MapWoW! for Resilient Asset Management

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Natural Disasters: 2007-2017

- $1.6 T in damage
- 700,000 people killed
- 1/3 of Earth’s population affected

... how can we use technology to reduce this?
Dominica aftermath Hurricane Maria, 2017
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- [https://www.youtube.com/watch?v=Hkn1jYP0Nmg](https://www.youtube.com/watch?v=Hkn1jYP0Nmg)
Houston aftermath Hurricane Harvey, 2017
Vulnerability of assets are not readily available

Good understanding of hazard

Models are getting better

However, data about the assets are hard to get

... MapWoW! provides comprehensive view of the assets
Resilience starts with vulnerability mapping
Haiti - Road Asset Vulnerability Monitoring for Climate Resilience
No easy way to understand:

- Potential damage and disruption before an event
- Actual damage, loss and disruption after the event
- Insurance claim/reconstruction costs

According to Insurance Information Institute, 16 insurers failed after Hurricane Andrew in 1992

“Concurrently, much – indeed, perhaps most – of the p/c world would be out of business,” he wrote, referring to property and casualty insurers.
MapWoW!

MapWoW! is mobile data collection solution that can help to collect georeferenced photos of the assets, emerging events and emergencies.

The data collected from MapWoW! readily integrates with existing the GIS platform where it can add value to monitor assets, rapidly changing situation and take decisions about these emerging situations.
1. Mobile App

2. Visualization and GIS integration

3. Project and user administration
   (complete backend system)
Mobile app

Available both for Android and iOS

Downloadable at Google Play Store

MapWoW!
Mobile app

MAP WOW
See your projects here.

This section chooses the network

This section chooses the type

Auto  Manual

DATA UPLOAD
- WiFi Only
- WiFi and Cellular Data

CHANGE PASSWORD
- Old Password
- New Password
Mobile app

**Capture by**

- **Time**
- **Distance**

**Data Upload**

- **Wifi Only**
- **Wifi and Cellular Data**

**Change Password**

- **Old Password**
- **New Password**
Mobile app

Belize and San Pedro

25th April, 2017
Status: In Process

Upload (2004/2258)

1928 photos (Continue) 98.15 miles
App working on moving vehicle
Data taken from the moving car
Data taken from the boat
Data collection from a small aircraft
Data acquisition from a small plane
MapWoW! data and Google Satellite
MapWoW! data at full resolution
Detail building characteristics can be extracted
Additional MapWoW! data
Mapping hard to reach places (trails, narrow alley etc.)
Using mapWow! to capture road incidence/ emergency

Road flooding from a construction site after heavy rain

Fallen tree after heavy rain
Visualization and GIS integration
Navigating through collected data

Tool for navigation
Ability to tag pictures – triggering maintenance/monitoring
Live Demo

https://mapwow.spatialedge.net/
MapWoW! is an Enterprise System

Create a new project

Create a new user

Assign a project to the new or existing user
Data review and edits

Post-processing/Admin module
Data publication into GIS system

Review and approve
Live Demo

https://admin.mapwow.spatialedge.net/system/login
Bishwa Pandey

More than 20 years working in GeoSpatial Intelligence/ Managing natural disaster risk

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Team of 25 developers, data scientists and product manager

Offices in:

• Stone Ridge, Virginia
• Bogota, Colombia
• Kathmandu, Nepal