# Earthquake Disaster Mitigation

Utilization of advanced technologies and information protects our society from earthquakes




## Hazard

Earthquake Tsunami

## Solution Purpose

Prevention & Mitigation Recovery

## Solution Theme

Research & Investigation Risk Assessment Disaster Prevention Plan Finance & Insurance Infrastructure Technology Information & Communication Technology Products & Goods Education & Training

## Technology Subject

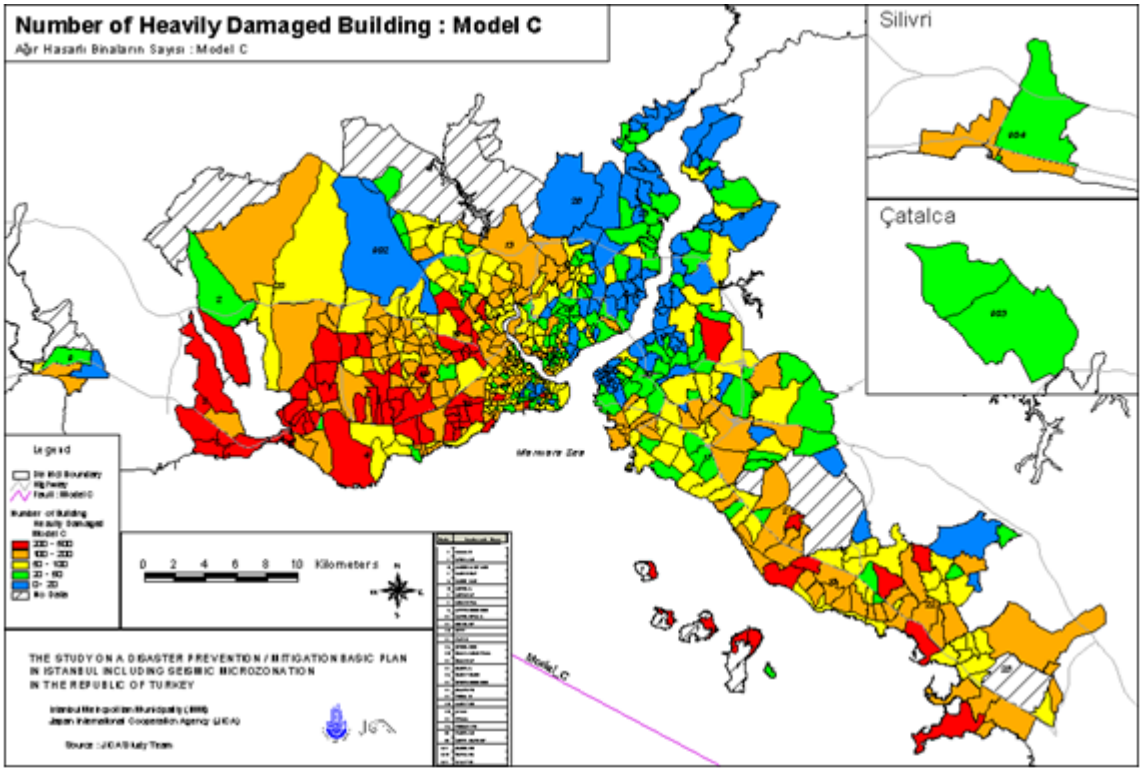
Research Site Investigation Technical Research & Development Hazard Identification Hazard Simulation Risk Monitoring Impact & Damage Simulation Mitigation Plan Business Continuity Plan Insurance River & Basin Dam & Reservoir Sabo Railways Airport Port Essential Utilities Urban Information Gathering Information Analysis & Judgement Machinery & Equipment Human Resource Development Training & Exercises

## Advantages

OYO provides various simulation technologies to understand the phenomena of earthquake and tsunami, and also provides solutions of damage estimation, disaster prevention plan and business continuity plan, etc.

## Solution Illustrated

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| Item | Damage |
|---|---|
| Heavily Damaged Buildings | 59,000 (7%) nos.<br>268,000 households |
| Human Casualties | 87,000 Deaths<br>135,000 Severely Injured |

