



Becoming a Better (Digital) Humanitarian

MOBILISE team



UTHM
Universiti Tun Hussein Onn Malaysia



Cabinet Office



GREATER MANCHESTER



Environment
Agency



GREATER MANCHESTER PREPARED



SECURE
INFORMATION
ASSURANCE

CATAPULT
Satellite Applications



Outline

- What/who is a Humanitarian?
- Past
- Present – Disaster Response Cycle
- Examples of Community Engagement platforms
- Digital Humanitarianism

What/who is a Humanitarian?

humanitarian

hjuˌmænɪˈteɪəriən/

adjective

1. concerned with or seeking to promote human welfare.

"groups sending humanitarian aid"

synonyms: compassionate, humane;

noun


1. a person who seeks to promote human welfare.


synonyms: philanthropist, altruist, benefactor, social reformer, do-gooder, good Samaritan;

historical almsgiver;

Kashmir Earthquake 0850hrs 8th October 2005

- Developed to address 2 of the major problems of disaster response: rapid dissemination of information and real-time coordination.
- It provided town-level demographic information (i.e. # of people, roads & schools) for the affected region.


Relief Information System for Earthquakes - Pakistan (BETA)




Home
VILLAGE INFO
BULLETIN BOARD
ADD NEW INFORMATION
MAPS
FORMS
Donation Links
GOP Update
HELP/FAQ
THE RISEPAK TEAM
Contact Us

This Site provides and gathers Demographic, Disaster, Access, and Assistance data and maps on all Earthquake Affected Villages to Help Coordinate Relief Efforts

A powerful 7.6-magnitude earthquake at 8:42 AM on Saturday 8th October 2005 has claimed many lives in Northern Pakistan. 80 percent of the affected areas are rural and there is little information about them.

This information-sharing web portal compiles detailed demographic data, damage, access and relief updates at the village/town level to ensure that no one is overlooked in the relief efforts. The information is provided in a flexible and searchable format and is based on data from population statistics, satellites, geographical systems, and relief agencies, workers, and local officials. The portal is maintained by a consortium of experts from US and Pakistani Universities, the World Bank, NGOs, and the private sector, with support from the Government of Pakistan.



ANY INFORMATION FROM RELIEF WORKERS, VOLUNTEERS, THE GOVERNMENT AND THE MEDIA NEEDS TO BE POSTED IMMEDIATELY YOU CAN DO THIS BY [POSTING A NOTICE ON THE WEBSITE](#), CALLING US AT 0301-4573534, SENDING US A TEXT MESSAGE AT 0301-4573531, 0301-4573532, OR FAXING US AT 042-5894990.

TO FIND OUT HOW YOU CAN VOLUNTEER TO HELP RISEPAK AND/OR BECOME PART OF THE RISEPAK TEAM [CLICK HERE](#).

