首相官邸

JOINT OECD/IRGC EXPERT WORKSHOP
Risk and Crisis Communication
Opportunities and Challenges of Social Media

June 29, 2012

Office of Global Communications
Prime Minister's Office

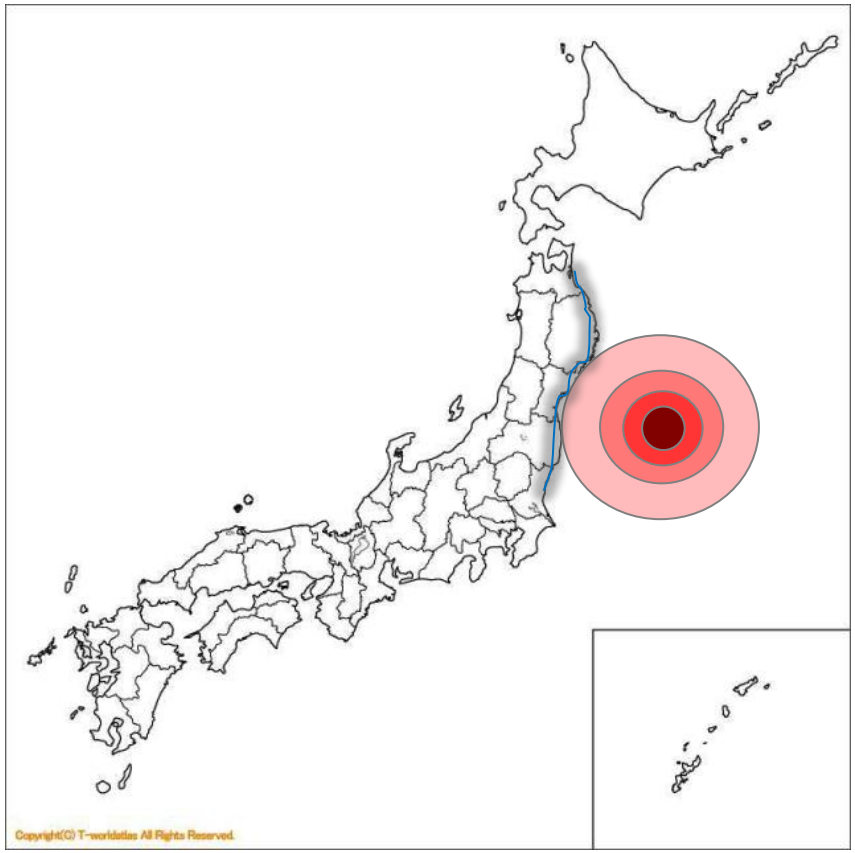
Agenda

The Great East Japan Earthquake

Disaster prevention history and activities since the Earthquake

Implications and our challenge

Unprecedented challenge for Japan since 3・11



The Great East Earthquakes

Earthquakes

- M-9.0 quake (March 11)
- M-7.0 class 5 times
- M-6.0 class 71 times
- M-5.0 class 380 times (As of May 16th)

Casualties (As of July)

- **Dead : over 15,600**
- **Missing: over 4900**
- **Injured: over 5,300**

Evacuees (As of May)

- **Over 124,000**

Main cause of physical damage was enormous tsunami

Source: Ministry of Economy, Trade and Industry

The Great East Japan Earthquake led to a compound of disasters

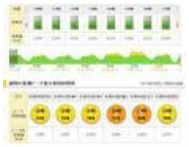
Structure of the chain of compound damage

Damage

(1) Primary damage

(2) Secondary damage caused by material factors

(3) Secondary damage caused by psychological factors

Earthquake		**2:46 pm, Mar 11** • Magnitude 9.0 earthquake at Sanriku coast
Tsunami		**3:51 pm, Mar 11** • 9.3m tsunami strikes Soma city, Fukushima prefecture
Nuclear power plant		**3:36 pm, Mar 12** • Fukushima Dai-ichi Reactor 1 structure collapses • Atomic fuel meltdown occurs
Power shortage		**Mar 14 ~** • Rolling blackouts in Kanto prefectures in March
Suspicion of safety of Japanese products overseas		**Mar 14 ~** • At least 50 countries/regions, starting with H.K. & China, impose import restrictions apart from products restricted by the Japanese Gvt.
Plummet in foreign tourist numbers		**Mar~** • Visitors decrease 50% compared to 2010

