

Sustainable society

JR-West Group's approach to a sustainable society

The JR-West Group recognizes that the challenges facing society, such as population decline, labor shortages, regional depopulation, and aging facilities and equipment, require us to seek out the optimal approach to each region and lifestyle and thereby enhance the sustainability of society. To that end, we believe it is important to work together with local communities to develop long-term businesses that support them. We will work to realize a future in which sustainable social systems are built, leveraging our know-how in the daily operation and maintenance of railway services along with our strengths cultivated through collaboration with various partners rooted in the local community, including the national and local governments.



Creating new transportation systems

Creating an easy-to-use and sustainable transportation system

Since our company's founding, we have worked with local communities to promote use of our local lines for improving transportation and encouraging tourism. At the same time, however, the social and physical environment surrounding local train lines is undergoing major changes, such as population decline, low birthrates and an aging society, development of high-standard road networks, and increasing urban development centered on roads. We believe that there are lines where certain key features of railways are not being fully utilized, in terms of mass transportation, and that the advantages that railways offer in terms of CO<sub>2</sub> emissions are not being demonstrated.

In light of this, and in order to foster more concrete discussion with local residents, in April 2022 we began releasing information on the business status of lines with a transport density of less than

2,000 people, and we are currently pursuing dialogue about this. As further population decline and other environmental changes are expected to continue in the future, we believe that, in order to achieve sustainable local communities, it is necessary to work with local residents to create an optimal regional transportation system that is easier to use than the current system, taking into account the differences in the characteristics of each line and the travel needs of each area, and that is tailored to the development of local communities.

Additionally, we are developing solutions related to various means of transportation. We wish to work together with local residents to utilize the power of innovation in exploring and realizing sustainable regional transportation systems.

Example 1: Johana Line and Himi Line

For the Johana Line and Himi Line in Toyama Prefecture, together with the prefecture and cities along the line, we have compiled a railway business restructuring plan in order to realize sustainable public transportation that will contribute to future urban development. This plan was approved by the Minister of Land, Infrastructure, Transport and Tourism in February 2024.

The design of the new rolling stock was decided in May 2025, and IC cards are being introduced in fiscal 2026.



(Image taken from 4th Johana Line and Himi Line Restructuring Meeting materials)

Example 2: Geibi Line

The first meeting of the restructuring council for the Geibi Line, which runs from Okayama to Hiroshima prefectures (between Bitchu-Kojiro and Bingo-Shobara), was held in March 2024. Discussions are underway with local parties, including the Chugoku Transport and Tourism Bureau and relevant local governments, to realize a sustainable transportation system free from any specific preconditions. From fiscal 2026, demonstration experiments, such as for increasing train service, are being carried out.



Digital technology-driven, seamless transportation systems

To revitalize local areas and promote sustainable urban development through transportation networks, including railways, we are working with local governments to provide reservation-based, shared transportation (demand-responsive transportation) services using AI technology.

As one example, we have signed a comprehensive partnership agreement with Tsuyama City and have begun operating the Noru Ico Tsuyama bus.



**Practical application of self-driven caravan BRT (bus rapid transit)**

We are entering an era in which society is undergoing major changes, and it may no longer be possible for railways alone to provide the services that customers expect. In this context, the JR-West Group aims to be a corporate group that provides a range of customer mobility-related services, with railways at its core. We are working on the technological development and practical application of next-generation mobility services, such as self-driven caravan BRT, in order to realize sustainable local transportation in conjunction with urban development.

Since 2021, we have been developing the technology at a dedicated test course in Yasu City, Shiga Prefecture. As the next step towards practical application, we began collaborating with

Higashihiroshima City, which is considering introducing BRT, in fiscal 2023 and conducted demonstration testing on public roads there in 2023 and 2024. This testing was the first of its kind in Japan in two areas: self-driving of articulated buses on public roads and caravaning of driverless buses on public roads. We also held test-ride events for the public in conjunction with the testing, attracting a lot of attention. Through the technological development and practical application of self-driven caravan BRT, we will provide sustainable transportation options to local communities, as well as contribute to addressing social issues and regional urban development in a way that meets local needs.



