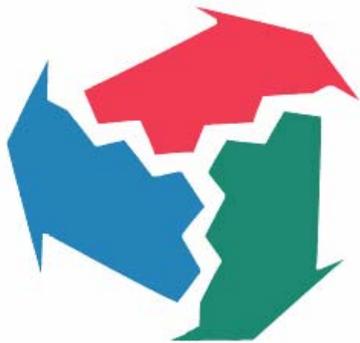


Project “E-Defense” (3-D Full-Scale Earthquake Testing Facility)



E-Defense



NIED

Keiichi Ohtani

**National Research Institute for
Earth Science and Disaster Prevention**

**Joint NCREE/JRC Workshop
November 17-19, 2003, Taipei, Taiwan**



Lessons from Hanshin-Awaji Earthquake

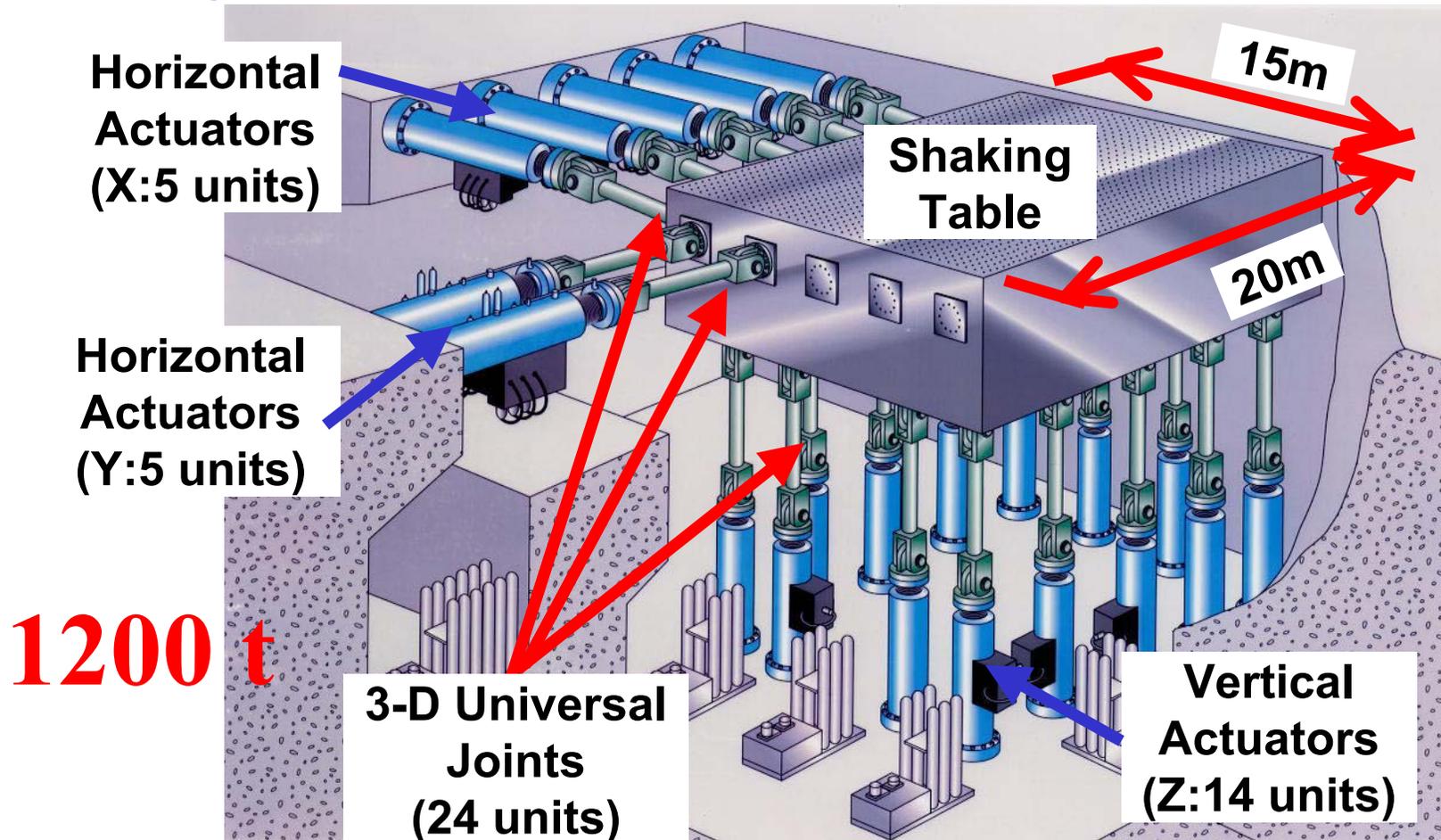
- ☆ **Underestimated Earthquake Motion**
Killer Earthquake
Maximum Ground Velocity > 140 cm/s
- ☆ **Un-Forecasted Failure & Damage of Structures**
Mid-Story Failure of Reinforced Concrete Buildings
Brittle Failure of Steel Structures
Collapse of Highway and Railway Bridges
Liquefaction of Manmade Island



