety through measures such as the Response Headquarters.



establishment of the Safe Transportation Comprehensive safety inspection

Safety-related data



*1 Railway operation accident Train accident: Train collision, derailment, and fire accident

*2 Nearly all of the railway operation accidents were not attributable to JR Central. *3 Incident refers to a situation in which there is the risk that a railway operation accident may occur



*Transport disruption refers to cases that are not railway operation accidents, but those involved suspending operation of a train or those where a passenger train was delayed for 30 minutes or more (one hour or more for non-passenger trains)

Status of industrial accidents (JR Central and its affiliated companies)



*Excludes heatstroke





*Excludes heatstroke

Railway crossing accident: A collision between a train or a vehicle and a pedestrian or a motor vehicle, etc. at a railway crossing Railway accident incluing personal injury. An accident in which a person was killed or injured by the operation of a train or vehicle Railway property damage accident: An accident in which the operation of a train or vehicle causes damage to property worth 5 million yen or more





Tokaido Shinkansen -Constant Effort to Enhance Services-

Since its establishment, JR Central has constantly refined not only the safe and punctual but also fast, frequent, high capacity, environmentally feasible, and comfortable characteristics of the Tokaido Shinkansen, which plays the role of Japan's main artery transportation, in order to maintain and strengthen its competitiveness. Specifically, we have constantly worked to enhance services through the introduction of the "12 Nozomi Timetable." the launch of new N700S Shinkansen rolling stock, and the expansion of online reservation and ticketless boarding services, among others.

Characteristics of the Tokaido Shinkansen



- Tokyo and Osaka is approximately 1/8th that of an aircraft
- The CO₂ emission rate for the same is around 1/12th

"12 Nozomi Timetable" expected to significantly improve our services

were operating the Tokaido Shinkansen at a maximum speed of 220 km/h. Since then, we have continued to work on enhancing our transportation services on the Tokaido Shinkansen. We put the Series 300 "Nozomi" into operation in 1992 with a maximum speed of 270 km/h, and then opened Shinagawa Station and replaced all trains with the Series 300 trains in 2003, allowing us to shift to a Nozomi-centered timetable. This timetable also underwent successive improvements to fulfill the needs of customers.

Then, in 2015, the speed of the Tokaido Shinkansen was increased for the first time in 23 years, reaching a top speed of 285 km/h.

The Series 700 was retired in the spring of 2020, and we completed the update to the N700A type*

When the Company was established in 1987, we to allow all trains to run at the same highest speed of 285 km/h. We also finished improvements to equipment and introduced the "12 Nozomi Timetable" in March 2020.

quiet space

With the "12 Nozomi Timetable," the maximum number of "Nozomi" services per hour increased by two from 10 to 12 in either direction, and "Nozomi" is now operated at an average interval of 5 minutes during busy hours. Also, under the "12 Nozomi Timetable," all "Nozomi" services will travel between Tokyo and Shin-Osaka within 2 hours 30 minutes. Figure 1

Passengers can reduce their travel time by reserving train seats online at their convenience and using the new, faster "Nozomi," This has made the Tokaido Shinkansen even more convenient.

*Generic name of the Series N700 and N700A, and later reflecting the main functions adopted in the N700A





- total due to rounding. *5 Daily departures for FY2020 and passenger volumes for FY2019 and FY2020 have decreased because of the impacts of the COVID-19 pandemic.

Launch of new N700S Shinkansen rolling stock

The N700S, new Shinkansen rolling stock, is designed based on the results of years of technological development, and is equipped with features such as enhanced safety and stability, enhanced comfort and convenience, higher emergency response capability, and a standardized design that can easily be constituted to any length of trainsets.

Based on the results of the test runs of the N700S test train, we determined the mass production specifications for the N700S rolling stock to replace the Series N700A type trains in FY2020, developed a launch plan as shown below, and began the service with the N700S in July 2020.

Number of Rolling Stock

	-					
Fiscal Year	2020	2021 (plan)	2022 (plan)	2023 (p		
Number of Rolling Stock	12	13	13	2		

Main features of the N700S

- Enhanced safety and stability Enhanced comfort and convenience
- Shorter braking distance in • Equipped with a fully active the event of an earthquake Figure 2 damping control system
- Enhanced snow-resistant features Additional outlets for mobile
- Enhanced status monitoring function devices

Figure 2 Shorter braking distance in the event of an earthquake (at 285 km/h) [Figure 3]



passengers can safely evacuate in the event of a long power outage following a natural disaster, etc.

Total

40

2 hr 33 to 37 min



7trains

None

Lower running cost	Higher emergency response capabili
Reduced power	Battery-based self-propelled
consumption Figure 3	system Figure 4
Reduced inspection/repair	Additional security camera
work	 Enhanced intercom function
	 Toilet functions during power outa
Reduced power consumption	
-16% -6%	
-0 78	

The N700S is the first high-speed train equipped with a battery-based self-propelled system. It can travel to a location where

Promoting Online Reservation and Ticketless Boarding Services

In an effort to have customers more conveniently use the Tokaido Shinkansen, JR Central takes the initiative in promoting greater use of online reservation and ticketless boarding services via "EX Service" ("Express Reservation" and "smartEX").

For customers who frequently ride the Shinkansen for business or other reasons, we provide the "Express Reservation" service that offers a discounted member price throughout the year. Members of the service can smoothly ride the Shinkansen by simply touching their member IC card at the automatic ticketing gates after reserving their preferred seats with a smartphone or other device beforehand. There is no need to stop at the ticket counter of a station, allowing customers to significantly reduce their total transit time, and potentially apply for the "Green Program" (not applicable for some members) that allows customers to utilize the points accumulated based on their usage of the Shinkansen to take a seat in a Green Car at the price of the reserved seat in a regular car. In addition, reservations can be changed as many times as necessary before departure without any handling fees, allowing customers to use the service without worry even if there are sudden schedule changes.

We also offer "smartEX" with no membership fee for customers who only occasionally use the Shinkansen, including people traveling to visit their hometown, tourists, and foreigners visiting Japan, so that they can also use the convenient online reservation & ticketless boarding service. This ticketless service enables customers to immediately use the service by simply registering their credit card and the nationwide interoperable transportation IC card from their smartphone, etc. As a result, we offer greater convenience to even more customers.

At the moment, reservations for reserved seats using these services currently account for nearly half of all reservations.

Further Enhancing Our EX Service

In March 2021, we launched a ticketless boarding service for group passengers, a ticketless boarding service using a QR code for visitors to Japan, and a reserved seat reservation/change service for delayed trains. Thanks to these services, passengers who board trains in groups and visitors to Japan who do not have commuting type IC cards are now able to board Shinkansen trains without the bother of receiving a ticket in stations.

Furthermore, we are aiming to extend the service area of the EX Service to the Kyushu Shinkansen (Hakata - Kagoshima Chuo section) in the spring of 2022.

In addition, we will enable customers to reserve both Shinkansen seats and services available along Shinkansen lines seamlessly in the summer of 2023 by introducing "EX-MaaS" (tentative name), which is based on the convenient and reliable EX Service but expands on its functionality. Specifically, we will offer special services with a special feel, including smooth linkage with hotels, tourist facilities, etc., entry outside business hours, and preferential entry to popular facilities.

Furthermore, we will make a new EX travel product, which will allow passengers to change trains according to their schedule and board Shinkansen trains through a ticketless process. available for purchase. It will be the first travel product in Japan that allows passengers to change Shinkansen trains online until immediately before the boarding time. It will address the needs of customers who wish to travel on a flexible schedule. We are currently accepting applications for reservation about a month before the boarding date, but will make it possible to make

Shifts in usage of online reservation services





reservations about a year before the boarding date. This will not only allow us to take reservations for events whose schedule is known well ahead, including concerts, but also address requests by visitors to Japan to make early reservations.

We aim to enhance our services in both the business and tourism aspects by offering products attractive to customers under these structures so that we can increase future usage and revenues.

Business trips and travel reservations can be arranged seamlessly in a single step



Other service enhancements

- Ticketless boarding, development of EX travel products that allow passengers to change trains online up to the last minute
- Early booking of Shinkansen (about one year before the boarding date)

Stimulating Tourist Demand

We are working to stimulate tourist demand by introducing Targeting inbound tourists and working in cooperation various campaigns for each region or target segment through with municipalities located along our train lines and other various information media and sales channels. For Kvoto and transportation companies, we offer sightseeing value tickets Nara, which are the largest tourist resources in our market covering destinations that are popular among such tourists, including "Takayama and area, we have continuously implemented travel campaigns in Hokuriku." We also have tour collaboration with local governments and travel agencies, such as (0) the Kyoto Campaign (launched in 1993) and the Nara Campaign packages for the Tokaido and (launched in 2005), and are promoting the use of the Shinkansen Shinkansen combined with ねぇ、そこのキミ mainly from the Tokyo Metropolitan area to the Kansai region. day trip excursion tickets to # 75 L 5K In addition, we are working on coming up with attractive destinations we serve, such products associated with Tokyo, Yokohama, Shizuoka, Aichi, Hida as FLEX JAPAN, which is a Takavama. Ise-Shima and other locations. package that comes with a m In the summer of 2020, we launched the "Shinkansen for a longroundtrip Shinkansen ticket, awaited trip! Make traveling more fun with small shifts" campaign accommodation, etc. to capture that proposes a new way of traveling by "shifting" from the inbound demand that remains "standard" in terms of time, location, means of travel and action solid. As a tool to promote while taking care to prevent the spread of COVID-19, aiming to these offerings, we post about stimulate demand by proposing "Zurashi Travel" (shifting travel) as attractive features of Japan on

a new form of travel. The campaign encourages travelers to "shift" the Central Japan Shinkansen/ elements of travel so that they can make their trip more fun with Train Portal, a website packed new discoveries, with the added benefit of avoidance of crowded with information on our products areas, which ultimately helps prevent the spread of infections. targeting visitors to Japan.

Improving the Working Environment to Support a New Way of Working

The COVID-19 pandemic has led to increased attention on new length of use, and introduce, on a trial basis, a "Business Booth" ways of working that does not discriminate between locations, that passengers can use for meetings, etc., and will be set up by including telework and web conferencing using ICT. In response to renovating the "smoking room" between Cars No. 7 and No. 8 (in such a change in work styles, JR Central aims to expand revenues the deck part) of N700S trains. by fine-tuning services and products that target individual needs, in Furthermore, we will set up semi-private work booths and poles

fitted with power outlets that are available free-of-charge in some addition to existing initiatives, in providing them. We will enhance the working environment in stations and trains waiting rooms at Tokyo, Nagoya and Shin-Osaka stations. We will to allow passengers to spend their time on the train in ways also set up at some stations box-type private work spaces and suitable to their work style by, for example, enabling them to office-type work spaces, called "EXPRESS WORK," incorporating continue working seamlessly before and after boarding a Tokaido private booths and meeting rooms that EX Service subscribers can Shinkansen train. use for a variety of purposes, including working along in a booth Specifically, we have made Car No. 7 of the Nozomi train an "S or having meetings with several people, before or after boarding Tokaido Shinkansen trains.

Work Car" on a trial basis, for passengers wishing to do work on mobile devices, etc. without worry. In addition, we plan to launch We aim to continue working to enhance our services in a on Cars No. 7 and No. 8 of Series N700S trains a new, free-ofvariety of aspects so that businesspeople who use the Tokaido charge "S Wi-Fi for Biz" service, which has double the transmission Shinkansen can spend the time of their travel in more convenient capacity of existing free Wi-Fi services and sets no limit on the and comfortable ways.



Business Strategy



"Zurashi Travel" poster





The Chuo Shinkansen Project

Using the Superconducting Maglev System

The Chuo Shinkansen Project using the Superconducting Maglev System is a project to duplicate our artery transportation system linking Tokyo, Nagoya and Osaka, which is the lifeline of our business, and drastically prepare for risks such as aging in the future and large-scale disasters of the Tokaido Shinkansen. This project will allow us to further reduce management risk and thus stabilize our management base, and continue to carry out our founding mission of undertaking high-speed, large-capacity passenger transport between Tokyo, Nagoya and Osaka. This project will also dramatically improve convenience by greatly reducing travel time due to its highspeed operations, bring significant benefits and potential for development to the Japanese economy and society. and ensure the long-term interests of shareholders and all other stakeholders over a long period of time.



Outline and Significance of the Chuo Shinkansen

Superconducting Maglev System based on the Nationwide Shinkansen Railway Development Act (hereinafter, "the Act") to continually carry out our mission of operating a high-speed railway linking the Tokyo Metropolitan area, and the Chuo and Kansai regions (from Tokyo through Nagoya to Osaka), which is the lifeline of our business, and to ensure the future foundation of the company.

The Tokaido Shinkansen has been in operation for more than half a century, and while we have been carrying out large-scale renovation, there is the risk of suspension of services due to major facility replacement caused by future aging. Furthermore, Japan is prone to earthquakes and, although we have taken earthquake resistance measures for the Tokaido Shinkansen, there is the risk of potential major disasters, including the undeniable possibility of long-term disruption to Japan's main transportation artery due to a possible major earthquake. Therefore, as a drastic measure to prepare for these future management risks, we decided to complete the Chuo Shinkansen as quickly as possible, under the assumption that we bear the cost of its construction, utilizing the Superconducting Maglev System

We are promoting the Chuo Shinkansen Project using the that we have developed. The Chuo Shinkansen will turn Japan's main transportation artery into a dual system, and JR Central will operate it in an integrated manner along with the Tokaido Shinkansen.

> Distribution map of the estimated greatest seismic intensity of the Nankai Trough Large Earthquake



Source: Prepared by JR Central based on "Countermeasure against a Nankai Trough Large Earthquake (Final Report)" (May 2013)

Chuo Shinkansen Project as a national project

The Chuo Shinkansen is being constructed in accordance with the Act, which is a legal system for developing infrastructure essential to the nation in order to contribute to the development of the national economy, the expansion of the area of Japanese people's lives, and the development of local communities. Based on the Act, we received the designation as the operator and the order for construction from the Minister of Land, Infrastructure, Transport and Tourism in May 2011, and then the construction implementation plan was approved by the Minister of Land, Infrastructure, Transport and Tourism in October 2014. In the meantime, we have conducted environmental assessment procedures and published the final environmental impact assessment report between Tokyo and Nagoya, which is promoted as the first stage.

On the other hand, in order to confirm that the principles of a privately owned company, such as freedom of management and

autonomy of capital investment, would not be hindered by application of the Act, we referred fundamental clauses regarding application of the Act to the Ministry of Land, Infrastructure, Transport and Tourism (hereinafter, "MLIT"), and received a reply in January 2008 indicating that those principles would not be hindered.

We will take steady steps towards the successful completion of this project, maintaining sound management and stable dividends, sufficiently examining costs and demonstrating our flexibility, while making necessary investments to ensure safe and reliable transportation, and to enhance the competitiveness of the Tokaido Shinkansen and conventional lines. We will first realize the project between Tokyo and Nagoya, where we have received approval for the construction plan, and strive to further extend to the project to Osaka.

Flow of work based on the Nationwide Shinkansen Railway Development A





*Research on the residual 4 items ●Items related to transportation capacity in response to transportation demand ●Items related to the development of facility and rolling stock technologies ●Items related to construction costs Other necessary items

New Value Provided by the Chuo Shinkansen

Frvironmental

Imnact Assessm

The realization of the Chuo Shinkansen using the Superconducting Maglev System will contribute to the vitalization of Japan's economic and social activities, turning Japan's main transportation artery between Tokyo, Nagoya and Osaka into a dual system, and merging the three major metropolitan areas into "Super Mega Region."

be 7.04 trillion ven



nentation Plan (Part2) of the Chuo Shinkansen Section between Shinagawa and Nagoya" (Mar. 2018) *4 Source: "Research Report on the Chuo Shinkansen Section between Tokyo and Osaka" (Dec. 2009) Yamanashi, Nagano, and Gifu on the Chuo Shinkansen line is temporary. *3 Source: "Construction Im

We will continue to fulfill our mission into the future cities, and the three major metropolitan areas will by reducing management risks and stabilizing our be transformed into one mega-metropolitan area, the management base by completing the Chuo Shinkansen so-called "Super Mega Region," where the interaction Project. Furthermore, by adopting the Superconducting of people will be highly activated and economic and Maglev System for the Chuo Shinkansen, we can social activities will be energized, which is expected expect a drastic reduction in travel time between to have a significant positive effect on our business.

۱ct	Content of Development Plan				
n	Construction line	Chuo Shinkansen			
у	Section	Tokyo - Osaka City			
	Technology used for running	Superconducting magnetic levitation technology			
	Maximum design speed	505 km/h			
990	Estimated amount of costs required for construction (including rolling stock costs)	9,030 billion yen			
08	Other necessary items	Main areas Kofu City area, south-central Akaishi Mountains passed through (Southern Alps), Nagoya City area, Nara City area			
	*The estimated amount of e	xpenditures for construction does not include interest.			
	Outline of the Construction Implementation Plan (Part 2) of the Chuo Shinkansen section between Shinagawa and Nagoya				
	Section	Between Shinagawa and Nagoya			
	Station Location	Shinagawa Station, Kanagawa Prefecture Station (provisional name), Yamanashi Prefecture Station (provisional name), Nagano Prefecture Station			

	Station Escation	(provisional name), Gifu Prefecture Station (provisional name), Nagoya Station
	Line extension	285.6km
4	Construction costs	4,853.6 billion yen [Total construction costs of 5,523.5 billion yen (Includes rolling stock costs. Excludes the construction costs for the existing Yamanashi Maglev Line)]
117	Expected completion year	2027
,,,,	*It is announced in the ' Chuo Shinkansen Sectio the total construction co	Notice Concerning Total Construction Costs for the n between Shinagawa and Nagoya" (Apr. 2021) that osts between Shinagawa and Nagoya are expected to

Creation of new demand

In the competition between the Shinkansen and air travel, the shorter the travel time of the Shinkansen, the greater its share. Demand is therefore expected to shift from air travel to the Chuo Shinkansen due to the time reduction effect of the Superconducting Maglev System. In addition, the dramatic time reduction will greatly stimulate the flow between metropolitan areas, which is highly expected to generate new demand.

intermediate stations in Kanagawa, Yamanashi, Nagano and Gifu Prefectures, there is a possibility of significantly improving travel time and frequency between cities along the line and the three major cities, and increasing the flow of people if there is room to increase the number of operations and the number of stops for the "Hikari" and "Kodama" by taking advantage of the extra transportation capacity caused by the transfer of "Nozomi" passengers to the Chuo Shinkansen.

Furthermore, in addition to the anticipated new use of



 \rightarrow Travel time and frequency between the cities along the line and the three major cities improves significantly.

2 Broad ripple effects on the economy and society

Due to the overwhelming time reduction effect of the Superconducting Maglev System, Tokyo - Nagoya - Osaka will be connected in about one hour, and the three major metropolitan areas will become a "Super Mega Region" with a total population of about 66 million, or over half of Japan's total population.

This "Super Mega Region" is expected to become the core driving new growth for Japan, which is experiencing a declining population, by broadening the scope of activities

and thereby significantly changing lifestyles such as the way people do business and spend their leisure time, as well as expanding various possibilities. The final report of the "Super Mega Region Concept Study Group" established by MLIT titled "Creating a Super Mega Region to Overcome a Declining Population: Creating New Value through Liberation from Time and Place" (May 2019) presents the following as "impacts of the Chuo Shinkansen."

From the Final Report of the "Super Mega Region Concept Study Group" (May 2019)

- Opportunities for face-to-face interaction between people will increase, and the time for interaction will expand, which will lead to opportunities to create new innovation.
- It is expected to bring about changes in business styles and lifestyles by liberating people from "time" and "place," which have been factors that restrict working and living styles, and providing a variety of options.
- Due to the integration of the three major metropolitan areas, the entire Super Mega Region will create new value and growth industries, which will increase the attractiveness of the region in inviting people and investment from overseas.
- By organically connecting the Chuo Shinkansen, Shinkansen and expressway networks, it is expected that the multiplicity and substitutability of the high-speed transportation network, which forms the framework of the national land policy, will be enhanced, and a sustainable flow of people and goods will be secured.
- It is expected that new regional revitalization will begin in the areas around the intermediate stations located between the three major metropolitan areas, and that the effects of the Super Mega Region will spread widely beyond the areas along the Chuo Shinkansen.

*Extract and summary by JR Central of the final report of the "Super Mega Region Concept Study Group" established by MLIT (May 2019)

Furthermore, according to the "National Land Policy Simulation Model" compiled by MLIT, the productivity improvement effects of the formation of the Super Mega Region as a result of the opening of the Chuo Shinkansen are estimated to be 3.5 trillion yen per year for the opening of the line up to Nagoya, and 6.5 trillion yen per year for the opening of the line up to Osaka.*

In this way, the dramatic reduction in travel time brought about by the opening of the Chuo Shinkansen will have a major impact on the entire country, and will lead to the creation of new value and the sustainable growth of Japan as a whole.

*National Spatial Planning and Regional Policy Bureau of MLIT "FY2017 Survey Report on the Development of National Land Policy Simulation Model" (July 2018)

Promotion of Construction Work

Outline of major construction work

Construction of terminal stations

The construction of the Shinagawa and Nagoya terminal stations involves installing a largescale underground structure in the basement of the Tokaido Shinkansen and other lines while they are in operation, which is very difficult and requires the utmost care and high level construction technology. In addition to safely replacing existing structures of the commercial lines, we will construct earth retaining walls to protect the surrounding areas. Then, we will construct a structure that will become the station of the Chuo Shinkansen in the excavated underground space using the open-cut method that digs down mainly from the ground surface.





used for digging.

Progress of Construction Work (as of end of September 2021)

We proceeded with measurement, design and land acquisition continue to focus on construction safety, environmental protection, and by establishing close coordination with local communities between coordination with local communities, and will steadily proceed with various Shinagawa and Nagoya, where we received approval for the construction types of construction while thoroughly and carefully examining costs. implementation plan, and signed contracts for Nagano Prefecture In the Southern Alps Tunnel (Shizuoka Section), we have not been Station (tentative name), etc. In addition, we explained the outline of the able to obtain the understanding of Shizuoka Prefecture and the local construction work and safety measures to residents of the construction municipalities concerning the impact on the water resources of the Oi areas where construction contracts have been signed. These included River, As such, construction work has not seen substantial progress and construction areas where tunnels will be dug at deep underground sections these situations make it difficult to meet our 2027 target for Shinagawaof the Tokyo Metropolitan Area and the Central Region, for which we held Nagoya opening. Given the circumstances, MLIT established the "Expert Conference on the Linear Chuo Shinkansen Shizuoka Section of the a briefing on the safety and security measures for shield tunneling ahead of a construction briefing. At the Southern Alps Tunnel (Yamanashi Section), Construction Site" in April 2020 to resolve issues through discussions where construction work has already begun, we continued to excavate based on the scientific and engineering evidence. At the 12th meeting of an inclined shaft, pilot tunnel and main tunnel. At the Nagano Section, we the Expert Conference held on September 26, an interim report (draft) on continued to excavate the inclined shaft and pilot tunnel. Besides these, we Oi River water resource issues was discussed, and a policy to finalize it at steadily constructed terminal stations, intermediate stations, mountainous the next meeting was indicated. In the same month, we held a meeting to tunnels, emergency exits in urban areas, and elevated bridges, etc. Among exchange opinions with the city and town mayors of the Oi River basin. those, at the Higashiyurigaoka emergency exit in Kanagawa Prefecture, We will continuously work to resolve the concerns of the Oi River basin the main vertical shaft was completed. At the Ina Sanchi Tunnel (the Aoki communities by sincerely giving explanations at the Expert Conference, and River Section) in Nagano Prefecture, excavation of the inclined shaft was exchanging opinions sufficiently with the cities and towns of the Oi River completed, and excavation of the main shaft was newly started. We will basin.

