

NEC's Comprehensive Disaster Management Solution and Lessons Learned from the Great East Japan Earthquake

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Flow of Disaster Management

- NEC Solution for Disaster Prevention
- ◇ Observation
 - ◇ Information gathering
 - ◇ Data analysis & Decision-making
 - ◇ Announcement

NEC is one of a very few companies which can supply and integrate a whole disaster prevention system and network from “Observation”, “Information gathering”, “Data analysis & Decision-making” to “Announcement”.

◆ Observation

- ✓ Ocean Bottom Observation Systems
- ✓ Earthquake Observation Systems
- ✓ Land (River, Coast, Dam) Observation Systems
- ✓ Land Observing Satellite Systems
- ✓ Global navigation satellite system (quasi-zenith satellites)

◆ Information gathering

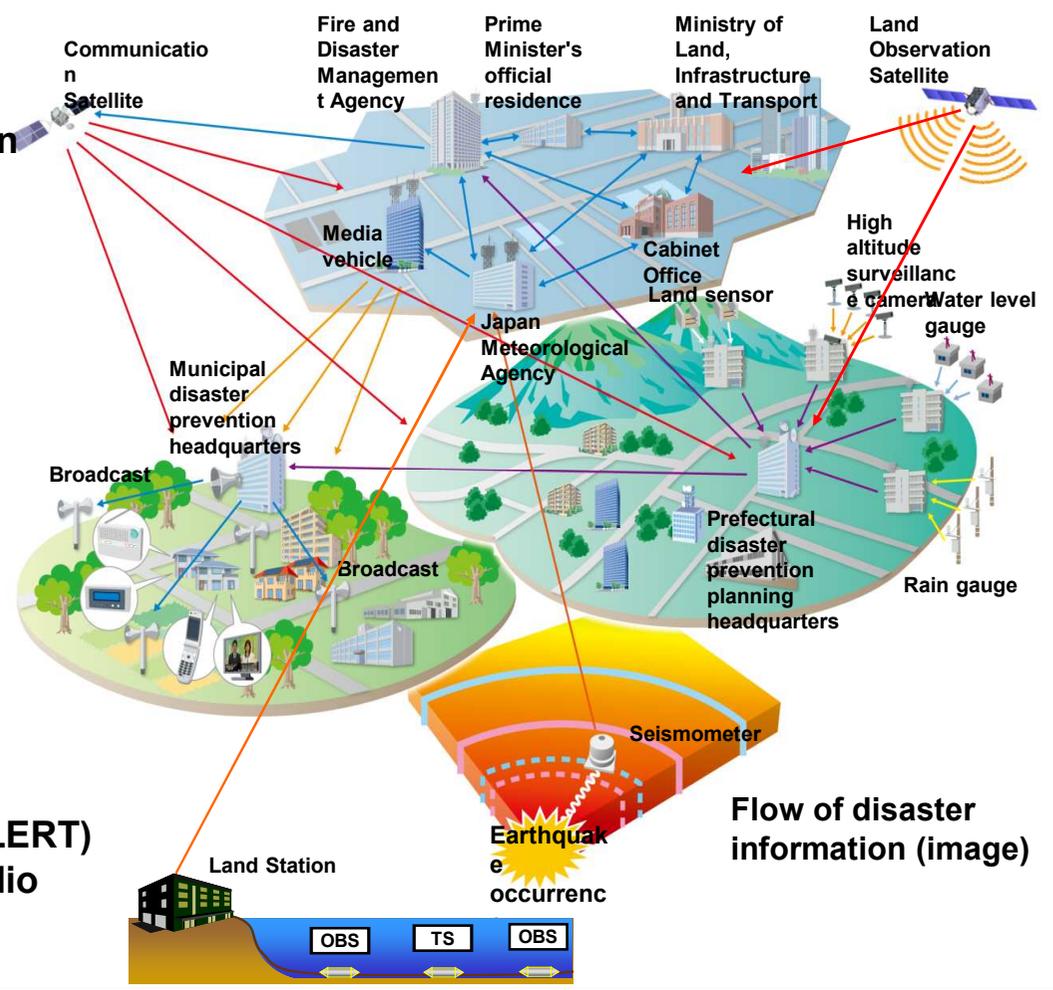
- ✓ Satellite communication system
- ✓ Terrestrial Radio system
- ✓ Optical transmission system

◆ Data analysis & Decision-making

- ✓ Earthquake Early Warning system
- ✓ Disaster Information System
- ✓ Disaster Emergency Response Center System

