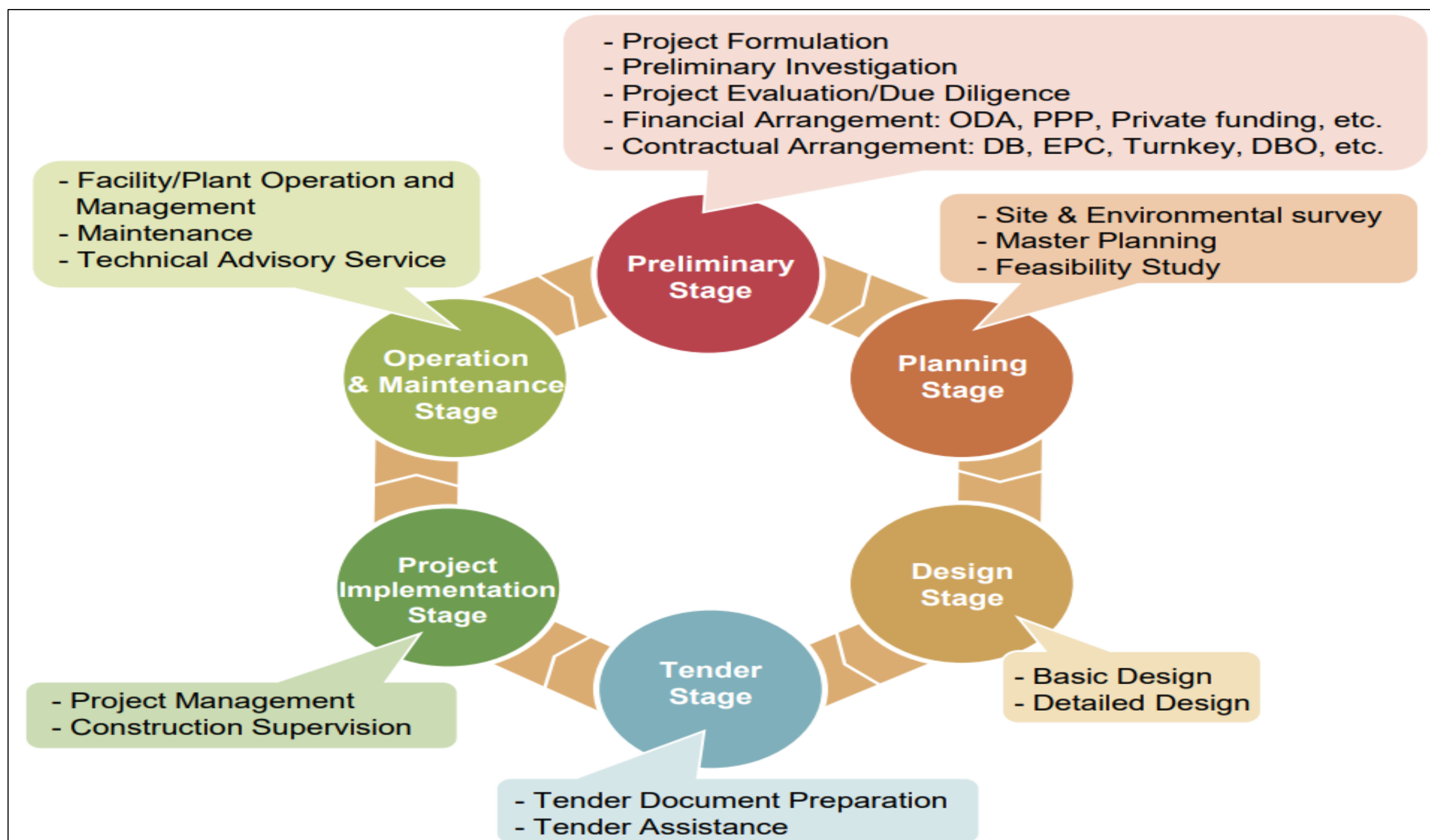




## Overview of Nippon Koei Geohazard Management

- Nippon Koei has a specialized team under “International Geohazard Management Department” to deal with the geohazards.
- The department has been in the forefront of geohazard management with proven technologies for over 50 years.
- Coverage includes landslides, earthquakes, tsunamis, volcanoes, and floods.
- Major clients:** Japan International Cooperation Agency (JICA), World Bank (WB), Asian Development Bank (ADB), Inter-American Development Bank (IDB) as well as other local governments and private companies.
- Depending on project financial and contractual arrangement, we conduct all or a combination of the services shown.