- * See our website for the latest information on the progress of the construction work. > Publicly released materials regarding the Chuo Shinkansen Project (The progress of construction work in each prefecture
- can be viewed in "Construction safety, environmental protection, and coordination with local communities.") https://company.jr-central.co.jp/chuoshinkansen/
- Summary of Consolidated Financial Report https://company.jr-central.co.jp/ir/brief-announcement/ Investor Meeting Presentation Handout https://company.jr-central.co.jp/ir/investor-meeting/





Nagoya Station

Mountainous tunnel construction

For tunnel construction in mountainous areas, we adopt the New Austrian Tunneling Method (NATM), NATM uses shotcrete to harden the surface of the ground drilled by machine or blasting, and bolts and concrete to fix the rock around the tunnel, and then the rock is integrated with the natural ground. This allows the natural support of the natural ground to be

Urban tunnel construction

We adopt the shield tunneling method for tunnel construction in urban areas. The shield tunneling method is a method where a cutter slowly rotates inside a protected steel tube (shield machine) and excavates soil while drilling. In the construction, vertical shafts (emergency exit), which are the starting point of the shield machine, are first drilled, and then the shaft is laterally drilled by the shield machine from one vertical shaft to another.

Shield machine



Southern Alps Tunnel (Yamanashi Section)



Kanagawa Prefecture Station (tentative name)



Higashiyurigaoka Emergency Exit

Implementation of Environmentally Conscious Construction

Construction of the Chuo Shinkansen is proceeded with, taking the surrounding environment into consideration. The main environmental conservation measures to be implemented are as follows.

Atmospheric environment (air quality, noise and vibration)	Water environment (water quality, water resources and groundwater)	Animals, plants and ecosystems	Reducing the impact of vehicles used to transport materials and machinery
The use of low-noise and low- vibration construction machinery with low exhaust emissions reduces the generation of nitrogen dioxide and suspended particulate matter, as well as noise and vibration.	Wastewater and turbid water generated by construction work are discharged into public waters after measures are taken such as treatment and neutralization to reduce turbidity as necessary, by means of turbid water treatment facilities, in accordance with wastewater standards, etc., based on laws and regulations, thereby reducing the impact on public waters.	In the detailed planning of construction, we avoid places where important plant species grow as far as possible and, if construction in such places is unavoidable, we compensate for the influence on the growing environment of important species by transplanting and seeding in places with similar environments.	We reduce the generation of dust by cleaning and watering the entrances, exits and surrounding roads for vehicles used to transport materials and machinery, and by cleaning their tires.

Overview and Development History of Superconducting Maglev System Technology

The Superconducting Maglev System is an advanced technology **Progress on Superconducting Maglev System Technology** unique to Japan. Instead of using the friction between wheels and rails like conventional railways, it runs in a non-contact manner due to the magnetic force between the Superconducting Magnet mounted on the vehicle and the coils mounted on the ground. In addition, to obtain the strong power of the magnets, the technology uses a superconducting magnet utilizing "the 'superconductivity' phenomenon whereby electrical resistance vanishes when a particular substance is brought below a certain temperature." which enables the vehicle to levitate about 10 cm, making it possible to operate safely in earthquake-prone Japan. These features make it possible to travel at an ultra high speed of 500 km/h in a stable manner, unlike conventional railways.

The level of the Superconducting Maglev System Technology has been evaluated in multiple stages since running tests began on the Yamanashi Maglev Line in April 1997. In July 2009, the Superconducting Magnetic Levitation Technological Practicality Evaluation Committee of MLIT (hereinafter, "Evaluation Committee") confirmed that the Superconducting Maglev System Technology had already achieved levels sufficient for commercial service, and the Minister of Land, Infrastructure, Transport and Tourism established the technological standards for the Superconducting Maglev in December 2011. Since then, we have continued running tests, and in February 2017, the Evaluation Committee confirmed its evaluation that the technology development required for commercial lines was completed.

We will continue to make efforts to further brush up Superconducting Maglev System Technology, including improving comfort and enhancing the efficiency of maintenance. We will also conduct running tests using the Series LO improved version and develop commercial vehicle specifications, as well as working to reduce costs for the construction, operation and maintenance of commercial lines.

June 1990	JR Central applies to the Minister of Transport for approval of the construction plan of the Yamanashi Maglev Line and gains approval.
April 1997	Running tests start on the Yamanashi Maglev Line.
March 2000	The Superconducting Magnetic Levitation Technological Practicality Evaluation Committee of the Ministry of Transport (hereafter, the "Evaluation Committee") acknowledges that "there is potential from a technological standpoint that the technology could have practical applications."
November 2004	JR Central performs exercises of trains passing each other at 1,026 km/h relative to one another.
March 2005	The Evaluation Committee of MLIT acknowledges that "the core technologies for practical application have been established."
July 2009	The Evaluation Committee of MLIT acknowledges that "the technologies required for commercial services have been established from a comprehensive and systematic standpoint, and it is possible to move forward with detailing the specifications for commercial services and the technical standards."
December 2011	The Minister establishes the technical standards for Superconducting Maglev.
August 2013	Extension of the Yamanashi Maglev Line to 42.8km and the upgrading of facilities are completed.
April 2015	JR Central records a travel distance of 4,064 km in one day. JR Central records the world speed record for a manned rail vehicle at 603 km/h.
February 2017	The Evaluation Committee of MLIT evaluates that "the technology development required for commercial lines has been completed."
August 2020	Running tests start using the Series L0 improved version.



running tests using the Series L0 improved version, which further brushed up the Series L0 based on the results of the running tests so far.

Series L0 improved version

Principles of the Superconducting Maglev System

Propulsion System

By passing current through the Propulsion Coils on the ground, a magnetic field (north and south poles) is produced, thus the vehicle is propelled forward by the attractive force of the opposite poles and the repulsive force of the same poles acting between the ground coils and the Superconducting Magnets built into the vehicles.

The Levitation and Guidance Coils are installed on both sides of the guideway (track). When the on-board Superconducting Magnets pass through at high speed, an electric current is induced in the Levitation and Guidance Coils, causing them to become electromagnets. This generates a force that both pushes and pulls up the vehicle.



Total Construction Costs for the Chuo Shinkansen Section between Shinagawa and Nagoya

It is announced in the "Notice Concerning Total Construction Costs As a reference, in order to confirm that the funds necessary for for the Chuo Shinkansen Section between Shinagawa and Nagoya" completion of the construction are secured, the Company calculated (Apr. 2021) that the total construction costs between Shinagawa and the operating cash flow based on certain reasonable assumptions in Nagoya are expected to be 7.04 trillion yen, compared to 5.52 trillion the event that the revenue recovers at a realistically expectable pace yen, which is the estimated amount at the time of the "Construction from the impact of the COVID-19 pandemic, and confirmed that, if approximately 1 trillion yen of new financing is added to such operating Implementation Plan (Part2) of the Chuo Shinkansen Section between cash flow, the cumulative amount of the funds available for construction Shinagawa and Nagoya" (Mar. 2018). The reasons for the increase in construction costs include responding to challenging construction of the section between Shinagawa and Nagoya would exceed the total work, enhancing earthquake countermeasures, and securing utilization construction costs of 7.04 trillion yen in FY2028. It should be noted sites of excavated soil that this does not mean that a new target time for opening is set: however, a trial calculation of the status of securing funds under certain The Company will prioritize sound management and stable assumptions was made for reference purposes only

dividends with regard to future management just as always, and will Thus, we have confirmed that we will be able to secure the level of fund the construction costs mainly through operating cash flow and the remaining amount through repayable borrowings. If the Company funds necessary to complete the construction even after incorporating anticipates that it can no longer ensure sound management and stable the increase in construction costs. The Company will continue to dividends, the Company will aim to complete the construction by proceed with the Chuo Shinkansen project with the aim of early adjusting the pace of construction and fully restoring its management realization of the Chuo Shinkansen while ensuring sound management and stable dividends. strength

Trial Calculation to Confirm Securing of Construction Funds (as of April 2021) (For reference: Assumptions for confirmation, etc.)

N

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ransportation revenues hinkansen and	Transportation revenues will recover gradually to 66% in FY2021, 80% in FY2022, and 90% in FY2023, and after FY2024 to 100% by FY2028.		Period in which the cumulative amount of the funds available for construction of the Chuo Shinkansen exceeds the total construction cost*	FY2028				
onventional lines)	Essentially, account autoesses will be maintained at the surrent code of account		Operating revenues for the fiscal year following the above period	1,530 billion yen				
Exponsos	required for railways, and non-personnel expenses will be recorded at the five-		Ordinary income for the fiscal year following					
Expenses	year average of the results from FY2015 to FY2019. In addition, cost reductions pursued through "Business Reforms" are considered to a certain extent.		the above period	240 billion yen				
nital investments			Long-term debt outstanding for the fiscal	6.0 trillion ven				
Chuo Shinkansen)	7.04 trillion yen		year following the above period					
apital investments (Shinkansen and onventional lines)	Essentially, necessary capital investments will be accumulated, and considering the cost reductions through "Business Reforms," capital investments will remain unchanged at approximately 220 billion yen per year in and after FY2028.	ľ	 above, in calculating , it is assumed that compared to previous tenance and operation Jo Shinkansen. 					
Others	Interest rate on financing: 3%							
te: The recovery in	The recovery in transportation revenues from the Shinkansen and conventional lines is compared to FY2018.							

(For reference: Changes in ordinary income and long-term debt)



Levitation System



Guidance System

The Levitation and Guidance Coils on both sides of the guideway keep the vehicle in the center of the guideway at all times by exerting an attractive force on the far side of the vehicle and a repulsive force on the near side when the vehicle moves off center to either side.



(For reference: Results of confirmation)

Highlight 4

Conventional Lines and Affiliated Businesses

-Maintenance and Development of Social Infrastructure-

By continuing to strengthen conventional lines in the Tokai region that form a network with the Tokaido Shinkansen, as well as affiliated businesses that are expected to generate synergies with the railway business, such as the JR Central Towers and the JR Gate Tower at Nagoya Station, JR Central is working to expand business revenues and contribute to the maintenance and development of the local social infrastructure.

Mission as a social infrastructure of the local community

JR Central undertakes the mission of supporting the social infrastructure. That is, in an integrated manner with the management of Japan's main transportation artery, we take a locally oriented approach in operating a network of conventional lines in the Tokai Region, centered on the Nagoya and Shizuoka areas, thereby supporting the people in these areas. The conventional lines operated by JR Central, covering 12 railway sections, reach approximately 1,400 km in operating kilométers, which is approximately 2.5 times the length of the Tokaido Shinkansen, and play a role as a means of transportation for daily life, including commuting to work and school. In other words, they serve as the social infrastructure of the local community. We have steadily improved our services by, for example, launching new vehicles and thereby increasing the speed and frequency of the services.

In order to enhance the convenience of limited express trains, we will continue to develop an integrated network of the Shinkansen and conventional lines by improving connections between the two and increase flexibility in the operation of major limited express trains by increasing the frequency of services or number of cars per train to absorb demand fluctuations caused by seasonal factors and events. Going forward, we will newly produce a mass-production vehicle of the next-generation hybrid powered limited express "Series HC85" as a replacement for the Series 85 diesel railcars currently used for our limited express trains "Hida" and "Nanki," from FY2022 to FY2023. The Series HC85 will achieve commercial operation as the first hybrid powered electric car in Japan to reach a top speed of 120 km/h.

Moreover, in order to offer convenient timetables for local train passengers, we will continue to develop a convenient rapid train system, operate trains at regular intervals, and increase the frequency of services or the number of cars per train, especially during the morning and evening commuting hours. Furthermore, as a replacement of the Series 211, Series 213 and Series 311, which were introduced around the time of our establishment, we will newly manufacture a new type of commuter electric railcar, the Series 315, from FY2021 to FY2025, and gradually introduce it to conventional lines centered on the Nagoya and Shizuoka City areas, including the Chuo Line, the Tokaido Line and the Kansai Line. By launching these new vehicles, we will have replaced all vehicles with vehicles that have been newly produced since our establishment, improving services for our customers by providing safety, stability, comfort and convenience, and further enhancing environmental performance.

Next-generation Series HC85 (testing vehicle)

Sales and marketing in coordination with local communities along our lines

Areas along our lines are blessed with many tourist resources. While continuing to strengthen our relationships with local residents and travel agencies at tourist spots in our operating areas, we are working to stimulate tourist demand by publicizing attractive tourist resources at stations, on trains, through our website and by other means, and taking various sales and marketing measures.

For example, we sell a special ticket package that includes a round-trip limited express reserved seat ticket, tickets for buses, taxis and other means of mobility in the destination area, and shopping coupons, improving the use of express services along conventional lines. We also offer a train journey with a sense of the extraordinary by operating the express train "lida Line Secret Stations" on the lida Line, which runs through remote mountain stations and scenic sections, during periods of high tourist demand. Furthermore, we are holding the "Sawayaka Walking" service, offering free-of-charge walking tours requiring no reservation that

start from our stations and visit wayside sightseeing spots. We are also collaborating with local governments, travel agencies, etc. through the Destination Campaign organized jointly by the six JR companies to develop attractive tourism resources and products and operate sightseeing

Express "lida Line Secret Stations"

trains, etc., contributing to regional revitalization as well as promoting the use of the Shinkansen and conventional lines.

▼ JR Central Group's affiliated businesses

The JR Central Group undertakes businesses in the areas of locations to attract customers. The Real Estate segment develops Transportation, Merchandise and Other, Real Estate, and Other. commercial facilities in stations and areas under the elevated The Transportation segment involves railway and bus businesses. tracks, and also leases real estate such as station buildings. In The Merchandise and Other segment manages department the Other segment, we manage hotels, travel agencies, and stores and provides sales services for goods and food in stations advertising agencies, etc. We also manufacture rolling stock and and trains, utilizing the advantage of having good railway station maintain, inspect and repair our railway facilities in this segment.

Uniform management of JR Central Towers and JR Gate Tower

The development of Nagoya Station, the largest station in our network, is a pillar of our affiliated businesses. The JR buildings have made a significant contribution to the economic development of the Chubu region. We will continue to operate Central Towers (hereinafter, the "Towers"), opened in 2000, the Towers and the Gate Tower in a uniform manner and and the JR Gate Tower (hereinafter, the "Gate Tower"), work to increase earnings by demonstrating synergistic effects opened in 2017, have been attracting large numbers of by clearly segregating the concepts of the businesses of both visitors. Already recognized as landmarks of Nagoya, these facilities and promoting collaboration in sales.

JR Central Towers

The JR Central Towers, the skyscraper complex with a station, attracts large numbers of visitors. In FY2020, we made height of 245 meters and a total floor area of approximately a large-scale renovation of 417,000 m², built right above Nagoya Station, forms the core the food section, securing of our affiliated businesses. Our three consolidated subsidiaries revenue. Nagoya Marriott operate a department store, a hotel, and offices. Ever since the Associa Hotel is rated highly opening of the facility, earnings of our affiliated businesses have for its convenient location directly above the station, its increased significantly The office business has enjoyed a high occupancy rate spectacular view from the top since its launch. All office spaces are almost fully occupied. JR floors, its upscale facilities, Nagoya Takashimaya, ideally located directly above the Nagoya and other features.

JR Gate Tower

The JR Gate Tower is a high-rise complex building with a height accommodation, offering both comfort and functionality. of approximately 220 m and a total floor area of approximately By integrating the management and operation of the entire 260,000 m² standing adjacent to the Towers, and comprises building with the Towers, we are pursuing efficient

commercial facilities, a hotel, offices, and other facilities. The office spaces are almost fully occupied due to their management as the JR Central Group. In addition, the Gate prime location directly above Nagoya Station, which the Tower has added new content Chuo Shinkansen will serve in the future. Housing about 160 fashion stores, Takashimaya Gate Tower Mall offers products not found in the Towers, further in categories and price ranges not found in the adjacent enhancing the attractiveness of department store. Nagoya JR Gate Tower Hotel, together the two buildings. with Nagoya Marriott Associa Hotel, is highly regarded by a wide range of guests as a hotel that focuses mainly on

Profitability improvement of JR Central Group's affiliated businesses

To overcome the severe business conditions caused by changes of the basement food section of JR Nagoya Takashimaya. The store in the business environment, we will thoroughly implement lowwill offer a wide range of popular brands and latest products that cost and efficient business operations, promote the management can only be found in a grocery store in the style of the food section efficiency of each Group company, and further improve the in the basement of a department store with high-quality foodstuffs. profitability of the Group's affiliated businesses. The Group's In addition, we will work to strengthen our e-commerce business affiliated businesses have been developed while demonstrating by expanding the "IIMONO TANBOU" website, which sells tasty food synergistic effects with the railway business, and in the future, we and selected crafts will also work to improve profitability without relying on the railway produced along the business. Specifically, we will expand new sources of revenue by railway lines, and developing businesses outside of station locations and businesses directly deliver them that focus on specific targets. from the production

For example, in terms of businesses outside of station locations, we develop offices, restaurants and other facilities under elevated tracks in response to the needs of the surrounding areas. In July 2021, we opened JR Nagoya Takashimaya Watch Maison, one of the largest luxury watch sections in Japan, in the Dai Nagoya Building. In spring 2022, we plan to open the JR Nagoya Takashimaya Food Maison Okazaki (tentative name) in the Aeon Mall in Okazaki City, Aichi Prefecture, utilizing the know-how cultivated through operation

Food section after the large-scale renovation

Takashimaya Gate Tower Mall

areas, as well as launching the "EC Mall," which is the common e-commerce site for our group.

JR Nagoya Takashimaya Watch Maison

Technological Development to Support JR Central's Growth

In order for JR Central to fulfill its mission and develop in the future, it is essential to constantly work to ensure daily safe and reliable transportation, to pursue comfortable transportation services, and to build the hardware and systems that will support these efforts through technological development. In regard to technological development in railways, it is necessary to bear in mind that only when each physical and non-physical research result is integrated and reflected in actual transportation services and management systems, it will generate value for the business, and that the railway business is greatly affected by social and economic conditions. In order to address various technological issues in a more integrated and comprehensive manner, we have set issues that contribute to company measures from a medium to long-term perspective at the Komaki Research Center, established in 2002, and systematically proceeded with technological development to ensure safe and reliable transportation in the railway business.

Key Themes of Technology Development

We are promoting technological development based on the following pillars, namely "Ensuring safe and reliable transportation," "Promoting operational reforms" and "Contributing to business operation of Chuo Shinkansen," while actively utilizing ICT and other advanced technologies.

Ensuring safe and reliable transportation

In order to ensure even higher levels of safe and reliable transportation, we are promoting the development of technologies for accurately detecting natural disasters such as earthquakes and heavy rain, technologies for reducing damage, and technologies for early recovery from disasters.

Contributing to business operation of Chuo Shinkansen

We are promoting technological development that will lead to cost reductions in construction work of the Chuo Shinkansen and effective maintenance and business operation after the beginning of the service, as well as advancing the depth of core technologies, such as design, analysis and simulation, common to all three generations of railways.

Promoting operational reforms

To accurately respond to changes in society and customer needs, and to drastically reduce capital investment and business operation costs, we are promoting the streamlining of rolling stock and ground equipment, cost reductions in the maintenance and renewal of facilities, and technological development that will aid the sophistication of operations for the purpose of increasing efficiency and saving labor by utilizing ICT and other advanced technologies.

In order to sustain and develop our company into the future, we are also working to broaden the scope of our company's technological fields to a wider range of areas. We will strive to develop new value and future visions that we want to create, and take on the challenge of research and development to realize them.

Development of technologies for the future, enhancement of technological capabilities, and human resource development

To proactively deepen railway technologies for the Shinkansen and conventional closely together to respond to the technological challenges facing the Railway lines, JR Central pursues the development of technologies that support the future Operations Divisions and conduct regular technical exchanges. In addition, employees of the Railway Operations Divisions and the Technology Research and Development of our company, and takes initiatives to enhance technical capabilities and develop human resources. At the Komaki Research Center (Komaki City, Aichi Prefecture), by Department work together to enhance the technological capabilities of the entire leveraging the development capability using actual-size testing equipment, which is the company. We are also promoting efforts to develop engineers by, for example, supporting research by researchers who have free ideas and take on new challenges. main distinctive feature of the research center, we have made various accomplishments in technology development, including the development of new rolling stock, the Going forward, we will continue to monitor technological trends in other industries and fields, broaden our scope of development of countermeasures against derailment and deviation for the Tokaido Shinkansen, the development of large-scale renovation methods for civil engineering inspiration and application structures in relation to our Shinkansen trains, and the development of high-speed capabilities, and actively heavy simple catenary for our Shinkansen trains. Furthermore, in light of the recent rapid incorporate external advances in information communications technology (ICT) and the progression of digital knowledge to enhance our transformation, we have established a special unit within the Technology Research and organizational capabilities Development Department to further strengthen our efforts to formulate ICT strategies, so that we can address gather needs, and execute highly challenging development projects the difficult technological Since the opening of the Komaki Research Center, JR Central's Railway Operations challenges we face in the railway business

Divisions and the Technology Research and Development Department have worked

Appropriate management and protection of intellectual property

In engaging in technological development, we recognize that it and other activities that we deem appropriate to establish as a legal is important to properly manage intellectual property in order to right, we strive to protect our right by acquiring intellectual property advance our business activities. Based on this recognition, for our rights, including patent rights, utility model rights, and design rights, as intellectual property obtained through technological development necessary not only in Japan but also in foreign countries.

Major technological developments: Efficiency improvement, labor saving, and cost reduction in maintenance by utilizing data

At JR Central, we are developing technologies to improve operational evaluation, and active maintenance. In recent years, we have been using efficiency, reduce labor, and reduce costs, such as those for mechanizing new technologies such as sensing, image recognition, information and and systemizing maintenance operations, on the basic premise that safety communications, mass data analysis, and robotics, as well as advancing is ensured. Specifically, we are working to develop technologies based technology development that leads to equipment integration, extended life, and optimization of standards, which we will utilize in our operational reforms. on the three pillars of introduction of new technologies, data analysis and

On the Tokaido Shinkansen, tracks and electrical equipment are measured about once every 10 days using the Dr. Yellow, a dedicated measurement train. We have also developed technology to reduce the size and weight of measuring instruments that can be installed in the N700S, the commercial rolling stock of the latest model, in order to grasp the status of facilities more frequently to perform maintenance work in a timely manner

As for measurements of the state of tracks, we developed the next-generation track status monitoring system with improved accuracy by using our own calculation program. This will make it possible to monitor the status of tracks more frequently and more accurately by measuring the status of tracks while trains are running and sending data to the General Control Center, etc. in real time.

In measuring the condition of overhead wires and signaling equipment, we developed the contact wire status monitoring system and the ATC signal and track circuit status monitoring system, which are smaller and lighter. This will enable the measurement of contact wire conditions (abrasion amount, height, etc.) on commercial trains, eliminating the need for periodical measurements of the entire lines that workers performed once a month at night to achieve significant labor saving. Furthermore, this will enable frequent checking of ATC signals and track

External view of Komaki Research Center

Development of technology for measuring ground equipment using N700S commercial rolling stock

circuit integrity, achieving early detection of signs of abnormality and prompt implementation of necessary measures and maintenance for signal equipment and track circuits

These systems will be put into operation sequentially from FY2021 onward, after the accuracy and durability of the measurements are confirmed through a series of running tests using the N700S verification testing trainset.

Measurement of ground equipment by N700S

Highlight 6

Reinforcement of Earning Power -Reconstructing Positive Cycle of "ESG Management" -

Although we are still experiencing a very tough business environment due to self-restraint on going out and movement amid the COVID-19 pandemic, we will continue to fulfill our role as a transportation service provider while maintaining measures against the spread of infections to ensure that our customers can use our railway service safely and securely. In addition, we are working to reinforce our earning power in order for the JR Central Group to recover from the significant damage incurred amid the pandemic, and continue to fulfill its social mission.