◆ Announcement

- ✓ National Early Warning System (J-ALERT)
- ✓ Municipality Disaster Prevention Radio System
- ✓ Cell Broadcast Service System

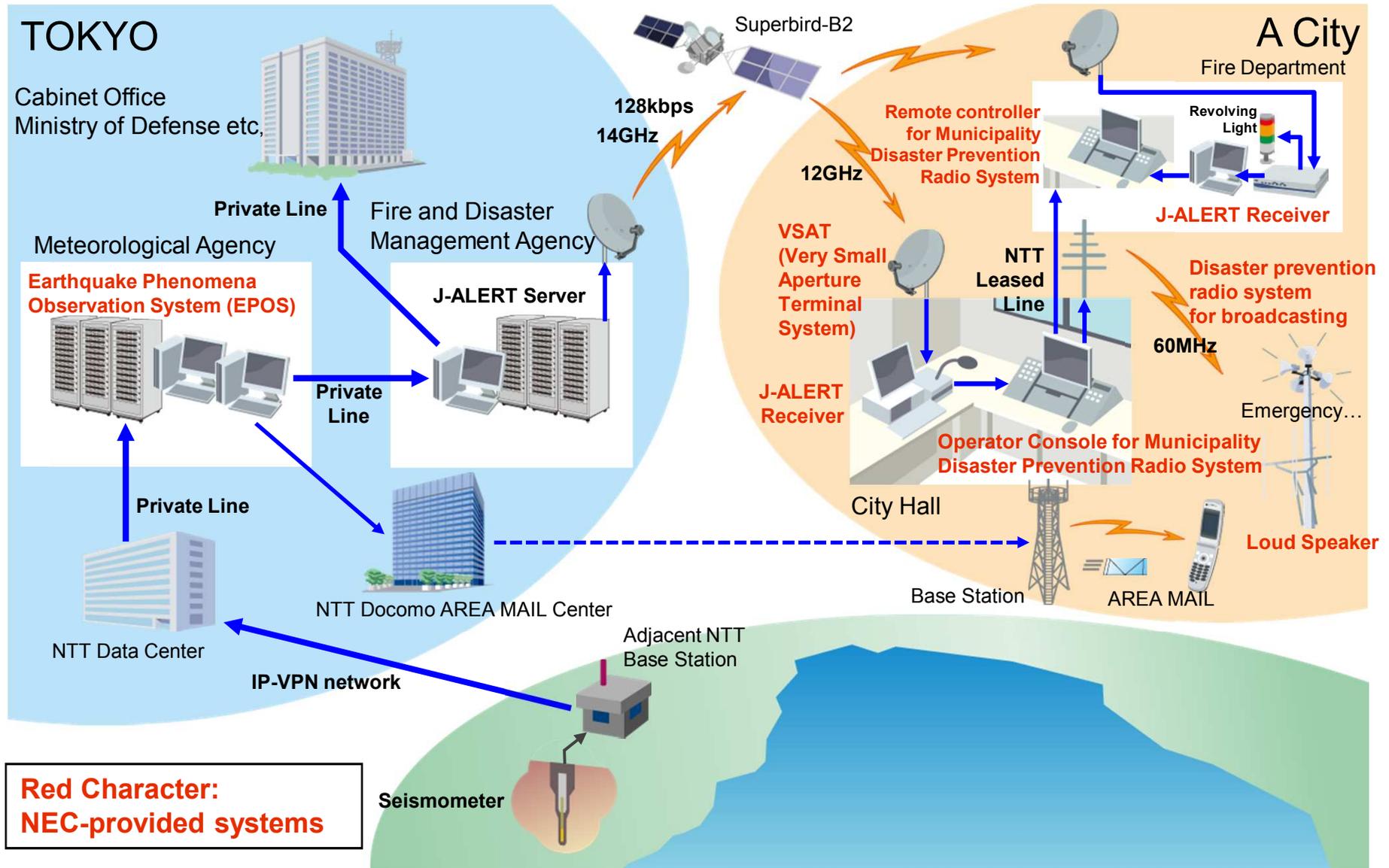


Video Presentation

NEC system under the Great East Japan Earthquake

System concept of Earthquake early warning system and Disaster prevention radio system

