

MapWoW! for Resilient Asset Management

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Founder

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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




Dominica aftermath Hurricane Maria, 2017

- <https://www.youtube.com/watch?v=Hkn1jYP0Nmng>



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

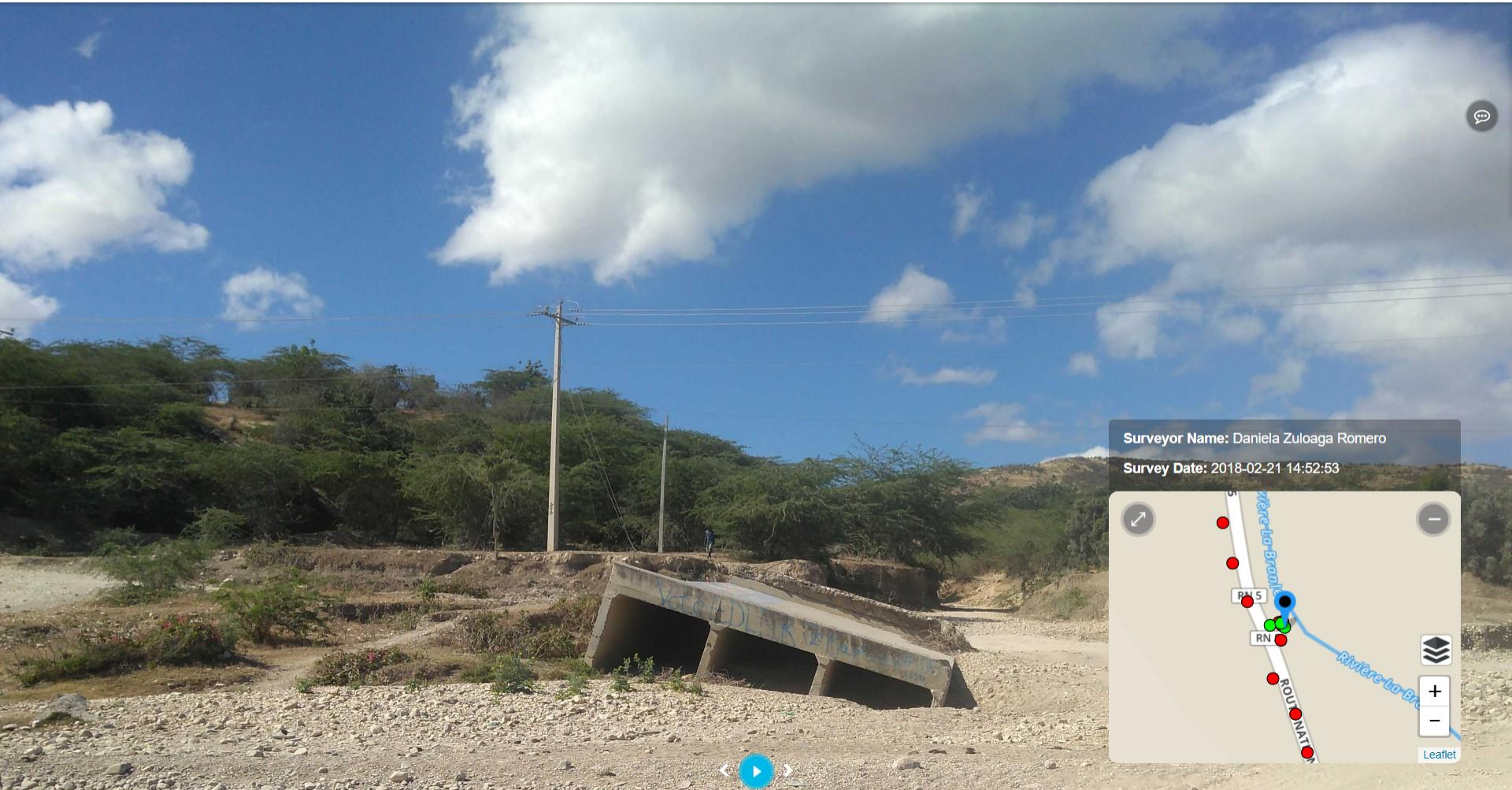
... MapWoW! provides comprehensive view of the assets