Initiatives Amid COVID-19 Pandemic

For the Tokaido Shinkansen, we are working to maintain sufficient transportation capacity by taking into consideration the passenger usage status and taking advantage of the "12 Nozomi Timetable." taking counter-infection measures, including ventilation of train cars, regular sterilization of parts of stations and trains that customers are likely to touch, and wearing of face masks by staff servicing customers, and providing easy-to-understand guidance for customers, using pictograms and video in digital signage, etc. at stations. For conventional lines, we are taking counter-infection measures to ensure customers can use the service without worry and providing sufficient transportation capacity,

Reinforcement of Earning Power

The situation where contact between people is significantly restricted due to the spread of COVID-19 is expected to run its course as people are vaccinated and treatment drugs are developed. However, we think the changes that have emerged during the pandemic, including greater use of telework, web conferencing, etc. and a major shift of travel reservations to online channels, will remain even after the pandemic runs its course, as long as they are reasonable. Although the pandemic had a role in accelerating these changes, JR Central will face these changes squarely and, in order to recover from the damage incurred amid the pandemic through its own effort and continue to powerfully fulfill its social mission into the future, work to reinforce our earning power by "Reform of Business Operations" and boosting revenues to reconstruct the positive cycle of "ESG Management."

Promoting "Reform of Business Operations"

A core part of efforts to reinforce our earning power is "Reform of Business Operations". This effort spans across the boundaries of departments, lines of operation, and group companies. By combining all available resources of the group, we will pursue ways of work that are thoroughly efficient. We will put ICT to full use, including for expanding status-monitoring functions to reduce the workload for inspection of cars and ground facilities, extending periods of replacing and inspecting cars to reduce renewal investments and workload for inspections, and using the AI image recognition technology to reduce the workload for facility inspections. By developing technologies and

Efforts to expand revenues

We are working to expand revenues from fresh perspectives and using flexible ideas by identifying and analyzing customer trends and needs more carefully than before. For example, we are undertaking an initiative to enhance the working environment on the Tokaido Shinkansen to support the "working in any location" style, which attracted attention amid the pandemic. In addition, we are preparing to launch "EX-MaaS (tentative name)" by the summer of 2023, which will allow users to seamlessly make reservations and payments for their entire trip, including Shinkansen travel, hotels, transportation for the journey, and sightseeing, through the EX

accounting for the passenger usage status.

In addition, we are working to stimulate demand by proposing "Zurashi Travel" (shifting travel), a new way of traveling whereby the times, locations, means of travel and action at destinations are shifted from the "standard," while taking care to prevent the spread of COVID-19.

Utilization of image recognition technology by AI

investing in equipment required for this to build an optimum operational structure, we aim to reduce about 80 billion yen, or 10% of the non-consolidated regular expenses related to Shinkansen and conventional lines, and reduce the costs of capital investments over the next 10 to 15 years.

Service members-only website.

Furthermore, our Group companies are working to take advantage of synergies with railways to increase profitability, and at the same time strengthen revenue sources that do not rely on railways. In July 2021, we opened JR Nagoya Takashimaya Watch Maison, one of the largest luxury watch sections in Japan, in the Dai Nagoya Building.

See page 30 for the Tokaido Shinkansen initiative to improve the environment to support new ways of working, page 29 for "EX-MaaS" (tentative name), and page 38 for profitability improvement of Group affiliates.

TCFD Recommendations -Endorsement and Our Initiatives-

JR Central expressed its endorsement of the TCFD recommendations * in May 2021. We see global environmental preservation as a key management theme. Therefore, we have been constantly working to further improve the environmental superiority of railways, which is more energy efficient and has starting in FY2021, in line with the "carbon-neutrality by 2050" policy formulated by the Japanese government. In addition to these efforts, we are working to analyze the risks and the opportunities related to climate change based on the TCFD recommendations, so that we can utilize them for stable business operations over

less environmental impact than other modes of transportation, by promoting the introduction of energy-saving rolling stock and equipment. Furthermore, we are determined to make efforts to further reduce CO_2 emissions, the long term and help the realization of a sustainable society.

1. Governance

At JR Central, the Corporate Planning Division and the General Technology Division that oversee management and technology sectors respectively, play a central role in studying the impact of climate change on our business, as well as formulating and promoting environmental measures, in cooperation with related departments within the company. In doing so, the President and Representative Director along with any other related directors reflect the results of the study on climate change in their management, while overseeing the efforts to address climate-related issues. In addition, important matters are discussed and reported at the Board of Directors meetings, etc.

2. Strategies

The main climate change-related risks and opportunities that disasters.) We are also working on the construction of the Chuo Shinkansen we are aware of are as follows: using the Superconducting Maglev System as an essential measure to prepare for large-scale disasters. Main climate change-related risks and opportunities

Transition risks	Increased costs that arise from the introduction and enhancement o carbon pricing (carbon tax, etc.) Increased costs to respond to stricter regulations on CO_2 and other emissions Increased costs to procure energy and materials
Physical risks	Increased suspension of service from more severe and more frequen wind and flood damage (decreased transportation revenue) Increased damage to railway facilities from more severe and more frequent wind and flood damage Adverse impact on material procurement, etc. due to supply chair disruption Decreased revenue triggered by customers refraining from traveling due to extreme weather conditions
Opportunities	Customers who value environmental superiority shifting from other modes of transportation to rail
	the second se

In order to manage and mitigate risks related to the transitioning to a lowercarbon society, we are working to reduce indirect emissions from electricity use, which account for approximately 95% of the 1.22 million tons of our CO₂ emissions (in FY2020). Examples of our efforts include the introduction of energy-saving rolling stocks, such as the N700S for the Shinkansen, as well as the consideration of renewable energy utilization. (Refer to page 63 for our specific efforts to save energy.)

With regard to direct emissions from the use of fuels, etc., which account for the remaining 5% of our emissions, we are promoting technological development and research for the electrification of trains, etc., and are also closely monitoring technological trends in the utilization of biofuels, etc.

As for physical risks, we believe that the impact of natural disasters, such as windstorms and floods, are significant for the railway business. For this reason, we have been proactively working on, since our establishment, to strengthen our facilities to cope with natural disasters in general, not just those caused by climate change, based on the recognition that ensuring safe and reliable transportation is a top priority. (Refer to page 23 for our specific efforts to cope with natural

3. Risk management

At JR Central, the Corporate Planning Division and the General Technology Division, in close cooperation with related departments, assess and analyze the impact of climate change-related risks on its business, and formulate and promote countermeasures.

Since the Corporate Planning Division and the General Technology Division oversee the management and the technology sectors, respectively, having these divisions play a central role in risk management enables the company to incorporate climate-related risks into the decision-making process regarding all of its important initiatives. In addition, important matters are discussed and reported at the Board of Directors meetings, etc.

TCFD stands for the Task Force on Climate-related Financial Disclosures, the task force established by the Financial Stability Board (FSB) in order to consider issues concerning climate-related disclosures, arc, its final report establishes the recommendation that companies, etc. understand and disclose information about the risks and opportunities that climate change presents to their businesses.

On the other hand, we see the recent rise in environmental awareness toward carbon-neutrality as an opportunity to further promote the use of train service. Railways are essentially a means of transportation that possess high environmental superiority. For example, the CO₂ emission rate per seat of the Tokaido Shinkansen (Series N700 "Nozomi") when traveling between Tokyo and Osaka is approximately 1/12th of that of an airplane (B777-200). We have been working to ensure safe and reliable transportation, to improve transport services, and to promote the use of railways with high environmental superiority, under the realization that such measures not only increase transportation revenues, but also help reduce CO_2 emissions and preserve the global environment.

We will work to deepen our assessment and analysis of the impact of climaterelated risks and opportunities on our business, while utilizing the scenario analysis recommended by TCFD.

and making use of the obtained knowledge to operate our business in a sustainable manner.

Furthermore, we will contribute Series N700 to the reduction of CO₂ emissions and the preservation of the global environment through a longterm and stable operation of the railways, an infrastructure system with high environmental superiority B777-200 compared to other modes of transportation, and by realizing CO2 Emissions per Seat our Management Philosophy to *1 Calculation based on running performance "Contribute to the development of Japan's main transportation *2 Calculated by JR Central using ANA's *Annual artery and social infrastructure."

- of Series N700 Nozomi (Tokyo Shin-Osaka) conducted by JR Central.
- Report 2011" B777-200 (Haneda Itami/Kansai Airport) for reference

4. Goals and indicators

We see global environmental preservation as a key management theme. Therefore, we have been constantly working to further improve the environmental superiority of railways, which is more energy efficient and has less environmental impact than other modes of transportation, by promoting the introduction of energy-saving rolling stock and equipment. Furthermore, we are determined to make efforts to further reduce CO₂ emissions, starting in FY2021, in line with the "carbon-neutrality by 2050" policy formulated by the Japanese government.

We will continue to study and promote specific efforts to reduce CO_2 emissions while keeping a close eye on government policies and technological trends.

Generating "Economic Value"

Financial Data

Operating Revenues and Operating Income (Loss) of each Segment

Merchandise and Other

Comparative Income Statement (Non-Consolidated)

	FY2017.3	FY2018.3	FY2019.3	FY2020.3	FY2021.3
	(Billion yen)				
Operating Revenues	1,380.7	1,427.4	1,464.8	1,436.9	541.7
Railways Business	1,371.9	1,414.8	1,452.0	1,422.2	527.4
Affiliated Businesses	8.8	12.5	12.8	14.7	14.3
Operating Expenses	784.9	802.1	797.1	813.9	717.7
Railways Business	779.9	793.5	788.7	805.4	709.4
Affiliated Businesses	4.9	8.6	8.3	8.4	8.2
Operating Income (Loss)	595.8	625.2	667.7	623.0	-175.9
Ordinary Income (Loss)	541.2	547.6	590.1	540.0	-256.6
Income (Loss) before Income Taxes	541.1	549.5	590.1	539.9	-277.8
Net Income (Loss)	381.8	384.4	414.0	378.8	-202.3

Comparative Income Statement (Consolidated)

	FY2017.3	FY2018.3	FY2019.3	FY2020.3	FY2021.3
	(Billion yen)				
Operating Revenues	1,756.9	1,822.0	1,878.1	1,844.6	823.5
Operating Expenses	1,137.4	1,160.0	1,168.3	1,188.4	1,008.2
Operating Income (Loss)	619.5	662.0	709.7	656.1	-184.7
Ordinary Income (Loss)	563.9	583.5	632.6	574.2	-262.0
Income (Loss) before Income Taxes	560.0	561.8	630.2	573.4	-268.5
Net Income (Loss) Attributable to Owners of the Parent	392.9	395.5	438.7	397.8	-201.5

Financial Statement Ratios (Consolidated)

	FY2017.3	FY2018.3	FY2019.3	FY2020.3	FY2021.3
Return on Equity	15.7%	13.8%	13.4%	10.9%	-5.4%
Net Income/Operating Revenues	22.4%	21.7%	23.4%	21.6%	-24.5%
Operating Income/Total Assets	10.1%	8.3%	7.8%	6.9%	-1.9%
Equity Ratio	38.2%	34.3%	37.3%	39.9%	37.9%
Earnings per Share	¥1,996	¥2,015	¥2,238	¥2,027	-¥1,025
Dividend per Share	¥135	¥140	¥145	¥150	¥130

* Some numbers for FY2020.3 and FY2021.3 have been affected by the COVID-19 pandemic.

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Comparative Balance Sheet (Consolidated)

	FY2017.3	FY2018.3	FY2019.3	FY2020.3	FY2021.3
	(Billion yen)				
Current assets	2,191.5	3,804.7	3,630.6	3,382.6	3,023.8
Of these assets, the Chuo Shinkansen construction fund management trust	1,472.7	2,840.9	2,670.5	2,435.0	2,076.1
Fixed assets	4,861.1	5,103.9	5,665.0	6,220.4	6,576.5
Tangible fixed assets	4,488.4	4,544.7	4,706.6	4,925.1	5,176.7
Intangible fixed assets	32.7	55.6	77.5	91.1	110.4
Investments and other assets	339.9	503.5	880.8	1,204.1	1,289.3
Total assets	7,052.6	8,908.6	9,295.7	9,603.1	9,600.3
Current liabilities	555.3	602.8	650.2	625.6	824.0
Fixed liabilities	3,770.5	5,221.1	5,137.4	5,105.3	5,089.6
Out of these liabilities, long-term debt for the Chuo Shinkansen	1,500.0	3,000.0	3,000.0	3,000.0	3,000.0
Total liabilities	4,325.9	5,823.9	5,787.6	5,731.0	5,913.7
Out of these liabilities, long-term debt and payables	3,395.4	4,856.2	4,851.1	4,846.0	4,932.6
Total net assets	2,726.7	3,084.7	3,508.0	3,872.1	3,686.6
Total liabilities and net assets	7,052.6	8,908.6	9,295.7	9,603.1	9,600.3

Comparative Cash Flow Statement (Consolidated)

	FY2017.3	FY2018.3	FY2019.3	FY2020.3	FY2021.3	
	(Billion yen)					
Cash flows from operating activities	580.5	609.5	600.3	595.2	-169.3	
Cash flows from investing activities	-1,909.5	-1,676.4	-597.5	-552.4	-134.7	
Payments for purchases of tangible/intangible fixed assets, etc.	-330.1	-306.9	-397.8	-459.0	-493.5	
Proceeds/expenditures concerning the Chuo Shinkansen construction fund management trust (net amount)	-1,472.7	-1,368.1	170.3	235.5	358.8	
Proceeds and expenditures from fund management (net amount)	-106.7	-1.3	-370.0	-328.9	_	
Cash flows from financing activities	1,425.1	1,434.7	-33.6	-32.9	262.6	
Proceeds from long-term debt for the Chuo Shinkansen	1,500.0	1,500.0	—	—	_	
Net increase in cash and cash equivalents	96.2	367.8	-30.8	9.7	-41.4	
Cash and cash equivalents at beginning of period	318.3	414.5	782.4	751.6	761.3	
Cash and cash equivalents at end of period	414.5	782.4	751.6	761.3	719.9	
						í

*1 Operating revenues of each segment include the amount of sales to other reportable segments as well as the amount of sales to external customers. *2 Numbers for FY2019 and FY2020 have decreased because of the impacts of the COVID-19 pandemic.

• Financial Data

Transportation and Financial Information

Transportation revenues

Passenger kilometers

Passenger Ridership

* The planned figures are as of the publication of March 2021

*2 The amount of dividend per share for FY2011 and prior is shown by dividing the amount by 100 for the ease of comparison with the amount for FY2012 and thereafter *3 Net income (loss) for FY2019 and FY2020 have decreased because of the impacts of the COVID-19 pandemic.

Long-Term Loan Using the Fiscal Investment and Loan Program (Long-term debt for the Chuo Shinkansen)

In November 2016, JR Central applied for a long-term loan the balance of long-term debt does not exceed 5 trillion yen using the Fiscal Investment and Loan Program (hereinafter, throughout the project period until live operation of the entire "FILP Loan") for 3 trillion yen to Japan Railway Construction, line. By utilizing this FILP Loan, we are able to reduce this period Transport and Technology Agency (hereinafter, "JRTT"), for restoring management strength and promote construction to promote the construction of the Chuo Shinkansen. We efforts in an aim to move up live operation of the entire line by proceeded to borrow funds in five lots sequentially thereafter up to eight years. and secured financing for a planned total of 3 trillion yen in July The Chuo Shinkansen Project is pursued based on the 2017. premise that JR Central, as a private corporation, covers the

The advantage we gain from the FILP loan lies in mitigating full cost of construction, while securing management autonomy three management risks, which are interest-rate increase risk, in investment and seeing that sound management and stable financing risk, and redemption risk. dividends are strictly maintained until the construction work is Specifically, since we can secure long-term, fixed- and lowfully completed. The FILP Loan poses no change to this premise.

As for the terms of the FILP Loan, the weighted average rate interest rate funds, we are able to mitigate the risk of interest rates rising in the future and fix interest payments at a low level is 0.86%, which is fixed throughout the entire period, and the annual interest expenses are 25.7 billion yen. The repayment for a long period of time. method is the equal principal payment over a period of roughly In addition, we expect that the construction costs between 10 years after deferring the payment of the principal for about Shinagawa and Nagoya will be 7.04 trillion yen and by securing 3 trillion yen out of the amount expected to require financing 30 years.

The funds procured from the FILP Loan will be applied only through the FILP Loan, we were able to reduce our financing risk. for the cost of construction of the Chuo Shinkansen. We ensure

Furthermore, since the FILP Loan matures after the construction period of the Chuo Shinkansen, during which time based management. a large amount of funds is needed, we are able to build up Illustrated plan of moving up live operation cash from operating activities to provide for the redemption of liabilities, thereby also mitigating redemption risk. Existing Construction betwee

In the material submitted to the Transport Policy Council of the Ministry of Land, Infrastructure, Transport and Tourism in 2010, we indicated in our outlook that a period of eight years after live operation in Nagoya will be set to recover management strength. After reducing long-term debt by a certain amount, construction on the route between Nagoya and Osaka will be initiated while ensuring that sound management and stable dividends are strictly maintained, and ensuring that

the transparency of funds by setting a trust aimed at segment-

Constant efforts for safety measures

Ensuring safe and reliable transportation is a prerequisite for all business development and marks the foundation of the railway business; therefore, we have consistently given top priority to this issue. Specifically, with regard to the Tokaido Shinkansen, the main transportation artery linking Tokyo, Nagoya and Osaka, which are the centers of society and culture and the main concentrations of population and economic power, and the conventional lines in the Tokai Region. centered on Nagoya and Shizuoka, which play the role of a means of transportation for daily life, including commuting to work and school, and serve as social infrastructure, we are building a safe and resilient infrastructure by promoting safety measures in all aspects of people, technology and equipment, to support Japan's economic and social activities in a sustainable manner.

In terms of equipment, or physical measures, we have made a safetyrelated investment of a total of more than 4.0 trillion yen over the 34 years since our establishment until FY2020. In addition, in the Fiscal 2021 Plan, we plan to invest 234 billion yen, or about 80% of the total capital investment excluding the Chuo Shinkansen (non-consolidated), in safety. As a specific initiative, we have been carrying out largescale renovation work on civil engineering structures of the Tokaido Shinkansen since FY2013 to maintain and improve their integrity, since it will be inevitable to replace many of the facilities due to aging in the future. Furthermore, we have been implementing measures against earthquakes and other natural disasters, which were available at the time, with certainty based on past damage and the latest knowledge.

In terms of non-physical measures, we have been tirelessly building

Trends in measures against disasters (extracts)

systems to protect safety, mainly by establishing rules and regulations. Furthermore, to put these systems into practice, we have been promoting human resource development focusing on discipline, etc. and repeatedly conducting practical training.

Refer to pages 21 to 23 for details of large-scale renovation, and measures against earthquakes and natural disasters.

Trends in safety-related investment

> Shinkansen Second General Control Center

We have the Shinkansen Second General Control Center in Osaka, which is equipped with the same functions as the Shinkansen General Control Center in Tokyo so that it can serve as an alternative control center should the General Control Center in Tokyo become non-operational due to a disaster. Thus, we have strengthened our crisis management in preparation for emergencies.

> Seismic reinforcement of platform sheds

Starting in FY2021 we are implementing seismic reinforcement of platform sheds (16 stations on the Shinkansen lines excluding Shinagawa, and 20 stations on conventional lines that are used by at least 10,000 customers per day excluding stations requiring no reinforcement and with sheds constructed with rails).

Cyber security measures

In terms of systems, we are also working to build a safe and processing capacity even if one computer fails. In addition, we resilient infrastructure. We are taking necessary measures, regularly conduct drills to prepare for natural disasters and including achieving the redundancy of facilities and securing system failures. backups, to ensure that the provision of services to customers Furthermore, we have taken all possible measures to ensure and the execution of internal operations will not be disrupted system security against cyber attacks, which have been due to earthquakes and other natural disasters and system increasing in recent years. For example, for systems that require failures. For example, the Shinkansen Operational Control absolute safety, such as those related to train operation, System has an alternative center in Osaka in case the system we have established an independent system structure that center in Tokyo is damaged, and the Express Reservation eliminates any contact with the outside world, thereby avoiding System comprises multiple computers to ensure sufficient external attacks.

The Chuo Shinkansen Project as a drastic measure

In addition to the above-described measures, we are working on the Chuo Shinkansen Project in order to continue to fulfill our mission of maintaining and developing Japan's main transportation artery while giving top priority to safe and reliable transportation. The Tokaido Shinkansen has been in operation for more than half a century, and while we have been carrying out large-scale renovation, we need to be prepared for the risk of suspension of services due to major facility replacement caused by future aging. Furthermore, although we have taken measures for earthquake resistance for the Tokaido Shinkansen, we also need to be prepared for the risk of long-term disruption to Japan's main transportation artery due to a possible heavy earthquake. Therefore, as a drastic measure to prepare for these future risks, we will achieve the redundancy of Japan's main transportation artery by completing the Chuo Shinkansen, which will act as an alternative to the Tokaido Shinkansen, as guickly as possible, under the assumption that we bear the cost of its construction, utilizing the Superconducting Maglev System that we have developed. By doing so, we will reduce management risks, stabilize our operations, and continue to forcefully fulfill our missions.

> Implementation of countermeasures against collapsing of station ceilings

To improve safety at stations, starting in FY2016, we are implementing earthquake resistance measures on suspended ceilings (a type of ceiling with a structure that hangs from the building frame) at stations that are used by a large number of customers (all 17 stations on the Shinkansen lines, and 30 stations on conventional lines that are used by at least 10,000 customers per day).

> Protection of the slopes of embankments with concrete

Source: Prepared by JR Central based on "Countermeasure against Nankai Trough Large Earthquake (Final Report)" (May 2013)

Improving the convenience of facilities (barrier-free, etc.)

Enhanced convenience of stations, etc.

The improvement of railway stations is important for local communities since they serve as a connecting point with the local community and secondary transportation, such as buses, private cars and taxis, as well as a gathering spot for the community. In response to requests from local municipalities, JR Central makes improvements to stations, including the installation of passages for pedestrians and bicycles and the building of over-track stations, creates plazas in front of stations, establishes new stations, and promotes railway elevation projects, thereby contributing to the development of local communities. For example, since the number of passengers using Kariya Station on the Tokaido Line is increasing, particularly during morning and evening commuting hours, we are currently carrying out work to widen the platforms, install movable platform fences, and improve the concourse based on discussions with Kariya City regarding improvements to ensure safety and comfort. Kariya City plans to establish and operate a local community exchange center and a

Initiatives to improve the level of accessibility

Based on relevant laws, such as the so-called Barrier-Free Act, JR Central cooperates with the central government and local municipalities to jointly establish and improve facilities to enable all passengers, including persons with disabilities and elderly passengers, to use our services safely and with a sense of security. As part of our initiatives taken in stations, we are proceeding with our plan to eliminate level differences by installing elevators, etc. and to install multi-functional toilets sequentially in stations used by 3,000 or more passengers per day. Basically, in all of the station's, installations have been completed or are under way. Going forward, we will promote the installation of barrier-free facilities in railway stations used by 2,000 or more passengers per day that are positioned as a facility necessary for people's daily livés in the general plans of local municipalities, in cooperation with the central government and local municipalities and in accordance with the central government's new improvement goals. We have completed the installation of guiding blocks for visually impaired persons, and braille blocks that prevent such persons from falling from platforms in all stations. In regard to braille blocks, we are sequentially replacing them with the type of braille blocks that indicate where platform edges are located. In addition, we are working to install movable platform fences to further enhance safety on platforms. On the Tokaido Shinkansen line, installation work commenced in FY2011, aimed at fencing off platforms at busy stations where the Nozomi stops. At Shin-Osaka Station, the installation of fences for Platforms 23 to 27 was completed. When the work to fence off Platforms 20 to 22 is completed as scheduled by FY2022, all of the platforms at stations where the Nozomi stops will be fenced off. On conventional lines, installation work at Kanayama Station was completed for Platform

tourist information facility to coincide with the station's improvements. JR Central has decided to create a new space that will be required for the city's plan in order to turn the surrounding area of the station into a hub and thereby contribute to the local community. As a railway company

that contributes to local communities and develops together with the communities, we will continue to enhance the convenience of stations and other facilities in cooperation with the local municipalities concerned

Image of Kariya Station

3 (inbound Tokaido line) and is currently under way on Platform 4 (outbound Tokaido line), with a plan to be put to use in December 2021. In addition to Kariya Station mentioned earlier, we are promoting the installation of fences at Nagoya Station for Platforms 5 and 6 (outbound Tokaido line), and are considering installation on Platforms 1 and 2 (inbound Tokaido line) and Platforms 7 and (Chuo line) to coincide with construction work of the Chuo Shinkansen and the timing of rolling stock renewal.

