

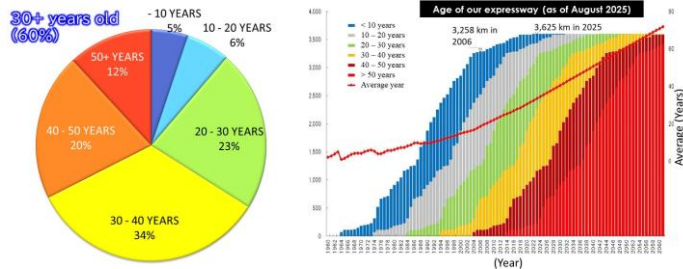
# NEXCO-West's Maintenance Initiative

## NEXCO-West et ses initiatives de maintenance



### Our Bridge Situation

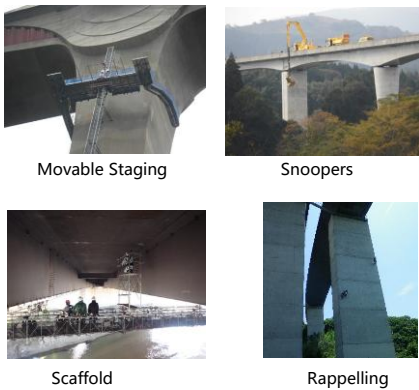
- Maintaining approx. **9,000 bridges**
- About **60%**: more than **30 years old**



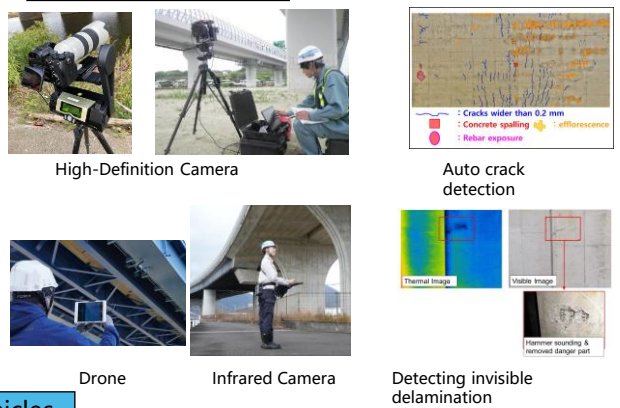
### Inspection Technologies

- The Road Act mandates **detailed close-up inspections every 5 years** from 2014.
- The new regulations caused a significant **increase in inspection costs** (more than double).
- Inspections for hard-to-access locations and improving the efficiency became an urgent issue.
- NEXCO-West began to actively implement **new technologies for efficient & effective inspections**.

#### Traditional Method

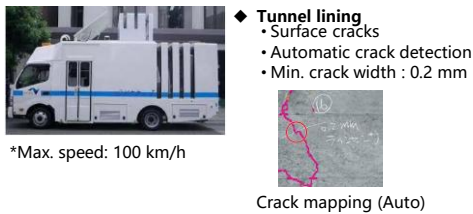


#### New Technologies

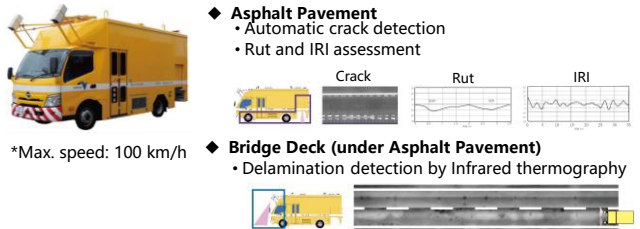


### Inspection Vehicles

#### Tunnel Inspection Vehicle (eQ-doctor T)

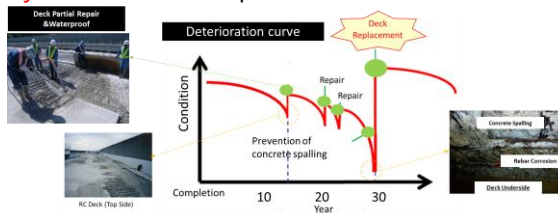


#### Road Surface Inspection Vehicle(Kei-Doc2.0)



### Renewal Project

- ❑ Our bridges have **not been restored to a satisfactory condition** even after repeated repairs.
- ❑ For such bridges, **renewal projects**, such as deck replacements, were initiated in 2015.



### Renewal with Minimal Social Impact

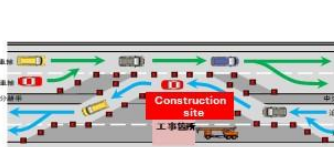
- ❑ To reduce construction time onsite, Precast Concrete Decks are being used instead of cast-in-place.
- ❑ 4-lane roads are consolidated to 2-lanes on each side of the expressway with a two-way traffic operation in lower traffic areas.
- ❑ In the secured work zone, the existing deck is removed and replaced with the precast decks.
- ❑ Single-operation erection of superstructures was performed in higher traffic volume areas.



Replacement of precast concrete decks



Nishi-Shimono viaduct in Chugoku Expressway



Example of Traffic Regulations



Single-operation erection of superstructures (Chugoku Expressway Renewal)

