構造計画研究所
KOZO KEIKAKU ENGINEERING Inc.

Ensuring Safety and Security

Minimize damage caused by natural disasters

Hazard

Earthquake Tsunami Land Slide Cyclone Storm Surge Flood Volcano Heat Wave Cold Wave Avalanche

Solution Purpose

Prevention & Mitigation Recovery

Solution Theme

Research & Investigation Risk Assessment Disaster Prevention Plan Infrastructure Technology Building Technology Information & Communication Technology Evaluation

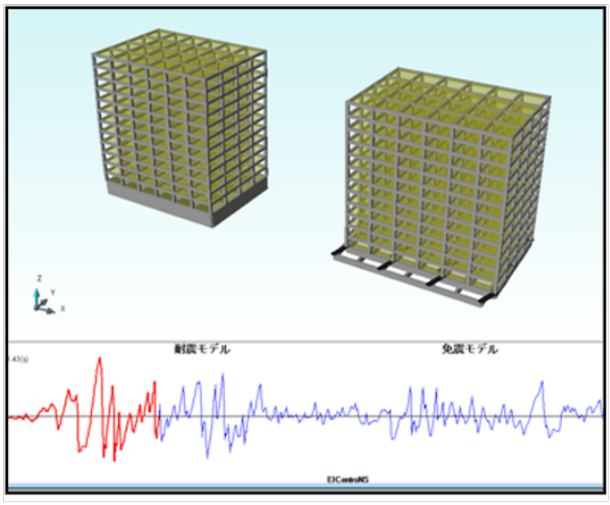
Technology Subject

Technical Research & Development Hazard Simulation Risk Monitoring Impact & Damage Simulation Mitigation Plan Business Continuity Plan River & Basin Dam & Reservoir Coast Sabo Road Railways Port Essential Utilities Urban Facility for Disaster Prevention Emergency Base & Back-up Facility Design & Construction of Resilient Building Resilience Improvement on Existing Building Mitigation Measures for Interior & Facility Information Gathering Information Analysis & Judgement Information Platform Post Disaster Evaluation

Advantages

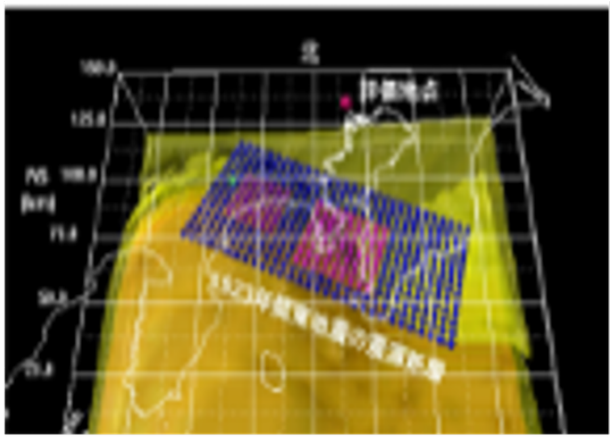
Buildings and infrastructure that can withstand disasters are critical to achieving safe and secure communities that will lead to a better future. By leveraging engineering technology for reinforcement, seismic isolation, vibration control, and various simulations as well as R&D support, we provide the right services for improving the value of municipal performances.

Solution Illustrated

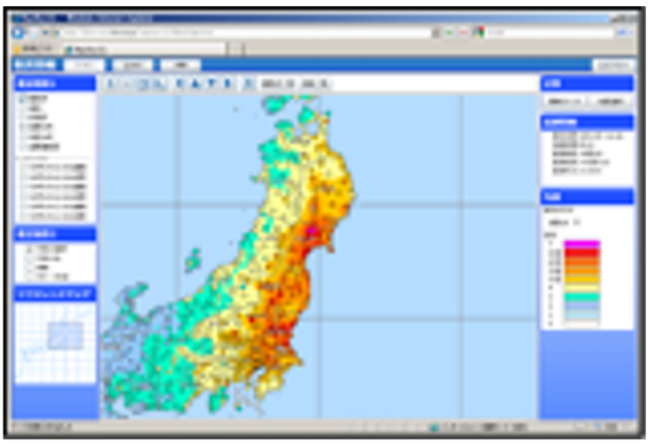


Response analysis of a building during earthquakes

Moving, tipping, and falling assessment of furniture/equipment



Evaluation of earthquake-induced shaking



Real-time damage assessment during earthquakes

Background

As natural disasters become more severe than in the past, threatening our daily lives and corporate activities, countermeasures against natural disasters must be taken from various aspects. We offer our society the ability to minimize damage and restore daily life as quickly as possible by not only comprehensively understanding the disaster's behavior but also the affected people, structures, organizations, and municipalities by implementing countermeasures.

Exposition of the Solution

- **Natural disaster preparedness support (Tsunami, flood, and ground motion analysis)**

  We provide support for assessments including damage estimation from tsunamis, floods, or other disasters that bring profound devastation, and support to build the optimal countermeasures.

- **Disaster mitigation support by earthquake damage assessments (Disaster information systems)**

It is difficult to gauge the extent of damage to a site after a large earthquake. This is why we provide speedy disaster mitigation support, immediately assessing local and wide area ground motion and evaluating damage severity.

- **Quantitative disaster risk assessments for BCPs (Disaster risk assessments, business continuity assessments)**

  Disaster preparedness measures and structure reinforcement plans for business continuity are becoming increasingly important. We conduct disaster risk assessments to help develop rational measures and establish priorities.

- **Evacuation procedure optimization (Evacuation simulations)**

  How to evacuate people smoothly from theaters, hospitals, high-rise buildings, and other such structures during disasters is an important issue to consider. By verifying the quality of buildings' evacuation routes and related considerations, we help customers put together safe and sensible evacuation plans.

Achievements of Examples

- Business Continuity Plan (BCP)
- Tsunami/flood simulations
- Natural environment assessment
- Resiliency
- Degradation assessment
- Nondestructive test assessments
- Information sharing support

Other References

- Contact

KOZO KEIKAKU ENGINEERING Inc.

https://www.kke.co.jp/en/solution/keep_safety/

Corporate Profile

KOZO KEIKAKU ENGINEERING Inc.

4-5-3, Chuo, Nakano-ku, Tokyo,164-0011, Japan

Tel. : +81-3-5342-1100

E-mail : global@kke.co.jp

Website : https://www.kke.co.jp/en/