Resilience starts with vulnerability mapping



Haiti - Road Asset Vulnerability Monitoring for Climate Resilience



Surveyor Name: Daniela Zuloaga Romero

Survey Date: 2018-02-21 14:52:53

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



25 Years Later: How Flori... x

Secure | <https://www.insurancejournal.com/news/southeast/2017/08/24/462204.htm>

Andrew's Impact on the Industry

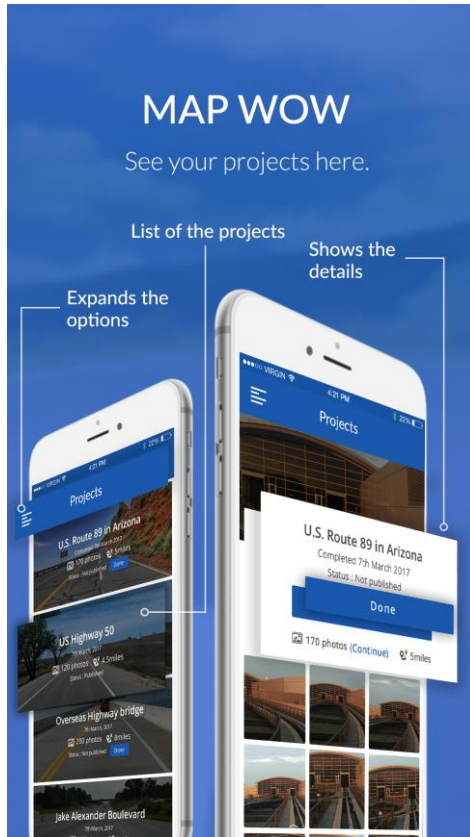
Not all citizens and businesses got back on their feet after Hurricane Andrew, a category 5 storm was the costliest disaster in U.S. history when it struck southern Florida in August 1992, then Louisiana with overall damage at the time of \$15.5 billion, according to the [Insurance Information Institute \(I.I.I.\)](#).

And when all was said and done, the industry was not prepared to handle the claims. Andrew was responsible for the failure of at least 16 insurers in 1992 and 1993, I.I.I. reports.

<https://www.reuters.com/article/us-berkshire-buffett-insurance/buffett-says-berkshire-can-handle-400-billion-mega-catastrophe-insurance-businesses>

"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.

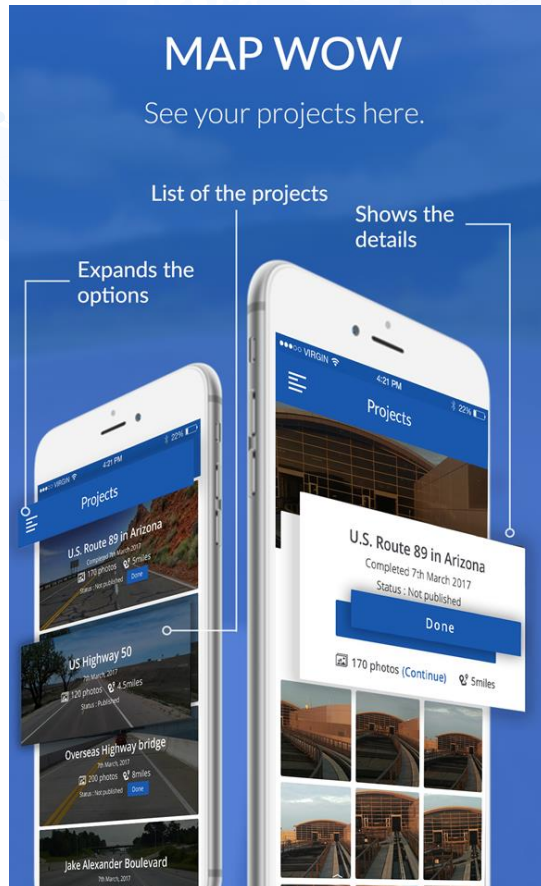


1.Mobile App

2.Visualization and GIS integration

3.Project and user administration
(complete backend system)