## Landslide Management

Landslide Management is one of our department's core fields. Services include:

- Roadway landslides
- Reservoir rim landslides
- Landslide dams
- Hydropower and water canal slope failures
- Pipeline and other lifeline infrastructure hillslope instabilities
- Filling and cutting slope instabilities
- Emergency response and early warning system development
- Geohazard or natural hazard management planning
- Preparation of various guidelines and manuals for landslide management
- Technical assistance and technology transfer to government officers



## Volcano Management



- Volcanic hazard and risk assessment, volcanic risk mapping.
- Emergency disaster prevention Sabo plan and volcanic Sabo plan (“Sabo works” involve erosion and sediment control.).
- Evacuation plan and drill for government or community base.
- Volcanic mudflow investigation, simulation and mitigation planning.
- Design of structural countermeasures such as Sabo dam, training dike, etc.

## Earthquake and Tsunami Management

- Seismic diagnosis, inspection and monitoring
- Ground shaking and fault rupture investigation and evaluation
- Earthquake and tsunami disaster risk maps
- Earthquake-induced landslides and liquefaction assessment
- Earthquake-induced tsunami simulation and assessment
- Seismic reinforcement design
- Earthquake or tsunami damage estimation and risk management planning
- Urban rehabilitation and reconstruction plan after earthquake
- Preparation of guidelines and manuals for earthquake risk management plan



**Our Advanced Technologies**

**From Surfaces to Spatial Overviews**

**AI Technology**

We can quickly and automatically extract landslide or collapse topography by using AI technology. In volcano areas, AI helps to quickly extract the unstable terrain immediately after the eruption.