Source: literature research, The Boston Consulting Group

Agenda

The Great East Japan Earthquake

Activities since the Earthquake

Implications and our challenge

Disaster prevention system in Japan has been developed over time

1923 Great Kanto quake → **World first quake-resistant building regulations**

1959 Ise Bay Typhoon → **Early warning system**
- Mt Fuji summit radar "Himawari"

1995 Hanshin Awaji quake → **Implementation of Earthquake Early Warning bottom-up & top-down**

Source: The Boston Consulting Group

After the Ise Bay typhoon in 1959, the Japanese government made extensive effort to develop the disaster prevention system

History of disasters in Japan

	Year	Dead/ missing	Lessons	Policies introduced
Nobi earthquake	**1891**	**7,300**	**Government made aware of the importance of earthquake measures**	**Former Ministry of Education established a disaster prevention investigation committee [disaster risk reduction]** • Began earthquake resistance structure research – Researched Western earthquake resistance construction
Great Kanto earthquake	**1923**	**105,000**	**Unprecedented damage** • Buildings constructed using Western earthquake resistance technology collapsed	**Revised town construction law [disaster risk reduction]** • First earthquake resistance regulations in the world
Fukui earthquake	**1948**	**3,769**	**First major earthquake after WW2, causing massive damage**	**Revised construction standards law [disaster risk reduction]** • Doubled the horizontal seismic coefficient
Ise Bay typhoon	**1959**	**5,098**	**Inadequate government role in disaster prevention** • Led by local groups such as flood fighting teams • Inappropriate warning systems • Inadequate seawalls and dams	**Enacted the Disaster Countermeasures Basic Act [governance]** • Established Central Disaster Prevention Council headed by the Prime Minister **Built early warning system [early disaster warning]** • Radar on the summit of Mt. Fuji • Launched Himawari weather satellite **Built seawalls [disaster risk reduction]**

Source: Emergency White Paper (2010), The Boston Consulting Group

After the Hanshin Awaji earthquake in 1995, top-down deployment and strengthening building structure was a priority

History of disasters in Japan (cont'd)

	Year	Dead/ missing	Lessons	Policies introduced
Miyagi earthquake	**1978**	**28**	**Many concrete apartment buildings thought to be resistant collapsed**	**Major revision of construction standards [disaster risk reduction]** • Introduced new earthquake resistance design law – buildings that would not collapse even under a force 7 earthquake
Hokkaido earthquake	**1993**	**230**	**Tsunami arrived before the warning system could function**	**Shortened forecast time from five minutes to three minutes [early warning]**
Hanshin Awaji earthquake	**1995**	**6,437**	**No output from earthquake prediction research** **98% of buildings that were destroyed were built before the amended construction law** **Local government functions were stopped by the disaster** • Notification reached the PM two hours after the earthquake • Delayed response by firefighters and self defense forces • Delay in identifying damage in each area **Unable to rebuild based on donations alone**	**Earthquake early warning system implemented [early warning]** • Switched from earthquake prediction **Enacted earthquake resistance improvement law [disaster risk reduction]** • Improving earthquake resistance of existing structures became a key issue **Rapid top-down response [emergency/recovery response]** • Established Cabinet information gathering center and crisis center at the PM's residence • Law revised to enable quick response by firefighters and self defense forces • Increased seismic observation points for immediate identification of damage in each area **Recovery support for victims [emergency/recovery response]** • Government financial support up to \3M

Source: Emergency White Paper (2010), The Boston Consulting Group

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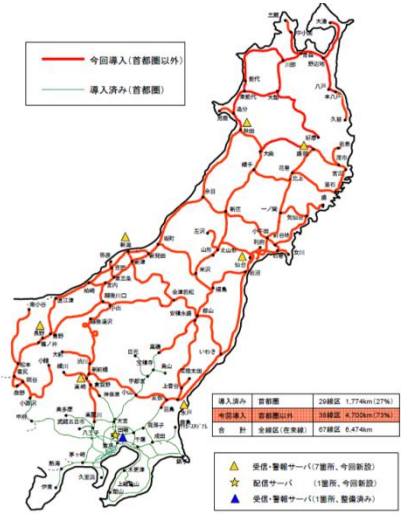
Source: Emergency White Paper (2010), The Boston Consulting Group

Early warning system stopped all 27 running bullet trains automatically before the quake hit

