

Disaster Prevention DX

Disaster prevention DX accelerates climate adaptation financing



Enhancing societal resilience against disasters through AI- and ICT-driven solutions

Issue

- The scale and frequency of human casualties and economic losses due to climate-change-related disasters are on the rise.
- Significant environmental challenges, such as managing vast quantities of waste and rebuilding efforts, arise during the recovery phase.
- The required preparation for escalating disasters is unclear.

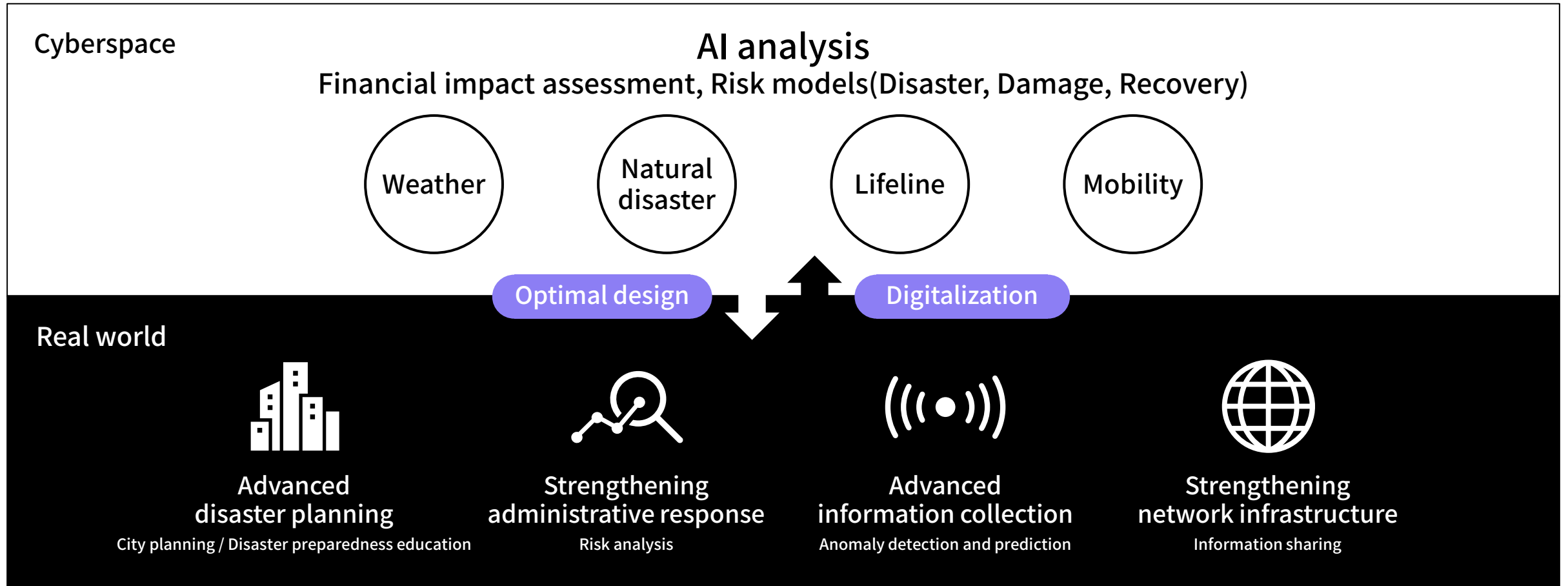
Solution

Designing
disaster-resilient cities

Visualize
and optimally control
urban anomalies

Calculate the value
of disaster mitigation

We aim to use real-world data to refine simulations for advanced planning and response strategies



