

Project “E-Defense”

(3-D Full-Scale Earthquake Testing Facility)



E-Defense



NIED

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

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



Lessons from Hanshin-Awaji Earthquake

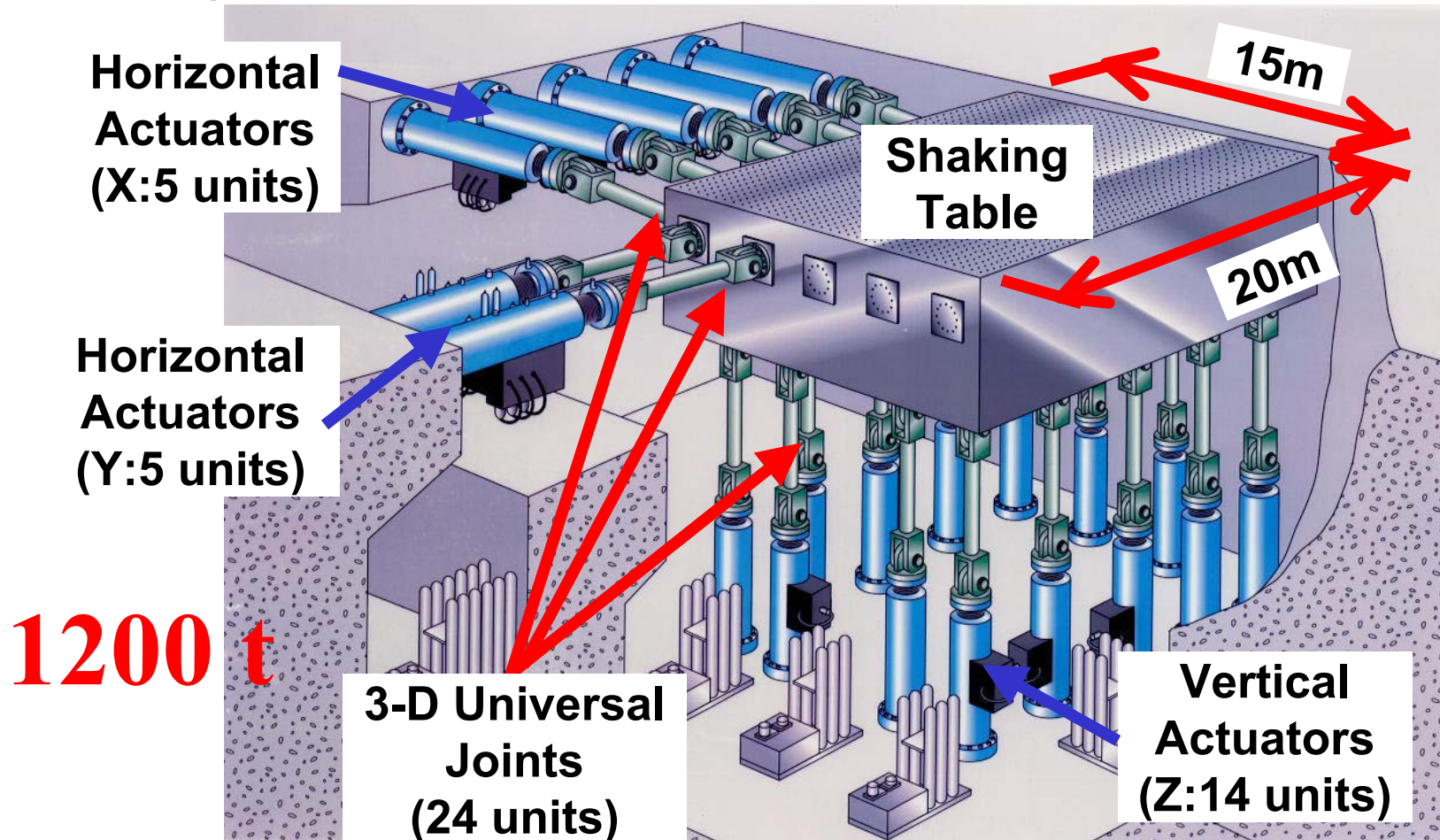
- ☆ **Underestimated Earthquake Motion**
Killer Earthquake
Maximum Ground Velocity > 140 cm/s
- ☆ **Un-Forecasted Failure & Damage of Structures**
Mid-Story Failure of Reinforced Concrete Buildings
Brittle Failure of Steel Structures
Collapse of Highway and Railway Bridges
Liquefaction of Manmade Island