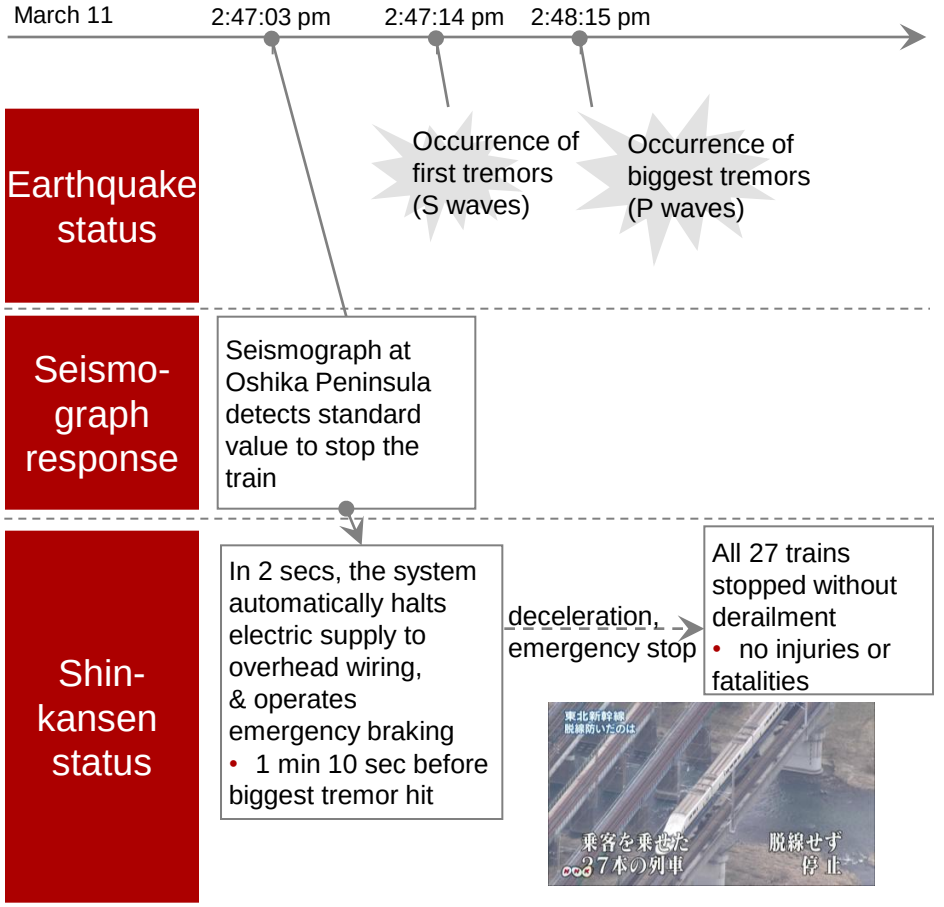
JR East introduces early earthquake warning system

Since the 2004 Mid-Niigata Pref. Earthquake, \50-60B has been invested in earthquake disaster prevention measures.

- Within the JR East area, earthquake measurement equipment has been improved and increased, and the time from early tremor detection, to electric supply cut has been reduced from 3 to 2 seconds
  - Seismographs at 62 locations were upgraded to the latest models in 2005
  - New seismographs were installed at 28 coastal locations in 2006
  - 97 installed in 2010
- By 2009, all carriages of the Tohoku Shinkansen were fitted with an early earthquake warning system



Succeed in making an emergency stop without derailing



Source: JR East; NHK; SankeiBiz, The Boston Consulting Group

Overseas communication from Japan PMO

Traditional Media

3/11 The Great East Japan Earthquake

3/13 Shikata Deputy Cabinet Secretary for Public Relations starts interviews with foreign media

3/16 Simultaneous interpreting introduced for PM & Chief Cabinet Secretary announcements

3/20 Chief Cabinet Secretary Edano starts foreign media interviews
- holds interviews with 11 media agencies

3/21 Foreign Press Briefings by governmental officials starts
- PMO, Nuclear Industrial Safety Agency, Nuclear Safety Commission, MEXT, MHLW, MAFF, MOFA
- to April 25

4/12 Consecutive interpreting for PM's announcements
- Questions able to be fielded in English

4/17 Editorial contributed by PM
- "Japan's Road to Recovery and Rebirth"
- 128 outlets in 62 countries through May

5/21 Face to face interview between PM & FT

Social Media

3/13 Starts communication through Twitter (Japanese)

3/16 Starts communication through Twitter (English)