Normal times

Emergency

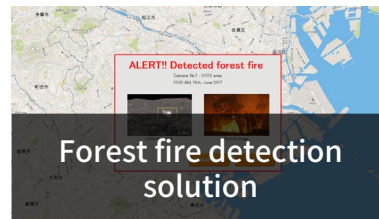
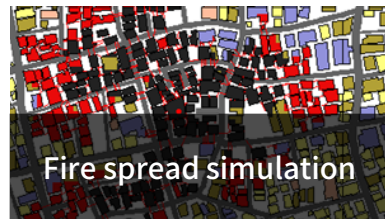
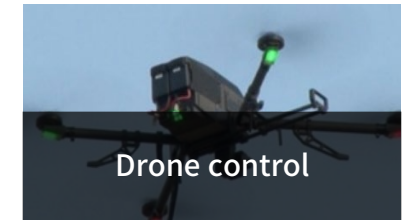
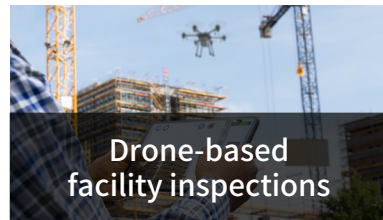
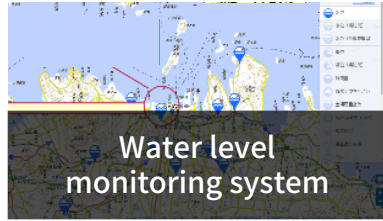
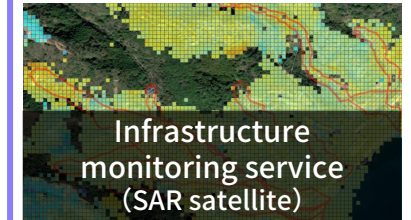
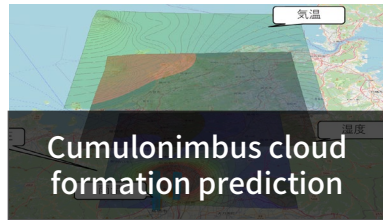
Disaster

Response / Recovery

City planning / Disaster preparedness education
Risk analysis

Anomaly detection and prediction

Information sharing



Enhancing Flood simulation riven solutions

Realistic 3D flood simulations enable advanced administrative disaster prevention planning and prompt residents to evacuate effectively during emergencies.

Utilizing 3D urban models, IoT sensors, and data on land, buildings, human movement, and traffic, this system conducts simulation predictions for floods and environmental factors. It allows for an intuitive, bird's-eye view of the entire city by overlaying past, present, and future urban structures on a 3D map.

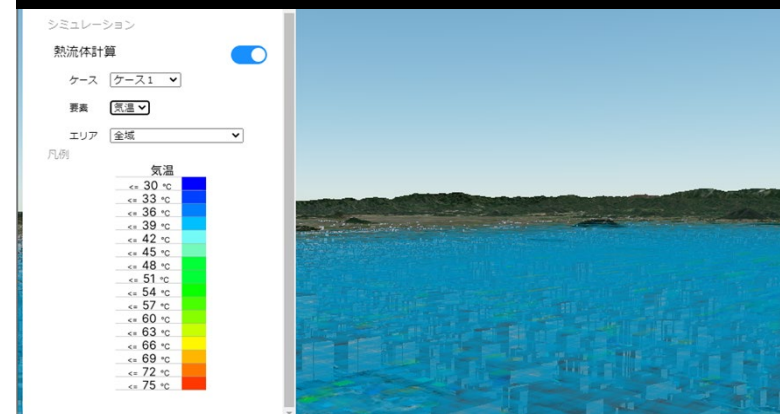
City policy evaluation simulation:
For planning and
assessing site suitability



