

**Way forwards for dealing
with the loss and damage:
Private sector perspective
- Technologies -**

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Impacts of Global Warming



Increases in drought



Changes in the ecosystem



Decreases in staple grain productivity



出典: Smithsonian National Museum of Natural History
Photo © The Nome Nugget,
http://forces.si.edu/arctic/04_00_18.html

Increases in damage by floods and rainstorms



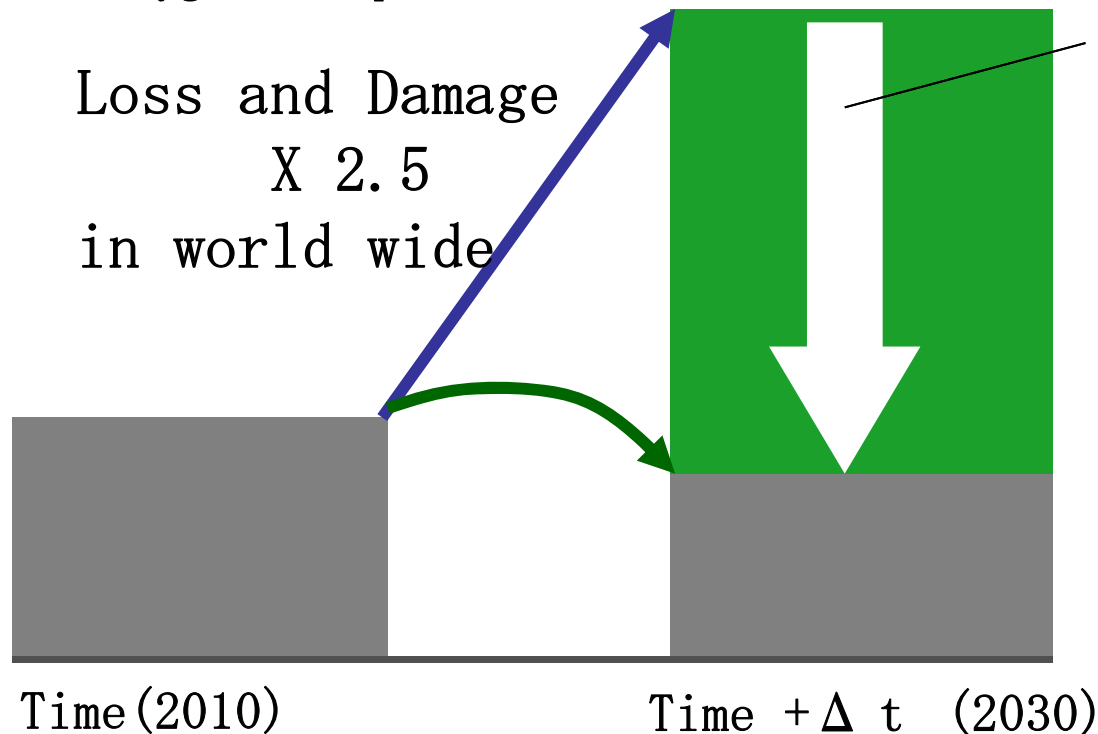
Increases in infectious diseases

Source: Seminar Materials for Fujitsu Forum 2007 (Yoichi Kaya)

Reducing Impacts created by Global Warming

- Water resource
- Agriculture and food
- Forest and conservation of nature
- Disaster prevention
- City and area development
- Traffic transportation
- Hygiene improvement

Loss and Damage
X 2.5
in world wide



Adaptation

Advanced technologies
New market mechanism
New social/financial system

Private Sector's Contribution

Technologies

Essence of Technologies (ICT etc.)



