## Key Measures and Capital Investment in FY2015.3 (Year ending March 31, 2015)

While giving priority to ensuring that our railway business provides safe and reliable transportation, we will steadily promote earthquake countermeasures, such as measures to counter derailment and deviation of the Tokaido Shinkansen, large-scale renovations of the civil engineering structures, introduction of the N700A and modification of Series N700 rolling stock, electrification of the Taketoyo Line, and replacement of diesel trains, etc.

In regards to our Chuo Shinkansen project which employs Superconducting Maglev technology, while publically releasing our Environmental Impact Statement and applying for approval of our construction implementation plan, we will move forward with our construction plan.

At the same time, we will steadily move forward with the JR GATE TOWER project in Nagoya Station and overseas projects that involve high-speed railway and our Superconducting Maglev system.

In order to steadily move forward with addressing these various issues, we shall continuously enhance management vitality by strengthening earning capability, improving technological competency, and pursuing efficiency and cost reductions at all levels, including capital investment.

#### I. Key Measures (see released documents)

- Ensuring Safe and Reliable Transportation
- Enhancing Tokaido Shinkansen Transportation Services
- Enhancing Conventional Line Transportation Services
- Promoting the Chuo Shinkansen Project that employs Superconducting Maglev technology
- Refining Superconducting Maglev technology and Reducing Costs
- Enhancing Marketing Initiatives
- Strengthening Technological Capability, Pursuing Overseas Projects & Preserving the Global Environment
- Developing Affiliated Businesses
- Tokaido Shinkansen 50th Anniversary

#### **II. Capital Investments**

Consolidated: 326.0 billion yen

Non-consolidated : 301.0 billion yen \*

\*including 188.0 billion yen for safety-related investments

### **Ensuring Safe and Reliable Transportation**

(Capital Investment: 136 billion yen)

We will give priority to ensuring safe and reliable transportation, which is the foundation of the railway business.

- Proceeding large-scale renovation to preserve and improve the soundness of civil engineering structures along the Tokaido Shinkansen in constant pursuit of cost reduction.
- Continuously promoting measures to counter derailment and deviation of the Tokaido Shinkansen, reinforcing elevated track columns along conventional lines and promoting the rebuilding and seismic strengthening of buildings such as the Hamamatsu Workshop, Nagoya Workshop and stations as further anti-earthquake measures.
- Promoting countermeasures for falling rocks and upgrading level-crossing safety devices on conventional lines.
- Completing the upgrading of the train management system for the Tokaido Line in the Nagoya area and continuing the upgrading in the Shizuoka area.
- Developing skills to counter tsunami by training employees based on the hazard maps published by each local government.



(Concrete Viaduct: measures to inhibit age-related deterioration)



Derailment and Deviation Countermeasure along the Tokaido Shinkansen



Illustration of the Nagoya Workshop after seismic strengthening

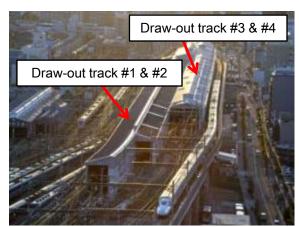
- [Note] Large-scale renovation of the Shinkansen : 93 billion yen over the first 3 years (35 billion yen in FY2015.3)
  - Derailment and deviation countermeasure for the Tokaido Shinkansen: Derailment prevention guards along approx. 80km (FY2015.3)
- Rebuilding of the Hamamatsu Workshop: General inspections using new line are scheduled to begin in March 2017.
- Seismic strengthening of the Nagoya Workshop: scheduled to complete in March 2022.
- Seismic strengthening of stations: Yoshiwara Station (scheduled to complete in FY2015.3), Kiyosu Station (scheduled to complete in FY2016.3)

### Enhancing Tokaido Shinkansen Transportation Services

(Capital Investment: 44 billion yen)

We will continue to enhance transportation services for the Tokaido and Sanyo Shinkansen, including "10 Nozomi Timetable" launched from March 2014, in which 10 Nozomi train per hour will depart from the first station.

- Flexibly setting train services based on the "10 Nozomi Timetable" to meet the demand of passengers.
- Enhancing the ability to resume normal operation when the timetable is disrupted by accidents caused by natural disasters, etc., for example, by using draw-out tracks and an additional platform in Shin-Osaka Station which was completed during long-term renovations.
- Continuing the introduction of our newest Shinkansen, the N700A, and modification of the Series N700.
- Proceeding with preparations for our speed-up project scheduled for the spring of 2015 during which the Shinkansen's maximum speed will be increased from 270km/h to 285km/h.
- Promoting installation of new movable platform fences at Tokyo Station and Nagoya Station and starting installation at Kyoto Station.