Real hazard map:
Evaluate flood risk due to heavy rain

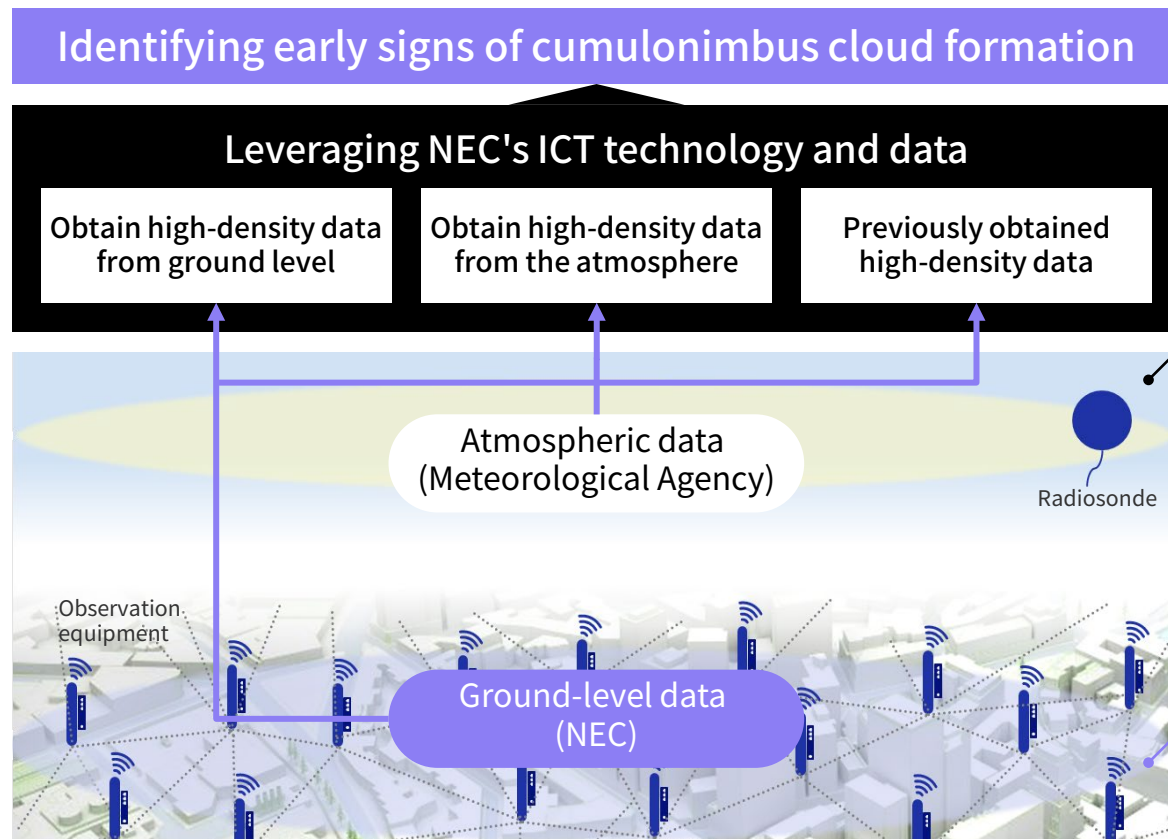


Urban heat island map:
Assess heat impact on
residential areas



Cumulonimbus cloud formation prediction solution

Using AI and supercomputers to analyze weather data gathered from multiple locations, this system can predict the development of cumulonimbus clouds up to 6 hours in advance.



Calculations using high-density atmospheric data (Meteorological Agency)



Atmospheric data monitoring

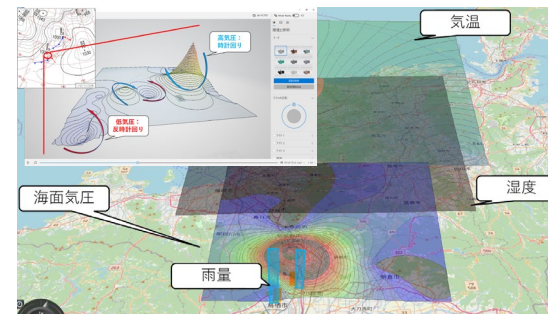
Obtains weather data from the atmosphere four times a day using radiosondes.



Calculations using high-density data

Obtains high-density atmospheric weather data, calculated every hour by a supercomputer.

Calculations using high-density ground-level data (NEC)



High-density data monitoring

Obtains weather data from high-density observation network.

AI-driven calculations

Offers an in-depth insight into target area using multi-location weather data.

My Timeline creation support and evacuation assistance solution

Tools are provided to visualize crucial disaster prevention information and streamline the creation of evacuation plans, enhancing residents' disaster awareness. In a disaster event, the system recommends the optimal pre-registered action plan customized for each disaster type.