With the aim of making rail travel more comfortable and convenient for everyone, we have installed facilities for wheelchair users on almost all trains we operate. At the same time, our station staff offers assistance and guidance to passengers with disabilities when necessary to use our facilities.

In addition, we are working to improve our services by, for example, exchanging opinions with organizations for persons with disabilities through the Study Group on Promoting Accessibility of Shinkansen Services hosted by the Ministry of Land, Infrastructure, Transport and Tourism, and, since April 2021, sequentially introducing the N700S series cars with six spaces for wheelchairs

and beginning the trial operation of online bookings of wheelchair accessible seats through the EX service to improve the convenience of booking

Installation of platform fences on Platform 3 of Kanayama Station

Initiatives to vitalize local communities

Roll out of initiatives in coordination with communities located along our lines

As part of sales and marketing, we are deepening our ties with communities located along our lines while rolling out initiatives such as "Sawayaka Walking" and "Destination Campaign (hereinafter, "DC")".

The purpose of Sawayaka Walking is to promote the use of railways on Saturdays, Sundays and holidays throughout the year. This walking event allows visitors to experience the attractive nature, history and culture of each area along the railway line, and also contributes to promoting the good health of the participants. The program started in 1991, and the cumulative number of participants now exceeds 5 million. It will commemorate its 30th anniversary in 2021.

DC is one of the largest tourism campaigns in Japan, which sets the target areas every three months for spring, summer, fall and winter, with the cooperation of the local municipalities concerned, six JR Group railway companies, travel agencies, etc., to promote new tourist sites in the target areas and attract customers by rail. In DC implemented along the lines we operate, we operate sightseeing

trains that enable passengers to enjoy the charms of the region and sell travel products that incorporate tourist attractions and offer perks in cooperation with those in the communities along the lines. In addition, even for DC conducted along railway lines operated by another company, we advertise the campaign at stations we operate to raise awareness of the tourist attractions, and work with various parties concerned to attract tourists in locations across Japan.

Sawayaka Walking 30th anniversary logo

SCMAGLEV and Railway Park - A museum of memories and dreams -Discover the Shinkansen Day

We opened the SCMAGLEV and Railway Park in March 2011 in Kinjo Futo, Minato-ku, Nagoya, as part of our participation in the Monozukuri (manufacturing) Culture Exchange Area Project hosted by the City of Nagoya.

At the SCMAGLEV and Railway Park, we introduce the progress of the highspeed railway technology through displays of rolling stock mainly of the Tokaido Shinkansen, as well as conventional lines and Superconducting Maglev. The cumulative number of visitors until FY2020 was 🌆 5.34 million.

SCMAGLEV and Railway Park

IIMONO TANBOU

foster a sense of familiarity with

the areas along our railway lines

by, for example, holding events

bearing the name "IIMONO TANBOU" at department stores

and offering hands-on type tours

to such areas. Going forward,

we will continue to add various

products representative of the

areas along our railway lines and

work with producers to revitalize

local communities along those

lines.

As an initiative aimed at vitalizing local communities through related

businesses, we operate the "IIMONO TANBOU" website, which sells

delicacies and selected crafts produced along the railway lines we

Facebook Integrant REF1

IIMONO TANBOU

Every year at the Hamamatsu Workshop, we hold the "Discover the Shinkansen Day" so that people might become more familiar with the Tokaido Shinkansen. We open our Hamamatsu Workshop to the public for free, and visitors can get a closer look at the features of the Shinkansen, which are usually not visible from station platforms or along railway lines.

Specifically, we offer programs such as a tour of the Shinkansen driver's platform, a tour inside the Doctor Yellow train, an exhibition and boarding experience of maintenance vehicles, a hands-on experience as the conductor and the purser, and a chance to experience in-train cleaning and maintenance work, all of which are quite popular.

*In FY2021, the event was canceled due to the impact of COVID-19.

Contribution to local communities through support for recovery from large-scale disasters

For electric power companies to swiftly recover from large-scale disasters, it is necessary to reinforce the support system to enable those engaged in recovery efforts to work safely. In December 2020, Hotel Associa Takayama Resort, which is operated by JR Tokai Hotels Co., Ltd., a JR Central Group company, entered into a disaster support agreement, together with two other hotels in the Takayama region, with the Takayama Office of Chubu Electric Power Grid Co., Inc., recognizing such support activities as an important role of a hotel rooted in the local community. Based on this agreement, we contribute to the local community by supporting recovery from large-scale disasters such as through the preferential provision of accommodation.

Hotel Associa Takayama Resort

Disaster prevention and recovery activities in coordination with local communities

In preparation for a large-scale disaster or other unforeseen contingency that might occur on the Tokaido Shinkansen Line, we conduct comprehensive accident response training. etc., with the aim of enhancing the technical capabilities of employees in each line of operations and affiliated companies and strengthening cooperation among related parties, including the police and fire departments, in order to provide relief to customers and establish a system for early recovery

As for our conventional lines, we conduct drills to quickly guide customers based on the assumption that trains stop between stations after the occurrence of the Nankai Trough earthquake. We are engaged in disaster prevention efforts in cooperation with local communities. In the past, we invited elementary school children and staff members of local municipalities along our railway line to participate in our drills.

response training

Tsunami evacuation guidance training

Earning trust from customers and offering user-friendly services

JR Central is committed to providing services that are trusted and welcomed by local communities and customers, based on our belief that providing safe and reliable transportation and high-quality services to customers and satisfying customers also leads to making ourselves happy.

For the Shinkansen, we are implementing the "Brand Quality Service Campaign" to provide customers with a sense of security, satisfaction and joy. Having set our customers service mission as "Respecting each customer's time," we are working to improve the level of our customer service by promoting good teamwork within the Company, including stations. While in recent years the number of online reservations has been increasing, the JR Central Group is making concerted efforts to enhance its knowledge and skills, and foster a service-oriented mindset so that we can accurately respond to the traveling needs of a wide range of customers, including those who are accustomed to traveling on business and travelers visiting lapan

On our conventional lines, we are aiming to provide customers with truly valuable services, or what we call "Real Value Services." The conventional lines that we operate run in a wide range of areas, each of which has its own unique characteristics. Therefore, each of our employees is required to think independently and take the initiative to provide services that best suit the purposes and situations of our customers. In order to encourage customers to choose our railway, we encourage employees to enhance their ability to notice the needs of customers and proactively and sincerely provide services that could give customers a sense of security along with a sense of affinity, such as warmth and familiarity.

Customer service role-play

Customer service scene

Establishment of a medical institution rooted in the local community (Nagoya Central Hospital)

As an acute care hospital, Nagoya Central Hospital, located in Nakamura-ku, Nagoya, performs over 1,500 surgeries year round, providing some of the most advanced medical care services available using the latest medical equipment. The hospital is also a committed emergency health care provider, coordinating with local ambulance services to take in over 3,200 ambulance calls per year. Looking ahead, the Nagoya Central Hospital will look to leverage its distinctive features and expertise to further contribute to the local community.

International exchanges

Meanwhile in the U.K., we operate an exchange training program As a railway operator responsible for managing Japan's main transportation artery, JR Central has also responded to the in which executives are dispatched to and from a local railway expectations of society in the form of international exchange. operating company, etc., as a way of providing opportunities for employees of both JR Central and other firms to develop such as receiving observation visits and developing human resources their skills in railway management and technology through such In Japan, at the request of the government and other parties exchange.

concerned, we take officials from foreign governments, overseas railway operators, and other related persons on tours of railwayrelated facilities, primarily of the Tokaido Shinkansen, to introduce the business of JR Central and exchange opinions on railway management and other matters. Furthermore, in collaboration with several universities in the U.S., we have established and are operating a summer internship program for students, providing them with opportunities to learn about the railways and culture of Japan, thereby increasing their understanding of our company. We have been actively promoting international exchange despite restrictions in exchange due to the spread of COVID-19 by leveraging online methods. The diverse knowledge gained through these visits and programs is also utilized in our initiatives, for example, to attract inbound travelers.

Outside Japan, JR Central maintains three overseas offices in Washington D.C., London and Sydney, where it proactively undertakes a wide range of international operations, such as gathering mainly railway information from countries around the world, exchanging information with specialists and persons in the railway industry in various countries, and engaging in PR activities for overseas markets. We are also actively taking part in international exchanges in these countries. In the U.S. for example, we hold exhibitions on the superconducting maglev system at STEM (science, technology, engineering and mathematics) education events, and provide local children with opportunities to experience cutting-edge science and technology.

Promotion of culture, art and lifelong learning (JR Central Lifelong Learning Foundation)

JR Central Lifelong Learning Foundation is a public interest incorporated foundation established in October 1990 with the purpose of contributing to society through the promotion of culture, art and lifelong learning. The Foundation's main activities include holding exhibits of the artwork of Hoshun Yamaguchi, a pioneer of new Japanese-style painting who drove the Japanese art scene, at Hoshun Yamaguchi Memorial Hall (Hayama-machi, Kanagawa), which opened in October 1991, and disclosing the ateliers and gardens that offer seasonal flowers and trees loved by Hoshun and his wife for public viewing. In 2021, a special exhibition is being held to commemorate the 50-year anniversary of Hoshun's death and the 30-year anniversary of the founding of the Hall. Further, in an effort to support lifelong learning, the Foundation engages in a wide range of cultural business activities, including holding classes on Japanese-style painting and organizing classes to learn about history and culture.

Nagoya Central Hospital

The internship program for university students in the U.S. and the exchange training program with U.K. firms are held every year, and both programs have been held more than 20 times since their inception. When reunions for the participants of these programs are held in both countries, many alumni gather, forming a network of people who share a good understanding of JR Central overseas. The strong relationships of trust that we have nurtured with people who have visited our company over many years support the various activities we conduct overseas.

Online exchange with university students in the U.S.

by Hoshun Yamaguchi, 1953

<<Boukyo - small sketch>> Hoshun Yamaguchi relaxing in his atelier

Policy on Human Resources

JR Central views its employees as its greatest management resource. Many railway technologies can only be built up to a high level through accumulated experience, and human resources development cannot be achieved overnight. In addition, the railway business can be operated only when a large number of employees work together as a team. We believe that long-term employment is useful also at JR Central from the perspective that maintaining trusting relationships among employees is important.

Based on this concept, we have established a personnel and wage system that rewards employees who make efforts more appropriately, while assuming long-term employment in order to enable employees to attain the necessary abilities and demonstrate their abilities with enthusiasm. We are also working to systematically develop human resources with a broad perspective on personnel management

Our Basic Policy on Human Resources Development is based on three fundamental principles: discipline, technical capability, and sense of unity. Given these three fundamental principles, we develop human resources that undertake the businesses of the Company. The basic education system mainly involves on-the-job training (OJT), in which employees learn the knowledge and skills required for work through daily operations in each workplace. They also acquire additional knowledge and skills through group training, which is held in the General Education Center, etc., and various self-betterment opportunities, such as internal and external training programs, etc., that help employees learn knowledge and skills on their own.

In April 2020, in view of changes in the employment environment associated with the declining birthrate and changes in the social situation surrounding the employment of the elderly, we revised our personnel and wage system to enable employees aged 60 or older with a wealth of work experience to use their accumulated skills and experience to fully demonstrate their abilities to the age of 65, and extended the retirement age from 60 to 65.

In addition, we have introduced a system whereby employees aged 65 or older who are highly motivated and capable are employed as senior contract employees until the age of 70.

Furthermore, with the recent significant changes in the business environment, the importance of ensuring diversity has become particularly important. At JR Central, we also believe that it is extremely important from the perspective of management to employ diverse human resources and maximize their capabilities to drive sustainable corporate growth. As one of the initiatives based on this concept, we are focusing on the promotion of women's empowerment. We have been proactively making efforts to enhance various systems to realize diverse and flexible work styles. In addition to these efforts, we are currently proceeding with various initiatives by setting numerical targets for key indicators, such as the hiring rate of women and the number of female employees in management positions, under the leadership of the Women's Empowerment Project launched in July 2020, which is under the direct control of the General Manager of the Personnel Department.

Moreover, we are actively enhancing health and productivity management in order to maintain and improve the health of our employees, which is the foundation for our continuing to fulfill our social mission.

As a result of these continuous efforts, our employee turnover rate is 1% for male employees and 4% for female employees, or around 1% in total. This is remarkably low compared to the rate in society in general, and we believe this is one of JR Central's strengths.

* According to the statistics of the Ministry of Health, Labour and Welfare in 2019, the average turnover rate in society was 7% for men and 11% for women, or around 8% in total.

Initiatives for Enhancing the Skills of Employees

On-the-job training (OJT)

We offer various types of on-the-job training (OJT) in With regard to promoting self-betterment, we are also each workplace. For example, under the N-OJT program enhancing various support systems and actively supporting provided for employees of younger generations to attain the development of the skills of motivated employees. specialized knowledge and technical skills, we take a fine-As internal training programs, we offer approximately 30 tuned approach in developing employees by using a "List," courses to employees of JR Central, its group companies, which indicates the requirements needed to be regarded etc., with many employees taking these courses every year. as qualified, and a "Chart" for recording each individual's Our license incentive program supports approximately development plan, details of guidance, and results of the 200 types of licenses, and more than 1,000 employees guidance. obtain licenses using this system every year.

Group training

For employees in managerial positions, we provide training on methods to maximize the performance of the workplace and teams by bringing out the strengths and abilities of each staff member.

For mid-level employees, for example, we provide selective training programs, such as leader training, middle-leader training, and forerunner training, to develop future leaders. We also use actual equipment, such as Shinkansen rolling stock, installed at the General Education Center, and conduct practical training in accordance with the employees' job functions and levels to improve their technical skills.

For new employees, we provide new employee training that runs for about two months after they enter the Company. We recognize this training as an "important opportunity for new employees to shift their awareness from being a student to being a JR Central employee" and implement a curriculum that instills the discipline and norms required of employees of JR Central and the awareness that safety is the top priority.

Scene of group training

"One STEP" activities

We promote "One STEP" activities in which multiple With the economic and social environment surrounding employees work together as a team to discuss various companies becoming increasingly globalized and complicated, issues in the workplace with a sense of ownership, and we have established the Overseas Study Program to send resolve and improve the issues by their own creativity and employees to overseas graduate schools to obtain a master's originality. The name of this program "One STEP" reflects degree while they are still employed by the company, with the the idea that "one step made together by ten persons aim of fostering human resources who can take charge of the is better than ten steps made by just one person." By future management of the Company and play on a global stage. implementing activities on a wide range of themes, such We have also established the Overseas Research Dispatch as service improvement, safety enhancement, and cost Program to send employees to overseas companies and other reduction, we aim to improve the skills of employees, organizations to conduct research on advanced technologies, create a rewarding and lively workplace, strengthen the etc., and to utilize the results of the research in our business physical strength of the workplace, and develop the operations upon their return. These programs are applicationbased, and although there are restrictions on the number of Company. years of service, age and other requirements, applications are accepted from employees of wide-ranging job types.

Support for self-betterment

Initiatives for Enhancing the ICT Literacy of Employees

In our new employee training and other stratified training sessions, we provide education and opportunities for enlightenment regarding ICT by, for example, inviting external lecturers, as well as actively supporting the acquisition of ICT-related licenses by promoting selfbetterment.

In terms of training methods, we are providing training that has a high educational effect by actively utilizing digital technologies. For example, we provide training and lectures using web conferencing and other online systems, and training using simulators, VR technology, and 360-degree camera images. In this way, we are actively using digital tools to provide our employees with education.

Use of 360-degree camera images

Overseas Study Program and Overseas Research Dispatch Program

Support for Maintaining Balance between Childcare, Nursing Care, and Work

JR Central has been actively making efforts to enhance various programs so that all employee's, regardless of gender, can maintain a good balance between work and childcare/nursing care, and be motivated to work with enthusiasm in active roles over many vears. In 2006, JR Central became the first company in the transport and railway industry to receive the "Minister of Health, Labour and Welfare Effort Award" as a Family Friendly Corporation.*¹ We have continued to make further efforts even after receiving the award, and many of our programs exceed the level required by law.

For example, at JR Central, employees are entitled to longer maternity, childcare and nursing care leave than the statutory periods set. We are currently taking specific measures to maintain and increase the percentage of employees who take childcare leave by setting targets.^{*2} In FY2019, the percentage of employees who took childcare leave was 100% for female employees and 21.43% for male employees.

We use flexible work arrangements, including flex time for office workers and reduced work days, which allows field office employees who provide care to a child in the third grade of elementary school or younger to take multiple unpaid leave days each month, all with an eye to helping employees achieve a good balance between work and childcare. We also have a wide range of employee benefits, such as mediating the use of company-led childcare centers and offering childcare support subsidies when employees use babysitters, etc., which are used by many employees.

In addition to these programs, we have a system designed to rehire former employees who resigned for childcare or nursing care reasons or due to other similar circumstances, as long as a certain set of conditions is met. We also have a system that allows an employee whose work location is limited to be transferred, upon request, to an area outside the current area of work. These measures are all part of our efforts to create a better work environment where employees can reach their full potential at different life stages.

Initiatives beyond that called for by law, or voluntary initiatives

*1 A system introduced by the Ministry of Health, Labour and Welfare whereby companies are rewarded for taking initiatives to establish various programs to support employees in achieving a good balance between work, childcare and nursing care, and for putting in place a mechanism whereby employees have the option of selecting diverse, flexible working styles.
*2 In the action plan from FY2021 to FY2023, we set targets for the percentage of employees who take childcare leave, of 100% for female employees and 30% or more for male employees.

employees. IR Central has been certified three times by the Minister of Health, Labour and Welfare as a child-care supportive institution ("Kurumin" certification), meeting certain requirements set forth in the Act on Advancement of Measures to Support Raising Next-Generation Children.

"Kurumin" certification

Initiatives for supporting childcare, etc.

Pregnancy	hildbirth 1yea	r old	3years old	Enrollment 1st grad	e & 9years old
	Check-up/maternity leave (unpaid)	- Related to the Equal Employment Opportunity	/ Act	school in element	ns ntary
	Working restrictions on pregnant women				л
	Childbirth leave	 Related to the Labor Standards Act 			
Rel: Car or C	Childcare leave (paid)				
ated egiver egiver Welfa Other I		Childcare leave			
to th r Leav are of Famil		Reduction of scheduled working hours			
e Act ve, ar Worl Worl		Restriction on overtime/late-night work			
nd Ot kers (Exemption from overtime work			
Child her A Caring		Nursing leave (unpaid)			
care Neasu for C		Late-night work relaxation system			
Leav Ires fo		Shorter day leave (unpaid)			
an q e		Child dependency allowance (up to 2	2 years old)	*	i
age	Provision of at least 30% of the year-end bonus even during childcare leave	The Company bears the social insurance premium deducted fr the year-end bonus in line with the period of childbirth/childcare	rom e leave		
ass <		Home help usage subsidy: Up to 5,0)00 yen/day (up t	o 20 days per yea	r) (no age limit)
Velfar		Childcare support subsidy: Up to 4,	000 yen/day (up i	to 60 days per yea	ar)
ion		Preschool center usage subsidy: 5,0	000 yen/month		

Healthy Labor-Management Relations

JR Central complies with various laws and regulations, including the Labor Union Act, and has signed labor agreements with all four labor unions currently in place. We hold joint management council meetings and engage in collective bargaining based on these labor agreements, and will continue to strive to build healthy and stable labor-management relations.

JR Central Employee Stock Ownership Program

With the aim of helping employees build their assets, we have established the JR Central Employee Stock Ownership Program for all employees in principle, under which our

Percentage of all employees covered by collective bargaining agreements (Non-consolidated, as of April 1, 2021)

*Excluding newly hired employees still in the probation period

company's shares are purchased with contributions from our employees and incentives from the Company.

Topix Promotion of Diversity

At JR Central, we believe that it is extremely important from the nationality, etc., and are also actively hiring persons with disabilities. perspective of management to employ diverse human resources We are also working to improve the working environment by and maximize their capabilities to drive sustainable corporate enabling diverse and flexible working styles in terms of systems and growth. With this in mind, in our recruitment process we carry out improving facilities to allow diverse human resources to work with employment without making distinctions with regard to gender, peace of mind and fully demonstrate their abilities.

Promotion of Women's Empowerment

In accordance with the provisions of the Act on Securing, Etc. of Equal Opportunity including as Presidents of affiliated companies and Department General Managers and Treatment between Men and Women in Employment (Equal Employment and Managers at the Head Office. Opportunity Act) and other relevant laws, we handle personnel matters, including We formulated an action plan from April 2021 based on the Act on the Promotion recruitment and assignments, in a fair and equal manner without distinction between of Female Participation and Career Advancement in the Workplace, in order to men and women. Currently, female employees are engaged in a wide range of duties, become a company where more than ever before, all employees, regardless of including administrative work, station front desk work, serving as conductors and gender, can maintain a good balance between work and childcare, work with job drivers of Shinkansen and conventional lines, and hospital nursing work. satisfaction, and fully demonstrate their abilities.

Due to the characteristics of the work involved, the railway business requires This action plan was formulated through repeated discussions at the Women's so-called late-night work (work between 10 p.m. and 5 a.m.). However, the Labor Empowerment Project launched in July 2020, which is under the direct control of the Standards Act at the time of the Company's establishment prohibited late-night work General Manager of the Personnel Department, with the aim of making the Company by women in principle, excluding for some job types. Due to this situation, the ratio a place where all employees, irrespective of gender, can work with job satisfaction of female employees as of the end of FY1996 was only 1.3%. and fully demonstrate their abilities. Under the positive action plan, we have set Subsequently, in response to the revision of the Labor Standards Act in 1997, we numerical targets, such as increasing the percentage of female employees hired as have actively employed female employees. As of the end of FY2020, the number new graduates to 25% or more and increasing the number of female managers by a factor of 1.5 or more (compared to the end of FY2020), and we are promoting of female employees was 2,130 (approximately 11% of all employees), reflecting a significant increase. In June 2021, a female employee was appointed as a Corporate company-wide efforts to achieve these targets by March 31, 2026, when the plan period ends.