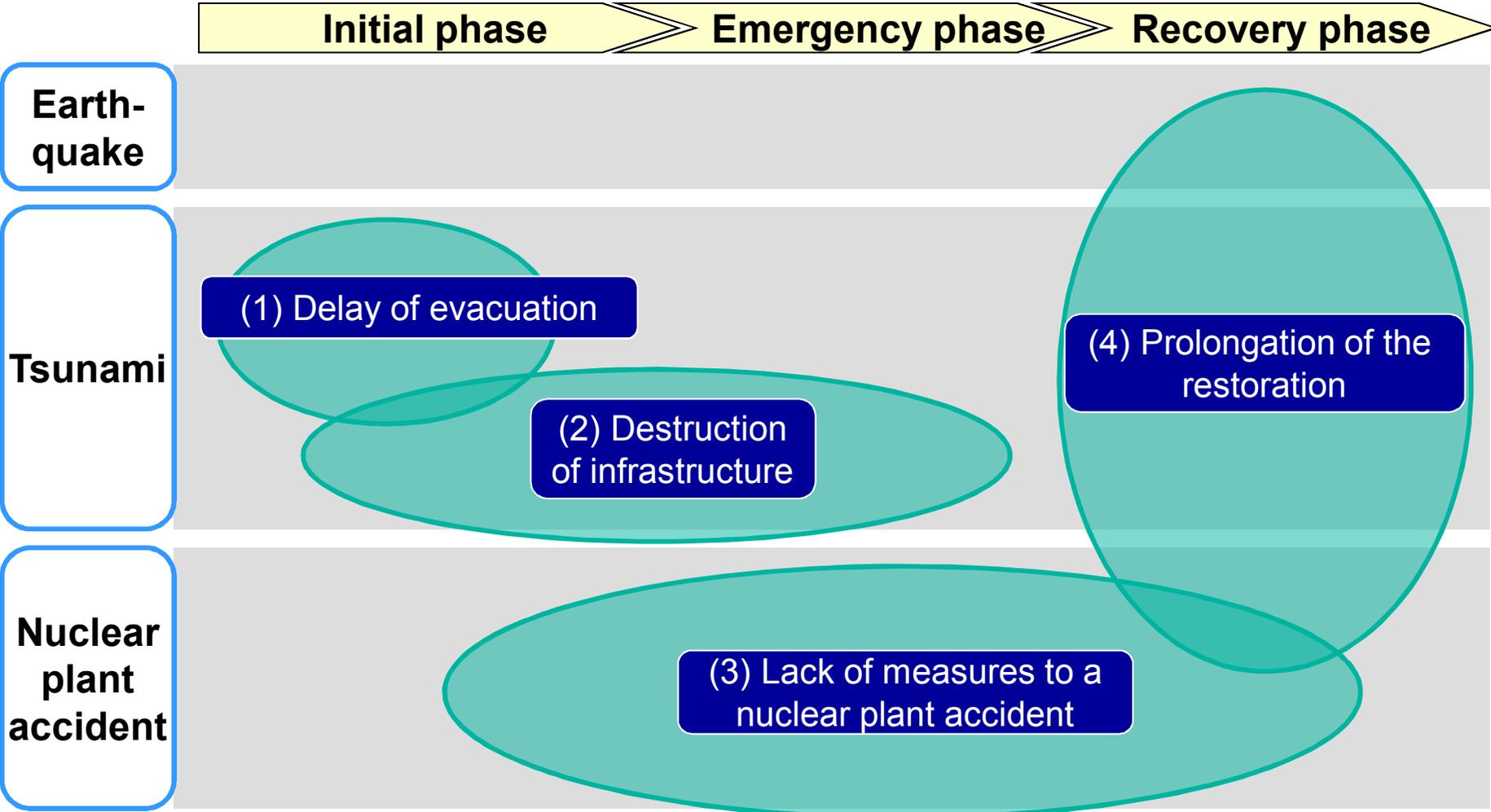
NEC system under the Great East Japan Earthquake



Lessons learned from the Great East Japan Earthquake

Feature of the Great East Japan Earthquake

Four features of the Great East Japan Earthquake are shown in a time scale.