Mobile app

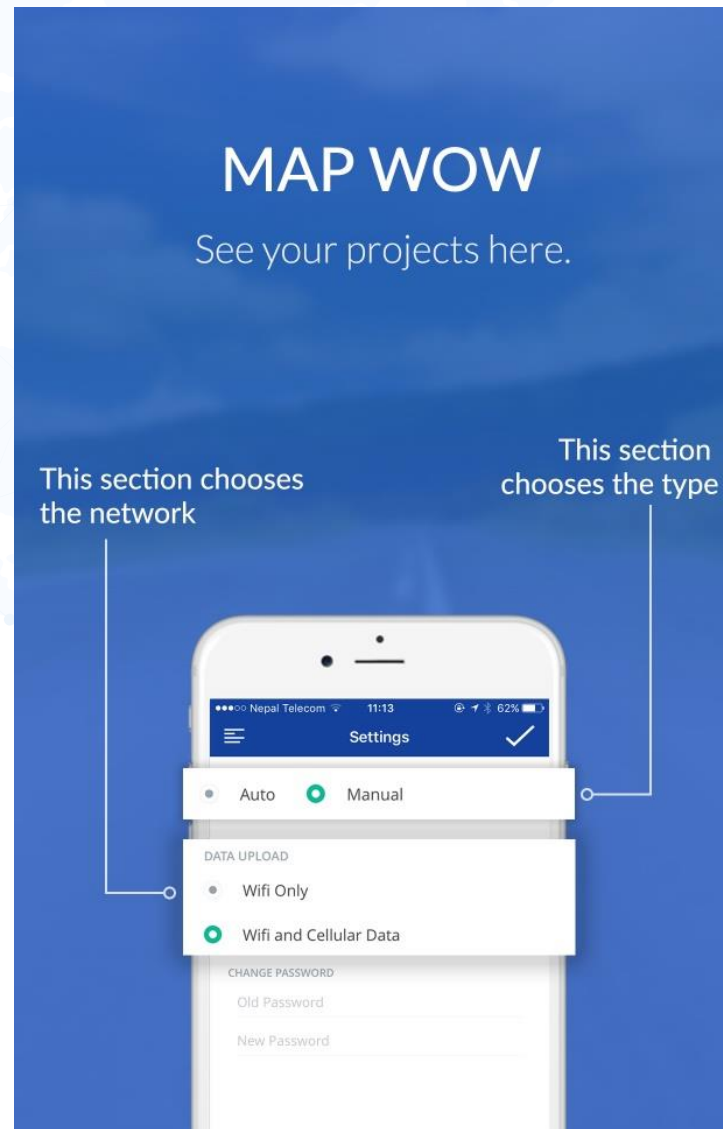


Available both for Android and iOS

Downloadable at Google Play Store

MapWoW!