3-D Full-Scale Earthquake Testing Facility

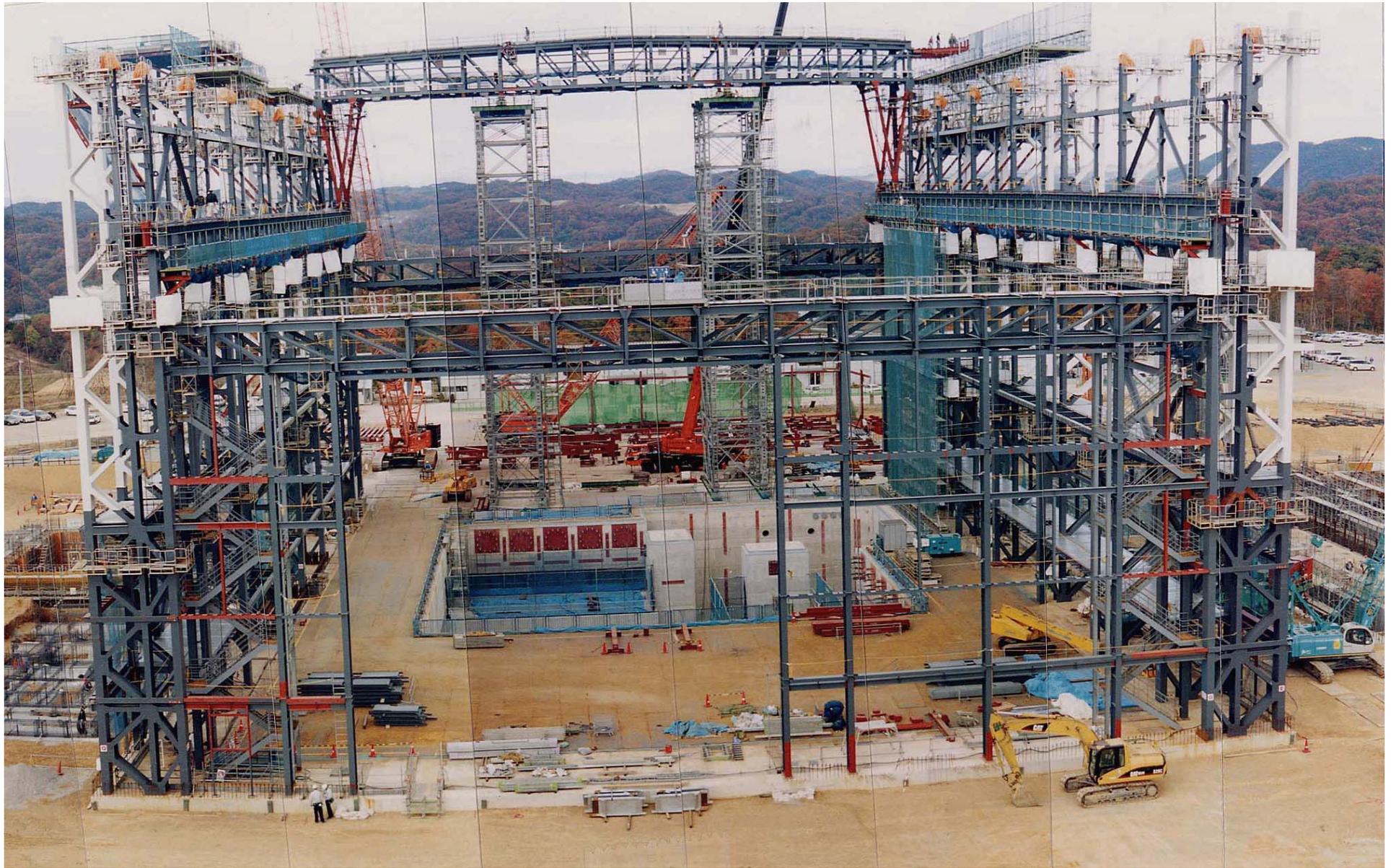
World's Largest Shaking Table

Shaking Table









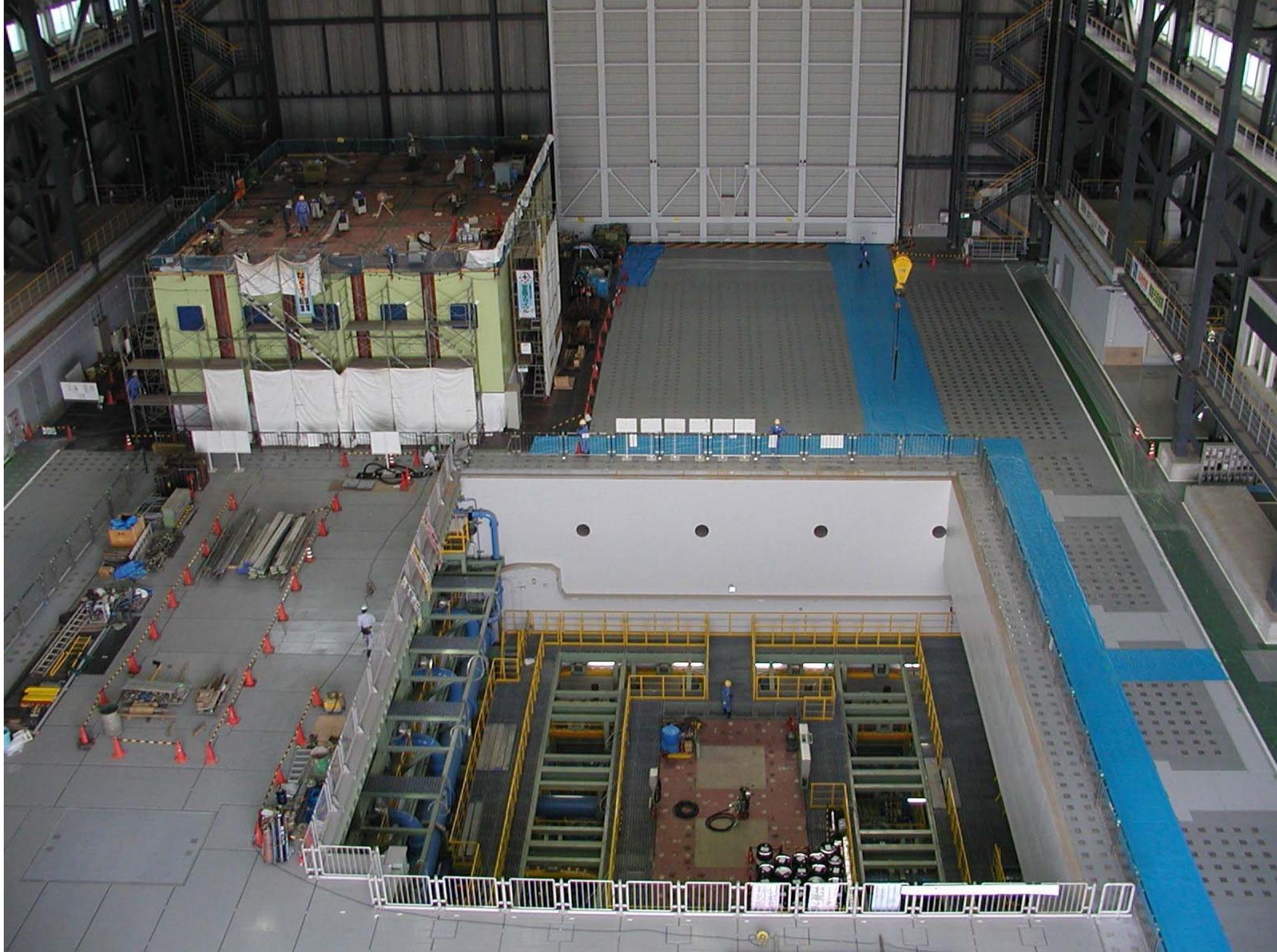




