DIGITAL CONVERGENCE, EMERGENCY MANAGEMENT & RESILIENCE
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DIGITAL CONVERGENCE

GLOBAL TECH STATS 2014

	Developed World	Developing World
40% of the world online	78%	32%
96% Mobile-cellular penetration rates	121%	90%
32% Mobile-broadband subscriptions (ITU, 2014)	84%	21%

670 million Twitter users
1.3 million Facebook users
(Statistics Brain, 2014)

IN CANADA
2/3 using Social Media (Macleans, 2013)
93% Facebook users (Huffington Post, 2013)

SOCIAL MEDIA USE IN DISASTERS
How social media is used in disasters
64% of Canadians use social media. Results of an Ipsos Reid survey of 1,000 Canadians commissioned by the Canadian Red Cross
54% of respondents would use social media to alert loved ones that they are safe in an emergency.
Twitter friends: did you feel that? I think it was an #earthquake. Thankfully everyone is ok.
63% of Canadians think emergency responders should be prepared to answer a call for help on social media.
1 in 3 think help would arrive... many expect it within an hour.
(Canadian Red Cross, 2012)

> "People need **information** as much as water, food, medicine or shelter. Information can save lives, livelihoods and resources. Information bestows power"
> (IFC, Red Cross, 2005, p12)

> "One of the greatest lessons learned from Hurricane Sandy was the need to identify how **communities can help themselves**"
> (McKay, 2013)

DIGITAL RESPONSE

THE DIGITAL RESPONSE

DIGITAL RESPONDERS + DIGITAL TECHNOLOGIES

Digital Technologies:
Mobile / Smart phones
Laptops
Tablets
GPS units
Drones / UAVs
Radio
Software / Apps
Social Media / Blogs

Affected Community
Seek help
Provide help

Digital Volunteers
(Aka Volunteer & Technical Communities (V&TCs))
Crisis Mapping
Needs Assessment
People finding
Translation
Situation Reports
Media Preparation
Routing of Aid

Diaspora
Seek help
Provide help

Digital Activists
Citizen Journalism
Information Activism
Blogging
Hacktivism
Clicktivism

RISKS TO DIGITAL RESPONDERS

> "Approximately 1 billion Internet users live in countries (40 of them) with **regular censored internet** (2.5 billion users in total) 40% of the world"
> (Diebert, 2013, p37)

Of 102 Mexican bloggers and journalists interviewed, **70%** have been **threatened or suffered attacks** due to their work; **96%** report knowing colleagues that have been attacked (Sierra, 2013)

LEVEL OF DIGITAL RESPONDER PREPAREDNESS **LOW**

DIGITAL
Surveillance / Breach of Privacy
Website Attack/Smear Campaigns
Information censorship
Information obstruction
Information manipulation
Government attacks (legal/non-legal)
Trolling
Phishing
Compromise of personal data

PHYSICAL
Detention / Arrest
Physical attack / abuse
Disappearance / Kidnapping
Hardware damage
Hardware stolen
Harm to family
Natural Disaster

PSYCHOSOCIAL
Intimidation tactics
Accusation of espionage
Reputation Damage
Humiliation (theft of personal data)
Fear for self / loved ones

CHALLENGES FOR DIGITAL RESPONDERS

- Low knowledge of EM & Resilience
- Limitations with donor funding
- Insufficient resources for planning
- Current practices don't align with digital response context
- Need for better EM preparedness practices (PLAN aka Fantasy Document)
- Role of technology is complex
- Emergency Classifications: NATURAL HUMAN INDUCED TECHNOLOGICAL

NEED FOR RESILIENCE

> "A **resilient organization** is one that not only survives, but is also able to thrive in an environment of **change** and **uncertainty**"
> (Seville et al., 2008, p2)

Organizational resilience practices shift the focus from planning for emergencies to managing uncertainty in daily operations

> "Organizational resilience contributes to broader resilience of **social systems**"
> (Buckle, 2006)

Resilience Indicators
Leadership
Staff Engagement
Situation Awareness
Decision Making
Innovation and Creativity
Effective Partnerships
Leveraging Knowledge
Breaking Silos
Internal Resources
Unity of Purpose
Proactive Posture
Planning Strategies
Stress Testing Plans
(Resilient Organizations, 2014)

CHALLENGE FOR RESILIENCE

Network → Resilient Network

GAP Organizational resilience literature does not account for convergence, developing world, and distributed nature

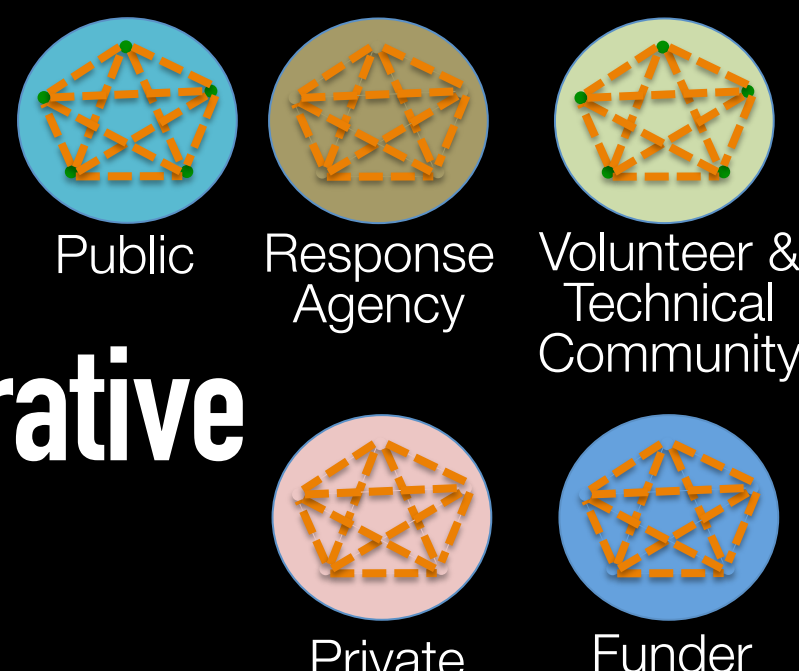Resilient Organization ? Vulnerable Organization

RESEARCH QUESTION
How is resilience assessed and developed in digital civil society in high-risk contexts using a networked approach?

RESEARCH PROJECT

1. Case Study
Using Utilization Focused Evaluation to assess and explore the development of resilience in a digital activist community in a networked project

2. Comparative Study
Public
Response Agency
Volunteer & Technical Community
Private
Funder

3. Model Development