Mobile app



Mobile app

Settings

CAPTURE BY

Time Distance

2m 4m 6m 8m 10m

DATA UPLOAD

☒ Wifi Only

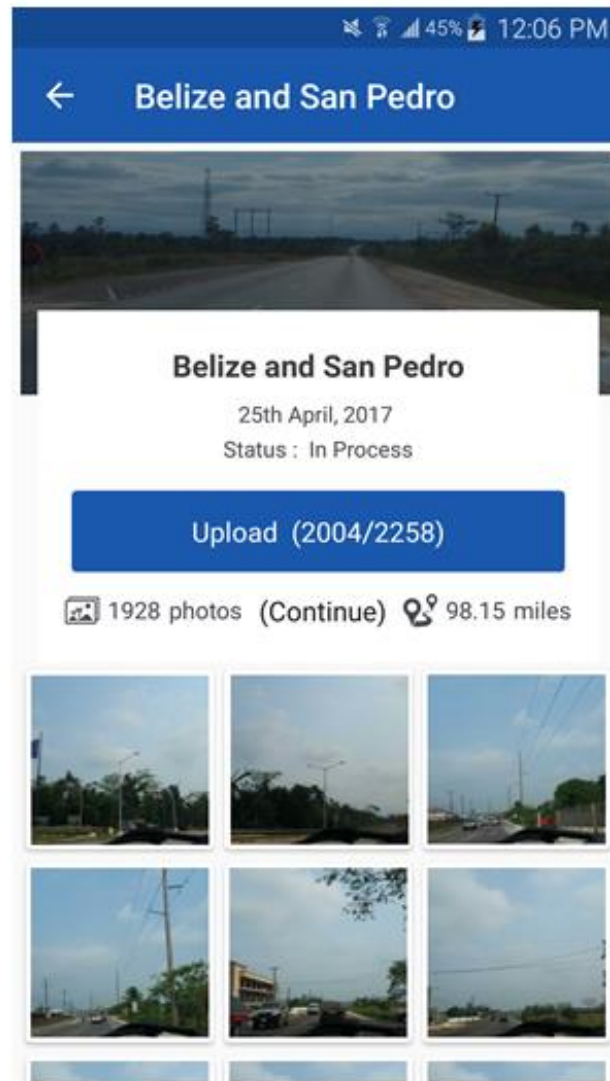
☐ Wifi and Cellular Data

CHANGE PASSWORD

Old Password