Important links/buttons

- Information DataBase
- Bulletin Board
- Add New Information

How to Help

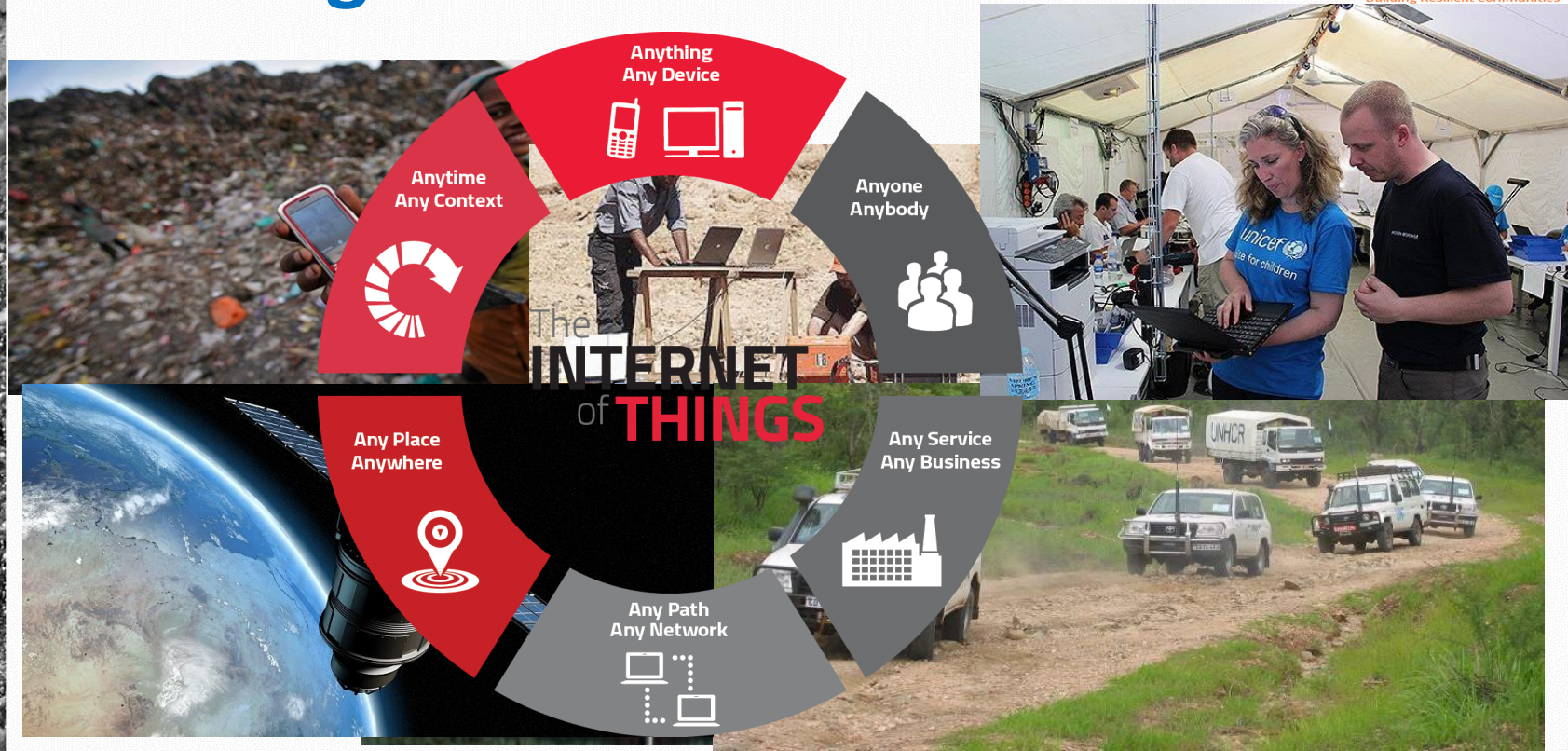
- I am in a village and have some information about this village. [What should I do?](#)
- I am a relief worker with an NGO. We are distributing relief in some villages. [What should I do?](#)
- I am a volunteer/relief worker. We want to know what village to go to. [What should I do?](#)