Additional Draw-out tracks in Shin-Osaka Station



N700A

### **Enhancing Conventional Line Transportation Services**

(Capital Investment: 12 billion yen)

We will actively address various measures such as electrification of the Taketoyo Line and replacement of diesel trains.

- Completing electrification of the Taketoyo Line to start operation in the spring of 2015 and introducing new trainsets.
- Commencing the use of new diesel trains on the Takayama Line and Taita Line in FY2015.3 and on the Kisei Line and Sangu Line in FY2016.3.
- Continuously promoting the installation of barrier-free facilities at stations, including elevators, multifunction toilets, and braille blocks that indicate where platform edges are located.



Electrification of the Taketoyo Line



Installation of Elevator at a station (Kamezaki Station)

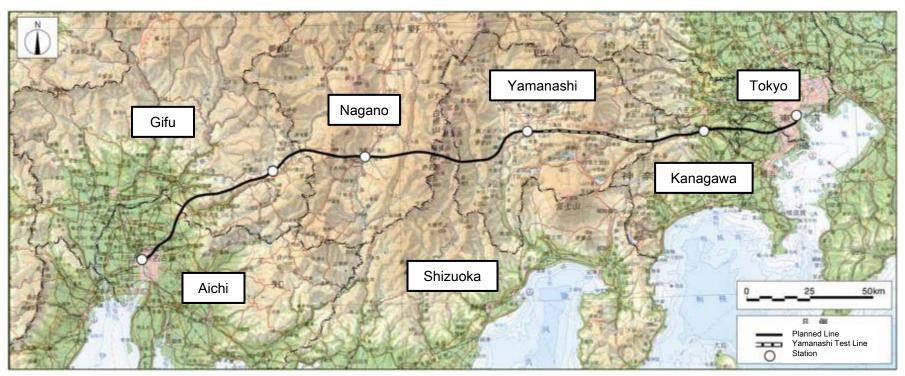
- [Note] Starting operation of newly electrified Taketoyo Line: Spring 2015 (planned)
  - Introducing new trainsets: manufacturing 28 "Series 313" (FY2015.3)
  - Introducing new diesel cars: manufacturing 52 "Series Ki-Ha 25" diesel cars (16 in FY2015.3 and 36 in FY2016.3)
- Installation of elevators and multifunction toilets:
- 11 elevators for 6 stations, multifunction toilets for 4 stations (FY2015.3)
- \*Station elevation (3 elevators for 2 stations, multifunction toilets for 1 station)
- Replacement of braille blocks that indicate platform edges: 8 stations (FY2015.3)

#### Promoting the Chuo Shinkansen Project that employs Superconducting Maglev technology

(Capital Investment: 23 billion yen)

# We will promote measures to realize the Chuo Shinkansen that employs Superconducting Maglev technology.

- Publically releasing our Environmental Impact Statement, applying for approval of our construction implementation plan, and then moving forward with the approved construction plan between Tokyo and City of Nagoya.
- Starting to construct advanced and efficient operation and maintenance systems for the Chuo Shinkansen.



Route of Chuo Shinkansen (Between Tokyo and City of Nagoya)

Progress of Environmental Impact Assessment for Chuo Shinkansen (Between Tokyo and City of Nagoya):

- Released Draft Environmental Impact Statement (DEIS) (September 20, 2013)

[Note]

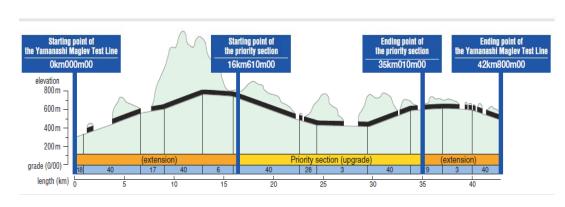
- Sent summaries of public opinions for DEIS and answers of the project proponent (JR-Central) (November 25, 2013)
- Received Opinions from governors of seven prefectures along the planned route from March 20 to March 25, 2014

#### Refining Superconducting Maglev technology and Reducing Costs

(Capital Investment: 21 billion yen)

#### We will continuously make efforts to improve Superconducting Maglev technology and to reduce costs.

- Conducting long distance running tests on the Yamanashi Maglev Test Line with equipment and a trainset with a maximum of 12-cars in length that have specifications equal to that for commercial operation, and performing verification tests to establish maintenance systems compatible with the commercial operation of rolling stock and ground facilities.
- Improving Superconducting Maglev technology and lowering costs for construction, operation and maintenance of the operation line.
- Preparing for Superconducting Maglev test rides that shall begin in FY2015.3.