Officer for the first time in the Company. Female employees are active in many fields,

Positive Action Plan for Promoting Women's Empowerment (Target period: From April 1, 2021 to March 31, 2026)

1	We will increase the hiring rate of women.	Target: Raise women's hiring rate in the recruitment of new graduates to at least 25%.	 Strengthen public relations for recruitment so that women can envision themselves working at a railway company. Strengthen the hiring of women in all job types.
2	We will increase workplaces to which women are assigned, and increase	Target: Increase workplaces to which women are assigned.	 Increase workplaces to which women are assigned in view of the provision of facilities for women.
2	places where employees with restrictions in working styles can play an active role.	Target: Increase places where employees with restrictions in working styles can play an active role.	 Increase places where employees with restrictions in working styles due to childcare, etc. can play an active role.
3	We will increase the number of women in	Target: Assign 1.5 times more women in managerial posts* (vs end of FY2020) * positions higher than Managers (excluding Officers)	 Foster professional mindsets among female leaders and support networking outside the Company by sending them on external training courses.
5	managerial posts.	Target: Assign 1.5 times more women in Assistant Manager and Supervisor levels or higher (vs end of FY2020)	 Hold seminars with successful women as lecturers in order to introduce role models. Provide training for women aimed at fostering professional mindsets.
	We will foster a workplace	Target: Foster a workplace culture that empowers women to demonstrate their capabilities.	 Provide training for managers, etc.
4	culture and enhance programs to facilitate women to demonstrate	Target: Enhance programs that support employees balancing work and childcare.	 Enhance work arrangements, etc.
	their capabilities.	Target: Raise the percentage of employees taking annual paid leave to at least 80%	 Encourage employees to take annual paid leave.
5	We will encourage men's participation in childcare.	Target: Raise the percentage of male employees taking childcare leave or leave aimed at childcare to at least 30%	 Strengthen the dissemination of information to male employees on childcare-related programs.
		General Employer Activ	on Plans https://company.ir-central.co.jp/others/action_plan/

Employment of Persons with Disabilities

JR Central is actively promoting the employment of persons with disabilities operations for the JR Central Group. from the perspective of utilizing diverse human resources and fulfilling its corporate As a result of these efforts, the employment rate of disabled persons as of June social responsibility. We place the right people in the right positions in a wide 1, 2020, was 2.75%, which is higher than the statutory employment rate. range of departments, including the administrative and operational departments, In accordance with the revised Act on Employment Promotion etc. of Persons with Disabilities, we will adhere to our non-discrimination policy in recruitment and

while giving consideration to the degree of individual disability and other factors. In October 2006, the Company established a special subsidiary, JR Tokai hiring as well as continuing to improve the work environment in an appropriate Well Co., Ltd., based on the Act on Employment Promotion etc. of Persons with manner, while taking into account restrictions due to disabilities so that individuals Disabilities. The special subsidiary mainly engages in printing and envelope-sealing with disabilities can make the most of their skills even after they are hired.

Promoting Human Rights Awareness

JR Central operates on the basis of respect for human rights, and we believe that enhancing employees' awareness of and sensitivity to human rights is also important from the perspective of fulfilling our corporate social responsibility. Based on this philosophy, we have set up human rights awareness offices in the Administration Department at the Head Office as well as in each of our railway business operation divisions and regional offices, and systematically implement human rights awareness education, mainly for managers who provide employees with guidance daily, in an effort to promote understanding of diversity. In addition, we have in place a system for ensuring fair and honest recruitment, appointing human rights promotion members in the Personnel Department of the Head Office as well as of each of our railway business operation divisions and regional offices, ensuring that we conduct recruitment activities with an awareness of human rights. In addition to these activities, as a member company of the Aichi Industrial Federation for Human Rights, we are working to solve various human rights issues from the standpoint of a corporation, and to contribute to the realization of a society in which human rights are respected, in cooperation with relevant administrative agencies and other organizations.

Major initiatives

- •Distributing a textbook for promoting human rights awareness "Learning Human Rights" and using it in training, etc.
- •Delivering lectures on promoting human rights awareness for Group training for managers and new employees at the General Education Center
- •Designating managers of major workplaces as human rights training instructors to raise awareness and provide guidance on human rights (In FY2020, a total of 28 lectures on promoting human rights awareness were delivered to a total of 2,133 employees.)

Lecture on promoting human rights awareness

Topix Enhancing Health and Productivity Management

Purposes

In order to achieve our mission to "Contribute to the development of Japan's main transportation artery and social infrastructure" shown in our management philosophy, it is essential that each and every employee demonstrate his/her full potential. In order to maintain and promote mental and physical health as its basis, we established the Health Promotion Policy as our overall policy for health promotion measures in April 2018 for the Company to actively support the promotion of employees' health.

Organization

Headed by the officer in charge of personnel affairs, health and productivity management is being enhanced through cooperation among the Personnel Department, the Company-managed medical institute (Nagoya Central Hospital), and the occupational health sector (Health Care Center).

The Health Care Center has health management offices at Tokyo, Shizuoka, Nagoya and Shin-Osaka, and assigns occupational physicians,

Numerical targets

With the aim of reducing the number of employees who are unable to exercise their full potential due to health reasons, we are working to improve health-related indicators that are considered to have a high correlation with physical and mental illness based on the findings of occupational physicians. This is based on the concept of preventing disease by taking action at the stage before people are exposed to health risk, rather than providing support after they become or are likely to become at high risk of illness.

Among several health-related indicators that are considered to have a high correlation with physical and

Measures

> Understanding the health status and sharing health issues and enhancement measures

In addition to stress checks for all the employees (with more check items than those required by law), we carry out stress checks with our own additional indicators for employees who have newly joined the Company, have moved to another department, or have been promoted. Internal medical professionals have interviews with employees who are found to be highly stressed. Furthermore, annual meetings are held for new management staff (equivalent to department heads) and the health promotion staff to share health issues faced by our employees and our promotion measures.

> Non-smoking support

We are providing support including having internal medical professionals give health lectures, offering in-person instruction during health checks or workplace inspections, establishing internal consulting services for quitting smoking, and consolidating smoking rooms. We are also encouraging staff to utilize the Non-Smoking Support Program by JR-KENPO.

"Health Promotion Policy"

For Working in a Lively and Continuous Way

1 The Company shall establish frameworks for employees to work in a lively way.

2 Employees should promote their own health. The Company shall support this.

3 We verify the effects of those efforts and further promote health based on objective data that help us understand the status of workplaces and employees.

public health nurses, nurses, clinical psychologists, and other medical professionals at all of those four locations.

In addition, health promotion staff have been designated at each workplace to support the development of frameworks for employees to work in a lively way and for employees' and workplaces' voluntary promotion of health.

mental illness, we focused first on the exercise habit and the smoking rate, and set numerical targets to be achieved by FY2023 to encourage employees to change their behavior.

Specific targets (until FY2023)

Exercise habit: Increase the percentage of employees who walk an average of 8,000 steps or more per day to 50% or more. Smoking rate: Reduce the number of smokers by 25% from the current level.

> Workplace vitality improvement projects

We are taking various voluntary and continuous measures both for mental health and against lifestyle diseases, based on employees' health status and work environments, with assistance from internal medical professionals, with the safety and health organization at each workplace playing a central role. In doing so, we are effectively utilizing the group analysis results of health checks or stress checks.

> Habituation of exercise support

We are holding the following events to improve awareness of health promotion and support the habituation of exercise.

• Promotion of health using an online fitness app

We have signed a corporate contract for an app that allows users to view a total of more than 700 classes in 11 fields, such as yoga, walking, meditation and other programs. The contents include individual competitions where participants aim to reach the goal by clearing designated tasks, as well as team competitions where participants compete in terms of the number of programs viewed, making it a fun way to work on promoting health.

Walking event "Minna de Arukatsu"

For the walking event held by the JR Group Health Insurance Association, we are making company-wide efforts by establishing an original incentive system

Recognition of "White 500" under the "2021 Certified Health & Productivity Management Outstanding Organizations"

- 001-3004 - 031-3004 - 032-3000 - 032-300 - 032-3000 - 032-3

The Certified Health & Productivity Management Outstanding Organizations Recognition Program is a certification system established by the Ministry of Economy, Trade and Industry. It recognizes outstanding organizations engaging in efforts for health and productivity management, such as initiatives for overcoming health-related challenges in communities or for promoting health conscious activities.

The purpose of this program is to highlight outstanding enterprises practicing health and productivity management. In this way, it also aims to organize an environment where such enterprises are able to gain enhanced social recognition from their employees, job seekers, related enterprises and financial institutions as

"organizations engaging in efforts for the health management of employees from a managerial perspective and promoting it strategically.

In 2021, under this program, 1,801 enterprises were recognized as "2021 Certified Health & Productivity Management Outstanding Organizations (Large Enterprise Category) out of which the top 500 enterprises, including JR Central, were further recognized as "White 500" (as of March 4, 2021).

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
	Male		37.9	37.8	37.6	37.4	37.1
Average age	Female	Age	30.1	30.7	31.2	31.7	31.8
	All		37	37	36.9	36.7	36.5
	Male	Year	18.2	17.9	17.7	17.4	17
Average years of service	Female		8.7	9.2	9.7	10.1	10.2
	All		17	17	16.8	16.5	16.3
Average number of training h	Average number of training hours per year		35	32	34	36	35
Employment rate of disabl	mployment rate of disabled persons		2.28	2.21	2.26	2.51	2.75

Significance of overseas expansion

Since its establishment, JR Central has focused on safe and reliable transportation, with its primary mission of connecting the three major metropolitan areas of Tokyo, Nagoya and Osaka, which form the main transportation artery of Japan. As a result of carrying out significant capital investment and technological development over the years, the Tokaido Shinkansen has evolved significantly in terms of high speed, high frequency and mass transportation, in addition to safety and reliability. The market for high-speed rail in Japan had been expanding along with the construction and opening of new railway lines thus far. In recent years, however, the development of Shinkansen lines in Japan has been generally completed. As for the Tokaido Shinkansen, the N700S, which began commercial operation in July 2020, is approaching its ultimate form as Shinkansen rolling stock, and the development of new trains is also entering its phase of maturity. The overseas deployment of high-speed rail systems that JR Central is pursuing is expected to expand the markets of related domestic manufacturers and

Consulting & Coordination Business

Based on the belief that a huge infrastructure, such as a high-speed railway, which serves as the foundation of local communities and the economy, should be owned and operated responsibly by the governments and companies of the country or region where such infrastructure is located, JR Central's policy regarding the overseas deployment of high-speed railway systems is that we do not lead the implementing body of development projects. Instead, we contribute to the projects by providing consulting services. Specifically, we propose the deployment of high-speed railways as

Therefore, the U.S. is currently the target for promotional activities. a total system, which includes civil engineering structures, tracks, electrical equipment, signaling equipment, rolling stock, operation management systems, maintenance and repair, etc., to overseas markets. We not only formulate technical specifications and provide support and consultation to ensure safe and reliable operation of the high-speed railways by supplying various manuals regarding operation and maintenance, and conducting education and training for staff, etc., but also coordinate with relevant

Integration Corporation (HInC), to work with TC on signing contracts for core systems

With regard to the Northeast Corridor connecting Washington, D.C. to New York City,

we are aiming to introduce our SCMAGLEV, starting with promotional activities to realize cooperation between the Japanese and U.S. Governments for the development of the

Washington, D.C.-Baltimore section. Currently, the Federal Railroad Association and other

relevant organizations are making preparations for environmental impact assessment and other

procedures, using a federal grant of USD 27.8 million provided by the U.S. Federal Government

to the State Government of Maryland to cover the survey costs for the section. The Government

of Japan also commenced research in FY2016 to introduce the SCMAGLEV in the U.S.

Meanwhile, both the Japanese and U.S. governments are showing more understanding and

support for this project, in part because we provided the U.S. Secretary of Transportation, the

Governor of Maryland, and other leading officials with an opportunity to ride on a Maglev train

in Yamanashi Prefecture and realize the strong potential of the technology. We are planning to

provide comprehensive technical support when the project is put into action.

with other Japanese manufacturers, and have been preparing for the project.

Japanese companies when projects become concrete.

The Northeast Corridor Project

to maintain and strengthen its technological capabilities. In addition, we

expect to receive feedback in the form of a stable supply of materials and

equipment, technological innovation in railway-related equipment, and

cost reductions in such equipment. We therefore believe that the overseas

deployment of high-speed railway systems is an important initiative for

JR Central to fulfill its mission of maintaining and developing Japan's main

transportation artery into the future. The candidates for deployment are

countries and regions where the introduction of total systems involving new

high-speed passenger railway lines can be expected, on which our superior

high-speed railway systems can be used to their full potential. Furthermore,

we realize the need for the target countries and regions to have a complete

legal system where intellectual property rights and the sanctity of agreements

are established as socially accepted ideas, a stable political situation, and

the economic strength to invest in large-scale infrastructure investments.

Initiatives in the U.S. project

We have been working on getting the Tokaido Shinkansen system, which boasts the highest level of safety and precision in the world, up and running in the state of Texas, while introducing the SCMAGLEV, our superconducting maglev system that is capable of an operating speed of 500 km/h, to the Northeast Corridor.

The Texas Project

The Texas Project is a private business venture that aims to link two major cities, Dallas and Houston, via the Tokaido Shinkansen rail system. The key players in the project, Texas Central Partners and its subsidiary (collectively referred to as "TC"), are currently proceeding with business development activities, including the formulation of technical specifications and processes and the procurement of construction funds. In order to provide TC with the technological assistance needed to move the project forward, we launched a local subsidiary, High-Speed-Railway Technology Consulting Corporation (HTeC), in 2016. HTeC currently provides TC with

technical consulting for its project-related operations, such as developing specifications, formulating operation and maintenance plans, drafting preliminary designs for stations and maintenance facilities, and preparing personnel training and education programs. Furthermore, in August 2018, we launched another local subsidiary, High-Speed-Railway

Technical Consulting for Taiwan High Speed Rail

In response to a request for technical assistance from Taiwan High Speed Rail Corporation, which operates Taiwan's high-speed rail system based on the Japanese high-speed rail system, we started providing technical consulting in FY2014. We have completed eight individual projects to date. From now on, the construction work that we have been consulting on in the planning stage will be in full swing. We will continue to respond to the request from Taiwan High Speed Rail Corporation and contribute to the safe and reliable transportation of Taiwan High Speed Rail.

Making Efforts to Promote Japanese High-Speed Rail Systems as a Global Standard

We will continue to promote initiatives to establish the Japanese high-speed rail system, which is based on the core

principle of "Crash Avoidance," as a global standard, through the International High-Speed Rail Association (IHRA).

Building Relationships with Material Suppliers

Policy on material procurement

As it is necessary to procure higher-quality and reliable supply and after-sale services. In particular, we place orders with materials at reasonable prices to support safe and reliable railway multiple suppliers for materials that are indispensable for our transportation, JR Central procures quality materials in Japan daily operation in order to disperse the manufacturing locations and from overseas based on its Basic Philosophy of Material geographically so that we can avoid the risk of supply disruption Procurement. In particular, we recognize that quality is the due to an earthquake or other disasters. Furthermore, we ask most important factor, and inspect our suppliers' manufacturing our suppliers to comply with the relevant laws and regulations capabilities and technological standards as well as their efforts and to respect human rights, and investigate their efforts in those matters not only when starting business but also during quality to maintain and improve such capabilities and standards. We also constantly strive to reduce costs by promoting the entry of audits at their plants. Suppliers are business partners in constantly making efforts new suppliers, placing orders that take into account economies of scale, and strictly assessing manufacturing costs, among other to reduce costs while maintaining and improving product efforts. In the railway business, which requires us to continue quality. We believe that building continuous and stable business to fulfill our social mission in a stable and sufficient manner relationships will enable us to procure high-quality products at over a long period of time, it is also necessary to maintain the low prices and, as a result, will contribute to the enhancement quality of materials used in the business over the long term. and development of all railway-related businesses in Japan, For this reason, we ask our suppliers to provide us with stable including our suppliers.

Basic Philosophy of Material Procurement

- Procurement that prioritizes the ensurement of safe and reliable transportation 1
- 2 Procurement of high quality materials
- Procurement of materials at reasonable prices
- Pursuit of suppliers possessing a supply system capable of strictly adhering to contractual delivery deadlines
- 5 Pursuit of suppliers capable of building a continuing and stable business relationship
- Pursuit of suppliers capable of supplying satisfactory after-sale care regardless of whether such service is needed during normal or emergency times

Actual guantities procured of main materials (FY2020)

The amount of materials procured in FY2020 was 192.4 billion yen, JR Central recognizes that the quality of procured materials with major items including rolling stock, rails, maintenance cars (cars is extremely important from the viewpoint of ensuring safe and used for the maintenance, etc., of railway facilities) and railway sleepers. reliable railway transportation. Therefore, we conduct rigorous Since we procure a wide range of materials, including rolling stock and inspections of technological standards and manufacturing rolling stock components, rails and other track materials, and power capabilities, perform quality audits at our suppliers' plants, and transmission systems, we procure them from numerous suppliers. In take other steps to ensure that the quality required for our FY2020, we engaged in transactions with approximately 400 suppliers. products is maintained.

Business Strategy

7	Pursuit of suppliers capable of adapting to diverse usage environments
8	Establishment of a satisfactory communication framework
9	Appropriate handling of information
10	Fair and equitable transactions
11	Pursuit of suppliers giving consideration to reducing the environmental burden
12	Compliance with relevant laws and regulations
13	Providing and updating website information on procurements

Quality management initiatives

Conducting a quality audit of rolling stock components

*JR Central defines the energy consumption unit as the amount of energy consumed when running one car for one kilometer; total rolling stock kilometers is a value most relevant to its business activities

Environmental superiority of railways

Climate change is an issue that should be addressed on a global scale. While it is regarded that CO₂ in particular has the largest impact among all greenhouse gases, railways have an outstanding characteristic of being highly energy efficient compared to other transportation modes and thus having minimal adverse impact on the global environment. Railways account for only 6% of CO₂ emissions despite undertaking 30% of Japan's overall passenger transport volume. Compared to an aircraft (B777-200), the Tokaido Shinkansen (Series N700 "Nozomi") consumes approximately one-eighth of the amount

of energy per seat, and discharges about one-twelfth of the CO₂ emissions when traveling between Tokyo and Osaka. The data shows that the Tokaido Shinkansen has overwhelming environmental superiority. JR Central believes that having as many passengers as possible opt to use railway services, which have a smaller environmental impact compared to other modes of transport, will mitigate the load placed on the environment across the entire Transportation section and contribute to global environment preservation.

Distribution of Passenger Transportation Share, in terms of Transportation Volume, Energy Consumption, and CO₂ Emissions

For transportation volume/energy consumption, created based on data from Handbook of Energy & Economics Statistics (FY2018). For CO₂ emissions, created based on data from the National Institute for Source ironmental Studies, Greenhouse Gas Inventory Office of Japan (FY2018)

Comparison of the Tokaido Shinkansen and Airplanes (between Tokyo and Osaka) Energy Consumption per Seat

*1 Calculation based on running performance of Series N700 Nozomi (Tokyo - Shin-Osaka) conducted by JR Central.

*2 Calculated by JR Central using ANA's "Annual Report 2011" B777-200 (Haneda - Itami/Kansai Airport) for reference

Promoting organization

JR Central promotes initiatives for global environment preservation in the organization that with the President at the top, the Corporate Planning Division, which oversees management departments, and the General Technology Division, which oversees technology departments, are working together to formulate policies for energy and resource conservation efforts and policies for technological development that contribute to reducing CO₂ emissions, while the Shinkansen and Conventional Lines Operations Division, the Chuo Shinkansen Promotion Division and the Business Promotion Division implement specific measures.

> Initiatives for global environment preservation and the achievement of a carbon neutral society

JR Central has been making efforts to preserve the global guidance on the current situation regarding global environment preservation, and on the Company's policy and compliance. Also, the Technology Research and Development Department of the General Technology Division has acquired ISO 14001 certification, the international standard Of the CO₂ emitted by JR Central, approximately 95% for environmental management systems. In order to further refine the characteristics of railways that are superior in terms of global environment preservation, we are working on the development of energy-conserving technologies, etc. In addition, we have endorsed the Task Force on Climaterelated Financial Disclosures (TCFD) recommendations established by the Financial Stability Board (FSB). We will understand the financial impact of the risks brought about by climate change, and promote information disclosure based on the TCFD recommendations. Note: Refer to page 42 for information on TCFD. In order to promote these initiatives throughout the > Trial introduction of electric automatic track cycles For our conventional lines, we have been developing

environment by further improving the energy efficiency of its railway operations, such as by lowering power consumption in rolling stock. Additionally, we strive to further reduce CO2 emissions in accordance with the government's 2050 carbon-neutrality policy. is indirectly emitted when the electricity we purchase is generated, while the remaining 5% is directly emitted through our use of fuels, etc. Regarding our 5% direct emissions, we will carry out research and work to develop technologies for the electrification of rolling stock. As for the remaining 95% indirect emissions, not only will the Japanese power generation sector shift towards producing carbon netural electricity, JR Central will aggressively strive to reduce CO₂ emissions by adopting new technologies, such as lowering power consumption in rolling stocks and facilities as well as considering the use of renewable energy. company, the Corporate Planning Division and the General Technology Division disseminate information and provide

Guidelines

Environmental Action Guidelines

JR Central has established a set of Environmental Action Guidelines consisting of the following seven items as part of its engagement in global environment preservation.

- **1** Provide comfortable transportation services to promote further use of railways, which offer superior global environment preservation
- 2 Promote technological development that contributes to global environment preservation 3 Use fuel and energy efficiently

Highlight

Generating "Economic Value" Creating "Social Value" Corporate Data

electrification technologies to electrify automatic track cycles that are used to inspect the safety of railway track facilities, and we began performance trials on the Kisei Line in July 2021.

Whereas conventional track cycles run on gasoline engines, the electric automatic track cycles are motor-driven, powered by

electricity from batteries. Therefore, they do not discharge emission gas and thus reduce CO2 emissions. Furthermore, a regenerative braking system that generates power during braking enables efficient use of energy. By recycling batteries of electric véhicles made in Japan into batteries, resources are also used efficiently.

Electric automatic track cycle

4 Promote waste control and recycling

5 Appropriately manage chemical substances

6 Procure environmentally friendly goods and materials

Contribute to society and raise awareness for

global environment preservation

Initiatives in energy-saving

Introducing energy-saving rolling stock (Shinkansen)

We are actively developing and introducing energy-saving rolling stock in an effort to further reduce the Shinkansen's energy consumption. To replace the Series 300 and the Series 700, we have introduced a total of 80 Series N700 trainsets since FY2007, and 51 N700A trainsets since FY2012. Furthermore, we have been introducing the N700S since FY2020 to replace the Series N700, with a plan to introduce 40 trainsets by FY2023.

When operating between Tokyo and Shin-Osaka at a maximum speed of 285 km/h, the N700S consumes 28% less energy than the Comparison of Electricity Consumption by Tokaido

Shinkansen Rolling Stock Type

Introducing energy-saving rolling stock (conventional lines)

JR Central has also been striving to reduce the energy consumption of rolling stock on conventional lines. We are promoting the introduction of rolling stock with better energy efficiency by introducing the Regenerative Braking System, higher efficiency power control conversion methods, lighter rolling stock, etc. to electric railcars, and will do the same for diesel railcars by introducing lighter rolling stock. high mileage diesel engines, etc. As a part of this effort, the Series 211 and the like will be renewed by a newly manufactured commuter train, the Series 315. We will further improve the energy efficiency of the Series 315 such as through the use of silicon carbide for the power converter, reducing electricity consumption by around 35% compared to the Series 211. From FY2021 to FY2025, we plan to

Comparison of Electricity Consumption and Diesel Fuel Consumption of Conventional Line Cars

Comparison of Electricity Consumption of Conventional Line Electric Cars

100 (Basi Series 211 72 Series 313 65 Series 315 Approx. -35% "Based on simulated test runs between Toyohashi and Ogaki, and Nagoya and Nakatsugawa at a maximum speed of 120km/h (rapid operatio Comparison of Diesel Fuel Consumption of Conventional Diesel Cars (Series KiHa 85) and Hybrid Cars (Series HC85) 100 (Basis Conventional Diesel Cars (Series KiHa 8 Hybrid Cars 70 (Series HC85) Approx. -30%

*Based on simulated test runs between Nagova and Toyama at a maximum

Series 300 when running at a maximum speed of 270 km/h, thanks to its silicon carbide semiconductor drive system, lighter car body, reduced air resistance, and other features. It also consumes 6% less energy than the N700A type* when running at a maximum speed of 285 km/h. This means that the N700S is not only faster but also much more energyefficient. As a result, the energy consumption unit as of the end of FY2020 decreased by approximately 32% from what it was in FY1990.

*Generic name of N700A and the Series N700 (enhanced version)

Shifts in the ratio of the Tokaido Shinkansen rolling stock and energy consumption per unit

manufacture and sequentially introduce 352 new cars.

Furthermore, we are preparing for the new production of a mass-production vehicle of the next-generation hybrid powered limited express Series HC85, which we will begin to use from FY2022, as a successor to the Series 85 diesel railcars currently used for our limited express trains "Hida," etc. The Series HC85 is expected to achieve an approximately 30% reduction in diesel fuel consumption and CO₂ emissions and an approximately 40% reduction in NOx emissions in comparison to the Series 85 diesel railcars, by making use of the power stored in the batteries when accelerating and stopping.