Disclaimer

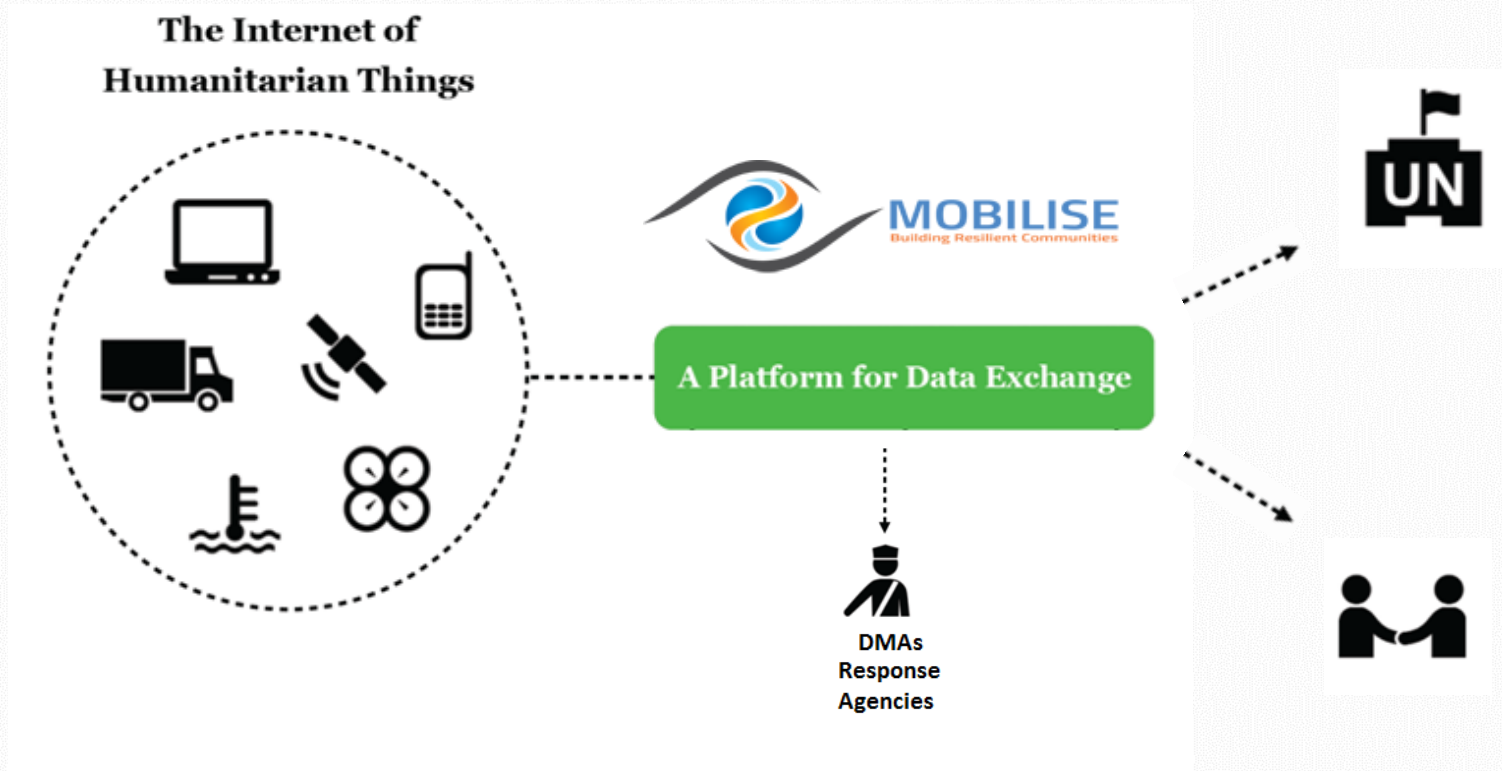
We have no means of verifying reports from the ground or elicited from our notice-boards. We cannot accept responsibility for inaccurate information given through the services made available on this site. Please use the site resources responsibly.

Visitor Counter: **038831**

Digital Humanitarianism



Mobilise platform



How can data generated by IoT support response efforts?



Response Cycle



MONITORING SITUATIONS



CRISIS

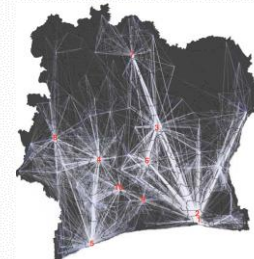


Assess vulnerability and preparedness
e.g. Environmental sensor reporting on frost risk in Kenya

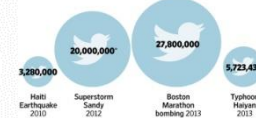


Example 1

Anticipate trajectory of evolving disaster
e.g. Phone data mapping population movement in Ivory Coast

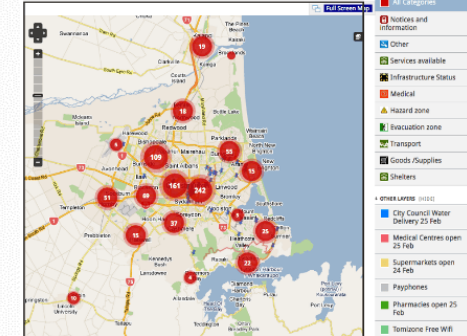


Measuring the Twitter Storms
Total Tweets during emergencies



*Includes five-day period covering the approach and aftermath of the storm.
Sources: International Journal of Information Management; Pew Research Center
THE WALL STREET JOURNAL

Click on map icons to see local reports

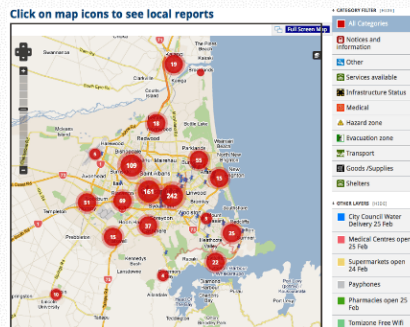


e.g. Social media tweets or posts regarding developing situation in New Zealand earthquake