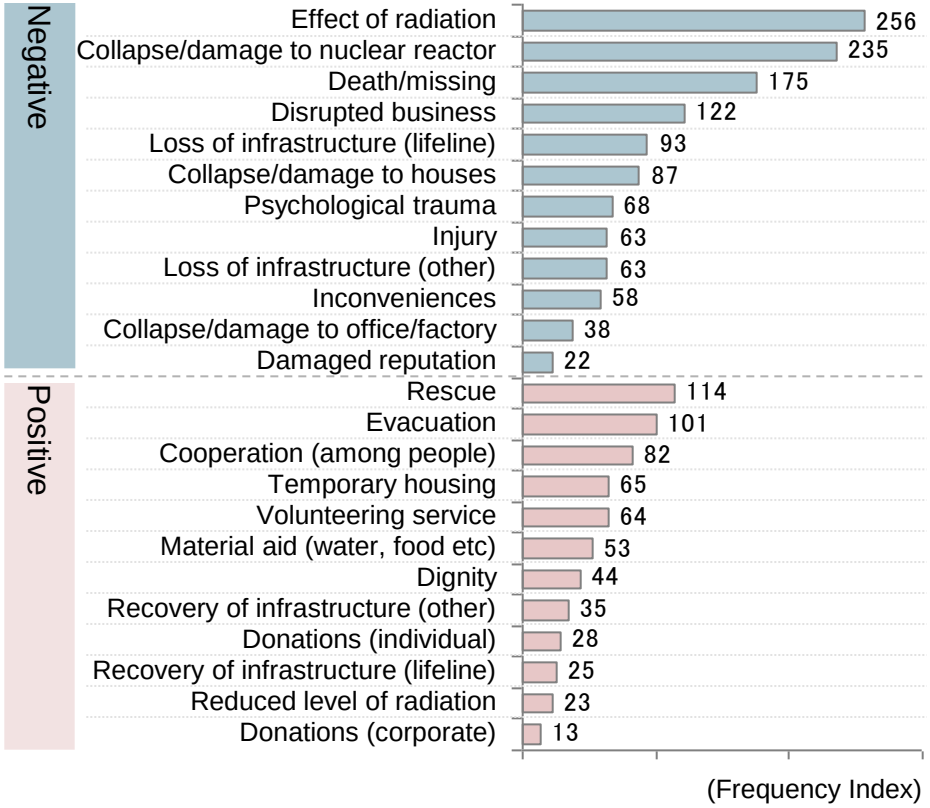
3/23 Starts communication through Facebook

1. Includes dead/missing, effect of radiation, collapse/damage to houses/offices, disrupted business; 2. Rescue, material aid, recovery of infrastructure, reduced level of radiation, temporary housing
Source: Press Search (10 newspapers selected from US, UK, Germany, France, China); PM's Office, Office of Global Communications, The Boston Consulting Group

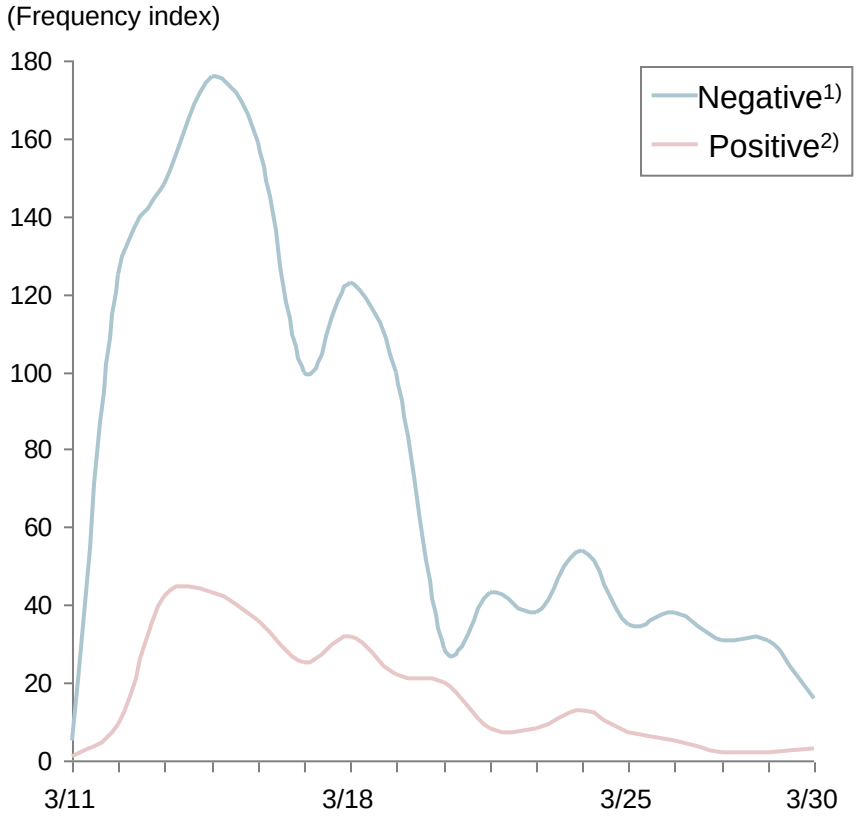
Negative prospects highlighted by media after the Earthquake