Experimental autonomous vehicles driving in formation on public roads in Higashihiroshima (front: articulated bus, rear: large bus)



Future vision of self-driven buses being considered in Higashihiroshima (with dedicated lanes for these vehicles to drive on)

**Operational reform and next-generation railway maintenance**

**Operational reform**

The situation surrounding railways is undergoing dramatic changes, including a decline in the workforce due to a shrinking population and the recent increase in the scale and frequency of natural disasters. To ensure safe and sustained railway operations into the future, we need to reassess existing infrastructure management practices and business methods. Regarding daily railway infrastructure management operations, we will review them to adopt data-driven management methods optimized for the entire railway, and at the same time, we will look at ways to standardize and streamline our operations. By improving operational efficiency, we will be able to focus more on the challenges that will shape the

future of railways, while also increasing the speed and accuracy of corporate decision-making, leading to the efficient use of company resources.

The expected benefits of this effort include improved collaboration with equipment management partner companies by reviewing daily railway infrastructure management operations, and maintaining and stabilizing the supply chain into the future. Furthermore, the efficient and speedy allocation of resources to areas that create customer value will lead to improved customer satisfaction.

**Changing the railway maintenance system**

The environment surrounding the railway industry is undergoing major changes due to a combination of factors, including the difficulty of securing maintenance personnel due to population decline, the increasing severity of natural disasters, and the aging of railway infrastructure. Under these circumstances, shifting to a maintenance system that pursues the possibilities offered by new technology is necessary to ensure safe and sustained railway operations into the future.

To address these challenges, the JR-West Group is implementing data-driven condition-based maintenance (CBM), strengthening track infrastructure and shifting to a maintenance approach that concentrates work into daytime hours, and strengthening the supply chain through the standardization of parts.

The concept of CBM is to do maintenance at the optimal timing, as determined by infrastructure conditions. Unlike conventional time-based maintenance (TBM), it is expected to ensure flexible, conditions-appropriate maintenance. With technological advances in things like sensors, communications, and the cloud, it is becoming increasingly feasible to ascertain infrastructure conditions in real time and detect early signs of failure.

The aim of introducing CBM is to establish a system that centrally manages infrastructure across the entire railway system, rather than just on an individual piece of equipment basis. The goal is to combine manual inspections and sensor-based monitoring to comprehensively analyze things like environmental conditions, usage history, and inspection results, and to quickly evaluate the

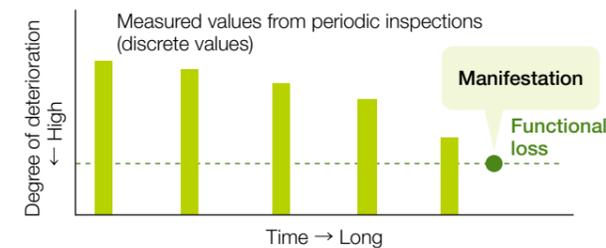
failure risk of each piece of equipment and do maintenance. Given the diverse characteristics of equipment and facilities used in railway operations, we need to optimize the maintenance systems used for different facilities and pieces of equipment. We are examining the possibility of switching from TBM-based inspection to CBM-based inspection.

To improve productivity, we are strengthening track infrastructure and shifting to a maintenance approach that concentrates work into daytime hours. Nighttime maintenance work has significant constraints, posing challenges in terms of securing manpower and ensuring productivity. Therefore, we are increasing the durability of track facilities to reduce inspection frequency and are transitioning to daytime work by utilizing ICT and mechanized construction. This is expected to improve the work environment and quality of maintenance.

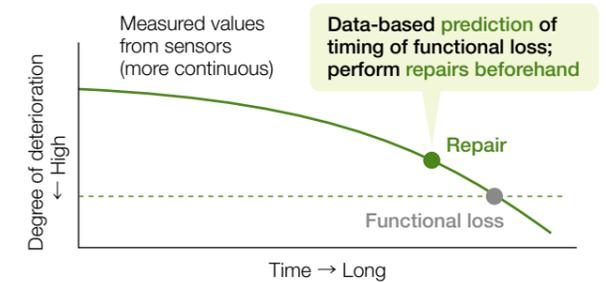
With the aim of strengthening the supply chain, we are collaborating with other railway operators to consider ways to standardize railway parts. Standardizing parts will consolidate demand for the same products, which is expected to improve manufacturer productivity and maintenance quality, leading to the creation of a stable supply system.

