

Socially-integrated Technological Solutions for Real-time Response and Neighborhood Survival After Extreme Events

#1951418

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Natsuki Kitagawa, Disaster Mitigation Research Center Nagoya University, Japan



Community Partners

Laurelhurst Earthquake Preparedness (LEAP) Network, Laurelhurst, WA

Matt Aullick, City of Seattle Emergency Management
Kevin Goodrich, Director of Public Works, Westport

Hiroki Umemoto, Chief of Regional Disaster Prevention, Disaster Prevention and Crisis Management Bureau, City of Nagoya, Japan

Sendai Bosai Leader Network, City of Sendai



Project Overview

Residents shall be able to share information & resources in a timely manner to carry out essential activities

RESEARCH TASKS



Community surveys



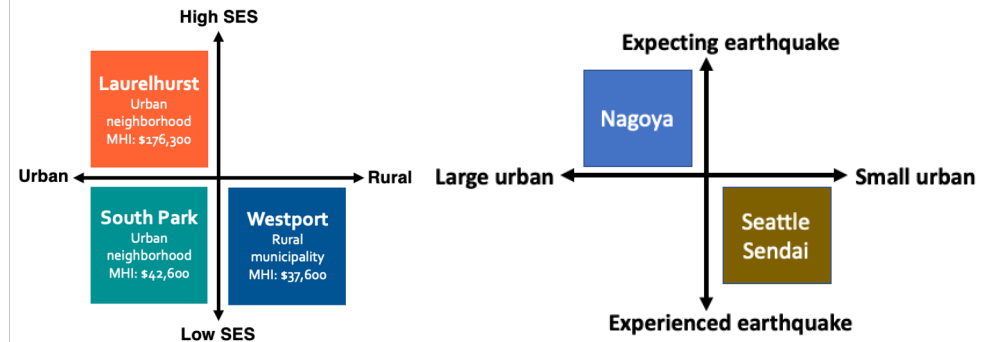
Interviews and focus groups

Partner communities: Range of urban/rural, socioeconomic status
 "Community" defined by geography, identity



Project Vision

- Co-design with local partners robust community-based communications, information sharing and resource sharing technologies that can be adopted by different communities and respond to different types of disruptions;
- Pilot test technologies in at least two different communities



Project Overview

Motivating scenario: “The really big one”



ANNALS OF SEISMOLOGY JULY 20, 2015 ISSUE
THE REALLY BIG ONE
An earthquake will destroy a sizable portion of the coastal Northwest. The question is when.
By Kathryn Schulz
July 15, 2015

www.newyorker.com/magazine/2015/07/20/the-really-big-one

- Cascadia Subduction Zone magnitude 9.0 earthquake (Schultz 2015)
- WA State’s Emergency Management Division: prepare for two weeks
- Disasters are inherently geographical; community needs vary with context
- Communities will be isolated; limited ability to carry out everyday activities
- Informing disaster preparedness efforts of community-based organizations