**Remote Sensing Technology**

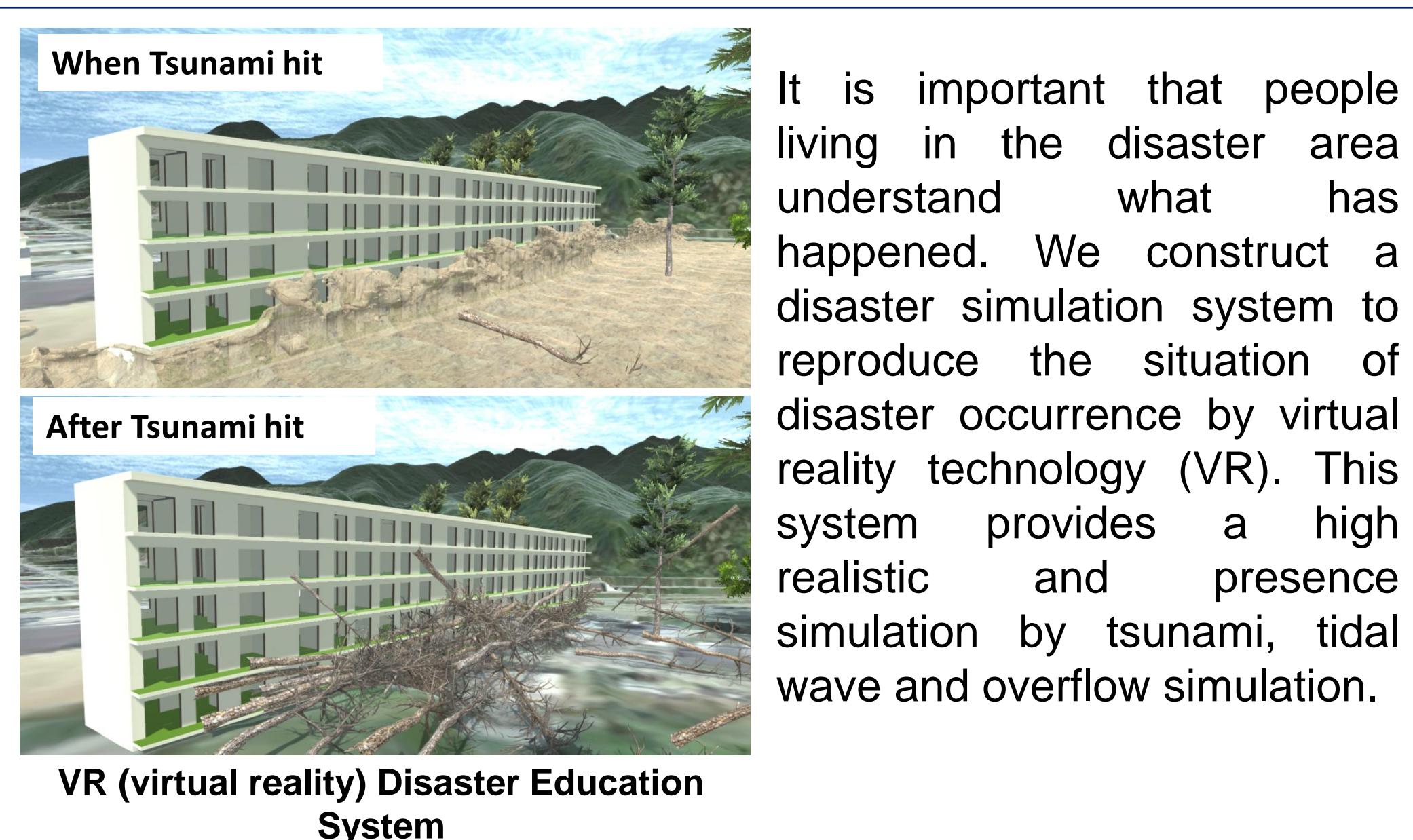
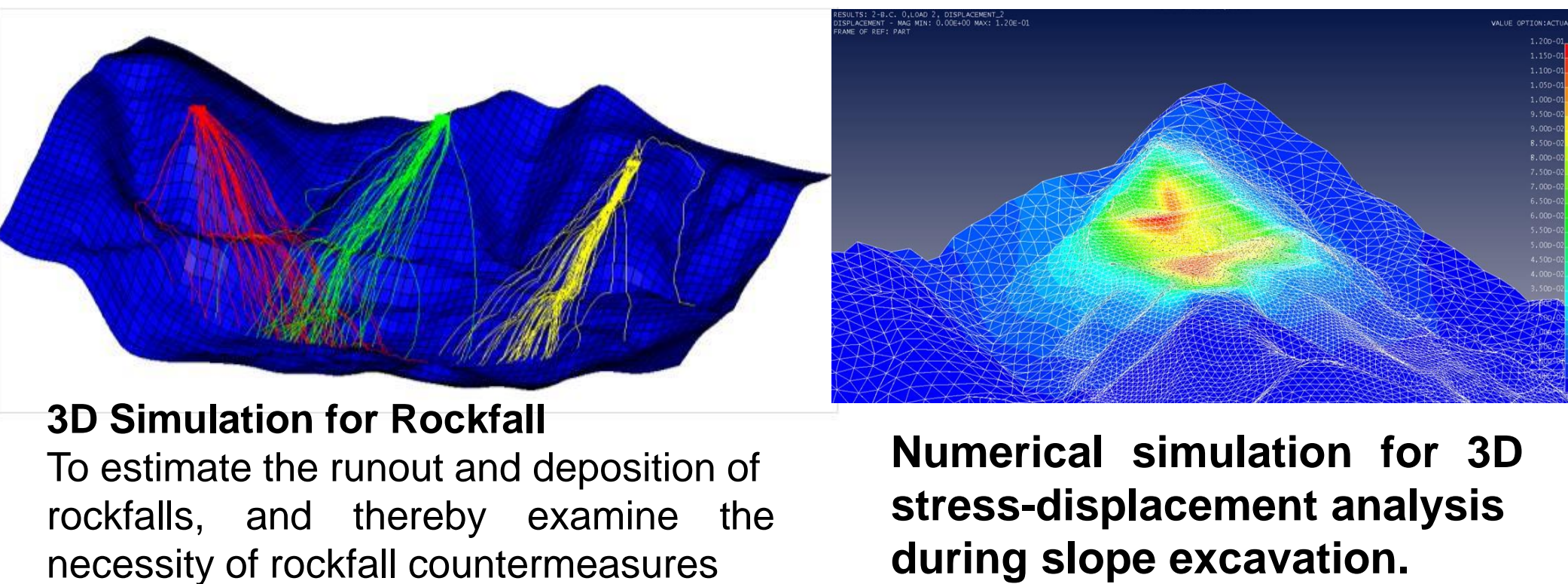
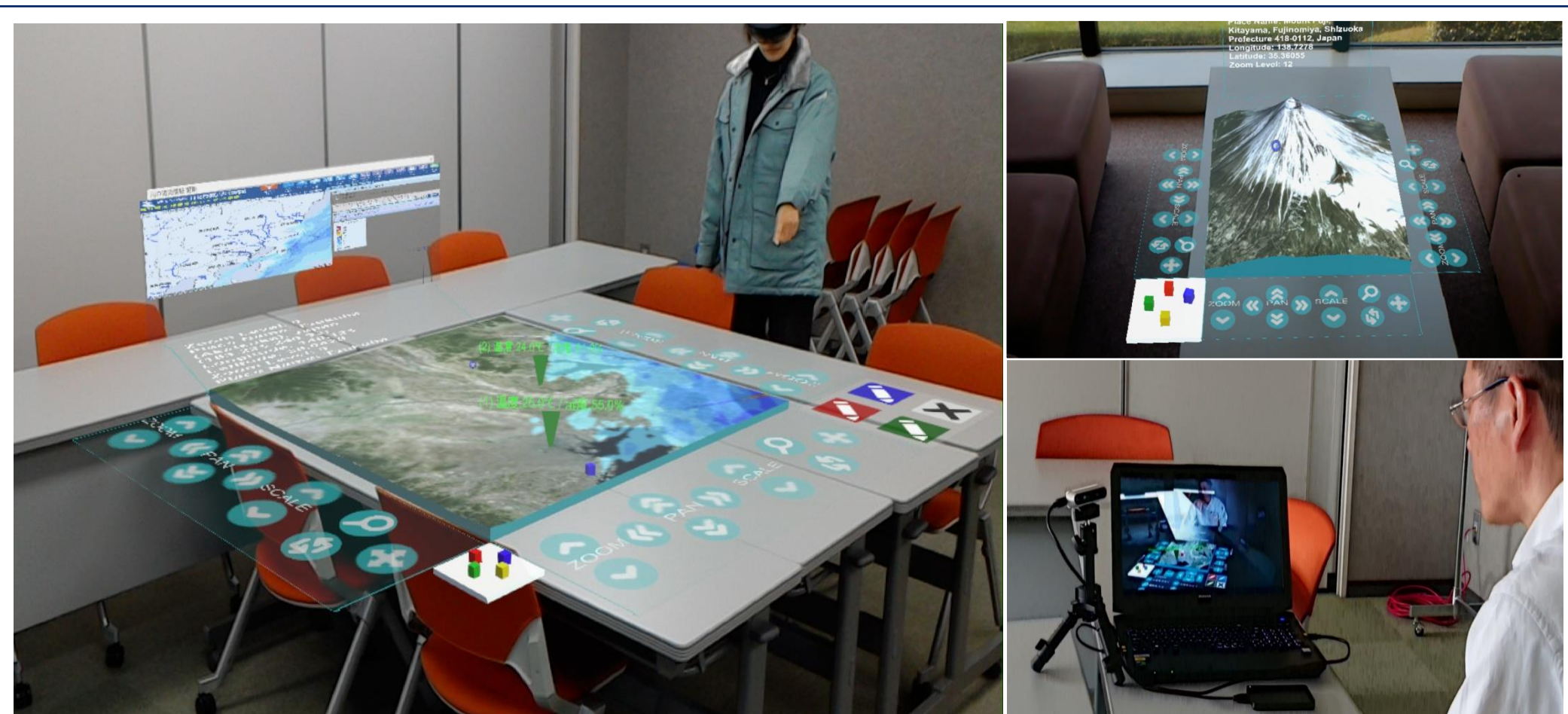
We can assess potential hazards around the globe by optical remote sensing and synthetic aperture radar (SAR) which can detect land-resources, topographic features, and ground deformation.

