

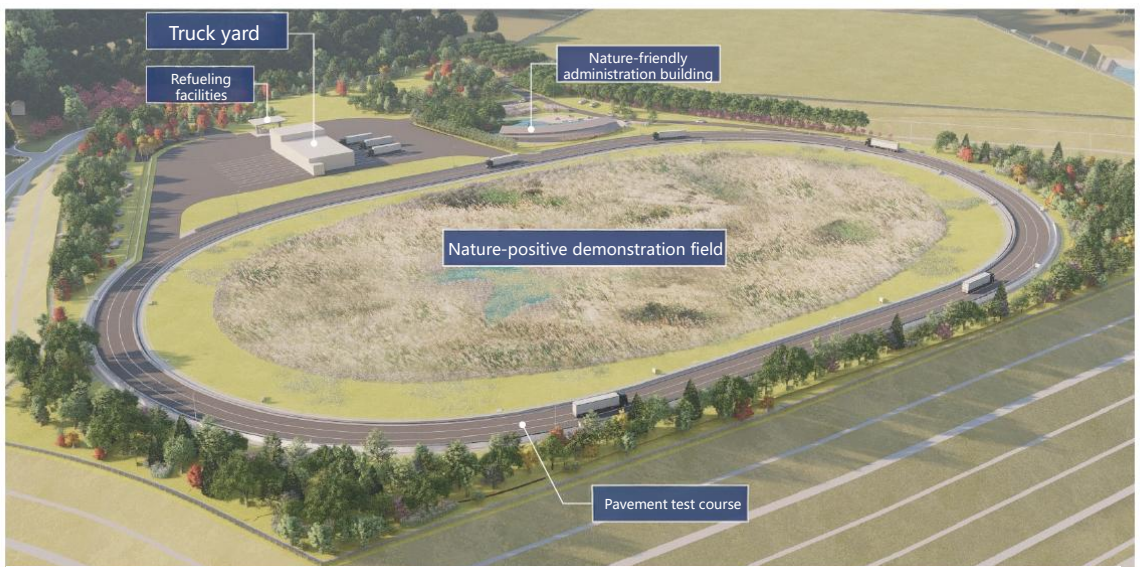
TAISEI Group Future Technology Field / TAMURA Pavement Test Course

Future Technology Field du groupe TAISEI /
Piste d'essais accélérés
de chaussées de TAMURA



Taisei Group Next-Generation Technology Demonstration Center in TAMURA

At this large-scale pavement test course, the first of its kind in Japan as a facility constructed by a private company, five unattended self-driving heavy load vehicles run the course year-round, significantly shortening the evaluation period for heavy-traffic road durability. By reducing the time required for the social implementation of new technologies, this facility contributes to the early adoption of newly developed technologies.

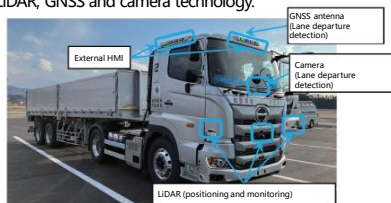


Pavement test course

- ▶ The number of wheel passes causing fatigue failure (35,000,000 wheel passes), an indicator necessary as part of the technical standards for pavement structure, can be evaluated in about three years* for pavements subject to the heaviest traffic.
 - Pavement durability evaluation for early adoption of newly developed technologies
 - Clarification of the definition of pavement failure
 - Validation of theoretical design methods
 - Applicability experiments for inspection and maintenance techniques

Automatic driving system

- ▶ Five large self-driving vehicles, each with a weight of 44 tons, run the test course around-the-clock at 40 km/h.
- ▶ Maintaining inter-vehicle distance through accurate positioning and automatic stopping upon obstacle detection is made possible by utilizing LiDAR, GNSS and camera technology.



Nature-friendly administration building

- ▶ Demonstration to create a zero-water building that does not depend on municipal water infrastructure
- ▶ Adoption of large-span structures using commercially available materials

Truck yard and refueling facilities

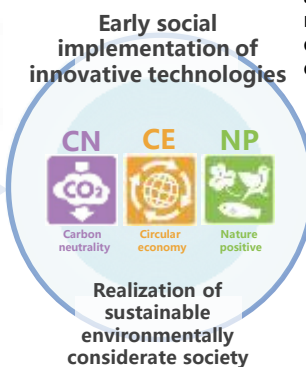
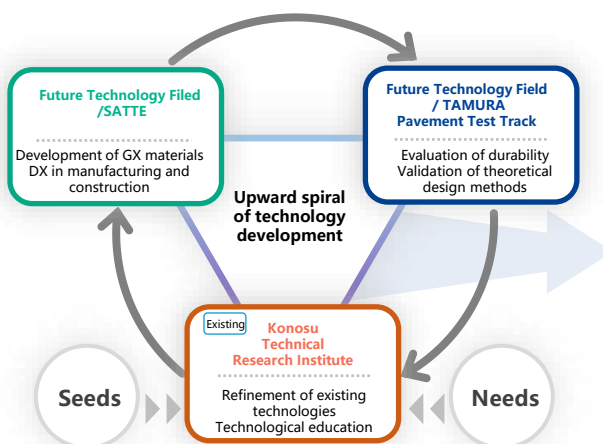
- Garages for five self-driving load vehicles
- Load vehicle maintenance dock
- Private refueling facilities



Nature-positive demonstration field

- ▶ Establishment of technology to create rare semi-natural grassland and wetland ecosystems
- ▶ Implementation of biodiversity credit
- ▶ Development of new technology to utilize thatch

Collaboration of research facilities



The three research institutes collaborate by dividing research activities into fundamental research, manufacturing and construction experiments, and durability and other performance evaluation.

The goal is to establish three types of society (**carbon-neutral society, recycling-oriented society, and nature-friendly society**), which are the long-term environmental goals of Taisei Group, by **adopting innovative technologies early** through efficient technology development.