- Laurelhurst, Seattle
- South Park, Seattle
- Westport, WA



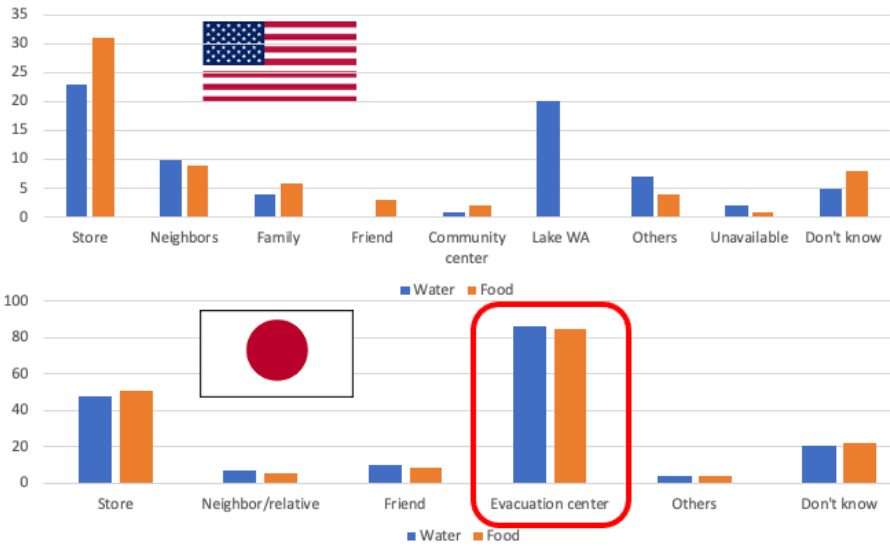
- City of Nagoya
- City of Sendai

PG Activities

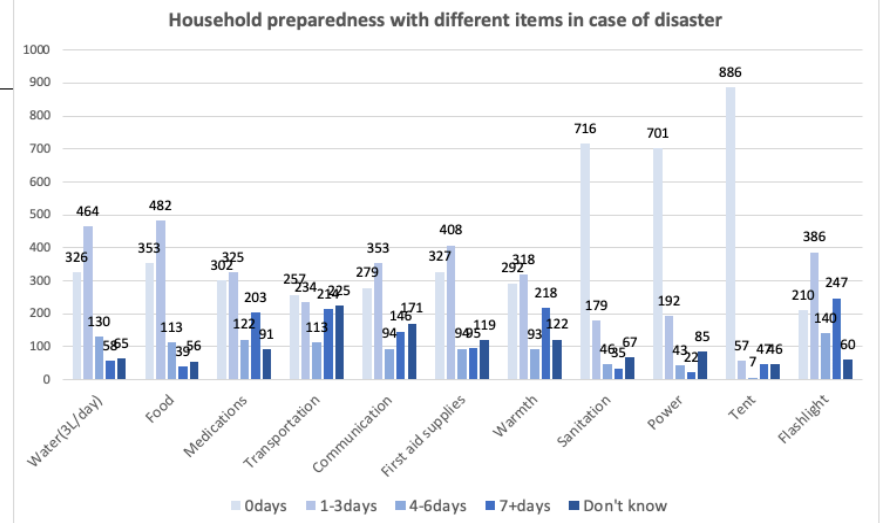
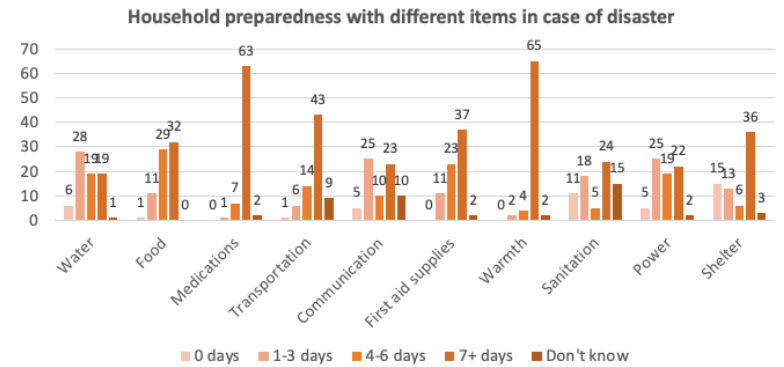
- **Community-based surveys in WA and Japan**
- **Focus groups and interviews in WA and Japan**
- **Analyses of results (surveys and interviews)**
- **Technology (information-sharing and resource-sharing) development**
- **Team building between UW and Japan**
- **Pilot test designs**

Project Update: Community-based Surveys

Q5 If you did not have the items listed below, where do you think you would go to get them in the case of a disaster (such as an earthquake)?



Q3 For each item listed below, please tell us for how long your household is prepared to be on its own in the case of a disaster.



Project Evolution

- *We learned that residents in the US anticipate to rely on stores and their neighbors for information and resource sharing during a disaster, while the Japanese expect help from central government within 3 days;*
- *We learned that residents on both sides have varying levels of willingness to share different resources, and with people of varying social ties;*