What these initiatives have in common is a focus on leveraging data and technology to optimize maintenance activities across the entire railway system. The JR-West Group will continue to incorporate technological innovations and will strive to improve safety, productivity, and other aspects of our operations as we pursue the realization of sustainable railway infrastructure.

**Conventional approach**



**CBM**



## Uncovering further regional charm

### Forest Festival of the Arts Okayama: Clear-Skies Country

Forest Festival of the Arts Okayama: Clear-Skies Country was held for the first time in autumn 2024 in northern Okayama Prefecture, attracting around 520,000 visitors.

Northern Okayama Prefecture is an area of beautiful scenery, culture, and attractive regional resources, including the magnificent nature of the Chugoku Mountains, historical towns that flourished as castle towns and post-station towns along old highways, traditional performing arts, and a wide variety of agricultural products. We have used art as a new perspective through which to showcase the charms of the region and provide an extraordinary experience. Through initiatives like holding related events in collaboration with local residents and promoting local products, the festival helped drive regional revitalization by promoting multi-destination tourism centered on the festival, thereby increasing the number of visitors, fostering greater civic pride, and producing a

positive economic effect of 3.8 billion yen. (Source: Forest Festival of the Arts Okayama: Clear-Skies Country results report)

We also worked to attract more visitors by promoting the appeal of the northern part of the prefecture, increasing the number of sightseeing train services, and improving secondary access. We further enhanced the appeal of the region by developing bento boxed meals and local products using local ingredients.

The second festival is scheduled for 2027, and we will continue to work with the prefecture and local residents to further expand tourism spending in the region and increase the number of visitors from both Japan and overseas. We are confident that, through interactions with artists and tourists, local residents will be able to rediscover the potential appeal of their hometowns and feel even greater pride in their communities.

- Area: 12 municipalities in northern Okayama Prefecture (the cities of Tsuyama, Takahashi, Niimi, Maniwa, and Mimasaka; the towns of Kagamino, Shoo, Nagi, Kumenan, and Misaki; and the villages of Shinjo and Nishiwakura)
- Organizer: Forest Festival of the Arts Okayama Executive Committee (Chair: Governor of Okayama Prefecture)
- Long-term installations: To continue attracting visitors, artworks are being exhibited in one location in each of five cities and towns (the cities of Tsuyama, Niimi, and Maniwa; the towns of Kagamino and Nagi) after the event has ended.



Opening ceremony



Giacomo Zaganelli, "Tsuayama Ping Pong Platz," 2024 long-term installation (Tsuyama)



Chien-Chung Liao, "Echoes in the Mountains," 2024 long-term installation (Kagamino)

### Identifying and selling local products

Aiming to contribute to revitalization by unearthing the charms of the region, we focus on local products in western Japan and provide support for identifying and promoting these products.

Specifically, we work to identify and develop local products through joint projects with local businesses and are expanding sales channels through the Discover West Mall online shop.

### Product development through efforts to identify and cultivate local products

We launched the Furusato-okoshi Project in the Okayama/Bingo area and the Temite Project in the Hiroshima/Yamaguchi area to help us identify and develop local products. Our original brand of products, JR Premium Select Setouchi, was developed in collaboration with businesses in the Setouchi area. It's being sold in stores inside train stations and has been well received.

### Expanding sales channels through online shopping

We operate the Discover West Mall and sell food and crafts that reflect the care and dedication of makers across western Japan. We are working to help more people learn about each region and inspire them to visit. In addition to showcasing the products themselves, we share the stories behind them—such as the producers' commitment and the unique characteristics of each area—through product pages and special feature articles.