手前 壁で受けて 衝突

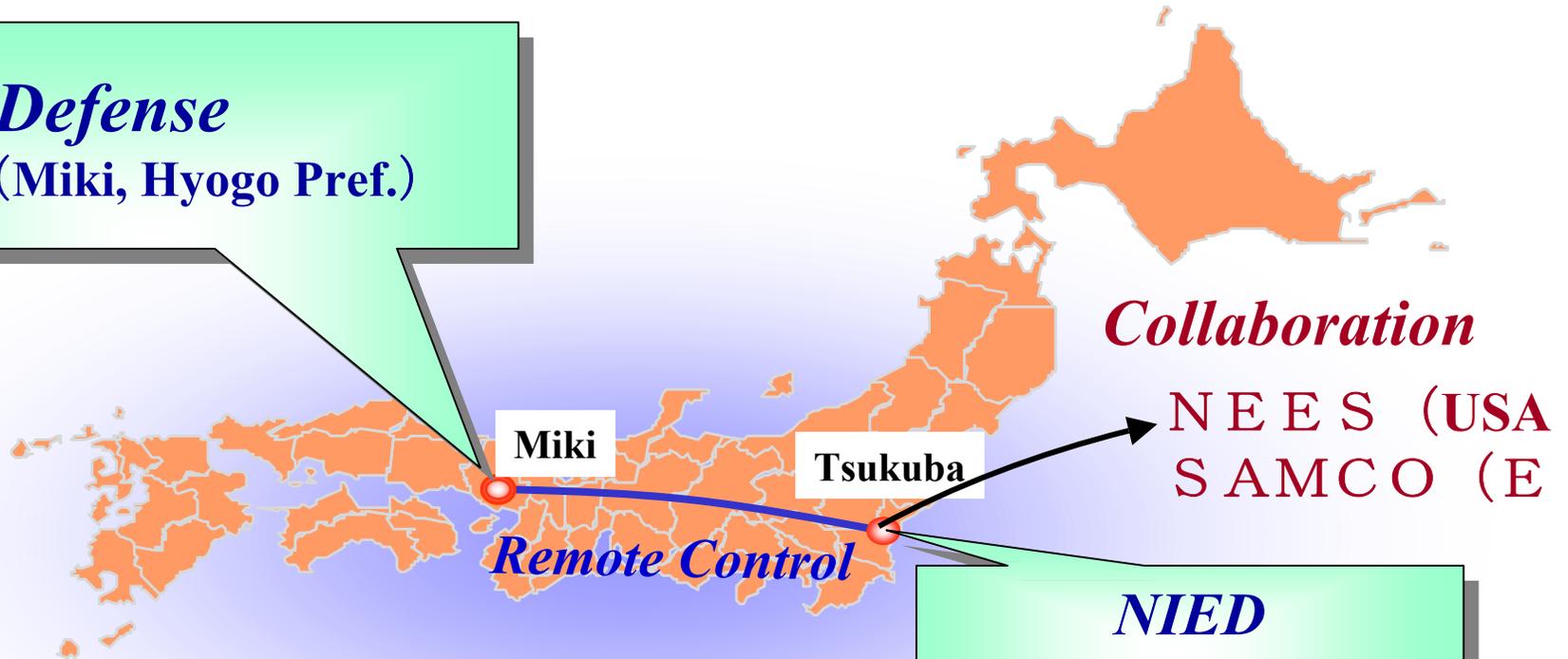
1メートルは一命取る
鉄まれ 巻き込まれ

SAFETY CONCERN PLEASE
SAFETY CONCERN PLEASE



International Network for Earthquake Disaster Mitigation Research (ED-Net)

E-Defense
(Miki, Hyogo Pref.)



Collaboration

NEES (USA)
SAMCO (E)

Miki

Tsukuba

Remote Control

NIED

*Large-Scale Simulation
By Super-computer*