Amount of media coverage over time since the quake

Catastrophic damage clearly highlighted over bright prospects



Only limited media coverage after a week of the incident



Earthquake related news got quickly replaced with others before recovery takes place

1. Includes death/missing, effect of radiation, collapse/damage to houses/offices, disrupted business; 2. Rescue, material aid, recovery of infrastructure, reduced level of radiation, temporary housing
Source: Press Search (10 newspapers selected from US, UK, Germany, France, China), The Boston Consulting Group

Mobile phone internet access functioned as the sole means of communication just after the quake

Only Mobile phone internet access remained working

Restriction of telephone calls

To prioritize internet services and emergency call services, call restrictions[1)] were imposed

- NTT Docomo: 90%
- KDDI: 95%
- Softbank: 70%

Back up of electric power supply

Back-up generators operated at all blacked-out exchanges

- Batteries start when electricity supply stops
- Approx. 5 mins later, private power generators start

(Private power generator)

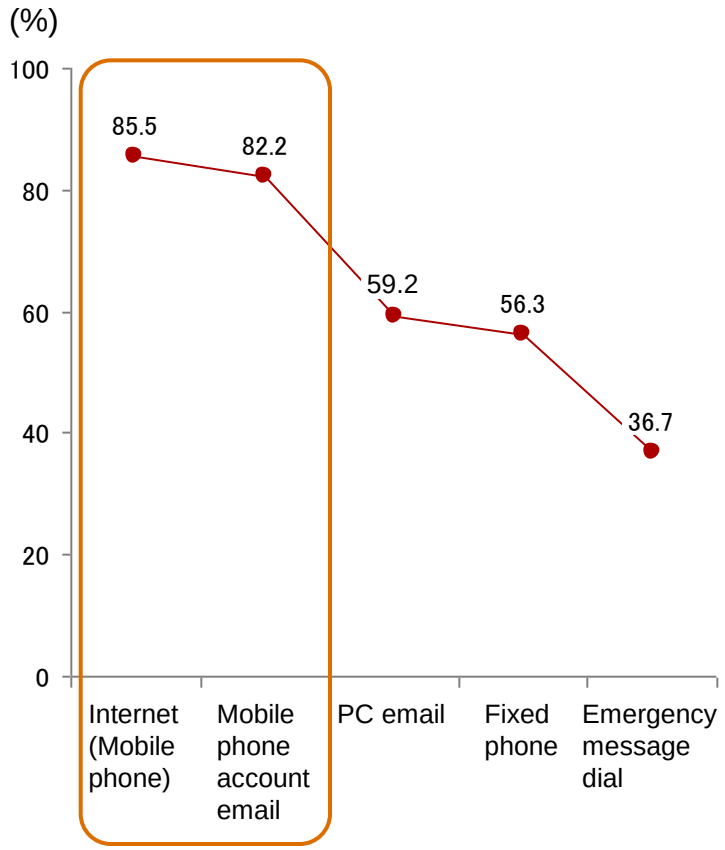
Running on batteries

Re-chargeable, therefore able to be used in blacked-out areas

- Some areas had no PC or TV use due to power failure

Internet access from mobile was the most convenient

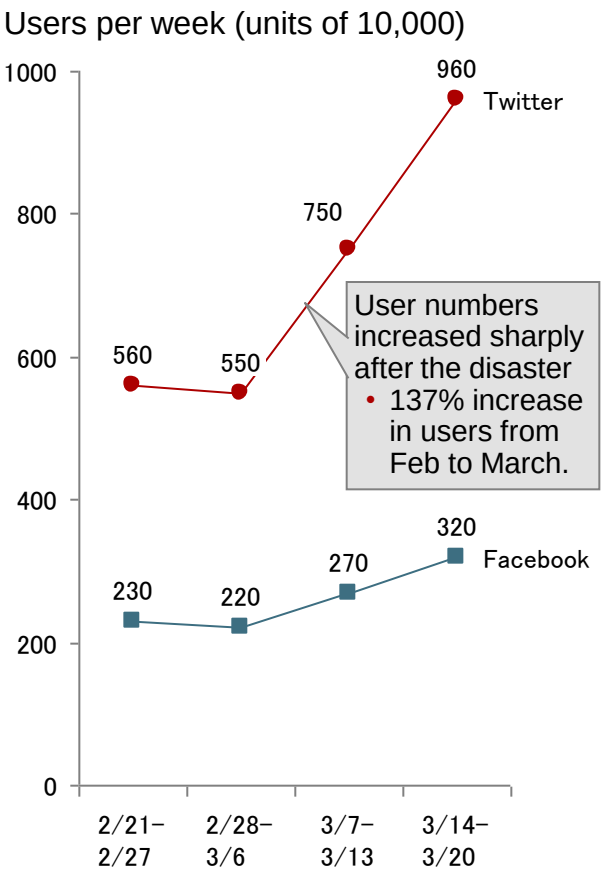
Proportion of those who tried who were able to make contact (n=832)