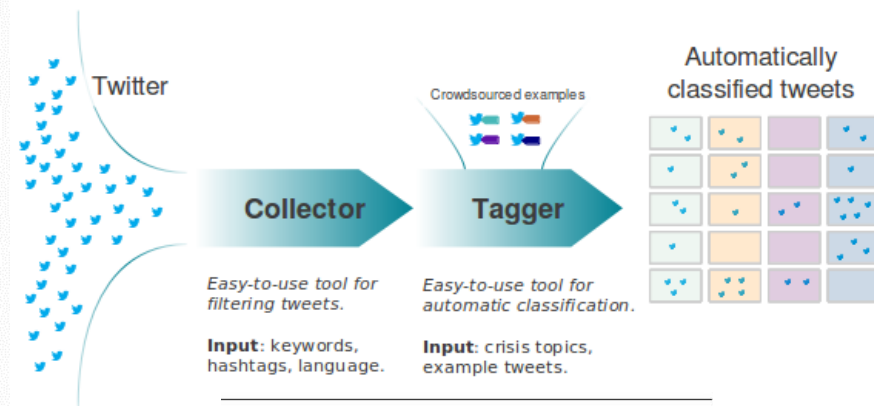
1. Ushahidi: Tweets in Disaster Response

Ushahidi (Meir, 2015)

- ❖ Founded 2008
- ❖ Launched by Kenyan entrepreneurs
- ❖ Estimated 90,000 projects worldwide
- ❖ Used in 159 countries and 31 languages

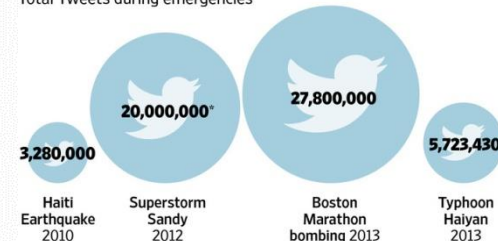


Artificial Intelligence for Disaster Response (AIDR)



Measuring the Twitter Storms

Total Tweets during emergencies



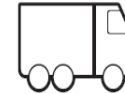
*Includes five-day period covering the approach and aftermath of the storm.

Sources: International Journal of Information Management; Pew Research Center



CRISIS

PLANNING MISSIONS



DEPLOYMENT

Communicate with victims and responders
e.g. Emergency updates sent from DMC to
public and responders



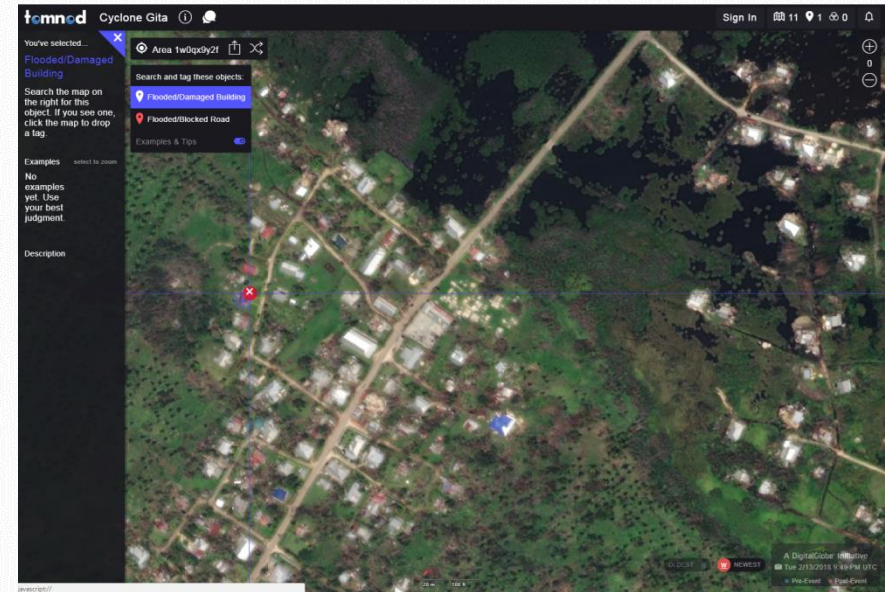
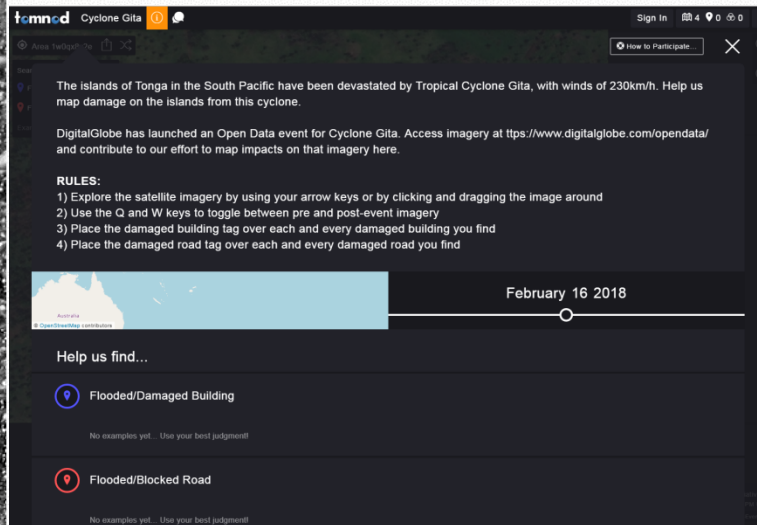
Example 2