New Password

Mobile app



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



Same area in Google Satellite



Same area in DigitalGlobe Satellite



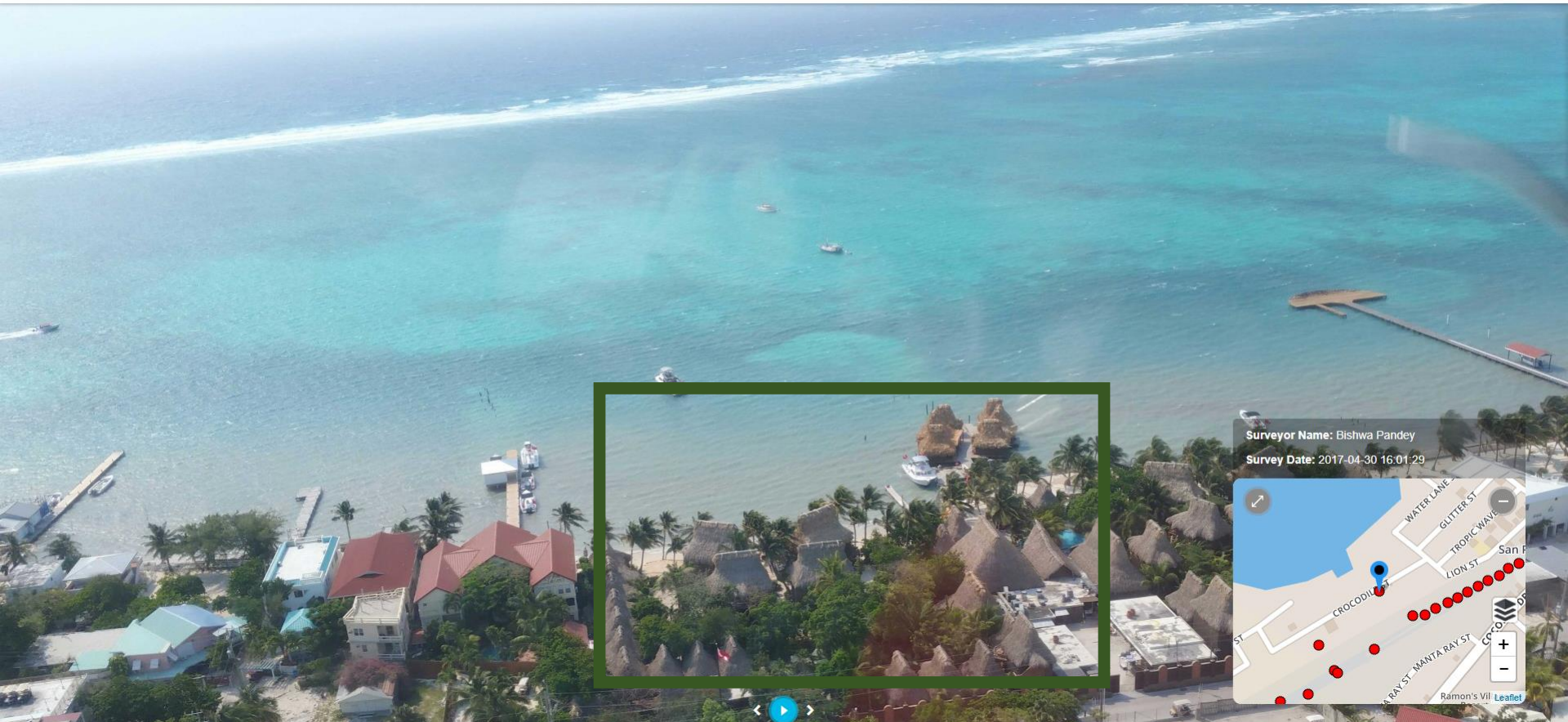