We can mobilize a team of over 200 multidisciplinary geohazard experts

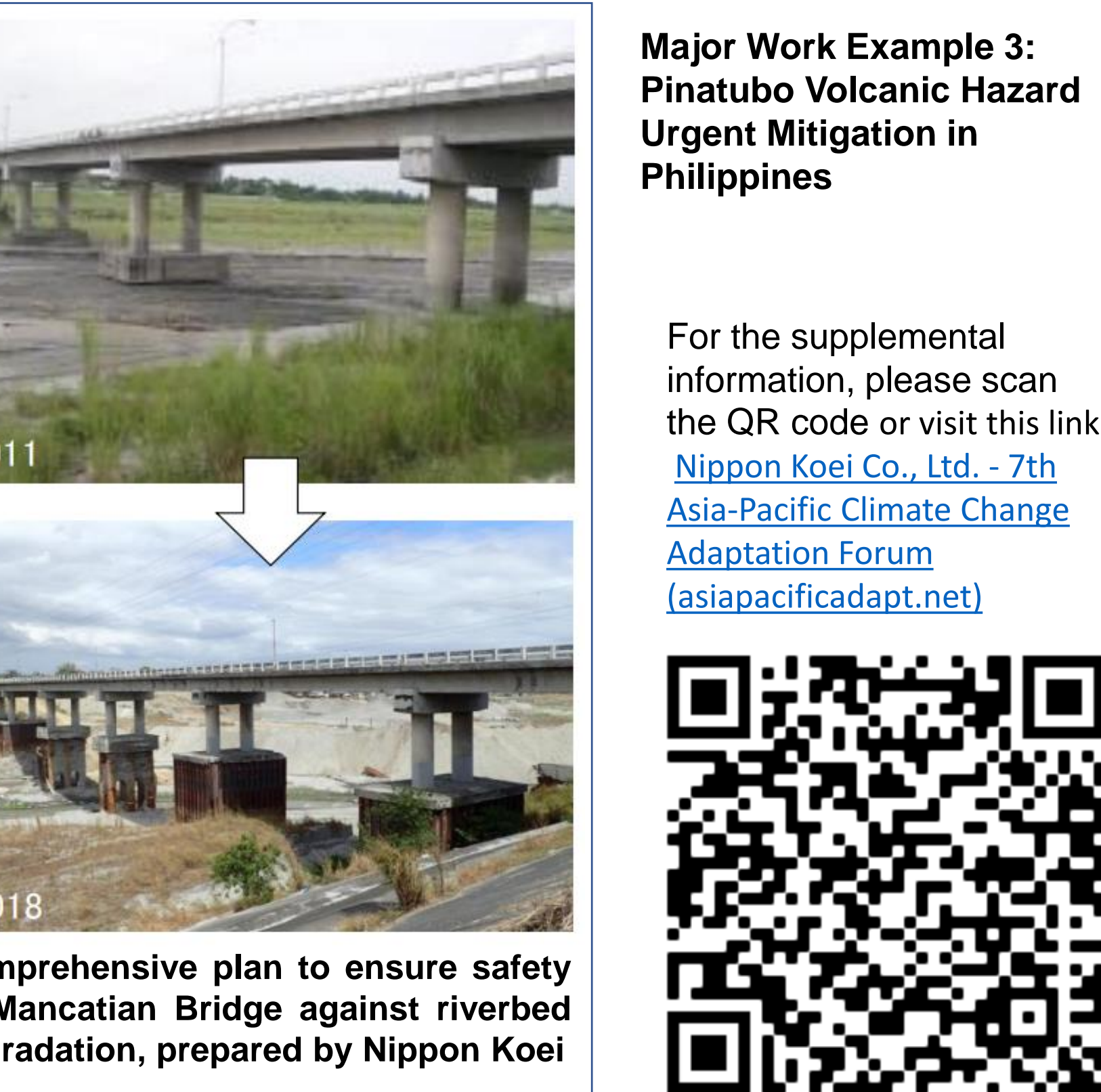
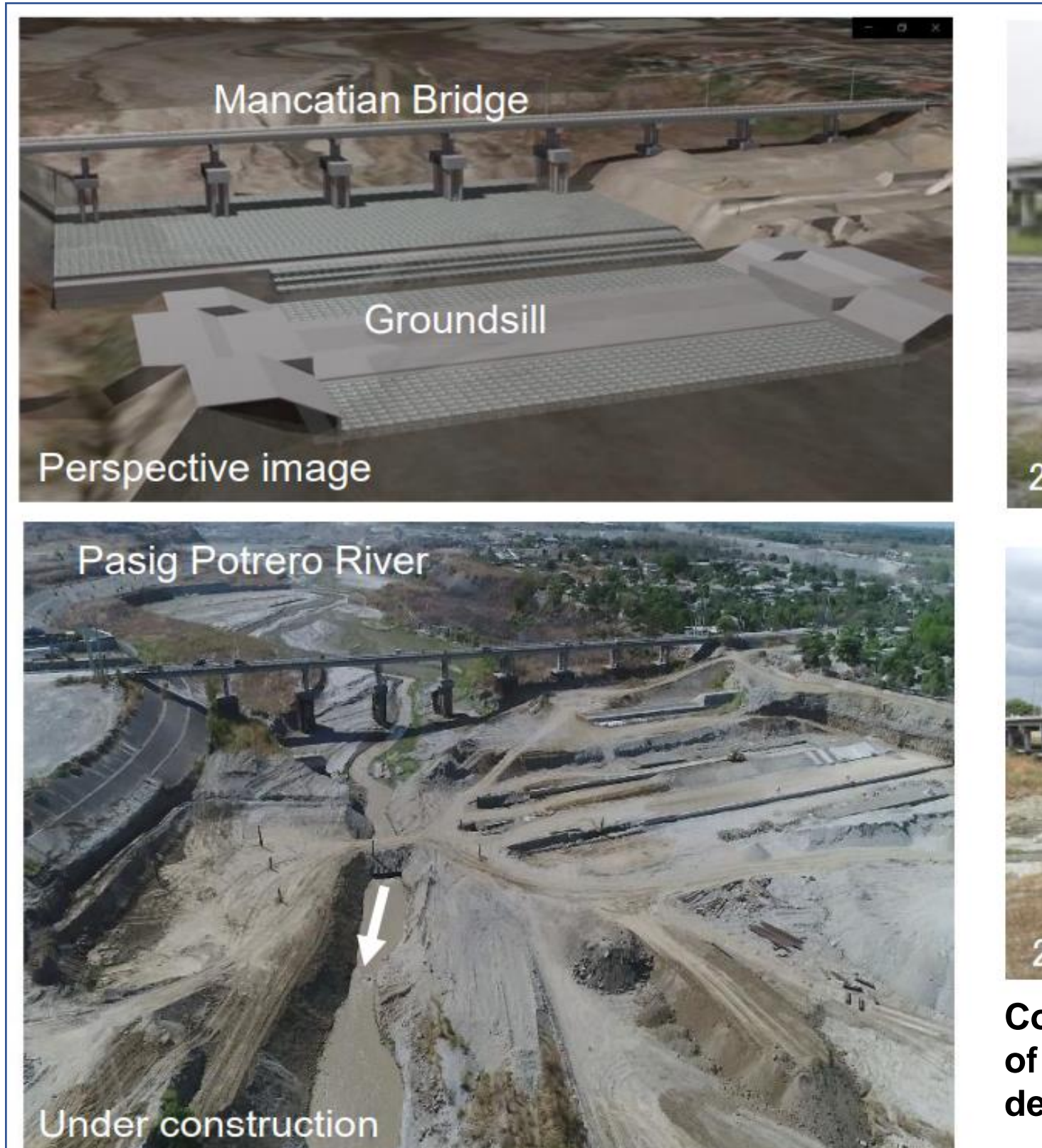
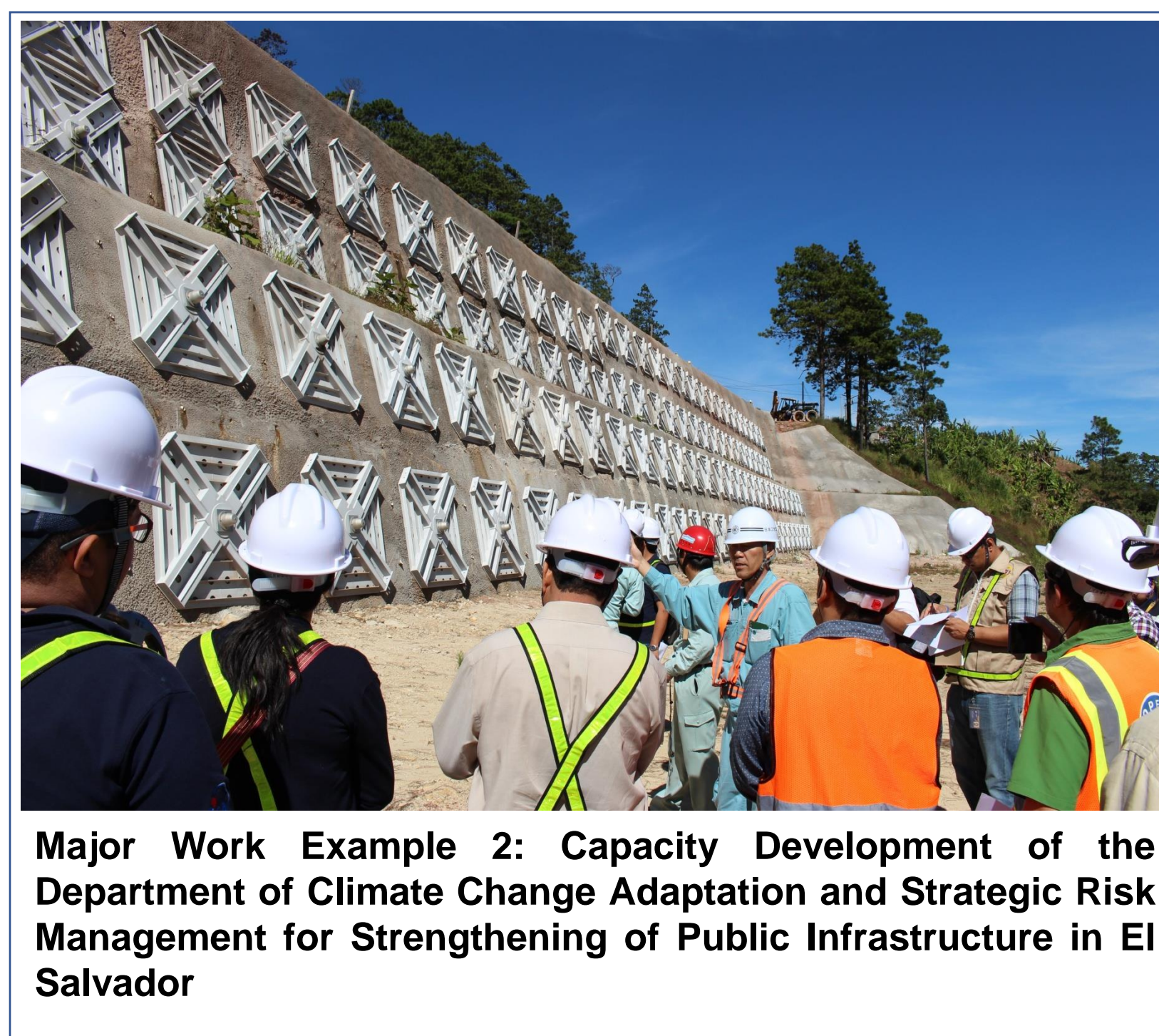