How the hybrid system works

Energy-saving by replacing ground facilities

Between FY2011 and FY2022, we have been replacing electricity compensation devices, which inhibit the voltage reduction of electric train lines when the load on Shinkansen substations becomes large. Since the new device experiences less electricity loss than the conventional facility, we expect to reduce electricity use on the Shinkansen by approximately 3%.

For the Tokaido Shinkansen, we have installed frequency converters that convert 50Hz electricity received from electric power companies, etc., into

Energy-saving by replacing high-pressure mercury lamps with LED

JR Central has conventionally used high-pressure mercury lamps for lighting at stations, railroad crossings, and other railway facilities, but completed replacing them

60Hz electricity, which is necessary for Shinkansen operation, in the sections east of Fujikawa. Between FY2014 and FY2023, we have been switching some of these devices from rotation types to static types with less electricity loss. We will also replace two more frequency converters, which are rotation types, with static types between FY2021 and FY2027, since we have developed a technology that can respond to sudden changes in grounding and load. Due to these replacements of frequency converters, we expect to reduce electricity use on the Shinkansen by approximately 4%.

with LED by the end of 2020. As a result, we have cut our annual power consumption by 70% (down 20 million kWh) compared to the level prior to the replacement work.

Facility and workshop status

> JR Gate Tower

As for the JR Gate Tower, whose construction was completed in February 2017, we worked on creating an energy-efficient environment within the entire building as well as reducing the environmental burden by introducing regional air-conditioning systems, adopting LED lighting, installing solar power generation panels, creating green areas in the 15th-floor rooftop garden and on roofs of low-rise buildings, etc. We not only achieved Rank S in environmental performance, which is the highest rank on the CASBEE (Comprehensive Assessment System for Built Environment Efficiency) scale, but also reduced CO₂ emissions from the building by approximately 25% compared to standard model buildings, according to the CASBEE Nagoya 2010 standard.

General Education Center

At the General Education Center, which opened in September 2011, we aim to save energy by introducing an air conditioning system that uses ice thermal storage achieved by the utilization of nighttime electricity service as its heat source and LED lighting, etc. Furthermore, we designed the building to use natural energy effectively by improving its external insulation efficiency by arranging a rooftop garden and taking advantage of natural wind and light as much as possible. As a result, we were able to obtain Rank S, which is the highest assessment level under CASBEE.

SCMAGLEV and Railway Park

At the SCMAGLEV and Railway Park, which opened in March 2011, we introduced a solar energy generation system on the expansive roof. The system has a generation capacity of approximately 500 kW, or roughly 470,000 kWh annually, which can cover approximately 30% of the SCMAGLEV and Railway Park's energy needs.

Initiatives by group companies

JR Central Group companies are also implementing initiatives that contribute to global environment preservation.

> JR Tokai Bus Company

Since 2011, JR Tokai Bus Company has been sequentially

compared to MT (manual transmission) buses, since 2017.

AMT buses

Cooperation with external entities

Environmental Partnership Organizing Club (EPOC)

EPOC is a group that was established in 2000 mainly by the industry sector in the Chubu region, with the aim of building a sustainable economy and society by leveraging the environmental achievements of companies. Its activities include disseminating environmental activities and

information to society through collaboration among companies beyond the boundaries of industry, and cooperation with government, academia, and a wide range of local entities. (For more information, see the EPOC website.)

We joined EPOC in FY2002 and are currently involved in the operation of the organization as a core company. We will continue to contribute to global environment preservation through EPOC in cooperation with member companies, etc.

Highlight

Generating "Economic Value" Creating "Social Value" Corporate Data vironment

General Education Center (rooftop gardening)

SCMAGLEV and Railway Park (solar power generation system)

Hamamatsu Workshop

The Hamamatsu Workshop, which conducts general overhauls of Shinkansen rolling stock, completed its renovation construction in March 2019. In addition to introducing a solar power generation system with the capacity to generate approximately 300 kW or about 410,000 kWh annually on the rooftop of the workshop, we installed a highly efficient substation facility, boilers, and other equipment.

Nagoya Workshop

JR Central has been taking anti-earthquake measures and upgrading facilities since February 2014 in the Nagoya Workshop where general overhauls, etc., of conventional line rolling stock are conducted. We aim to reduce the electricity consumption of the entire workshop by approximately 20% by introducing high ceiling LED lighting and by replacing some transforming equipment with highly efficient models to meet the requirements of the Top Runner System.

*Energy consumption efficiency target specified for specific equipment in the Act on Rational Use of Energy

> JR Tokai Takashimaya Co., Ltd.

areas where outside air flows in.

> JR-CENTRAL PASSENGERS Co., Ltd.

JR Nagoya Takashimaya has been switching to More than 50% of the coffee beans used in the coffee introducing vehicles with high performance engines that LED lighting and has completed the replacement sold on the Tokaido Shinkansen "Nozomi" and "Hikari" trains conform with the Post New Long-Term Emission Gas of approximately 27,000 lights. As a result, are grown on farms certified by the Rainforest Alliance. The Regulations. Vehicles with these engines account for almost all of the lights in the building have been Rainforest Alliance was established in 1987 as an international approximately 80% of all vehicles currently owned by the changed to LED lighting. In the Takashimaya non-profit environmental protection organization, and their company, and have achieved an approximately 80% reduction Gate Tower Mall, air conditioning efficiency is activities cover more than 60 countries. With the aim of in NOx included in emission gas compared to the level prior improved by preventing the inflow of outside air improving the lives of farmers and achieving sustainable to the introduction. The company has also been promoting and suppressing fluctuations in room temperature management of tropical rain forests, the Alliance gives initiatives for further global environment preservation by by limiting the number of doors that are always certification to farms that meet the criteria for forest and river sequentially introducing AMT (automated manual transmission) open in the passageway (colonnade), reducing the protection, pesticide restrictions, waste management, and the buses, which can improve mileage by more than 15% shutter opening time, and installing new doors in like. Through the procurement of certified coffee beans, we contribute to global environment preservation.

Switching to LED lighting

Onboard service

EPOC's general meeting

Initiatives in compliance and the achievement of a recycling society

JR Central ensures compliance with various environmental laws and regulations, while striving to appropriately manage chemical substances and reduce waste. We also promote

Reducing food loss

Cooperation with startups

We introduced No Food Loss, an app provided by Minatoku Co., Ltd. to reduce food loss, in some stores of group companies in an effort to reduce the loss of food, such as ekiben (lunch boxes sold at railway stations), bread and cake sold at the stores. In addition, by installing "food loss reduction boxes," which are being installed by Nestlé Japan Ltd. and Minatoku Co., Ltd., in the bus terminal within the JR Gate Tower, we strive to reduce waste of snack foods, etc. that have passed their delivery date and may be discarded.

Management of chemical substances and waste

As part of our efforts to preserve the global environment, we conduct an annual compliance survey of all workplaces in order to ensure compliance with various environmental laws and regulations, and carry out appropriate management of chemical substances, etc. We also conduct internal audits to check compliance at each workplace, and provide feedback on the results to the workplace to ensure thorough compliance.

Furthermore, while we had been using oil-based paint containing volatile organic compounds (VOC) for full body painting of trains on the Shinkansen and conventional lines, we introduced the country's first water-based paint

> Management of chemical substances

Based on the PRTR system^{*1} under the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Pollutant Release and Transfer Register Law), we report the amount of emissions and transfer of relevant substances and manage those substances appropriately.

Measures against soil contamination

We submit a report to the relevant organizations should any substances exceeding the standard value set be detected in soil surveys conducted at the time of landform changes or land sales, and will take appropriate measures as instructed by laws and regulations and the administrative authorities.

Measures against water contamination

Some of our offices use vehicle washing equipment that falls under the category of specified facilities under the Water Pollution Control Act. We are working to prevent water pollution by installing devices to treat wastewater generated by cleaning and by regularly measuring Wastewater treatment device the pollution status of such wastewater.

Reducing waste

The aluminum from scrapped Shinkansen rolling stock is recycled into interior materials and interior parts of the N700S. For example, recycled aluminum from scrapped Series 700 Shinkansen rolling stock was used to create the concourse, pillars, ceilings, and other parts of the Tokyo Gift Palette, a commercial facility at the Yaesu North Exit. We also provide recycled aluminum from Shinkansen rolling stock as store interior materials to The Body Shop, a U.K. cosmetics brand (awarded the 2021 Good Design Award). Using recycled aluminum from Shinkansen rolling stock reduces environmental

Sustainable public procurement

JR Central implements a green procurement policy, prioritizing the procurement of environmentally friendly materials. To this end, we established the JR Central

impact compared to when producing new aluminum, since it can reduce CO₂ emissions by 97% as it eliminates the use of energy for production.

Furthermore, we aim to reduce the generation of waste during construction, utilize rainwater, and recycle train tickets and station staff uniforms. etc.

and work with them to contribute towards global environment preservation.

URL https://company.jr-central.co.jp/company/material_procurement/_pdf/green_guide_line.pdf

Recycle), etc.

> Donating stockpile food to an NPO

the effective use of resources to reduce environmental

impact through the 3Rs initiative (Reduce, Reuse and

From among our stockpile of food and drinking water kept at each workshop in preparation for a large-scale disaster, we donated our head office's stockpile food that was approaching its expiration date to a certified NPO engaged in the food bank business, with the aim of contributing to local communities and reducing food loss.

coating robot for the Shinkansen in our Hamamatsu Workshop in FY2016, enabling environmentally friendly water-based painting. We also introduced the country's first waterbased paint coating robot for trains on conventional lines in the Nagoya Workshop in March 2020, enabling water-based painting of some bodies.

Train body painting

Measures against air pollution

Our measure to prevent air pollution in regard to boilers, which are soot and smoke emitting facilities,^{*2} include introducing burners that reduce the generation of NOx, introducing devices that adopt an exhaust gas recirculation system that reduces the generation of NOx by recirculating combustion exhaust gas, and regularly measuring and recording the amount and concentration of soot and smoke.

Furthermore, in accordance with the Act on Rational Use and Appropriate Management of Fluorocarbons (Fluorocarbons Recovery and Destruction Act), we manage class-1 specified equipment properly by inspecting and keeping records on it.

*1 A system whereby business operators identify the amount of chemical substances, which may be harmful to human health or the ecosystem, that were either released from their business sites into the environment (air, water and soil) or were transferred outside of business sites as part of waste, and report them to the national government. The government then tabulates and discloses the amounts released and transferred, based on such reported data and estimates.

*2 Soot and smoke emitting facilities refer to facilities installed in workplaces that generate and emit soot and smoke and that can cause air pollution through such soot and smoke.

Green Procurement Guidelines to enhance coordination with our business partners

in a train body

2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 (FY) *Carbon intensity rose in FY2020 as operating revenues (non-consolidated) decreased significantly due to the impact of COVID-19

1.10 1.17 1.11 1.05 1.15 1.20 1.17 1.11 1.07 1.03 0.96 0.94

Environment-related data

Activity Status for FY2020 and Environmental Accounting

The investments, costs, and their principal effect involved in environment preservation activities during FY2020 are estimated as listed below.

Environmental accounting

Carbon intensity

(tCO₂/million ven

2.50

1.50

1 00

0.50

0.00

Classification	Main Initiatives	Environment p (100 mill		
		Investment	Expenditures	
Global environment preservation cos	 Introduction of energy-conserving rolling stock Improved energy-efficiency at stations and t office buildings, etc. 	770.3	10.0	Energy-conserving relectric railcars), 10 railcars and diesel related to the production of the Use of LED lighting relations of the lighting re
Research and development co	•Development of energy-conserving rolling stock •Development related to environment preservation along railway lines, etc.	0.0	131.4	•Energy efficiency of than Series 300) *Comparison betwee km/h) and the N700
Resource recycling cost	 Proper disposal and recycling of station and train refuse, etc. Proper disposal and recycling of items generated by workshops and construction work 	0.4	96.9	Recycle rate of Shink Recycle rate of unifo
Environment conservation cost along railway lines	Countermeasures for noise and vibration Proper management of environmental load substances, etc.	91.4	47.5	 Protection of the su noise-blocking w shaving rail surface
	Total *2	862.0	286.1	
[Approach to e • Compilation i • "Environment • Depreciation • In the event of	nvironment preservation cost) *1. Fr s applicable only to JR Central. •The applicab al Accounting Guidelines 2005", a publication or is not included in the calculations for expenditu of multiple-purpose expenditures, the full amour	actions below le period is Apr of the Ministry of res. nt with greater of	10 million yen a il 1, 2020 to Ma f the Environme environment pre	re omitted. *2. Total arch 31, 2021. .nt, was consulted w

- olling stock ratios: 100% (Shinkanse) 00% (conventional line (electric ailcars)) N700S rolling stock
- Series N7005 ▲28% (more efficient en the Series 300 (traveling at 270 OS (traveling at 285 km/h)
- ansen rolling stock: Approximately 80% orms: Basically 100%
- rrounding environment by modifying valls and increasing their height.
- als do not add up due to rounding. with regard to aspects of style
- included in the calculation

2.25

Environmental load in business activities

The main resources and energy utilized as well as waste generated during JR Central's business activities during the year FY2020 are as shown below.

Power consumption

Creating "Social Value" – Governance–

Corporate Governance

JR Central strives to enhance its corporate governance to ensure the soundness. efficiency and transparency of its management, to implement the long-term development of the company, and to continuously enhance corporate value. We have announced our stance on, and the initiatives put in place in relation to, the Corporate Governance Code in the Corporate Governance Report.*

> *The Corporate Governance Report can be found by clicking the following URL. Corporate Governance Information Service URL https://www.jpx.co.jp/listing/cg-search/index.html

JR Central's Corporate Governance System

Overview of corporate governance system

JR Central's Board of Directors is composed of 15 members (including three outside directors) and is chaired by the company chairman. JR Central also employs an auditor system, and its Audit and Supervisory Board consists of five members (four of whom are outside auditors). (The figures are as of June 23, 2021.)

The Board of Directors meets at least once a month to make legal and appropriate decisions upon fully discussing matters stipulated by the law as well as important management matters. It also monitors the work of directors. A Management Meeting is held for in-depth discussion of important management issues. Chaired by the president, the Management Meeting is attended by all full-time director's, Audit and Supervisory Board members, and some corporate officers. By deliberating on a wider range of management matters ahead of Board of Directors' meetings, discussions at the subsequent Board of Directors' meetings are enhanced. We request members of the Audit and Supervisory Board to attend meetings of the Board of Directors, the Management Meeting and other important meetings, as we endeavor to ensure the legality of management measures during the deliberation process. In addition to these initiatives, each director and member of the Audit and Supervisory Board performs self-assessment on the effectiveness of the Board of Directors, the results of which are discussed by the Board to further enhance its functions. Further, JR Central strives to ensure the appropriate execution of business by managing and providing guidance to subsidiaries, etc. where necessary

From the perspective of ensuring the improvement of objectivity and transparency in the determination of personnel changes and the remuneration of officers, JR Central has established the Personnel Remuneration Committee consisting of a total of four members: three independent outside directors and the president (chaired by an outside director). The Committee deliberates twice a year with the attendance of all of its members prior to the decision of the Board of Directors on personnel changes and remuneration. Decisions made by the Board of Directors regarding the determination of personnel changes and remuneration are based on the content of deliberation by the Committee.

Although we introduced the corporate officer system in May 2003, we introduced an executive system in June 2012 that is aimed at further

accelerating decision-making, enhancing discussions by the Board of Directors, and further clarifying the roles of directors and corporate officers, who are responsible for business execution, in order to appropriately respond to changes in the business environment surrounding the Company in a timely manner. In addition, in order to make decisions in line with the actual conditions of our business, some corporate officers in charge of core operations, including the director generals of the railway operation divisions, serve concurrently as directors. Audit and Supervisory Board members not only attend important meetings such as the Board of Directors and the Management Meeting, but also perform rigorous audits based on plans formulated by the Audit and Supervisory Board through audits of head office departments, railway operation divisions, branch offices, field offices, subsidiaries, etc., as well as examination of the state of their business execution through exchanges of opinions with directors, corporate officers and employees. To ensure effective audits by Audit and Supervisory Board members, JR Central also provides an assistant system whereby its employees are assigned as full-time staff to support the work of the Audit and Supervisory Board members.

Internal audits are performed by the Audit Department on the overall work of JR Central, its major subsidiaries, and other related companies from the perspective of compliance, efficiency and effectiveness of business operation. The audits are performed by such methods as checking business materials, contracts and other documents, observing operations, and interviewing related persons, and the results are reported to the management. In addition, to prevent operational and labor accidents, safety audits are performed by the Transportation Safety Department, the results of which are also reported to the management.

JR Central receives appropriate accounting audits that are based on generally accepted audit standards by Deloitte Touche Tohmatsu LLC, which has been selected as its accounting auditor.

Audit and Supervisory Board members, internal audit departments, and the accounting auditor cooperate with each other by exchanging information periodically or as necessary, and receive necessary information from each department involved in internal control to confirm the status of implementation of each item stipulated in the Fundamental Corporate Governance Policies.

Outside directors and outside Audit and Supervisory Board members

Based on its policy to ensure the most appropriate system for of experience and insight accumulated outside the Company. In executing the duties of the company, JR Central appoints three addition, through the various opportunities to provide briefing on our outside directors and four outside Audit and Supervisory Board operations prior to Board of Directors' meetings, they provide us with members. The level of independence of each outside director and valuable advice on economic and social developments and overall outside Audit and Supervisory Board member is judged in accordance business management. with the criteria for independence established by the Tokyo Stock The advice given by outside directors and outside Audit and Exchange, Inc., in order to ensure that the opinions provided are Supervisory Board members are utilized to perform audits by Audit formed from an independent standpoint and are based on the high and Supervisory Board members, internal audits, safety audits, and degree of experience and insight accumulated outside the Company. accounting audits, as well as to implement the items stipulated in the JR Central receives opinions from outside directors at meetings of Fundamental Corporate Governance Policies.

the Board of Directors and the Personnel Remuneration Committee, Each outside director and outside Audit and Supervisory Board and from outside Audit and Supervisory Board members at meetings member is registered with the Tokyo Stock Exchange as an of the Board of Directors and the Audit and Supervisory Board, independent officer with no risk of conflict of interest with general from their independent standpoints and based on the high degree shareholders.

• M ar	ain concurre nd outside A	ent posts held by out udit and Supervisory	side directors Board members		A (ctivity statu nembers	us of outside directors and outside Audit and Supervisory Board
[As of March 31, 2021]						[FY2020]	
	Name	Name of other company, etc.	Title			Name	Principal activity
Tak Sa Directors Ta Osh	Takashi Saeki	The Ogaki Kyoritsu Bank, Ltd.	External Auditor		Directors	Takashi Saeki	He attended all 12 meetings of the Board of Directors held in FY2020. In the Board of Directors' meetings, he has stated his opinions based on his experience in corporate management and other expertise. He also attended the Personnel Remuneration Committee and expressed his opinions based on his extensive experience and deep insight into corporate management. In addition, through various briefing opportunities prior to Board of Directors' meetings, he has provided valuable advice on economic and social developments and overall business management. Through the abovementioned activities, he has contributed to the maintenance and further development of the sound management of the Company from the standpoint of an independent outside director.
	Haruo	Sumitomo Corporation	External Auditor	(Haruo Kasama	He attended all 10 meetings of the Board of Directors held since his appointment on June 23, 2020. In the Board of Directors' meetings, he has stated his opinions based on his experience as a public prosecutor and lawyer and other expertise. He also attended the Personnel Remuneration Committee and expressed his opinions based on his extensive experience and deep insight in law. In
	Kasama	Toppan Printing Co., Ltd.	External Auditor	0			addition, through various briefing opportunities prior to Board of Directors' meetings, he has provided valuable advice on economic and social developments and overall business management. Through the abovementioned activities, he has contributed to the maintenance and further development of the sound management of the Company from the standpoint of an independent outside director.
	Taku Oshima	NGK Insulators, Ltd.	President and Representative Director			Taku Oshima	He attended nine out of 10 meetings of the Board of Directors held since his appointment on June 23, 2020. In the Board of Directors' meetings, he has stated his opinions based on his experience in corporate management and other expertise. He also attended the Personnel Remuneration Committee and expressed his opinions based on his extensive experience and deep insight into corporate management. In addition, through various briefing opportunities prior to Board of Directors' meetings, he has provided valuable advice on economic and social developments and overall business management of the sound management of the Company from the standpoint of an independent outside director.
Audit and	Shigeo	higeo Mori Building External			Audit and	Hajime Ishizu	He attended 11 out of 12 meetings of the Board of Directors and 13 out of 14 meetings of the Audit and Supervisory Board held in FY2020. In the Board of Directors' and Audit and Supervisory Board meetings, he has stated his opinions based on his experience in transportation administration and other expertise.
Superviso	Kifuji	Co., Ltd.	Auditor		Fumio Yamashita	He attended all 12 meetings of the Board of Directors and all 14 meetings of the Audit and Supervisory Board held in FY2020. In the Board of Directors' and Audit and Supervisory Board meetings, he has stated his opinions based on his experience in police administration and other expertise.	
ory Board members	Kunihiro	Sangetsu Corporation	Outside Director (Audit and Supervisory Committee Member)		orv Board	Shigeo Kifuji	He attended all 12 meetings of the Board of Directors and all 14 meetings of the Audit and Supervisory Board held in FY2020. In the Board of Directors' and Audit and Supervisory Board meetings, he has stated his opinions based on his experience as a public prosecutor and lawyer and other expertise.
	Nasu	Hyojito Co., Ltd.	Outside Director	0	members Nasu		He attended all 12 meetings of the Board of Directors and all 14 meetings of the Audit and Supervisory Board held in FY2020. In the Board of Directors' and Audit and Supervisory Board meetings, he has stated his opinions based on his experience as a lawyer and other expertise.
		-		_	-		

Ensuring the effectiveness of the Board of Directors and the Audit and Supervisory Board

The appointment of directors is conferred to General Shareholders positions bear no hindrance on the director or Audit and Supervisory Board Meetings following a resolution of the Board of Directors concerning the member's ability to fulfill the roles and responsibilities of such positions for appropriate election of candidates deemed to be the most fitting for the role the Company as selected based upon a general consideration of their abilities, knowledge, The Company holds meetings of the Board of Directors at least once a work history, etc., irrespective of age, sex or nationality. The number of month to make legal and appropriate decisions upon fully discussing matters directors elected, the division of director roles, etc., are determined based on stipulated by law as well as important management matters. The execution of a comprehensive consideration of the progress of ongoing projects based on duties by directors is appropriately monitored by having directors report back a policy of establishing the most appropriate system for the execution of the on business functions under their charge when needed. JR Central receives Company's operations. From the perspective of ensuring the improvement of valuable broad-view advice on management from outside directors, which is brought into consideration in regulating the management of the Company. objectivity and transparency in the determination of personnel changes, etc. of officers, JR Central established the Personnel Remuneration Committee Furthermore, each director and Audit and Supervisory Board member consisting of a total of four members: three independent outside directors performs self-assessment of the effectiveness of the Board of Directors, the and the president (chaired by an outside director). The Committee deliberates results of which are discussed by the Board to further enhance its functions. twice a year with the attendance of all of its members prior to the Board of Additionally, round-table conferences for opinion exchanges between outside directors, outside Audit and Supervisory Board members (part-time) Directors' decision on personnel changes, etc. Decisions made by the Board of Directors regarding the determination of personnel changes, etc. are based and members of management are held ahead of meetings of the Board of Directors in order to further improve the effectiveness of the Board. on the content of deliberation by the Committee.

The important concurrent positions held by directors and Audit and Based on the above details, we find that, at meetings of the Board of Supervisory Board members are as described in the business reports and Directors, the effectiveness of the entire Board of Directors is ensured to a General Shareholders Meeting Reference Materials. All currently held satisfactory degree.