MapWoW! data and Google Satellite



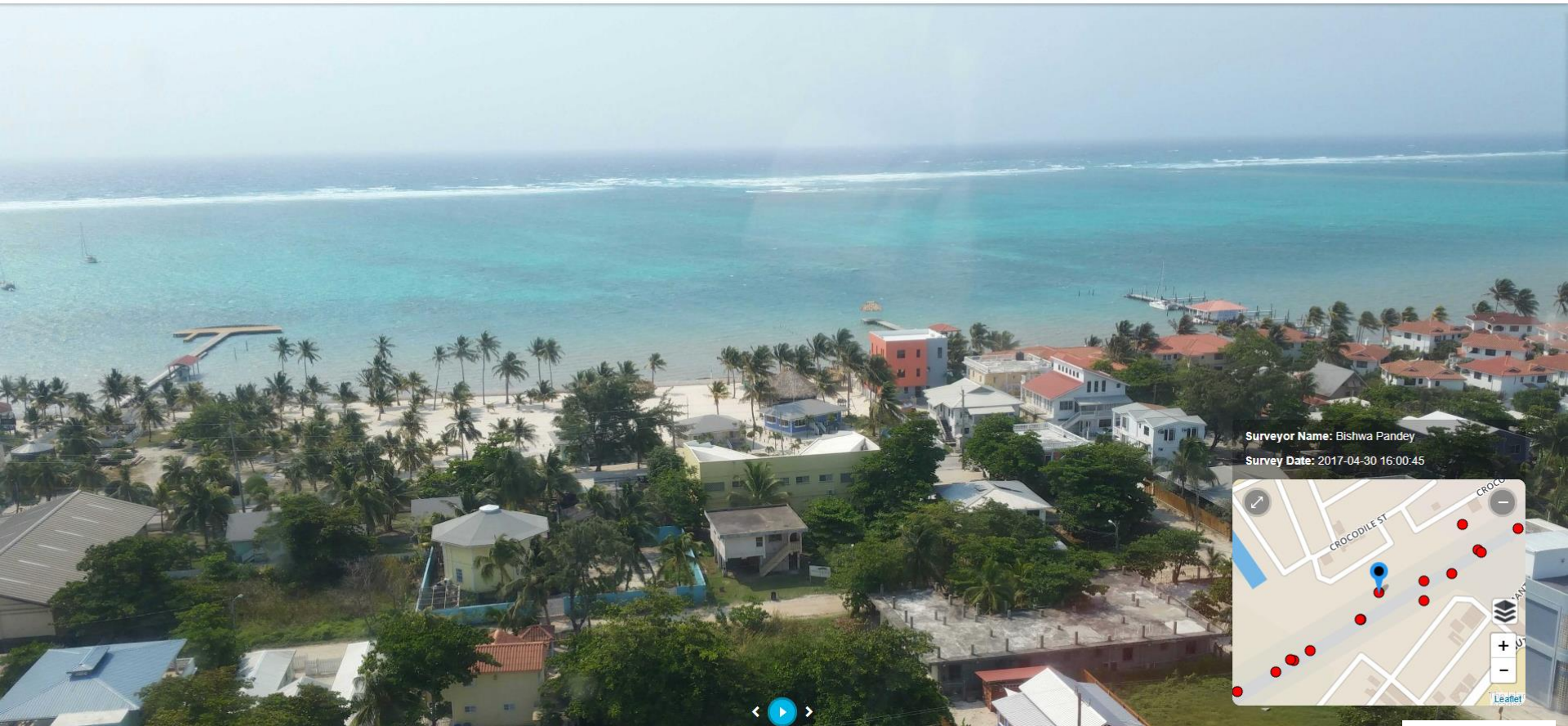
MapWoW! data at full resolution

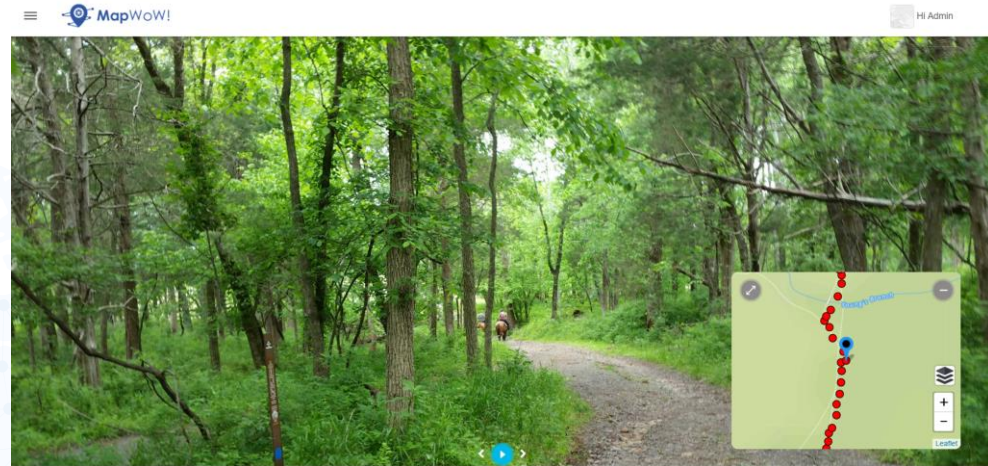
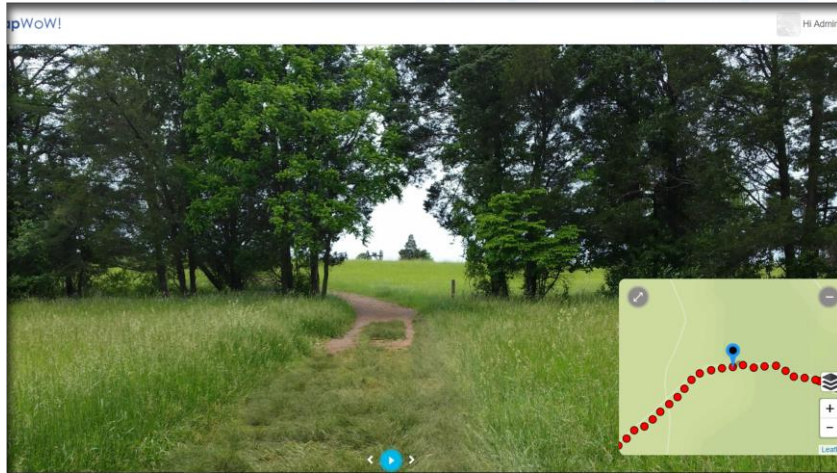