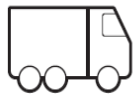
Evaluate physical environment
e.g. Satellite imagery from Turkey and Japan
showing earthquake pre-post damage



2. Tomnod: Using Crowd sourcing to sort Satellite data for damage assessments

<https://www.tomnod.com/>





DEPLOYMENT

COORDINATED ACTION

Track workers and supplies

e.g. Vehicle trackers monitoring distribution of goods



Example 3

Report on the situation

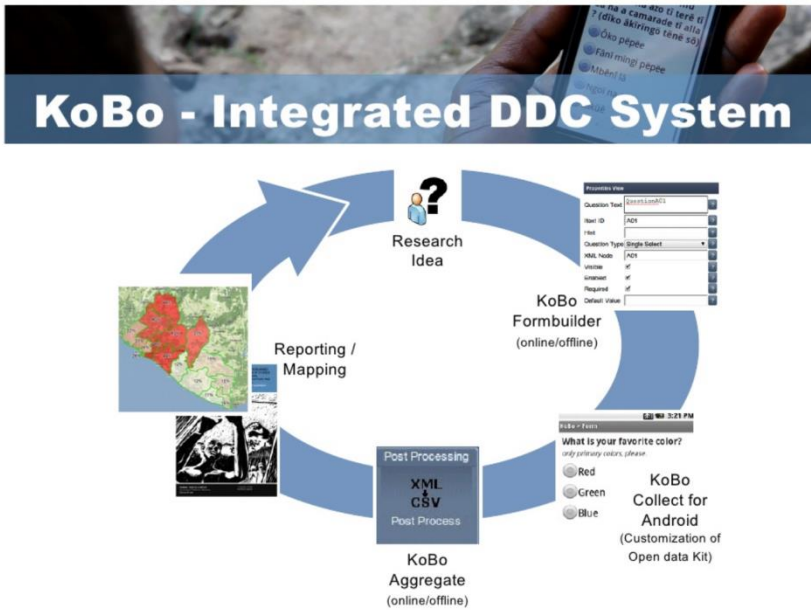
e.g. Flood affected people registration in the field in Pakistan



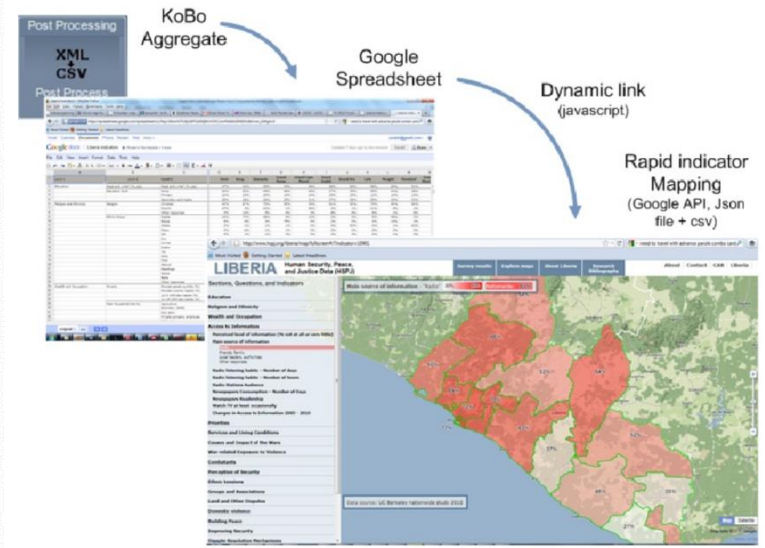
e.g. MOBILISE post disaster impact reporting app