Learning from the Great East Japan Earthquake

<Lessons for strong information communication in disasters>

- **Support for unexpected situation like infrastructural damages**
 - Communication functionality is maintained by rearranging routes flexibly
 - Securing data integrity

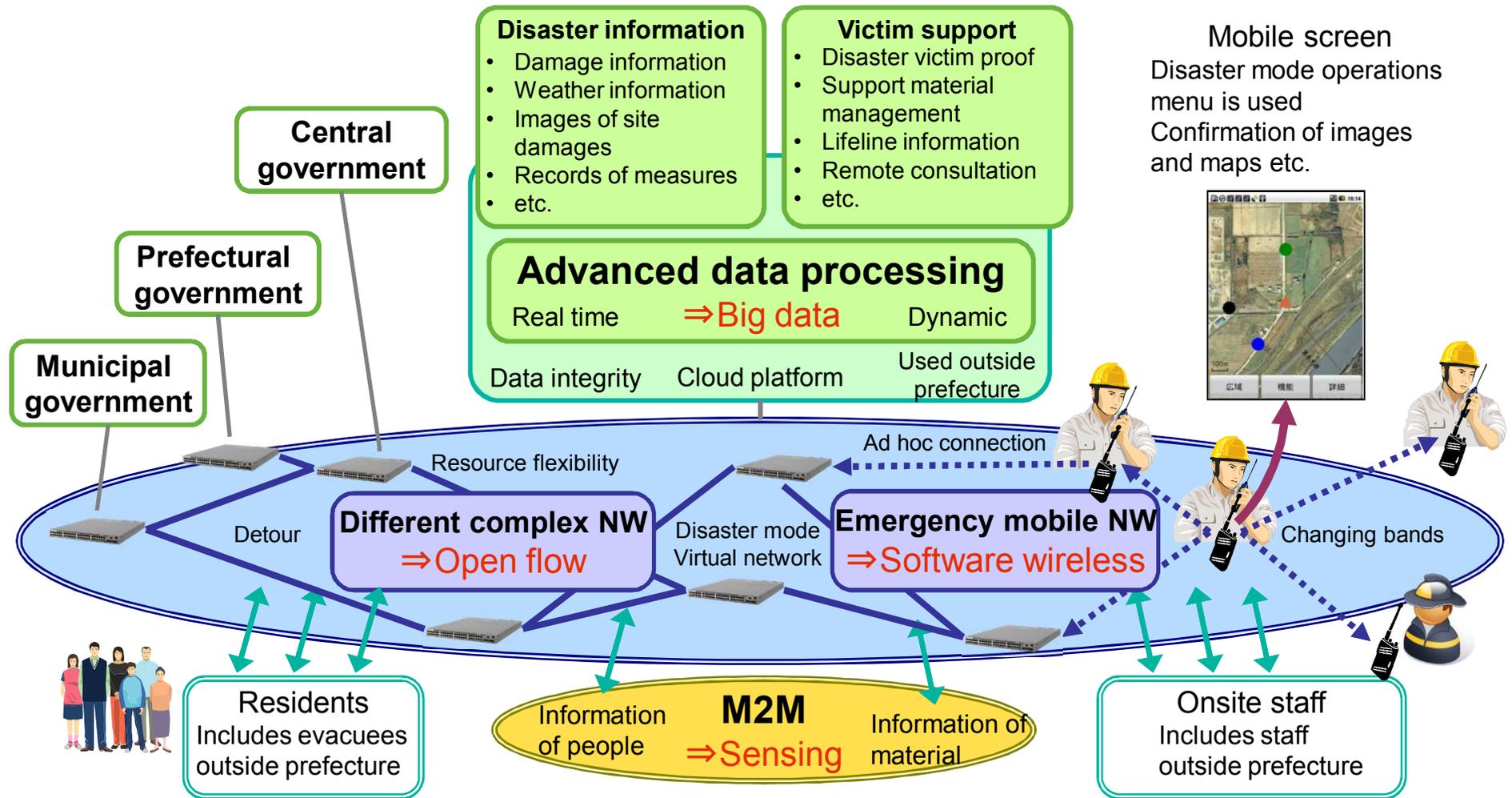
- **Support for wide areas beyond administrative districts**
 - Securing of agency services such as wide area assistance for distant staff members
 - Securing ways to communicate with wide area evacuees

- **Prompt and accurate understanding of whole situation**
 - Central consolidation of diversified data that lies scattered in every place and organization
 - Arranging events in chronological order and grasping the situation accurately based on data

- **Transmission of accurate information to disaster site**
 - Transmission of accurate information to the staff working on disaster site
 - Transmission of information to citizens for appropriate actions

Concept of New Disaster Information Communication System Model

"More Resilient, More Robust, More Reliable"



⇒ Problem: Requirement of cooperation between organizations

Empowered by Innovation

NEC