Detail building characteristics can be extracted

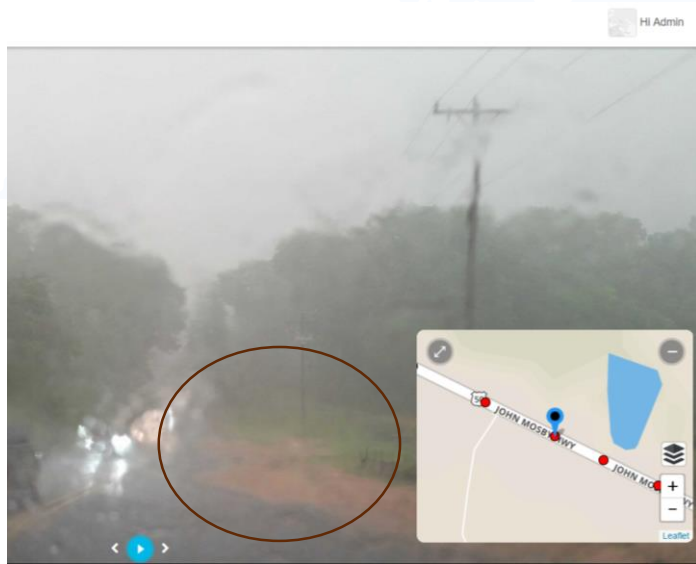


Additional MapWoW! data

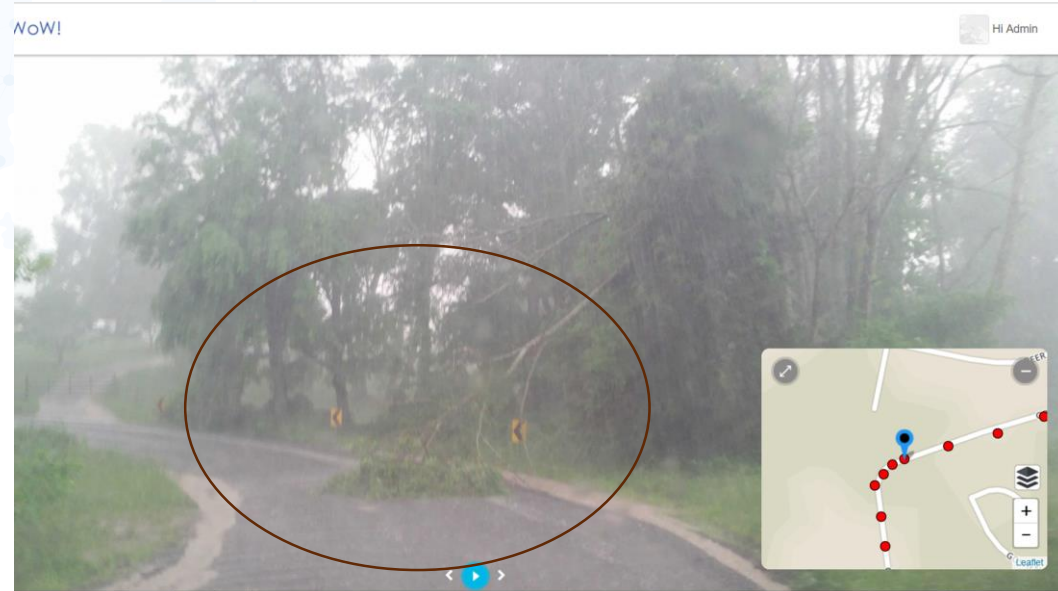




Mapping hard to reach places (trails, narrow alley etc.)