3. KoboToolbox: Using Crowd sourcing for situational awareness

Data collection through



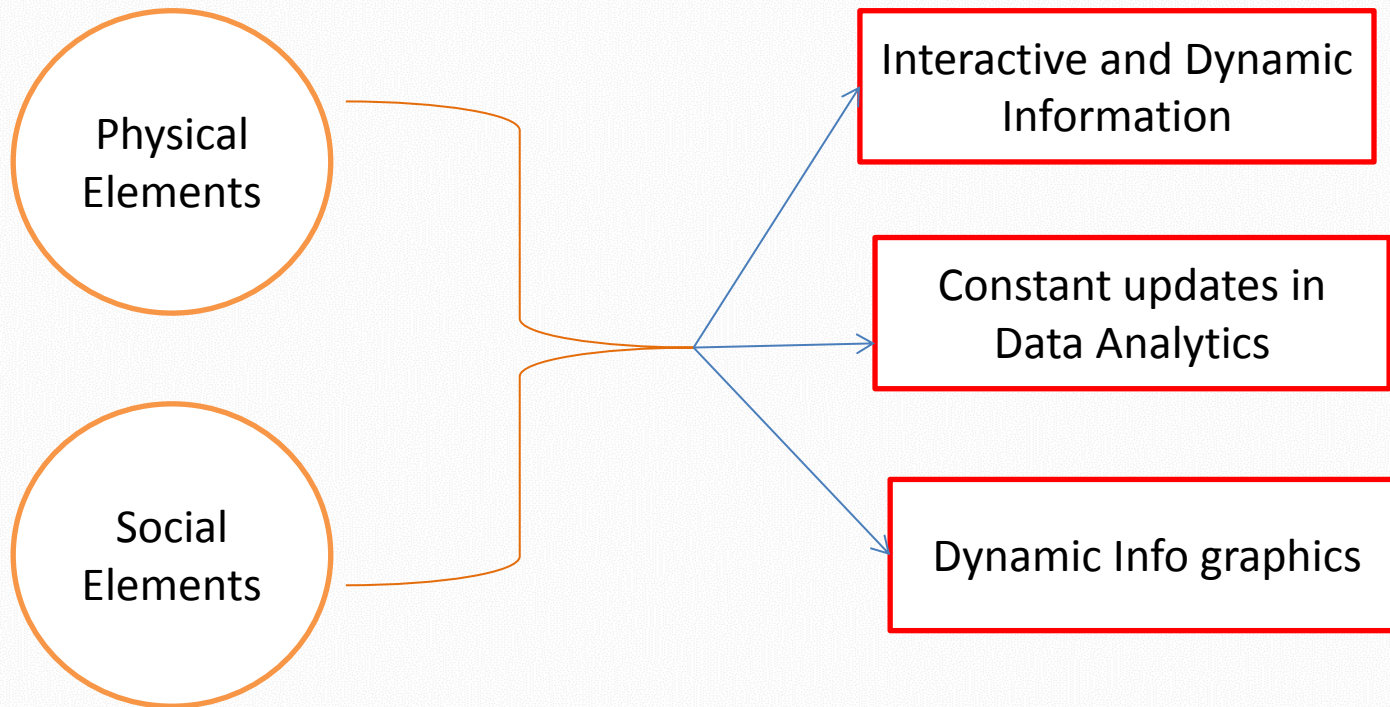
KoBoMap allows you to display the results of your research on a map with user selectable indicators.



Other Tools

Platforms (Authors)	Preparedness	Response	Recovery	Open Source	Mobile App
City-Share (Ludwig et al., 2017)	-	✓	-	-	✓
TwitInfo (Marcus et al., 2011)	-	✓	✓	✓	-
Twitcident (Abel et al., 2012)	-	✓	✓	-	-
Ushahidi (Okolloh, 2009)	✓	✓	✓	✓	✓
Mobile4D (Frommberger and Schmid, 2013)	✓ (Early warnings)	✓	✓	-	✓
CROSS (Chu et al., 2012)	✓	✓	✓	-	✓
OpenStreetMap (Poblet et al., 2014)	✓	✓	✓	✓	✓

Possible Outcomes



Digital Humanitarian Network



Members



Thank you



“The change has come – and we (the disaster response agencies in the public sector) need to embrace the change from analogue to digital in our processes if we are to do our jobs better.”

M.Khalid, DG, PDMA, Chair Steering Committee (Pakistan), MOBILISE project