Discover West Mall



Temite Project



Okayama Nori-ten (JR Premium Select Setouchi)

### Creating local businesses in collaboration with partners

We aim to identify regional charm through collaboration with local residents and to create businesses that utilize the JR-West Group's know-how and assets to provide integrated value, from disseminating information to customers to providing transportation and payment services. By collaborating to ensure that local

resources, such as the culture, history, and customs cherished by local residents, are passed on and their value is enhanced, we will increase the number of people who have an interest in and connection with the region and will carry out initiatives that will increase the appeal of living in the region.

### Collaborating with businesses

We collaborate with businesses with specialized know-how to identify the charms that local regions have cultivated and to create value for our customers.

For example, we collaborate with Note Inc., which uses historical assets such as old traditional houses to carry local culture and ways of life into the future, and with Newlocal Inc., which works with key community members to create places (accommodation facilities and shops) where local residents can connect with visitors from outside the area. Together, we work in areas such as human resources, funding, and information to support the launch and operation of locally initiated projects.



Nipponia accommodation facility developed by Note



Accommodation that serves as a base for travel and interaction

### Collaborating with local governments

Against a backdrop of a growing interest in living in nonurban areas and the increasing adoption of remote work, we are running Otameshi-gurashi, a business that offers short-term trial relocation packages.

Municipalities along the railway lines provide information on trial properties and rent subsidies, and we support them with information dissemination and commuting expenses. Through collaboration with these municipalities, this project proposes attractive lifestyles rooted in local communities and aims to increase non-resident and permanent resident populations.



Three municipalities currently offering Otameshi-gurashi opportunities

### New possibilities for railways

#### Nimo-shu! freight business using passenger trains



#### Addressing local and social issues

By capitalizing on the advantages railways offer, such as punctuality, speed, and a wide-area network, we are expanding our freight services to encompass Shinkansen and other trains. We aim to create value together with various regions and companies and contribute to regional revitalization through the utilization of our strengths in same-day, express, high-frequency, low-vibration, and temperature-controlled transport. We are also helping to address logistical challenges, decarbonization, and other social issues.

Nimo-Shu! is the name of our freight business that utilizes Shinkansen and other trains. We take advantage of the strengths of railways as we engage in the transportation of cargo that requires

prompt and delicate handling, such as fresh food, newspapers, and medical specimens. In July 2025, we launched Nimo-Shu! Quick, an emergency freight service that allows same-day acceptance and delivery in response to the needs of shippers who want their goods to reach their destinations as soon as possible.

#### Future development

We will further strengthen collaboration with other JR companies to build a wide-area freight network. This will improve convenience for shippers and create new demand, while also aiming to address local and social issues and further expand our freight business.



**Comprehensive infrastructure management business—  
Towards a society of lasting prosperity**



**Future vision of JCLaaS**

Infrastructure like roads, water supply and sewerage systems, parks, and public facilities are facing such issues as aging and a lack of personnel and finances. JCLaaS aims to address these issues by realizing efficiency through wide-area, multi-sector collaboration and long-term infrastructure management. We will contribute to sustainable urban development by leveraging the comprehensive strengths of the JR-West Group and the alliances with partner companies.



**The thinking behind JCLaaS**

- J** The letter J incorporates the meaning of “Japan,” in the sense of serving as a vehicle for nationwide initiatives, and “join,” signifying the participation of government, the private sector, and residents.
- CL** The letters CL are taken from the first letters of “community life” and reflect our desire to help realize sustainable local lifestyles. The letter C also signifies the words “continuous,” in the sense of ongoing support for life that transcends generations, and “circular,” in the sense of a virtuous cycle in order to realize a sustainable society.
- aaS** The letters aaS stand for “as a service” and signify a transformation in our approach to infrastructure, moving from a focus on physical property to its ongoing provision as a service.

JCLaaS website



<https://jclaaS.jp>

**Creating new value through JCLaaS**

I have been working on this initiative since June 2024, launching new projects and developing business in collaboration with local governments and partners. Having been involved in the railway business since joining JR-West, I have found it difficult to work in unfamiliar territory, but I find great satisfaction in working—through trial and error—to address infrastructure-related issues. I will continue tackling the challenge of creating new value in order to realize a society of lasting prosperity.