Efficiency improvement

Downsizing

Dematerialization

Sensing and Monitoring

Analysis and Simulation

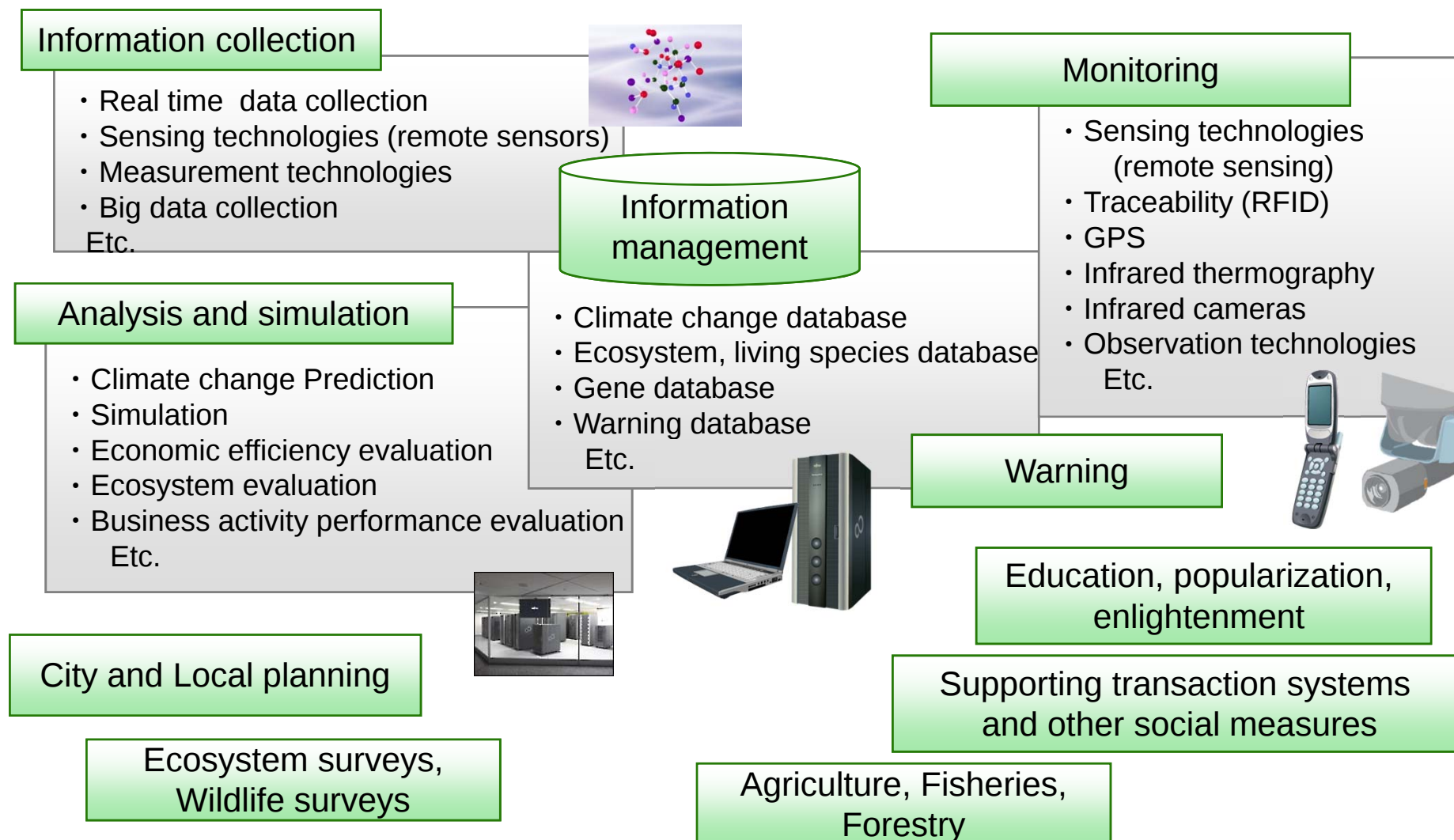
Warning and sharing of information

Transcendence of time and distance



**Further progress of Technologies
is necessary for reducing loss and
damage**

ICT can contribute in following area for Adaptation

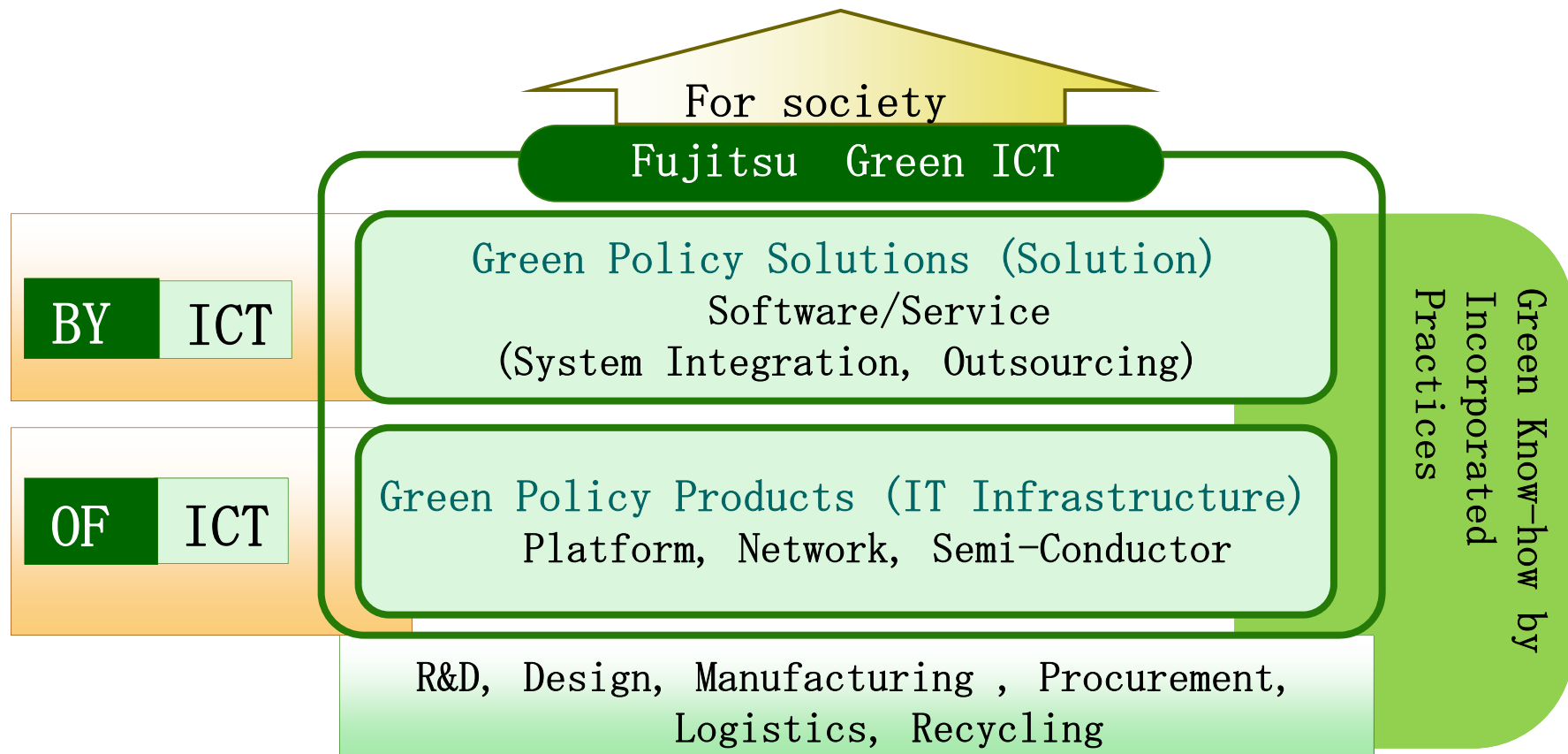




Green Policy Innovation

Reducing Society’ s Environmental burdens

Reducing Society’ s Impacts created by Global Warming





Contribution on Disaster Prevention

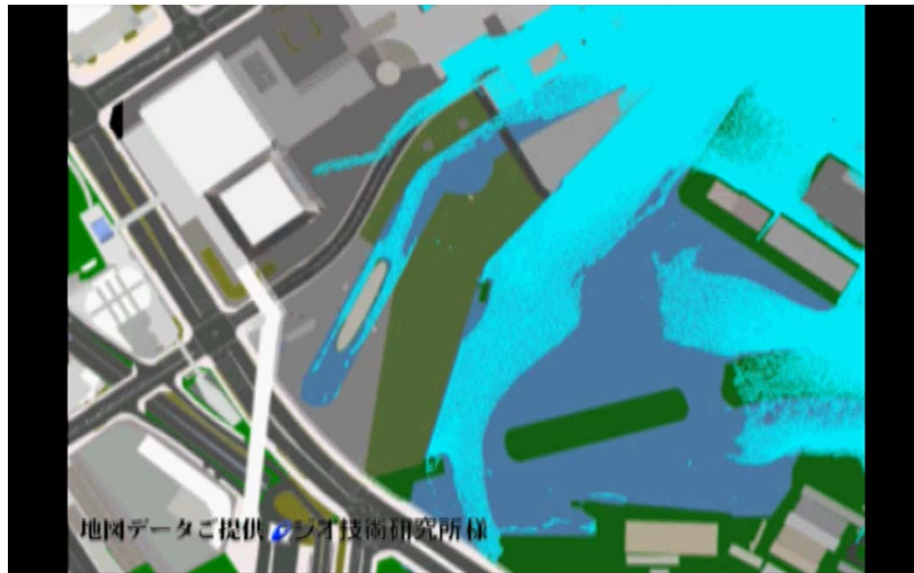
A fishing boat on the ground
Scene After Tsunami in March 2011, Japan



■ Reduction of flood damage by the Tsunami simulation

Precise prediction of tsunami by simulation

Collaboration: Tohoku University and Fujitsu



Calculate Speed =
10, 000, 000, 000, 000, 000 c/s



The “K Super Computer”

Collaboration; Fujitsu and Riken (Japan’s leading research institute)

Contribution on Disaster Prevention

- Reduction of flood damage by the weather forecast simulation
- The flood that the anomalous rainfall causes happens frequently also in Australia that concentrates 80 % of the population on the coast part.
- Fujitsu is advancing the climate change measures by the weather forecast simulation, the disaster prevention strengthening, and the research of the flood measures for a joint research with Australian National Universities.



Appearance of flood of Australia



Super computer of Australian National University

Contribution on Productivity of Crop Farms

- Quality and productivity decrease in water field rice by climate change.

- Field inspections by staff driving trucks and check now performed by satellite system.

Before introduction



- Farmers traveled by truck to visually assess state of fields

Introduction of ICT



After introduction



- Trucks no longer used
- Quantity of work reduced
- Precise best harvest time

The Japan Agricultural Cooperative Echigo Santo

- Farmer can increase the quality and productivity of the farm by using these information.