3-D Full-Scale Earthquake Testing Facility

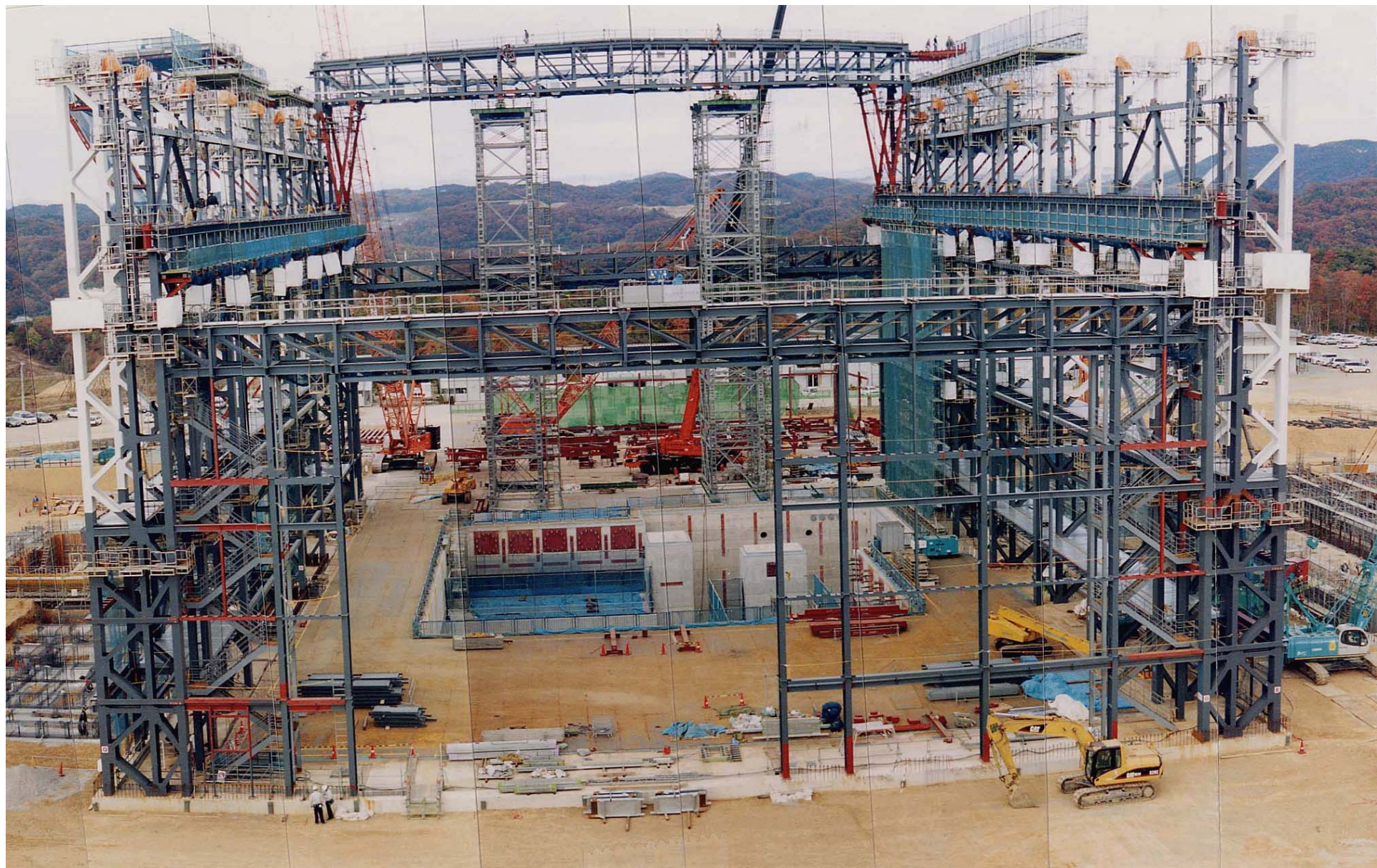
World's Largest Shaking Table

Shaking Table









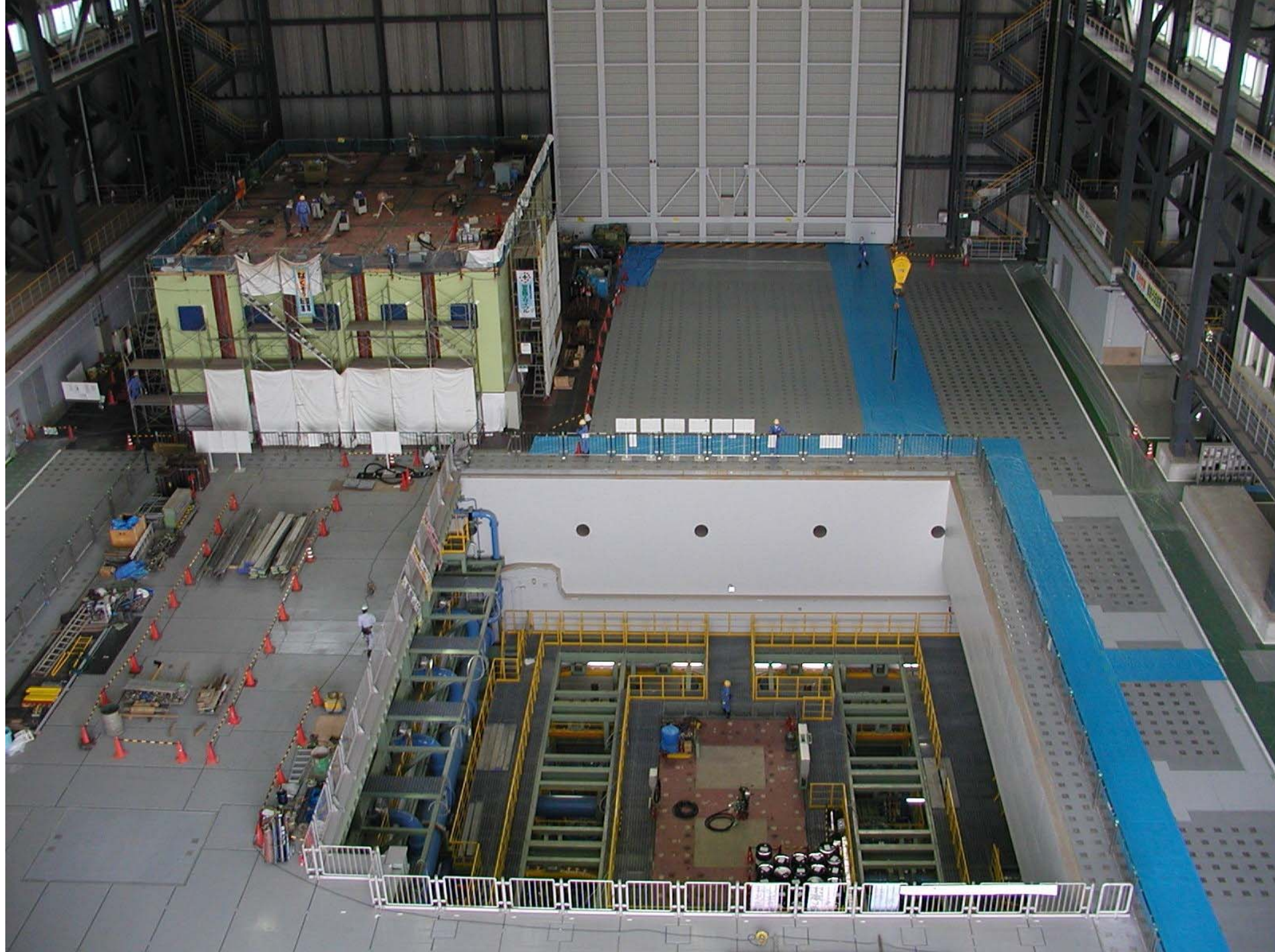


建設現場 東京電力福島第一原子力発電所
工事名 廃炉工程 廃炉設備の設置
機材名 大型吊り機 3
工機名 〇〇〇〇 NA
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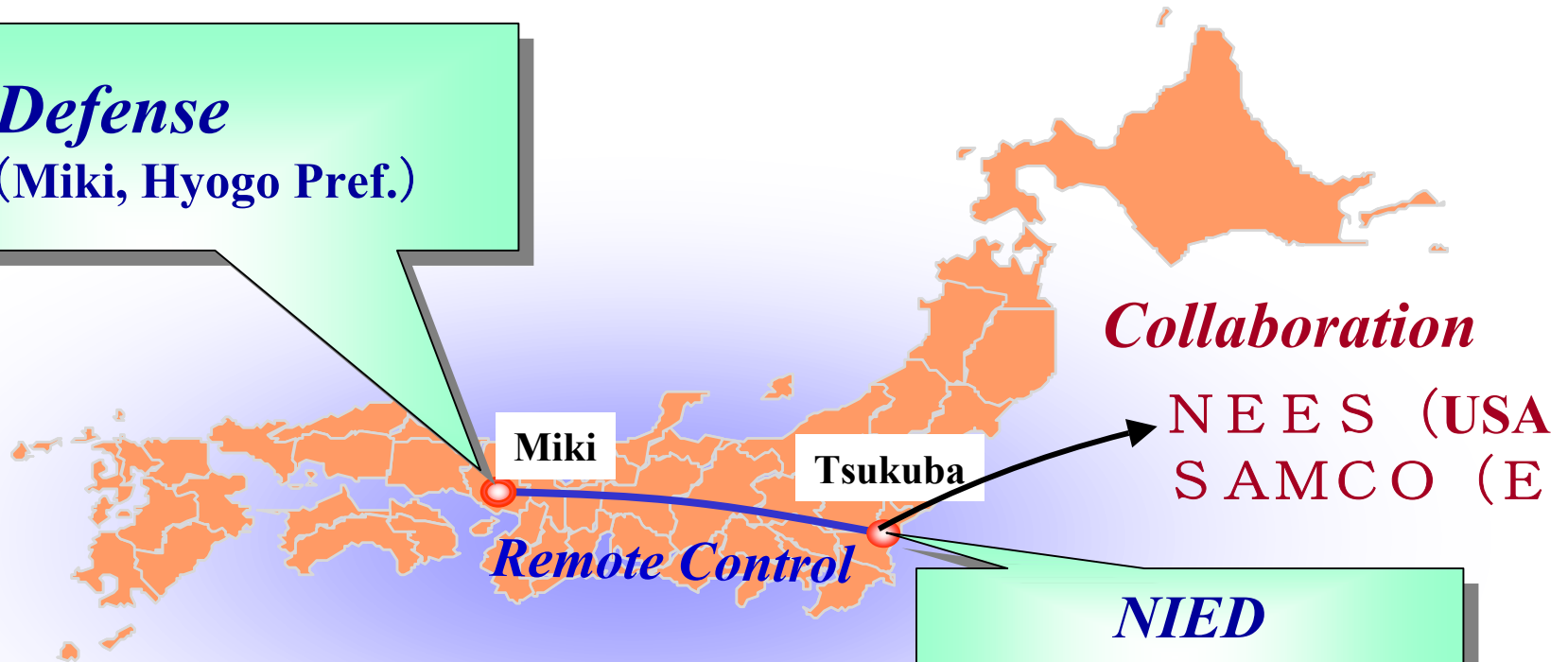


Schedule for Construction, Preparation of Experimental Research by E-Defense

	1998	1999	2000	2001	2002	2003	2004	2005
FACILITY CONSTRUCTION								
Foundation Works								
Experiment Building								
Component for Shaking Table								
Assembly and Installation								
Flushing								
Preliminary Operation								
EXPERIMENTAL RESEARCH								
Preliminary Experiment								
Experiment by E-Defense								
OPERATIONAL ORGANIZATIONS								
Advisory Council								
Operating Committee								
Hyogo Branch								
Support Company								

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

E-Defense
(Miki, Hyogo Pref.)



NIED
Large-Scale Simulation
By Super-computer



