

# Ready or Not Here Comes the Crowd



**COMMONS LAB  
WOODROW WILSON CENTER  
WASHINGTON, DC**

**PRESENTED TO THE SUBCOMMITTEE ON  
DISASTER REDUCTION**

**02.02.12**

# Crisis Informatics



- **Definition:** An integrated approach to the technical, social and informational aspects of crisis
- **Scope:** Full life-cycle of a crisis
- **Focus:** Needs and contributions of the public

See Hagar (2006, 2010), Palen (2007, 2011)

# Opportunities



- Public safety and crisis information
- Public engagement
- Emergency warnings and alerts
- Requests for assistance
- Locating family members
- Situational awareness
- Damage estimates
- Citizen-based science

# Citizen-based Science



- **USGS National Earthquake Information Center**
  - Did You Feel It? Citizens contribute to earthquake science
  - Twitter monitoring for earthquake detection
  - Crowdsourcing seismometers

# Operations and Response



- Review of the 2010-11 Flood Warnings and Response – State Government of Victoria, Australia (2012)
- **Disaster Relief 2.0** – UN Foundation and Harvard Humanitarian Initiative (2011)
- **2011 Social Media + Emergency Management Camp: Transforming the Response Enterprise** – CNA (2011)

# Digital Volunteer Ecosystem



- MapAction
- GIS Corps
- CrisisMappers
- Stand By Task Force
- CrisisCommons
- Humanity Road
- Ushahidi
- Swift River
- Sahana
- Crowdfunder
- Humanitarian Open Street Map
- Open Aerial Map
- Geeks Without Bounds
- Tweak the Tweet

- Project Epic – UC Boulder
- Harvard Humanitarian Initiative
- Tufts University Fletcher School
- American Red Cross
- ICT4Peace
- NetHope
- World Bank
- UN OCHA and UN-SPIDER
- NDU STAR-TIDES
- ESRI, Google, etc.
- Facebook, Twitter

# Digital Volunteer Challenges



- Volunteer management and sustainability
- Cross training
- Preparedness and prioritization
- Data scramble
- Data licensing interoperability
- Decision-makers' needs assessment
- Transition
- Impact evaluation framework
- Overall coordination

# Research Agenda (Draft)



**Challenge 1:** Technology-mediated behavior

**Challenge 2:** Data integration and system interoperability

**Challenge 3:** Information extraction and natural language processing

# Research Agenda (Draft)



**Challenge 4:** Information security and reputation systems

**Challenge 5:** Legal and policy issues

**Challenge 6:** Ethical issues & humanitarian best practices

# Legal and Policy Issues



- Liability
- Cyber-security
- Privacy
- Human security
- Data ownership and licensing

- Access
- Open records
- Records Management
- Paperwork Reduction Act
- E-Gov Act of 2002

# Commons Lab



- Communia Blog
- Panels and roundtable discussions (Feb 16)
- Research agenda and survey
- Report on liabilities of digital volunteers
- Forthcoming case studies
  - Earthquakes, Hurricane Irene, Public Health, ...
  - Smart and Resilient Cities
  - User-Centered Design for Humanitarian Response
  - Crowdsourcing for the National Broadband Map

# Commons Lab



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