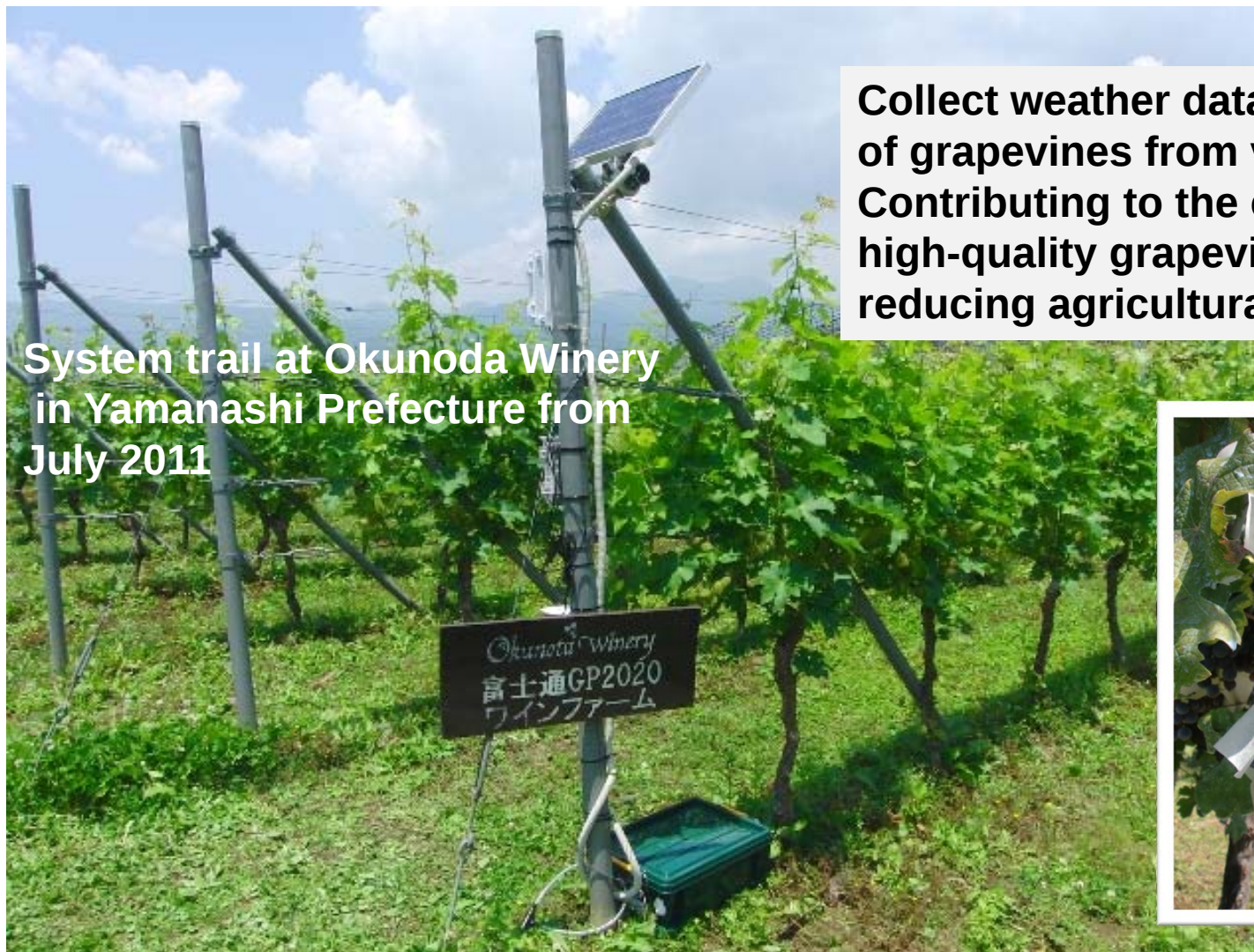
Satellite photograph

Harvest maps and protein maps of the rice.



Contribution on Sensing Climate for farms

- Weather and temperature is changing by climate change.
- Sensing technology for growing grapevines



System trial at Okunoda Winery
in Yamanashi Prefecture from
July 2011

Collect weather data and images
of grapevines from vineyards.
Contributing to the collection of
high-quality grapevines and
reducing agricultural chemicals.



Cooperation for dealing with the Loss and Damage



Environ.

Energy

Food · Water

Safety

Healthcare

Transport

Society

Government,
Government office,
Municipality office

Cooperation

Private sector
Industry

University
Institute
NPO, NGO

World

Japan

Cooperation

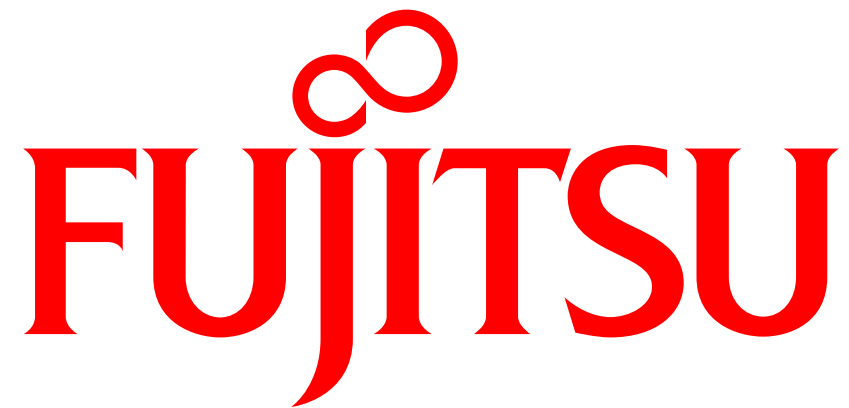
Asia
Pacific

USA/EU

It is significant for us to clarify the quantitative effectiveness and the priority of the technology in these cooperation.

**It is our obligation to hand the beautiful
"Earth" to the next generation.**





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