Details of offerings

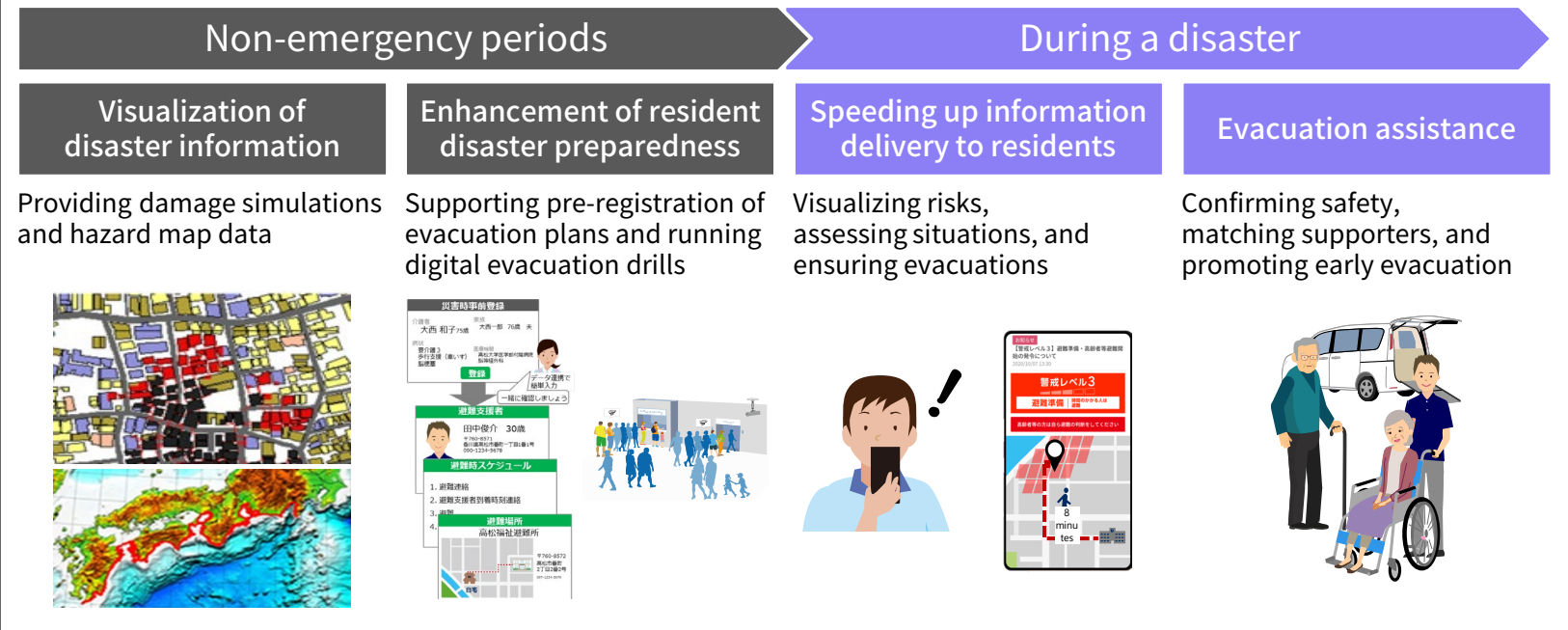
Digital tools to create
“My Timeline”

Evacuation plans based on
disaster simulations

Assisting cities and community
organizations in building support
systems for vulnerable individuals

"My Timeline" is a pre-planned sequence of actions for individuals to follow during various types of disasters, such as typhoons or heavy rains

Utilization flow



Advisory issuance decision support system

The system integrates vital information for decision-making related to evacuation advisories and additional notifications. It issues alerts when predefined thresholds are exceeded, thus assisting personnel in making critical judgments required for dissemination.

Advisory issuance decision support feature

Real-time Information

- Weather information alerts and warnings
- Damage information

Routine data collected in non-emergency periods

- Hazard maps
Landslide warning areas
- Evacuation centers
Individuals requiring assistance

Consolidate information



Mass dissemination

Advisory issuance decision support system

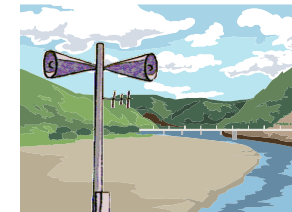
Simplified reporting

On-site situation awareness feature

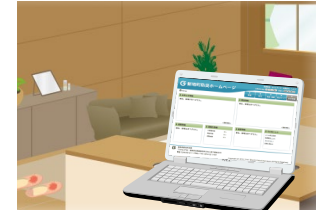


One-click status reporting

Information dissemination feature



Public address radio system



Websites



Emergency alert emails

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