# Estimation of Heavily Damaged Buildings in Istanbul, Turkey

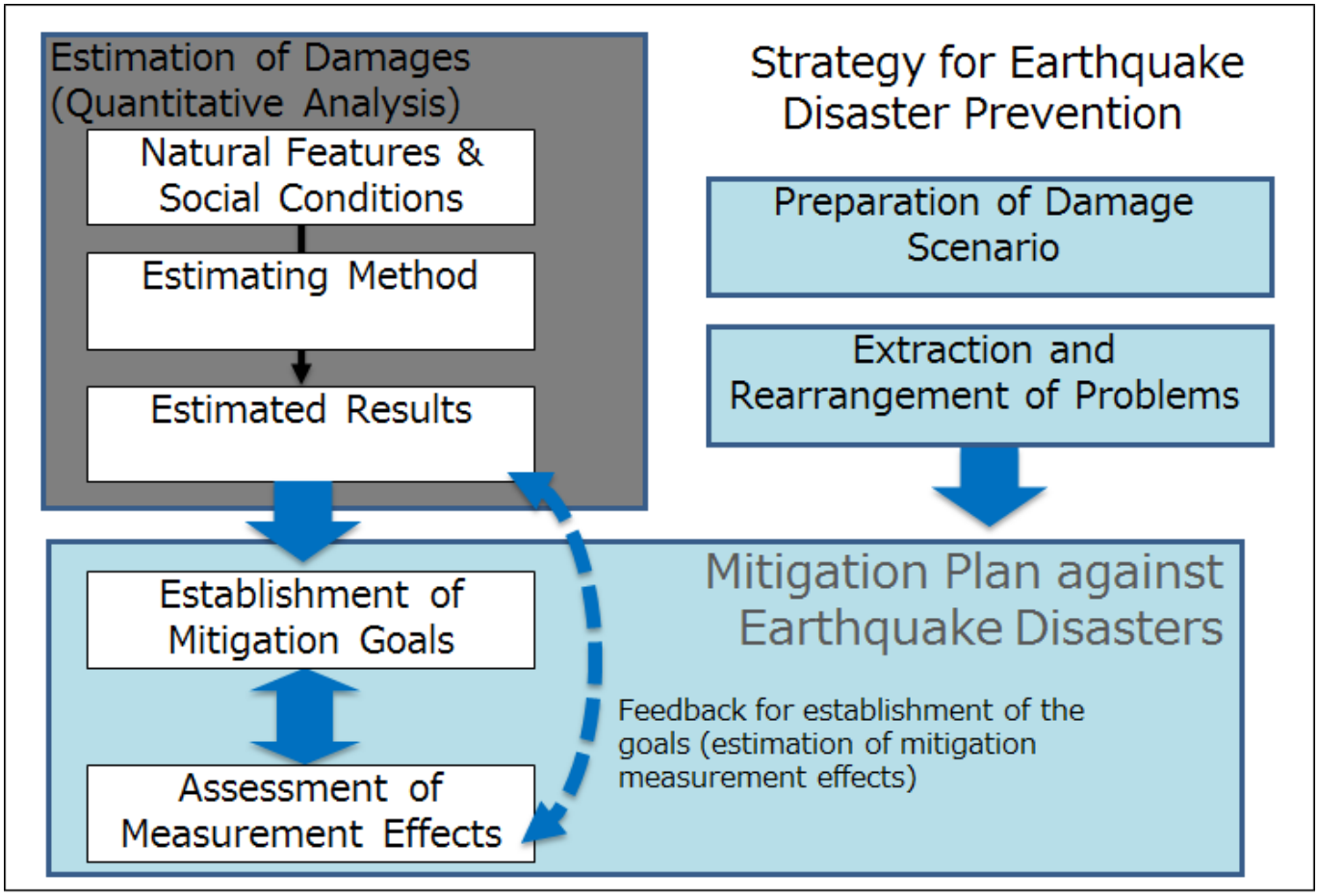
## Background

OYO firstly involved damage investigation of Niigata Earthquake in 1964. Since then, OYO has involved various research on more than 50 natural disasters.
OYO has coped with pursuing questions what geology with what earthquake at what time occurs what damage, and how could it be mitigated. The answers from them are now contributing societies to estimate potential damages from earthquake disasters.OYO also provides variable solutions for planning local disaster management and assessing business continuity at natural disasters.

## Exposition of the Solution

Along with quantitative estimation of damages, we prepare a damage scenario on which time shift of damages is examined. This allows you to extract concerned problems in disaster prevention / mitigation and confirm necessary preparation concretely.

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## Achievements of Examples

OYO has conducted more than 160 jobs in both domestic and overseas from 1992.

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| Year | No.of the job | Remarks |
|---|---|---|
| 1992 | 7 | |
| 1993 | 7 | |
| 1994 | 4 | |
| 1995 | 19 | Kobe Earthquake |
| 1996 | 13 | |
| 1997 | 8 | |
| 1998 | 4 | |
| 1999 | 1 | |
| 2000 | 2 | |
| 2001 | 3 | |
| 2002 | 4 | |
| 2003 | 8 | |
| 2004 | 9 | |
| 2005 | 7 | |
| 2006 | 4 | |
| 2007 | 5 | |
| 2008 | 8 | |
| 2009 | 6 | |
| 2010 | 10 | |
| 2011 | 9 | Great East Japan Earthquake |
| 2012 | 15 | |
| 2013 | 11 | |
| Total | 164 | |

## Corporate Profile


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