1. Values are for restrictions on cell phone usage for each provider. For fixed phones, the values were 90%, 90% & 80& respectively. The Boston Consulting Group

Social media played a pivotal role in confirming people's safety and obtaining disaster information

Number of social media users increased sharply



Source: The Boston Consulting Group

Uses of social media (example)

Confirming the safety of someone

Google Person Finder
- photos of evacuation center name lists uploaded via Picasa
- 320,000 postings were made within 1 week

Twitter hash-tags
- call for help: #j_j_helpme
- confirm safety: #anpi

Checking disaster information

Google Crisis Response traffic results map
- Roads where traffic successfully passed through the previous day were shown

Many users valued the social media highly

" I sent a DM via Twitter to my wife, with no expectations, and was surprised we made contact so quickly. I think I was the first in my company to confirm my family's safety."

- Male, 30s

" A gas station was on fire, and black smoke enveloped the area where I live, but I didn't panic after being able to get information on the situation via Twitter."

- Female, 20s

" I was in London studying, but made a plea for help for my parents using Twitter hashtags, someone who read it helped us."

- Male, 20s

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Risk management framework

4 key enablers for risk management setup

From an holistic view take strategic risk decisions
ex) Invest to reduce (operational) risks

Decide on actives changing risk profile in portfolio
ex) Decide on new project or divestment

Daily "operationally" manage risks and protect the organization's value
ex) Daily risk manage operations in a suitable organizational structure

Create transparency on risks in asset portfolio and activities
ex) compile a comprehensive risk register

Source: The Boston Consulting Group

Our challenge 1:"Know"- Risk recognition and proactive search

The Great East Japan Earthquake

Under estimated magnitude of tsunami and risk of nuclear power generation

- Key lessons from past tsunamis had been weathered away
- Insufficient risk estimation of nuclear power generation

	Features	Prerequisite for next stage
Transparency on core risks	• Bottom-up risk maps for core risks • Not necessarily connected • Common basis for communication	• Connect / merge bottom-up identification • Extend risk map from core risks only to "all known risks"
Full transparency on all known risks	• Risk identification institutionalized with central coordination • Group-wide map including risk assessment and risk owners	• Put extra effort in anticipating black swans and low likelihood events • Separate process to challenge assumptions (e.g.: black swans)
Proactive search for new ones	• Key assumptions proactively challenged from risk perspective • Search for low probabilistic and black swan events	

Source: The Boston Consulting Group, Japan PMO Office of Global Communications

Our challenge 2:"Manage"
Operations related to Global Communications

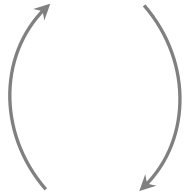
Government / Ministries

Standardized frameworks
- Consistent frameworks roll-outs

Quantitative risk assessment across the nation/government
- Setup quantification procedures
- Introduce/develop quantitative assessment tools

Impact assessment
- Create multiple scenarios for individual risks

Setup/develop emergency governance and procedure



Global Communications

Strengthen multi national language communication and press capability at PMO

Establish a crisis communication procedure/protocol
- Information flow
- Unified contact and message
- Involvement to decision making and communication strategy building process

Source: The Boston Consulting Group, Japan PMO Office of Global Communications

Our challenge 3:"Steer"- Investment and Actions for Emergency

Investment

Develop global communication platform
- Human resources, Press capability development etc,

Establish a process to ensure continuous commitment and investment
- Prevention of key learning of disasters from going into oblivion
- Annual publication of white papers for disaster prevention governance and process

Structure/relation that enable to leverage neutral/third parties
- Scientists , private sectors

Alternative communication route ready for use in future disasters
- social media etc.