Remuneration for officers

Directors' remuneration is comprised of fixed basic compensation paid on a monthly basis and a bonus paid in June each year. The basic compensation amount is determined through a comprehensive assessment of a director's position, length of service, and other factors, while the bonus amount is determined mainly in consideration of the operating performance such as ordinary income, as well as the performance of ensuring the safety of railways, shareholder return, and other factors. The specific bonus amount for each individual is determined in consideration of the degree of responsibility attached to the director's position and the performance of their assigned duties. The ratio of the basic compensation and bonus we use as a guide is 3 to 1. The operating performance for FY2020 and other fiscal years is as described in the financial data on pages 43 to 46.

Outside directors' remuneration consists only of the fixed basic compensation paid on a monthly basis.

The Board of Directors has passed a resolution on the policy on determining the above directors' remuneration, as well as to leave the decision of the specific remuneration amount for each director to the discretion of President and Representative Director Shin Kaneko, who has knowledge of the performance of duties assigned to each director. For FY2020, however, bonuses will be unpaid since significant losses have been recorded. A decision was made at the 25th Ordinary General Meeting of Shareholders held on June 22, 2012 to keep the total annual amount of directors' remuneration at 1.2 billion yen or less (of which remuneration for outside directors is 50 million yen or less). The amounts are ultimately decided by the president within these limits. The number of directors at the time of the conclusion of this Ordinary General Meeting of Shareholders was 14 (three of whom were outside directors).

The remuneration of Audit and Supervisory Board members consists only of fixed basic compensation paid on a monthly basis, and the appropriate amount is determined via discussions among Audit and Supervisory Board members. A decision was made at the 20th Ordinary General Meeting of Shareholders held on June

Policy concerning cross-shareholdings

Our strategy for cross-holdings is based on a general consideration of the necessity thereof, and is grounded in the belief that maintaining and bolstering long-term and stable business relationships through holding other companies' stock facilitates our operations and enhances our corporate value over the medium to long term. If any of our cross-holdings are deemed to be unnecessary in light of this policy, we will assess and possibly divest from them.

Additionally, our Board of Directors examines whether it is

Policy for promoting constructive dialog with shareholders

JR Central positions the General Meeting of Shareholders as an important opportunity for dialog with shareholders, and strives to improve the quality of question-and-answer sessions in the meeting as a means of contributing to sustainable growth and enhancing corporate value over the medium to long term. All dialog with shareholders is overseen by the general manager of the Administration Department, and questions, opinions and requests from shareholders are responded to, to the extent reasonable, in the form of an individual meeting or over the telephone, etc.

Of this, dialog with institutional investors is overseen by the director general of the Corporate Planning Division, and the IR team that is placed in the Business Administration Department, Corporate Planning Division is in charge of the dialog response. The IR team strives to further improve shareholder dialog by organically coordinating with the Administration, Finance, Legal and other Departments. It also strives to improve upon dialog measures by not only holding individual meetings but also implementing conference calls and facility tours, etc., where necessary, in addition to holding quarterly financial results briefings. Dialog response is made, to the extent reasonable, together with members of management and directors or Audit and Supervisory Board members, based on a general consideration of the requests and interests put forth by the institutional investor. We conduct a questionnaire survey of institutional investors after individual meetings 22, 2007 to keep the total annual amount of Audit and Supervisory Board members' remuneration at 250 million yen or less. The final amount is set within this limit. The number of Audit and Supervisory Board members at the time of the conclusion of this Ordinary General Meeting of Shareholders was five.

The Company established the Personnel Remuneration Committee on February 1, 2021. From the perspective of ensuring the improvement of objectivity and transparency in the determination of remuneration of officers, the Committee consists of a total of four members: three independent outside directors and the president. The Committee deliberates on the policy on deciding officers' remuneration twice a year with the attendance of all of its members, prior to the Board of Directors' decision on remuneration. Decisions made by the Board of Directors regarding the determination of remuneration are based on the content of deliberation by the Committee. Delegated by the Board of Directors, the president decides the specific amounts of directors' remuneration. As the amount of remuneration of each director is determined through the abovementioned procedures, the Board of Directors deems that the amounts conform with the decision policy. Total amount of remuneration by officer classification, total amount

of remuneration by type, and number of target officers [FY2020]

	Basic Com	pensation	Bor	านร	
Classification	Number of target officers	Total amount (Million yen)	Number of target officers (Number of persons)	Total amount (Million yen)	Total amount of remuneration (Million yen)
Directors (Excluding outside directors)	18	569	0	0	569
Audit and Supervisory Board members (Excluding outside Audit and Supervisory Board members)	2	47	-	-	47
Outside Officers	9	141	-	-	141
lote: Directors (excluding outside directors) have voluntarily returned 10% of their basic					

compensation from May 2020 to March 2021.

beneficial to retain specific cross-holdings after scrutinizing them in light of the medium- to long-term economic rationale and outlook, the purpose of continuing to own such cross-holdings, and other factors. Furthermore, in exercising the voting rights of cross-held shares, JR Central closely examines the details of each agenda and decides how to vote in consideration of the improvement of corporate value of the Company over the medium to long term, the continuous growth of its

and financial results briefings, and analyze the feedback and investor needs obtained to be used to enhance disclosure, consider the content of briefing materials, and enrich IR activities.

We also strive to enrich the broader provision of information to shareholders by posting the information presented at financial results briefings on TDnet and our website, enhancing the content of the convocation notice of the General Meeting of Shareholders, and sending reports to shareholders. Moreover, we work to ensure that a sufficient degree of information concerning decisions made on important measures and important capital investments reaches as large a number of stakeholders as possible using the mass media services to deliver detailed information at press conferences held by the president, and by presenting such information to the press.

The content of dialog with shareholders is reported to members of management and, if necessary, feedback is given to the Board of Directors.

Main activities (FY2020)

business partners, etc.

•Number of dialogs held with institutional investors and analysts:	213
•Number of financial results briefings and small meetings	q
with institutional investors and analysts:	5
•Number of items of feedback from institutional investors:	186

Fundamental Corporate Governance Policies

JR Central passed a resolution on the Fundamental Corporate Governance Policies* at its Board of Directors' meeting. *Please refer to the following URL for the Fundamental Corporate Governance Policies.

URL https://global.jr-central.co.jp/en/company/about/governance.html

Compliance & whistleblowing system

JR Central not only stipulates internal regulations based efforts to protect whistleblowers by allowing anonymous on law, etc., but also conducts employee education on whistleblowing and clearly indicating in our internal various occasions with the aim of thoroughly complying regulations that the names of whistleblowers will not be with the law, etc., when executing business. In addition, disclosed and that whistleblowers will not be subject to we have also established a whistleblowing system, which disadvantageous treatment for whistleblowing. We also enables employees, etc. to report any violation of laws strive to disseminate information of the system by posting or regulations they discover in the course of their work fliers in all workplaces describing the whistleblowing system, the protection of whistleblowers, and contact by providing contact points not only within the Company but also in an external law firm. We make thorough information of the contact points.

Risk management system

JR Central has established the Railway Safety Promotion a day at each railway operation division to respond to emergencies, such as accidents and disasters, and has also established a fast-response restoration structure in which employees can be gathered at any time according to the scale or impact of an accident or disaster. Additionally, in preparation for emergencies such as large-scale natural disasters, we have established the Second General Control JR Central also manages a control center, which plays Center that can substitute for the General Control Center for the Tokaido Shinkansen.

Committee, etc., at the head office, railway operation divisions, branch offices, and in each area from the perspective of preventing train and labor accidents and disasters, and formulates and promotes safety measures through integrated organization that extends from the head office to each field office. a key role in information communication, on call 24 hours

Response to internal control related to financial reporting

We periodically investigate the system, state of execution, effectively functioning. etc. of internal control related to financial reporting within We are also engaged in efforts to maintain the level of JR Central and JR Central Group companies in accordance internal control related to financial reporting by providing with the basic framework offered by the Business feedback from the investigation to our operations. Accounting Council, in order to confirm that they are

Capital policy and approach to shareholder return

We will finance our projects by issuing corporate bonds not plan to purchase additional treasury stock at this point. When we say "from a long-term perspective," we mean that we will not cut corners to take the necessary steps to ensure that our rail services continue to operate steadily over the long term. For example, we will undertake such measures as large-scale renovations as well as derailment Due to the nature of the railway business, which operates and deviation countermeasures for the Shinkansen along with working on the Chuo Shinkansen, a major long-term project. We believe that continuing a stable dividends policy is necessary to gain shareholders' understanding toward the above approach. We will maintain this principle of stable dividends during the construction of the Chuo Shinkansen.

and borrowing, in addition to a long-term loan totaling 3 trillion yen acquired using the Fiscal Investment and Loan Program (FILP) to promote the construction of the Chuo Shinkansen. We do not plan to use treasury stock or pursue capital increase at this point. from a long-term perspective, a specific dividend amount is determined considering the business environment and results of each fiscal year based on the Company's consistent and basic policy for the continuation of stable dividends. JR Central considers that shareholder returns through dividends are appropriate in principle, and does

Deepend to the C						
Respond to the C	Lorporate G	overnance Code		-		JR Central has been strivin
JR Central has announced ut in place, in relation to the nereafter, "the Code") found leport*.	its stance on, and e Corporate Gove d within Corporate	l the initiatives it has mance Code Governance	Further, The reasons for not implementing the principles of the code and matters disclosed based on each principle of the code are as follows. * Corporate Governance Report can be found on the Japan Exchange Group, Inc. website	Principle 2-4 Ensuring internal diver including the utilization of	Supplementary principle vomen 2-4 1	Whole means and the second sec
he reasons for not in	mplementing	the principles of	the code	Principle 2-6 Roles of Corporate Pension	Funds	Since we do not offer a We use a defined contri contribution pension plar
General principle	Supplementary principle		Disclosed contents	as Asset Owners		accumulation.
Principle 4 – 1 Roles and responsibilities of the Board of Directors (1)	Supplementary principle 4-1 2	 In the railway business, the utmost importance, and all investment, are implemente and, as such, we do not im formulated and managerial of the business at set mom While JR Central neither for Company does promote its 	core pillar of JR Central's business, ensuring safe and reliable transportation is an issue of aspects of our business, from our daily business operations, to employee training and capita ad with the highest priority given to increasing the level of reliability of the services we provide plement a system of management whereby company-wide mid-term business plans are targets are pursued in a manner that can neatly serve as a cross-sectional look at the state ents. mulate mid-term management plans nor establish numerical targets in this manner, the railway business from a long-term perspective. Specifically, in addition to the construction			[1] • JR Central was four integrally maintaining main transportation region with a centra Furthermore, JR C of Japan's main transhould aim at in line the operation, etc. c Shinkansen, and th
Principle 5-2 Establishing and Disclosing Business Strategies and Business Plans		of the Chuo Shinkansen, wi large-scale renovation for t upgrade rolling stock in see forward these projects. Pla progress continues to be m measures, and capital inve to steadily enhance our ma efficient operational manage	hich is now underway, other measures that require a long-term capital investment, such as he Tokaido Shinkansen, the implementation of earthquake countermeasures, and plans to rvice, are established with a long-term perspective in mind, and we are steadily proceeding ns and results of other major measures are announced publicly as appropriate, and steady rade in these areas. We will continue to announce annual income and expenditure plans, key stment plans each year in light of our immediate management environment, and will continue inagement foundation in order to firmly maintain a sound management outlook based on gement stemming from the securing of safe and reliable transportation.	-		URL https://globa In the railway busin Central's fundamen above through the c streamlining of work Report, and can be Integrated Repor URL https://global • Specific measure
visclosure based on	Corporate Go	vernance Code p	rinciples			are described in Ko Key Measures ar URL https://comp
General principle	principle		Disclosed contents			[2] The basic outlook on c
Principle 1-4 Cross-shareholdings		 Policy concerning cro Our strategy for cross-ho holding other companies' any of our cross-holdings a Assessment of cross- Our Board of Directors we medium- to long-term econ Criteria for the exercising and decides how to vote in sustainable growth of busing 	ss-shareholdings Idings is grounded in the belief that maintaining and bolstering business relationships through stock facilitates our operations and enhances our corporate value over the medium to long term. If are deemed to be unnecessary in light of this policy, we will assess and possibly divest in them. holdings amines whether it is beneficial to retain specific cross-holdings after scrutinizing them in light of the iomic rationale and outlook, purpose of owning such cross holdings, etc. ing of voting rights of cross-shareholding voting rights, JR Central closely examines the content of each resolution consideration of improving the corporate value of the Company over the mid- to long-term and the ness partners, etc.	Principle 3-1 Full disclosure		 "Disclosure of Policy under II.1. Matters Governance Report. [4] It is our policy to app and Audit and Super on a comprehensive nationality, via a reso Shareholders. In app provisions of relevan From the perspective of personnel, etc. of all independent outs
Principle 1-7 Related party transactions		All transactions involving I the Company, require the a regulations and rules gover	Directors which may pose a conflict of interest, and transactions between Directors and pproval of, and reporting to, the Board of Directors as stipulated in relevant laws and ning the Board of Directors. Every year confirmations are made on a regular basis with drafty transactions have been made between officers or relative and the Company.			deliberation, attende Directors, and decisi based on the conten
		At JR Central, we believe that and maximize their capabilities	it is extremely important from the perspective of management to employ diverse human resources to drive sustainable corporate growth. With this in mind, in our recruitment process we carry out	-		their career backgro concerning the chan Disclosure Rules.
Principle 2-4 Ensuring internal diversity luding the utilization of women	Supplementary principle 2-4 1	employment without making dia With regard to women, we har 1997, which prohibited late-nig skills without regard to gender . end of FY2020 was approximat first female corporate officer in General Managers and Managg In order to further promote we empowerment in FY2020 under resources, it is essential to bece with enthusiasm. Especially for we believe it is important for a a to the full. Based on this conce Employer Action Plan in Accord discussions in the women's em targets such as a hiring rate of Supervisors or higher) compare the following for details on the re > Positive Action Plan	stinctions in terms of gender, nationality, or the like. ve actively employed female employees in response to the revision of the Labor Standards Act in ht work by women in principle. As a result of appropriately evaluating employees' competence and and appointing them to jobs that suit their evaluations, the number of female employees as of the ely 2, 130 (of whom 122 were in managerial posts). In addition to the appointment of JR Central's June 2021, women play an active role in various lines of duty, such as President of an affiliate and ars of the Head Office. when's participation and career advancement, we established a project team for promoting women's the General Manager of the Personnel Department. In order to enhance the quality of human ome a company where all employees, irrespective of gender, can fully demonstrate their abilities us as a railway company aiming to provide services that would satisfy a wide range of customers, fiverse variety of employees, irrespective of gender, to exchange ideas and exercise their abilities opt, we established the Positive Action Plan for Promoting Women's Empowerment and the General lance with the Act for Measures to Support the Development of the Next Generation, following powerment project. The Positive Action Plan, which covers FY2021 to FY2025, includes numerical women of at least 25%, and at least 1.5 times more female managers (Assistant Managers and ed to the end of FY2020. We will make efforts to achieve these goals going forward. Please refer to sumerical targets and our efforts in human resources development based on the targets. to FPromoting Women's Empowerment		Supplementary principle 3-1 3	 Initiatives in sustainal JR Central's specific and "JR Central's "EE Relationships with M Communities," and "I (2) Investments in human JR Central's investm Development" and "I (3) Risks and opportunitie With regard to clima with the government May 2021. By analyz business operation c further information, p the Integrated Repou ► The Integrated F URL https://globa
		URL https://company.ju General Employer Development of the URL https://company.ju At the same time, JR Central h employees can be motivated to we offer our employees longer	-central.co.jp/others/action_plan/_pdf/woman.pdf Action Plans in Accordance with the Act for Measures to Support the Next Generation -central.co.jp/others/action_plan/_pdf/nurturing.pdf as been making efforts to enhance the work environment by creating an environment where work with enthusiasm in active roles over many years. For example, to support employees' childcare hildcare leave than the statutory period set, as well as flexible work arrangements a system	Principle 4 – 1 Roles and responsibilities Board of Directors (1	Supplementary principle of the 4-1 1	The Board of Directors and regulations and the and important matters re rules governing the Boar Further, the Board of D based on internal regula defining the division of re
		designed to rehire former employees foriger (until their child is one year of ac We will continue to actively mak work with enthusiasm in active r Please refer to the following U	yees who have resigned for childcare, etc., and a program that dems employees' childcare leave the as attended work in terms of eligibility for promotion assessments. We also offer various subsidies, e efforts to enhance various programs so that employees, irrespective of gender, can be motivated to oles over many years. RL for details of JR Central's initiatives in ensuring diversity and other efforts concerning human	Principle 4-9 Independence standards gualification for Indepen	and dent	The Company determir Board Members based of to ensure that the opinion matters raised are forme

Please refer to the following URL for details of JR Central's initiatives in ensuring diversity and other efforts concerning human resources, which are described in "Human Resources Development" of the Integrated Report. Integrated report: https://global.jr-central.co.jp/en/company/ir/annualreport/

Business Strategy

g to hire human resources with the skills and capabilities necessary to support our future business n terms of nationality, etc. Therefore, it is our recognition that we are not in a situation where we must argets for the specific appointment of foreign nationals in managerial posts.

erm employment will prove to be effective as high levels of most railroad technologies can only be ulation of experience. Therefore, we do not recruit mid-career employees en masse, and recognize that e we must implement measures or set targets for the appointment of mid-career hires in managerial we will consider doing so accordingly if the need arises due to various measures in response to ironment surrounding the Company.

corporate-type defined benefit corporate pension plan, this principle does not apply to us. bution pension plan instead. We provide employees who participate in the defined with adequate training on asset management since the plan affects their asset

ded in 1987 as part of the reform of the national railway system with a mission of ng, developing and future-proofing the Tokaido Shinkansen, which serves as Japan's artery linking Tokyo, Nagoya and Osaka, and the conventional line network in the Tokai focus around Nagoya and Shizuoka.

instral established its management philosophy to "Contribute to the development hsportation artery and social infrastructure" to reflect the direction the Company with the expanding scope of business activities going forward, including f the three denerations of railways, i.e. conventional lines, the Tokaido

Chuo Shinkansen. This management philosophy can be found on our website. l.jr-central.co.jp/en/company/about/outline.html

ess, JR Central sets the highest priority on ensuring safe and reliable transportation. JR tal policy is to stably and fully execute the long-term social mission described in detail continuous efforts of providing services that are preferred by customers as well as the , etc. This Management Philosophy is included in the Business Strategy of the Integrated found at the following URL.

jr-central.co.jp/en/company/ir/annualreport/

to be implemented in the current business year based on this Management Philosophy ey Measures and Capital Investment, and can be found at the URL below.

nd Capital Investment

any.jr-central.co.jp/company/achievement/capital-investment/

orporate governance is described in I.1. Basic Outlook in the Corporate Governance Report.

/ and procedures concerning the setting of Director compensation are described in for Determining the Amount of Compensation and the Calculation Method for Such" Concerning the Composition and Operation of the Organization in the Corporate

pint individuals who are most fit to perform the given duties for the company as directors visory Board members. In accordance with this policy, we select candidates based review of their abilities, knowledge, work history, etc., regardless of age, sex and ution of the Board of Directors and appoint them upon approval at a General Meeting of ointing or dismissing a representative director, we follow the same policy as well as the tlaws and the rules of the Board of Directors.

e of ensuring the improvement of objectivity and transparency in the determination officers, JR Central established the Personnel Remuneration Committee comprising de directors (3 persons) and the President. The Committee is held twice a year for by all committee members, prior to the personnel-related decisions of the Board of ons made by the Board of Directors regarding the determination of personnel, etc. are of deliberation by the Committee.

nd Supervisory Board member candidates are appropriately selected in consideration of und provided in the General Meeting of Shareholders material. We disclose information ge of a representative director as required by the Tokyo Stock Exchange's Timely

bility

Directors

Control initiatives in sustainability are described in "Positive Cycle of "ESG Management"" SG Management, "" as well as "Building Safe and Resilient Infrastructure, " "Building aterial Suppliers," "Improving the Convenience of Facilities," "Cooperation with Local Destribution of Control Co Contribution to Global Environment Preservation" in the Integrated Report.

capital and intellectual property

nents in human capital and intellectual property are described in "Human Resources rechnological Development to Support JR Central's Growth" in the Integrated Report. s related to climate change

ate change, we have been making efforts to further reduce CO₂ emissions in accordance s 2050 carbon-neutrality policy. We also endorsed the recommendations of the TCFD in ng the risks and opportunities related to climate change, we will strive to ensure stable ver the long term, as well as contributing to the achievement of a sustainable society. For lease refer to "Endorsement of TCFD Recommendations and Initiatives to Be Taken" in

eport can be found at the following

jr-central.co.jp/en/company/ir/annualreport/

is involved in decision making processes concerning matters stipulated in relevant laws articles of incorporation, matters put in their charge at a general shareholders' meeting lated to the execution of business. A specific outline of such matters is established in the d of Directors

rectors clearly defines the division of duties and job functions for each department tions, clarifies the scope of authority for Directors and corporate officers, while also les of Directors and areas in which corporate officers are put in charge.

es the level of independence of Outside Directors and Outside Audit and Supervisory n the criteria for independence established by the Japan Exchange Group, Inc. in order to ensure that the opinions provided by Outside Directors and Outside Audit and Supervisory Board Members on matters raised are formed from an independent standpoint, and are based on the high degree of experience and insight accumulated outside the Company.