Yamanashi Maglev Test Line



New vehicle, Series L0

<sup>[</sup>Note] - Yamanashi Maglev Test Line: Running tests using new facilities was started on August 29, 2013.

<sup>-</sup> The Series L0 (L-zero): Manufacturing 14 cars (Currently conducting the running test with 7-car train set)

<sup>-</sup> The other cars will be introduced by the end of FY2015.3.

### **Enhancing Marketing Initiatives**

(Capital Investment: 9 billion yen)

#### We will proactively develop marketing initiatives to increase revenue.

- Making efforts to expand use of and increase the number of "Express Reservation" service members and "PLUS EX" service members.
- Proactively developing various marketing campaigns by utilizing permanent tourism resources, such as Kyoto and Nara, creating demand for Mount Fuji, which was registered as a World Cultural Heritage Site, and developing travel products for inbound tourists.
- Creating demand through the sale of commemorative and bargain travel products to celebrate the 50<sup>th</sup> anniversary of the Tokaido Shinkansen.
- Increasing passenger volume through cooperation with local communities, such as the "Sawayaka Walking Event", "Shupo", "Takayama Line 80th Anniversary", etc.



"Express Reservation" service and "PLUS EX"



**Kyoto Campaign** 

# Strengthening Technological Capability, Pursuing Overseas Projects & Preserving the Global Environment

(Capital Investment: 1 billion yen)

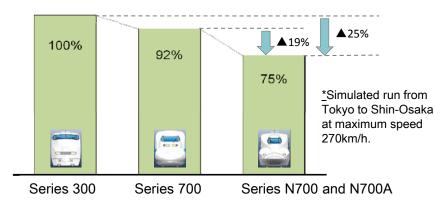
We will continuously strive to enhance our technological capabilities, which are the foundation of railway management and development, as well as pursuing overseas projects that use high-speed railway and Superconducting Maglev systems.

We will also continue to conduct measures to preserve the global environment.

- Promoting research and development for practical technologies, such as those for enhancing transportation services and countermeasures for natural disasters, as well as reducing costs by upgrading facilities through large-scale renovations made possible by the development of new technologies.
- Engaging in marketing activities in regions and corridors that have been selected as viable targets for overseas projects by leveraging our technological prowess with high-speed railway and Superconducting Maglev systems.
- Making efforts to promote Japan's high speed rail system, based on the basic principle "Crash Avoidance", as a global standard.
- Promoting measures to contribute to conservation of the global environment such as replacing old rolling stock with energy-saving rolling stock.







Electric Power Consumption by Tokaido Shinkansen Rolling Stock Type

#### **Developing Affiliated Businesses**

(Capital Investment: 33 billion yen) \*Including 25 billion yen to be invested by consolidated subsidiaries

We will steadily move ahead with JR GATE TOWER Project in Nagoya Station as well as strive to increase competitiveness and revenue of our existing business.

- Promoting construction of JR GATE TOWER, as well as actively promoting tenant leases and hashing out the details of other businesses to be opened.
- Increasing revenues by stimulating station building and merchandising businesses.
- Making continuous efforts to develop our agriculture business to provide safer and more reliable food products.



Image of JR GATE TOWER (right side)



ASTY ROAD presented by Asty Kyoto

### Tokaido Shinkansen 50th Anniversary

We will make efforts to enable people to understand the Tokaido Shinkansen in depth as well as convey our gratitude to the numerous passengers of the Tokaido Shinkansen.

- Selling commemorative travel products and organizing various promotions sponsored by JR-Central's group companies and the SCMAGLEV and Railway Park, etc.
- Holding an International High-Speed Rail Conference in Commemoration of the 50<sup>th</sup> Anniversary of the Tokaido Shinkansen (tentative name).



Opening ceremony of Tokaido Shinkansen (October 1, 1964)



Logo for Tokaido Shinkansen 50th Anniversary