Crisis communication

Timely and transparent communication to meet audience's expectation
- Clear message
- Expectation measurement/awareness
- Communication based on impact scenarios in cases

Clear communication of scientific "gray zone"
- Leverage of credibility of neutral/third party scientists
- Simple and plain delivery of the facts and risks

Source: The Boston Consulting Group, Japan PMO Office of Global Communications

Implications and call for action to the global community

1. Establish a process to ensure continuous commitment and investment by the government
- Prevention of key learning of disasters from going into oblivion
- Disaster prevention governance and process with annual publication of white papers

2. Leverage multi-national platforms for global sharing of key learning from natural disasters
- Multi-national platforms to share learning beyond the disasters of its own country
- Sharing of learning from past disasters besides the Japan Earthquake
- Sharing of experience/insights from both public and private sectors

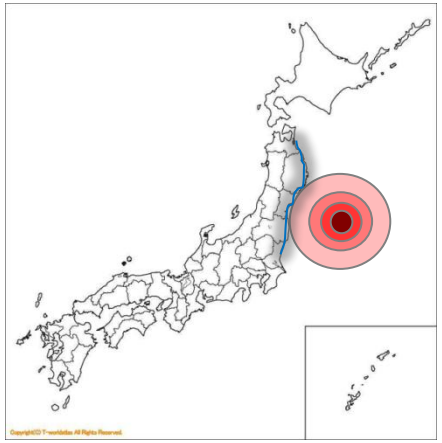
3. Establish a global communication platform in case of disaster to close the communication gaps
- Minimization of unnecessary collateral damage
- Alternative communication route (social media etc.) ready for use in future disasters

4. Clear communication of scientific "gray zone"
- Leverage of credibility of neutral/third party scientists
- Simple and plain delivery of the facts and risks

Source: The Boston Consulting Group, Japan PMO Office of Global Communications

IT lifeline for Disaster Management led by private-public initiatives

The Great East Earthquakes Mar 11, 2011



Lessons learned from the disaster...

Major highlights

Develop the world's most advanced Guidelines on IT lifeline for Disaster Management