	Supplementary	From the perspective of ensuring the improvement of objectivity and transparency in the determination of personnel and the remuneration of officers, JR Central established the Personnel Remuneration Committee consisting of a total of four members: 3 independent Outside Directors (Takashi Saeki, Haruo Kasama and Taku	Appendix	1
Principle 4-10	principle	Oshima) and the President (Shin Kaneko). The Committee is held twice a year for deliberation, attended by all committee members, prior to the decision of the Board of Directors regarding personnel and remuneration. The independent Output Directors regarding being and the second s	Position Name	
Julization of arbitrary mechanism	4-10 1	The appointment of Directors is conferred to General Shareholders Meetings following a resolution of the Board of Directors concerning the determination of the Board of Directors regardless of the Committee. The secretariat is placed within the Secretarial Department.	Chairman and Koei Tsuge Representative Director	Following his appointmer his positions as General M President and Represential and development of the ra the highest priority to ensu Director by dedicating his poported among other ini-
		selected based upon a general consideration of their abilities, knowledge, and work history, etc., regardless of age, sex and nationality. The number of Directors elected, and the division of Director roles, etc. is determined based on a comprehensive consideration of the level of progress of each project at the time based on a policy of establishing the most appropriate management structure for the execution of the Company's business activities. Furthermore, from the perspective of ensuring the improvement of objectivity and transparency in the determination of personnel, etc. of officers, JR Central established the Personnel Remuneration Committee consisting of a total of four members: 3 independent Outside Directors and the President. The Committee is held	President and Shin Kaneko Representative Director	Following his appointmer frolugh his positions as G of the Corporate Planning his efforts to important ma President and Representa contributing to the develop
	Supplementary principle	twice a year for deliberation, attended by all committee members, prior to the decision of the Board of Directors regarding personnel, etc. Decisions made by the Board of Directors regarding the determination of personnel, etc. are based on the deliberations of the Committee. Of the director candidates, candidates for internal directors have been nominated for having the skills, knowledge and career history required to powerfully tackle JR Central's various management issues, such as ensuring safe and reliable transportation of the Tokaido Shinkansen and conventional lines and steadily promoting the	Executive Vice President and Representative Director	Mr. Yoshiki Suyama has h Corporate Planning Divisic infrastructure. He currently toward achieving the Com and social infrastructure a
Principle 4-11	4-11 1	Chuo Shinkansen project. They are expected to do so by exercising strong leadership to lead the administrative and technological departments and the overseas high speed railway project as well as the departments and organizations of the Conventional Lines Operations Divisions and the Chuo Shinkansen Promotion Division toward realizing our management philosophy of contributing to the development of Japan's main transportation artery and social infrastructure at a higher level, with the ultimate aim of maintaining the sound management and further development of the Group. Candidates for outside directors have been nominated for having the skills, knowledge and career history required to perform an outside director's important role of appropriately supervising the work of directors.	Executive Vice President Shun-ichi and Kosuge Representative Director	Mr. Shun-ichi Kosuge has Technology Planning Depa High Speed Railway Projer the General Technology Di infrastructure. He currently toward achieving the Com and social infrastructure at strong leadership.
Premises for ensuring the effectiveness of the Board of Directors and the Audit and Supervisory Board		management with regard to corporate management, finance, accounting, the maintaining of compliance, and the development of local communities from a legal standpoint, including corporate governance and compliance, based on their broad-ranging experience gained outside the Company and their deep insight. The specific skills, knowledge and career history of each director are described in the Appendix. Upon our next nomination, we plan to disclose the skills, etc. of each director in a skills matrix.	Executive Vice President and Mamoru Uno Representative Director	Mr. Mamoru Uno has hele Structures Department of til among others, through whi responsibility as Executive management philosophy o level, and supervising the
	Supplementary principle 4-11 2	The status of Directors and Audit and Supervisory Board Members holding important concurrent positions is as described in business reports and General Shareholders Meeting Reference Materials. All currently held positions bear no hindrance on the Director or Audit and Supervisory Board Member's ability to fulfill the roles and responsibilities of such a position for the Company.	Executive Vice President Mamoru and Tanaka Representative Director	Mr. Mamoru Tanaka has I Technology Division, Gene General of the Shinkansen management infrastructure assisting the President tow transportation artery and s transportation services of t
	Supplementary principle 4-11 3	that are given to bring all concerned up to speed on the policy objectives discussed and the progress on such matters. Further, the status of the execution of duties by Directors is monitored by having the Directors report back on business functions under their charge when needed. JR Central receives valuable broad-view advice on management from Outside Directors, which is brought into consideration in regulating the management of the Company. Directors as well as Audit and Supervisory Board members also self-evaluate the effectiveness of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the effectiveness of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the effectiveness of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the effectiveness of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the function of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the function of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the function of the Board of Directors as well as Audit and Supervisory Board members also self-evaluate the second provide the second pro	Director and Takanori Senior Corporate Mizuno Executive Officer	priority to ensuring safe an Mr. Takanori Mizuno has I 21st Century Division and I his efforts to strengthening Corporate Executive Office promoting the Chuo Shinka
		Directors, and after discussing the self-evaluation results and other matters at the board meetings, implement initiatives that will help improve the functions of the Board of Directors. Additionally, round-table conferences for opinion exchanges between Outside Directors, Outside Audit and Supervisory Board Members, and members of management are set up ahead of meetings of the Board of Directors in order to further improve the effectiveness of the Board of Directors. Through the above-mentioned initiatives, we find at meetings of the Board of Directors that the effectiveness of the entire Board of Directors is ensured to a satisfactory degree.	Director and Senior Corporate Atsuhito Mori Executive Officer	Mr. Atsuhito Mori has hele of the General Technology dedicated his efforts to strrt Senior Corporate Executive further enhancement of tra ensuring safe and reliable
Principle 4-14	Supplementary principle	All Directors and Audit and Supervisory Board Members of the Company have the sufficient ability and insight to fulfill their roles and responsibilities, and perform their duties with an appropriate sense of responsibility as entrusted by all shareholders, while continuing to refine their skills and knowledge by actively participating in external training programs, etc.	Director and Shunsuke Corporate Executive Niwa	Mr. Shunsuke Niwa has h the Public Relations Depar infrastructure. He currently Planning Division by super solving managerial issues.
Director and Audit and Supervisory training	4-14 2	IN Central takes necessary measures to ensure that all Directors and Audit and Supervisory Board Members perform the duties required of them, such as in instances where relevant laws and regulations are revised, for example, by making the content of such revisions commonly known through meetings, etc., and by holding training events to share management issues faced by the Company so that the Company can make decisions concerning such issues in an appropriate manner.	Director and Corporate Executive Hiroshi Suzul Officer	Mr. Hiroshi Suzuki has he Division and Director Gene the Group's management i General of the Conventiona the Company's convention
	 JR Central has established a Policy for Promoting Constructive Dialog with Shareholders as follows. JR Central positions the General Meeting of Shareholders as an important opportunity for dialog with shareholders and strives to improve the quality of questions and answers sessions in the meeting as a means of contributing to sustainat growth and enhancing corporate value over the mid- to long-term. All dialog with shareholders is overseen by the 	Director and Takayuki Corporate Executive Oyama Officer	Mr. Takayuki Oyama has Branch Office, through whi responsibility as Director a initiatives for the enhancen and reliable transportation	
		 and responded to in the form of an individual meeting or over the telephone, etc. where it is reasonable to do so. Of this, dialog with institutional investors is overseen by the Director General of the Corporate Planning Division, and the IR team that is placed in the Management Supervision Department, Corporate Planning Division is in charge of the dialog response. The IR team strives to further improve shareholder dialog by organically coordinating with the Administration, Finance, Legal and other Departments. It also strives to improve upon dialog measures by not only holding individual 	Director Torkel Patterson	Mr. Torkel Patterson has important positions in the I MAGLEV, an outsourcee o Japan MAGLEV. He currer Company's business mana
Principle 5-1 'olicy for constructive dialog with shareholders		meetings our also implementing web conterence and facility fours, etc., where necessary, in addition to holding quarterly financial results briefings. Dialog response is made, to the extent reasonable, together with members of management and Directors or Audit and Supervisory Board members, based on general consideration of the requests and interests put forth by the institutional investor. • We also strive to enrich the broader provision of information to shareholders by sending reports on information presented at financial results briefings, on top of posting this information on TDnet and our website and enhancing the content of	Outside Director Takashi Saek	Mr. Takashi Saeki has a w the maintenance and deve Director of TOHO GAS Co a member of the Board of the work of directors.
	at infancial results briefings, on top or posting this information on Linet and our website and enhancing the content of the convocation notice of the General Meeting of Shareholders. Moreover, we work to ensure that a sufficient degree of information concerning decisions made on important measures and important capital investments reaches as large a number of stakeholders as possible using the mass media services to deliver detailed information at press conferences held by the President, and by presenting such information to the press.		Outside Director Haruo Kasam	Mr. Haruo Kasama has a compliance, through holdir and Prosecutor General. H of important management
		 given to the Board of Directors. Under no circumstances is insider information communicated during discussions with shareholders. Furthermore, the 14-day period in the lead up to the day in which financial results are announced each quarter is designated as a silent period, in which the Company refrains from discussing financial results. 	Outside Director Taku Oshima	Mr. Taku Oshima has a w technological perspective, LTD. He currently fulfills

Abilities, knowledge, work history, etc. of Directors

ving his appointment as Director of the Company in 2002, Mr. Koei Tsuge demonstrated superior management skills through itions as General Manager of the Personnel Department and the Secretarial Department. Following his appointment as nt and Representative Director in 2014, he strengthened the Company's management infrastructure through the maintenance elopment of the railway business, the promotion of the Chuo Shinkansen, and the reduction of long-term debt, while giving est priority to ensuring safe and reliable transportation. He currently fulfills his responsibility as Chairman and Representative by dedicating his efforts from the position of Chairman of the Board to ensuring that the Board of Directors is appropriately d. among other initiatives.

ving his appointment as Director of the Company in 2004, Mr. Shin Kaneko demonstrated superior management skills I his positions as General Manager of the Administration Department and the Personnel Department and Director General orporate Planning Division. In 2012 onward, he assisted the President as Executive Vice President, as well as dedicating to important managerial issues such as promoting the Chuo Shinkansen project. He currently fulfills his responsibility as nt and Representative Director by exercising strong leadership toward achieving the Company's management philosophy of uting to the development of Japan's main transportation artery and social infrastructure at a higher level.

whiki Suvama has held positions as Director General of the Shinkansen Operations Division and Director General of the te Planning Division, among others, through which he dedicated his efforts to strengthening the Group's managemer cture. He currently fulfills his responsibility as Executive Vice President and Representative Director by assisting the President achieving the Company's management philosophy of contributing to the development of Japan's main transportation artery ial infrastructure at a higher level, and supervising the administrative departments by exercising strong leadership.

un-ichi Kosuge has held positions as Deputy Director General of the General Technology Division, General Manager of the by Planning Department of the General Technology Division, Head of the Consulting and Coordination Office-Overseas beed Railway Project of the Technology Planning Department of the General Technology Division, and Director General of reral Technology Division, among others, through which he dedicated his efforts to strengthening the Group's management acture. He currently fulfills his responsibility as Executive Vice President and Representative Director by assisting the President achieving the Company's management philosophy of contributing to the development of Japan's main transportation artery cial infrastructure at a higher level, and supervising the initiatives for the rollout of high-speed railways abroad by exercising

amoru Uno has held positions as General Manager of the Public Relations Department, General Manager of the Tracks and res Department of the Shinkansen Operations Division, and Director General of the Chuo Shinkansen Promotion Division, others, through which he dedicated his efforts to strengthening the Group's management infrastructure. He currently fulfills his sibility as Executive Vice President and Representative Director by assisting the President toward achieving the Company's ement philosophy of contributing to the development of Japan's main transportation artery and social infrastructure at a higher Id supervising the initiatives for promoting the Chuo Shinkansen project by exercising strong leadership.

amoru Tanaka has held positions as Director General of the Kansai Branch Office, Deputy Director General of the General bgy Division, General Manager of the Technology Planning Department of General Technology Division, and Dire of the Shinkansen Operations Division, among others, through which he dedicated his efforts to strengthening the Group's ement infrastructure. He currently fulfills his responsibility as Executive Vice President and Representative Director by the President toward achieving the Company's management philosophy of contributing to the development of Japan's mair tation artery and social infrastructure at a higher level, and supervising the initiatives for the further enhancement of the tation services of the Tokaido Shinkansen and conventional lines by exercising strong leadership, while giving the highest o ensuring safe and reliable transportation.

kanori Mizuno has held positions as General Manager of the Planning and Promotion Department of the Tokaido Shinkansen Intury Division and Director General of the Chuc Shinkansen Promotion Division, among others, through which he dedicated rts to strengthening the Group's management infrastructure. He currently fulfills his responsibility as Director and Senior te Executive Officer, and Director General of the Chuo Shinkansen Promotion Division by supervising the initiatives for ng the Chuo Shinkansen project.

suhito Mori has held positions as Director General of the Conventional Lines Operations Division, Deputy Director General Same to the first of the position and General Manager of the Econventional Links operations briston, beputy blicture deneral Beneral Technology Division and General Manager of the Technology Planning Department, among others, through which he ted his efforts to strengthening the Group's management infrastructure. He currently fulfills his responsibility as Director and Corporate Executive Officer, Director General of the General Technology Division by driving technological initiatives for the hancement of transportation services of the Tokaido Shinkansen and conventional lines, while giving the highest priority to safe and reliable transportation

unsuke Niwa has held positions as General Manager of the Company's Personnel Department and General Manager of lic Relations Department, among others, through which he dedicated his efforts to strengthening the Group's management acture. He currently fulfills his responsibility as Director and Corporate Executive Officer, Director General of the Corporate Division by supervising the formulation of the basic policy for the Company's business management and the initiatives for

oshi Suzuki has held positions as General Manager of the Engineering Department of the Conventional Lines Operations n and Director General of the Shizuoka Branch Office, among others, through which he dedicated his efforts to strengthening buc's management infrastructure. He currently fulfills his responsibility as Director and Corporate Executive Officer, Director of the Conventional Lines Operations Division by supervising the initiatives for the enhancement of transportation services by npany's conventional lines, while giving the highest priority on ensuring safe and reliable transportation

kayuki Oyama has held positions as Director General of the Kansai Branch Office and Director General of the Shizuoka Office, through which he dedicated his efforts to strengthening the Group's management infrastructure. He currently fulfills his sibility as Director and Corporate Executive Officer, Director General of the Shinkansen Operations Division by supervising the s for the enhancement of transportation services by the Tokaido Shinkansen, while giving the highest priority to ensuring safe

rkel Patterson has a wealth of connections overseas as well as extensive experience and deep insight through holding nt positions in the U.S. government, such as special assistant to the president, and serving as president of U.S.-Japan W an outsourcee of JR Central's overseas expansion operations, and president of Northeast MAGLEV, a subsidiary of U.S.-IAGLEV. He currently fulfills his responsibility as part-time Director by providing valuable guidance and advice on the ny's business management, mainly concerning its overseas rollout of high-speed railways

kashi Saeki has a wealth of experience and deep insight in corporate management, finance, accounting, compliance, and ntenance and development of local communities through holding important positions such as President and Representative r of TOHO GAS Co., Ltd. and head of the Aichi Prefectural Public Safety Commission. He currently fulfills his responsibility as er of the Board of Directors by participating in deliberations of important management matters and appropriately monitoring

ruo Kasama has a wealth of experience and extensive knowledge of law, particularly in corporate governance and nce, through holding important positions such as the Superintending Prosecutor of the Tokyo High Public Prosecutors Office secutor General. He currently fulfills his responsibility as a member of the Board of Directors by participating in deliberations tant management matters and appropriately monitoring the work of directors.

ku Oshima has a wealth of experience and deep insight in corporate management, particularly from a manufacturing and ogical perspective, through holding important positions such as president and Representative Director of NGK INSULATORS, a currently fulfills his responsibility as a member of the Board of Directors by participating in deliberations of important management matters and appropriately monitoring the work of directors

Creating "Social Value" – Governance–

Board of Directors, Audit and Supervisory Board Members, and Corporate Officers [as of June 23, 2021]

Chairman Representative Director Koei Tsuge

Executive Vice President Representative Director

Yoshiki Suyama overseeing the Administrative Departments

Executive Vice President Representative Director

Senior Corporate Executive Officer

overseeing the Construction Sections

Director

Promotion Division

Takanori Mizuno

Mamoru Uno (Ph.D.) overseeing the Chuo Shinkansen Promotion Division

Director General of the Chuo Shinkansen

President Representative Director Shin Kaneko

Executive Vice President Representative Director

Shun-ichi Kosuge overseeing the General Technology Division, and the Overseas High Speed Railway Project

Executive Vice President Representative Director

Mamoru Tanaka overseeing the Railway Operations Division, and Safety Sections

Director Senior Corporate Executive Officer Director General of the General Technology Division

Atsuhito Mori overseeing the Electrical Engineering Sections

Director Corporate Executive Officer Director General of the Corporate Planning Division Shunsuke Niwa

Director Corporate Executive Officer Director General of the Shinkansen Operations Division

Takayuki Oyama overseeing the Rolling Stock Sections

Director Corporate Executive Officer Director General of the Conventional Lines **Operations Division**

Hiroshi Suzuki overseeing the Tracks and Structures Sections

Reasons for election

Mr. Torkel Patterson has a wealth of connections overseas through holding important positions in the U.S. government, such as special assistant to the president, as well as extensive experience and deep insight. His ability, insight and experience are suitable for our group to maintain sound management and further develop, thus we believe he is gualified for the position of Director of our company.

Director Torkel Patterson

Reasons for election

Mr. Haruo Kasama has a wealth of experience and extensive knowledge of law through holding important positions such as the superintending prosecutor and prosecutor general of the Tokyo High Public Prosecutors Office. In terms of supervision and advice by an outside director, his ability, insight and experience are suitable for our group to maintain sound management and further develop, thus we believe he is

Director (Outside) Haruo Kasama qualified for the position of Director of our company.

Reasons for election

Mr. Tatsuhiko Yamada possesses high-level expertise in finance and accounting, through his positions as Manager of Funding Section of our Company's Finance Department, Manager of Accounting Section of the same Department, and Corporate Officer and General Manager of the same Department. His ability, insight, and career are suitable for auditing the Full-time Audit and Supervisory execution of duties by directors, and thus we believe

he is qualified for theposition of Audit & Supervisory Board Board Member Tatsuhiko Yamada Member of the Company.

Reasons for election

Mr. Fumio Yamashita has a wealth of experience and a high level of insight in police administration, etc., through his positions such as Deputy Superintendent General of the Metropolitan Police Department and Director-General of the Community Safety Bureau of the National Police Agency. His ability, insight and experience are suitable for auditing the execution of duties by directors, and thus we

Full-time Audit and Supervisory Board Member (Outside) Fumio Yamashita

Reasons for election

Mr. Kunihiro Nasu has a wealth of experience and extensive knowledge of law through his positions such as Vice President of the Japan Federation of Bar Associations and Chairman of the Aichi Prefectural Personnel Commission. His ability, insight and experience are suitable for auditing the execution of duties by directors, and thus we believe he Board Members (Outside) is qualitied for the position of outside Audit & Supervisory

Supervisory Board Member of the Company.

Audit and Supervisory Kunihiro Nasu

Board Member of the Company.

Senior Corporate Executive Officers

Takanori Mizuno Motoaki Terai Akihiko Ito Atsuhito Mori

Corporate Executive Officers

Shunsuke Niwa Hajime Ikuta Atsushi Honda (Ph.D.) Hiroto Takeuchi (Ph.D.) Hiroshi Suzuki Takayuki Oyama Akihiko Nakamura Kentaro Takeda

Director (Outside) Takashi Saeki

Director (Outside) Taku Oshima

Full-time Audit and Supervisory Board Member (Outside) Hajime Ishizu

Audit and Supervisory Board Members (Outside) Shigeo Kifuji

Reasons for election

Mr. Takashi Saeki has a wealth of experience and deep insight in corporate management through holding important positions such as president and representative director of TOHO GAS Co., Ltd. In terms of supervision and advice by an outside director, his ability, insight and experience are suitable for our group to maintain sound management and further develop, thus we believe he is qualified for the position of Director of our company.

Reasons for election

Mr. Taku Oshima has a wealth of experience and deep insight in corporate management through holding important positions such as president and representative director of NGK Insulators, Ltd. In terms of supervision and advice by an outside director, his ability, insight and experience are suitable for our group to maintain sound management and further develop, thus we believe he is qualified for the position of Director of our company.

Reasons for election

Mr. Hajime Ishizu has a wealth of experience and a high level of insight in transportation administration, etc., through his positions as Director-General of the Kinki District Transport Bureau and Vice-Minister for Transport and International Affairs of the Ministry of Land, Infrastructure, Transport and Tourism. His ability, insight and experience are suitable for auditing the execution of duties by directors, and thus we believe he is gualitied for the position of outside Audit & Supervisory Board Member of the Company.

Reasons for election

Mr. Shigeo Kifuji has a wealth of experience and extensive knowledge of law through his positions such as Superintending Prosecutor of the Hiroshima High Public Prosecutors Office and Superintending Prosecutor of the Tokyo High Public Prosecutors Office. His ability, insight and experience are suitable for auditing the execution of duties by directors, and thus we believe he is gualitied for the position of outside Audit & Supervisory Board Member of the Company.

Corporate Officers

Tatsuya Okajima Manabu Ishibashi Shigeki Mivamoto Hiroshi Oshima Yoshihiko Uchida Masami Nitta Masahiro Yamamoto Masaya Sugiura Kenichi Niimi Atsushi Tsujimura Kenji Hagihara Ataru Kimura Yoichiro Dendo Takahide Saito Masaru Yosano Hisao Sawada Hiroshi Shigeta

Naoki Hayakawa Hirotaka Kawada Kazuma Tsukamoto Masafumi Kondo Shunichi Usui Yoichi Inoue Mitsuhiro Aoki Masami Owaki Seigo Hatada Takeya Tanitsu Chika Takeda

CENTRAL JAPAN RAILWAY COMPANY Integrated Report 2021 76

► Profile

Name	CENTRAL JAPAN RAILWAY COMPANY (JR Central) Central Japan Railway Company(JR Central)					
Established	April 1, 1987					
Business activities	s Railways business, Affiliated businesses					
Key data	(As of the end of March 2	021)				
	Capital	112.0 billion yen				
	Operating Revenues	541.7 billion yen				
	Number of Shares Outstanding	206 million				
	Share Listings	Nagoya / Tokyo Stock Exchange				
	Number of Shareholders	118,111				
	Number of Employees	18,499				
	Operating Kilometers	1,970.8km				
	Number of Stations	405				
	Number of Rolling Stock	4,857				
	Double-and Multi-Tracked Section	55.1% (1,086.8km)				
	Electrified Section	76.7% (1,511.0km)				
	CTC System Adoption Rate	97.5% (1,922.3km)				
	Automatic Signaling System Adoption Rate	97.8% (1,927.3km)				

Office and Main Offices	Head Office	Meieki 1-1-4, Nakamura-ku, Nagoya-shi, Aichi 450-6101, JapanJR Central Towers
	Head Office (Tokyo)	JR Central Shinagawa Building A Wing 2-1-85, Konan, Minato-ku, Tokyo 108-8204, Japan
	Conventional Lines Operations Division	JR Central Taiko Building, Meieki 1-3-4, Nakamura-ku, Nagoya-shi, Aichi 453-8520, Japan
	Shizuoka Branch Office	4, Kurogane-cho, Aoi-ku, Shizuoka-shi, Shizuoka 420-0851, Japan
	Mie Regional Office	Ust-Tsu 12F, 700, Hadokoro-cho, Tsu-shi, Mie 514-0009, Japan
	lida Regional Office	5356, Kami-Iida, Iida-shi, Nagano 395-0000,Japan
	Shinkansen Operations Division	Marunouchi Chuo Building, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan
	Kansai Branch Office	Shin-Osaka Hankyu Building 10-11F, 1-1-1, Miyahara, Yodogawa-ku, Osaka-shi, Osaka 532-0003, Japan
	Washington D.C. Office	900 17th Street, N.W., Suite 520, Washington,DC 20006, U.S.A.
	London Office	6th Floor, 4 Eastcheap, London, EC3M 1AE, U.K.
	Sydney Office	Suite 5.01A, Level5, 20 Hunter Street, Sydney, NSW 2000, Australia

► Organization Chart

Operating Area

JR Central operates the Tokaido Shinkansen, the main transportation artery linking Tokyo, Nagoya, and Osaka, and a network of 12 conventional lines centered on the Nagoya and Shizuoka City areas.

C 500km Area diagare Appres 30000km Popular Vid anway 1.0201 Shine David Shine David Shine David Shine David

59.9km

180.2km

Meisho Line 43.5km Sangu Line 29.1km Conventional Line Total 1,418.2km

1,970.8km

Stock Information

Shifts in JR Central's Stock Price

Major Shareholders

Name	Number of shares held	Percentage of total issued shares
The Master Trust Bank of Japan, Ltd. (Trust Account)	15,652,300	7.95%
Custody Bank of Japan, Ltd. (Trust Account)	10,225,900	5.19%
Mizuho Bank, Ltd.	8,642,300	4.39%
The Nomura Trust and Banking Co., Ltd. (Holder in Retirement Benefit Trust for MUFJ Bank, Ltd.)	7,125,000	3.62%
MUFJ Bank, Ltd.	6,278,100	3.19%
Nippon Life Insurance Company	5,000,000	2.54%
The Norinchukin Bank	3,350,000	1.70%
Toyota Motor Corporation	3,000,000	1.52%
JR Central Employee Stock Ownership Program	2,864,500	1.45%
Custody Bank of Japan, Ltd. (Trust Account 5)	2,551,300	1.30%
Total	64,689,400	32.84%
		FA (14 1 04 00043

Note: In addition to the above, JR Central holds 8,999,249 shares of treasury stock.

For more information, please visit the following:

- Safety Report
- https://company.jr-central.co.jp/others/report/
- ·Linear Chuo Shinkansen
- https://linear-chuo-shinkansen.jr-central.co.jp/ •Fact Sheet
- https://global.jr-central.co.jp/en/company/ir/factsheets/

Please refer to the left axis for stock prices before September 2012 and the right axis for stock prices after October 2012.

[As of March 31, 2021]

URL: https://global.jr-central.co.jp/en/ Tel:(052)564-2413/Fax:(052)587-1300 E-mail: ir.msd@jr-central.co.jp