JCLaaS Business Division, Business Design Division  
**Takayuki Shintani**

**Leveraging railway asset management**

Infrastructure is aging throughout society, and the effects are becoming apparent in both rural and urban areas. In response to this challenge, I feel there is great significance to be found in utilizing the know-how we have cultivated in railway operations to undertake comprehensive infrastructure management as a company that coexists with local communities. I will leverage the experience and technology I have cultivated in railway civil engineering to take on the challenge of realizing a safe and sustainable society.



JCLaaS Business Division, Business Design Division  
**Takaki Sakata**

**News 1**

**Communicating with society**

At the Innovation & Challenge Day held in December 2024, we held a panel discussion with experts on the theme of creating sustainable local communities through public-private collaboration.

Speakers (posts, etc. as of December 2024)

Mr. Naoki Nakamura: Acting water supply and sewerage manager, director of Water Supply and Sewerage Department, Fukuchiyama City (center right)

Ms. Yoshimi Adachi: Professor, Faculty of Economics, Konan University (center left)

Mr. Akimasa Matsuo: Representative director of Water Service Kihoku, general manager of West Japan Department, Partnership Division, Metawater Co., Ltd. (at right)

Mr. Ushio Kurahara: General manager of Business Design Division, Digital Solutions Headquarters, and senior managing executive officer, JR-West (at left)



**News 2**

**Example: Secondary comprehensive private-sector outsourcing of water service from the city of Fukuchiyama**

We began participating in the secondary comprehensive private-sector outsourcing of water service from the city of Fukuchiyama in Kyoto Prefecture for five years starting in April 2024. We're operating an outsourcing business as a member of the special-purpose company Water Service Kihoku.

**Water Service Kihoku**

Established: September 15, 2023

Shareholders: Metawater Co., Ltd., Fukuchiyama Pipework Cooperative Association, West Japan Railway Company, others

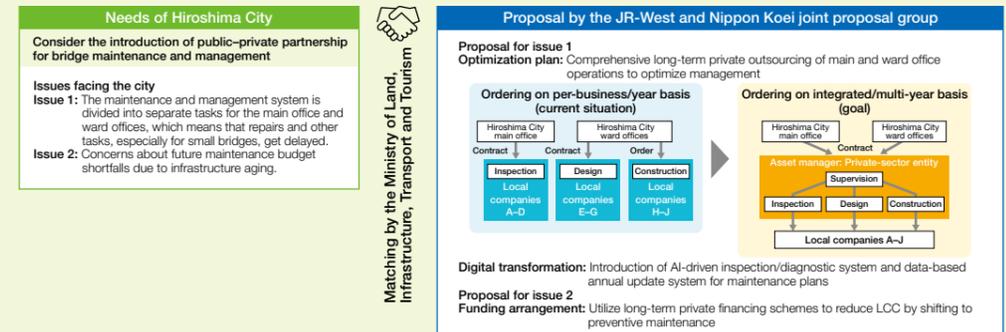
Partner companies: Daitetsu Kogyo Co., Ltd. (a JR-West Group company), member companies of the Fukuchiyama Pipework Cooperative Association



**News 3**

**Selected for the FY2025 private sector proposal-based public-private partnership modeling program**

A joint proposal group consisting of JR-West and Nippon Koei Co., Ltd. was selected for the FY2025 private sector proposal-based public-private partnership modeling program commissioned by the Ministry of Land, Infrastructure, Transport and Tourism, and it has begun operations. Hiroshima City faces challenges with regard to bridge maintenance and management and is considering introducing this public-private approach. Through an analysis of the challenges and effects of introduction, we aim to pursue demonstration testing and commercialization in the future.



**News 4**

**Comprehensive private-sector outsourcing of waterworks and sewerage from the city of Jojo**

As a member of the Water Partner Jojo Joint Venture, we will be contracted to carry out the comprehensive management of waterworks and sewerage in Jojo City, Kyoto Prefecture, for a 10-year period starting in April 2026.

**Water Partner Jojo Joint Venture**

Representative: Veolia Jenets K.K.

Members: Fuji Subsurface Information Ltd., Japan Maintenance Engineering Co., Ltd., West Japan Railway Company, Asia Air Survey Co., Ltd.