Launch new IT lifeline initiatives and services

IT lifeline for disaster management council

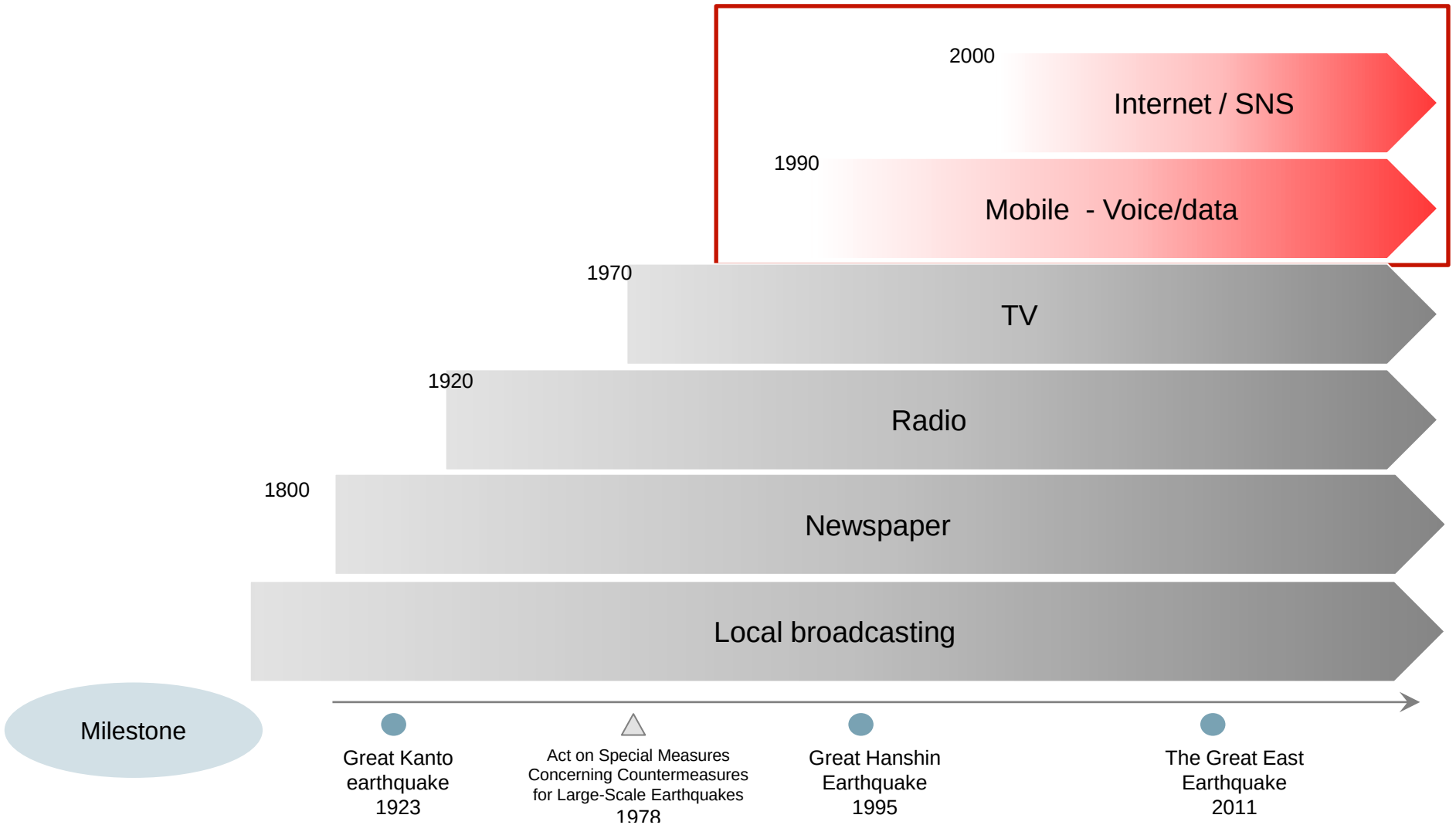
Government of Japan

- Led by Prime Minister Noda and Minister Furukawa
- IT strategic headquarters and across the office and ministries

Private sectors

- Composed of major carriers, internet services, ITS (car navigation) companies and NPOs

Enhancement of disaster management infrastructure in tandem with expansion of media channels



Drawing on the lessons learned from the Great East Japan Earthquake, developing the “Guidelines on IT lifeline for Disaster Management”

Immediate aftermath of earthquake

1. Disclosure and secondary use of government disaster information
2. Collection and public use of grassroots information
3. Development of an emergency dissemination/communications network
4. Extensive drills for information dissemination for disaster management
5. Internationalization of disaster management information protocol
6. Ensuring operation of information infrastructure during emergencies

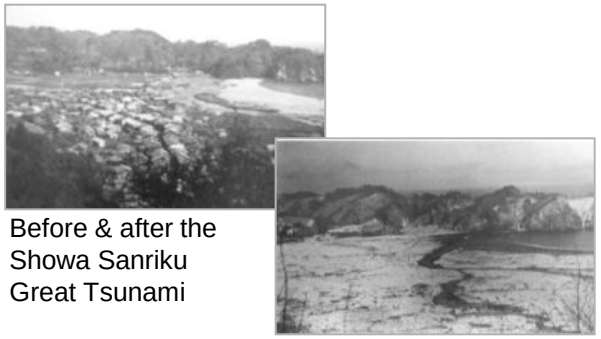
Recovery	Reconstruction
Dissemination of information on supports for disaster-affected people	Revival of communities
Development of recovery and reconstruction-support system DB	Company activities using IT/Reinforced management of social infrastructure
Rebuilding of community medical services	Government information system tailored to disaster risk
Understanding mid- to long-term health conditions of disaster-affected people	Rehabilitation of SMEs in disaster area/creation of new industries
IT utilization support for disaster-affected people	Rehabilitation of agricultural and fishery centers

Key lessons from past tsunamis had been weathered away

Tsunami of similar proportion hit the Sanriku area in 1896 and 1933

Due to the rias coastal characteristics of the region, they have experienced tsunamis before

- 1896 Meiji Sanriku Tsunami
  - magnitude 8.5 earthquake
  - 22,066 fatalities
  - 8891 houses washed away
- 1933 Showa Sanriku Great Tsunami
  - magnitude 8.1 earthquake
  - 1522 fatalities
  - 4885 houses washed away



Before & after the Showa Sanriku Great Tsunami

...people in the Sanriku area built stone monuments to warn their descendants...

Ancestors erected stone monuments marking the point reached by the tsunami, engraved with the warning "Do not build homes below this point"

A high dwelling is peace and harmony for children and grandchildren. Remember the tsunami calamity. Do not build below this point

In 1896 and 1933, tsunami reached this area and the settlement was destroyed, only 2 survived in front, and 4 behind

Precaution is needed no matter how many years pass

Miyako City, Iwate Prefecture

...some people ignored those warnings and suffered from the tsunami

People make decisions based on convenience and choose to ignore the lessons from the past.

- "Since fishing is my only means of earning a living, it would be too much trouble getting to and from work if I built my home on the hill"
- "I know the dangers of tsunami, but don't think one will come in my lifetime"

Homes built below the monument were washed away, and 304 people died.

Ofunato City, Iwate Prefecture

Source: "The Study of Mistakes, "Hatamura Institute for the Advancement of Technology; Tokyo University Earthquake Research Institute, The Boston Consulting Group