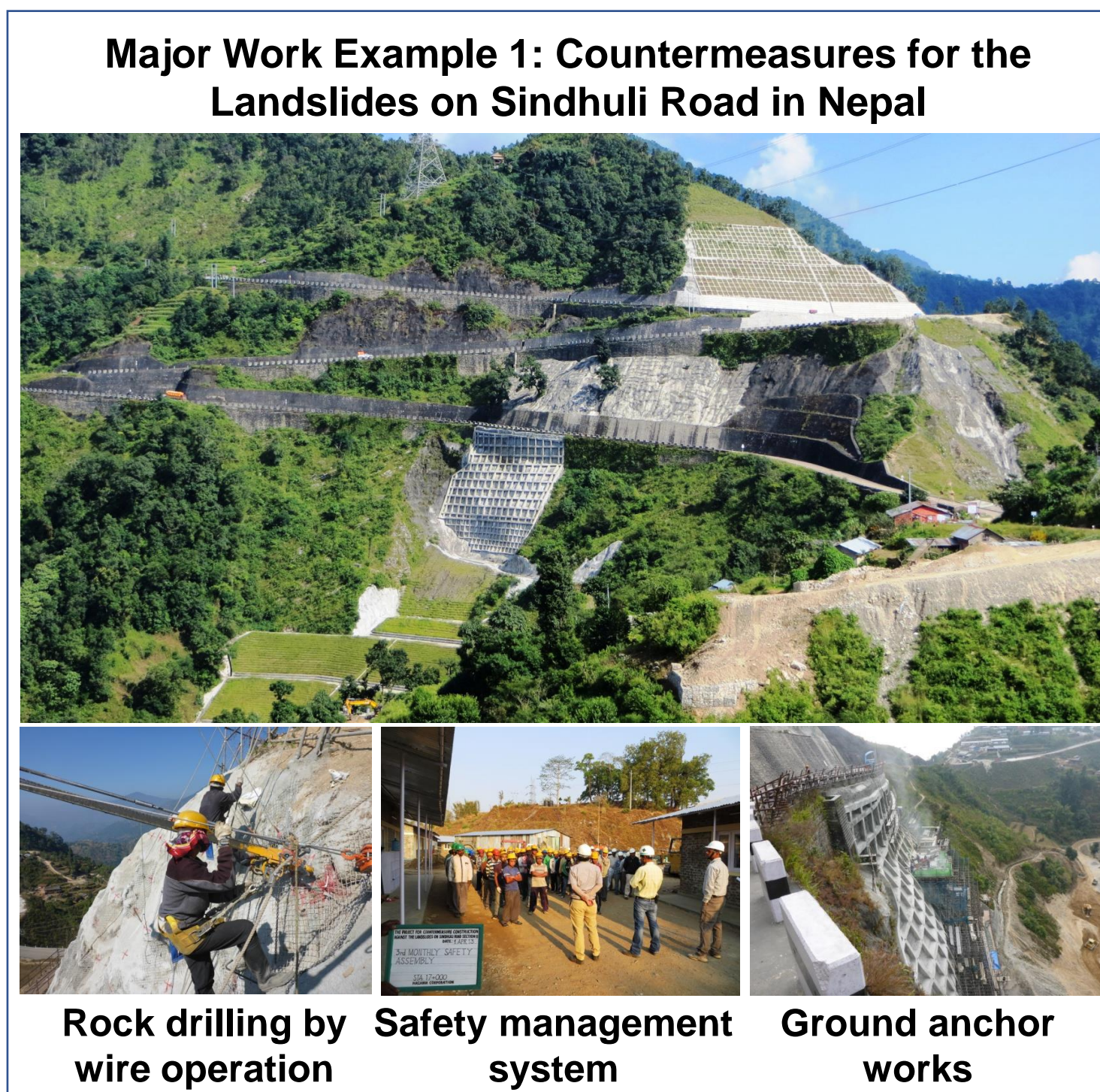
We form teams, covering advanced and wide range of technologies based on long-standing experience, to provide optimum solutions customized for each condition and need.

Extracted landslides by an expert

Extraction of landslide topography using AI



## Major International Experiences



For the supplemental information, please scan the QR code or visit this link: [Nippon Koei Co., Ltd. - 7th Asia-Pacific Climate Change Adaptation Forum \(asiapacificadapt.net\)](http://Nippon Koei Co., Ltd. - 7th Asia-Pacific Climate Change Adaptation Forum (asiapacificadapt.net))

