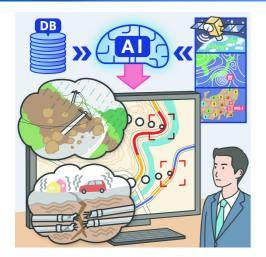
# Damage prediction technologies for social infrastructures

# IOWN Evolution Smart Infrastructure



## Background

Social infrastructure needs to maintain its function even in the event of a Nankai Trough earthquake or a severe downpour disaster. Since they have been constructed a lot, it is difficult to take measures for all of them. Therefore, it is necessary to predict the damage accurately.

#### | Summary

We build AI that learns the patterns of facilities that will be affected in the disaster from NTT's vast amount of data on telecommunications facilities to predict the damage. This will be corrected and applied to various social infrastructures with the aim of predicting damage to all facilities.

#### **Open data**

**Topography** Seismic intensity

#### Past damages

Earthquake

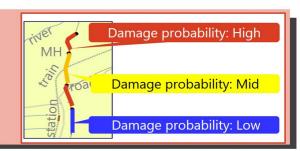
**Torrential** rain



Machine

#### Seismic disaster prediction technology for underground conduits

- Predicting the damage probability to individual pipelines using thousands
- · Using for reinforcement or inspection planning nationwide.



## Machine learning

**Utility pole damage prediction** technology for sediment disasters

- Predicting the damage probability to individual utility pole using thousands
- Use for route, preparation or inspection after torrential rain

# Damage probability: High Damage probability: Mid Damage probability: Low

# Topography

**Open data** 

Precipitation

#### **Features**

- Learning patterns of susceptibility to disasters from data on damage to communications facilities in various disasters
- Predicting vulnerable facilities from publicly available data developed nationwide without special field surveys
- Based on the characteristics of each social infrastructure, development of disaster prediction technology for communication facilities to predict other infrastructure facilities

#### Future benefits

We will realize a safe and secure society by predicting the impact of disasters on all types of social infrastructure and by taking priority measures against infrastructure.

# Exhibiting Company

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# Contact

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