Road flooding from a construction site after heavy rain




Fallen tree after heavy rain

Using mapWow! to capture road incidence/ emergency

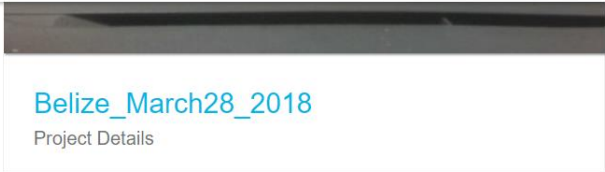
Visualization and GIS integration






UK
Project Details

Export CSV Export Shape File




Belize_March28_2018
Project Details

Export CSV Export Shape File



Snowstorm DC March 21 2018
Project Details

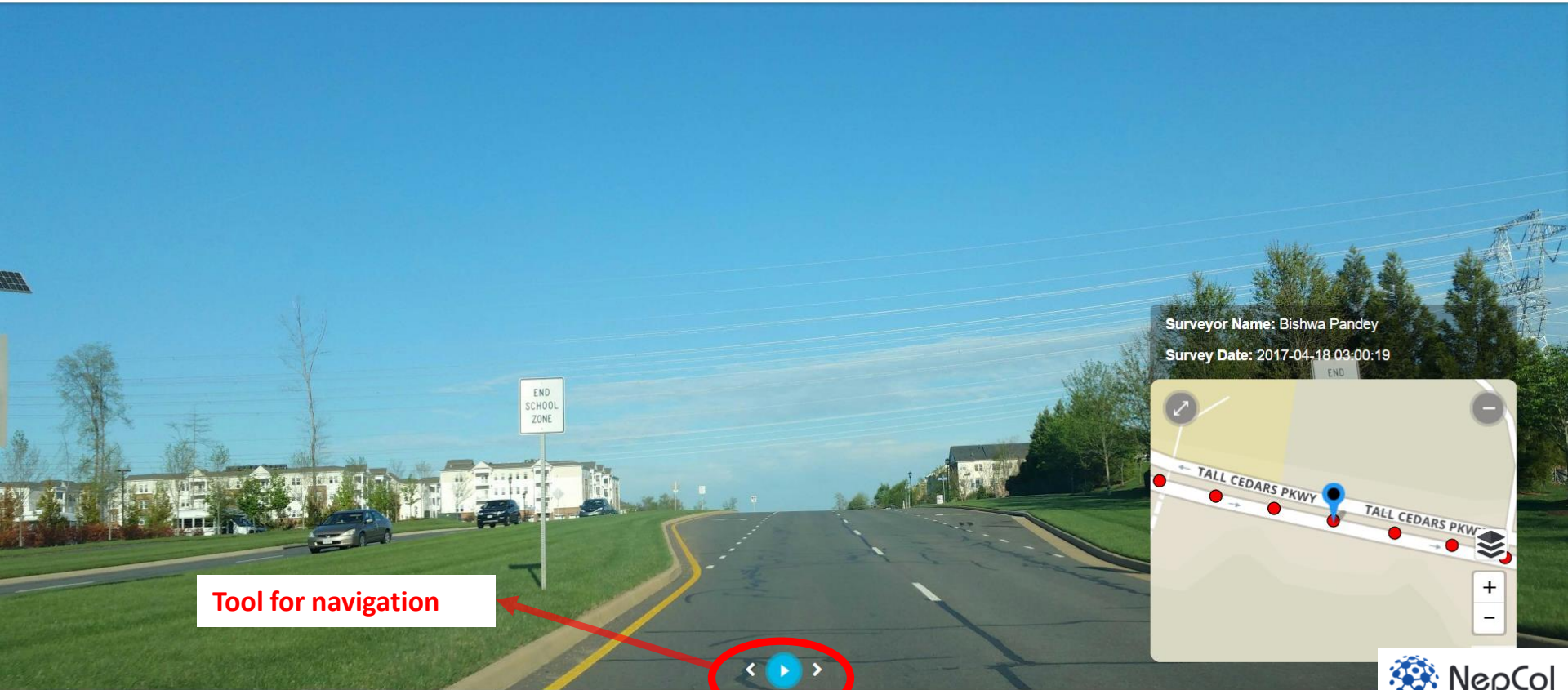
Export CSV Export Shape File



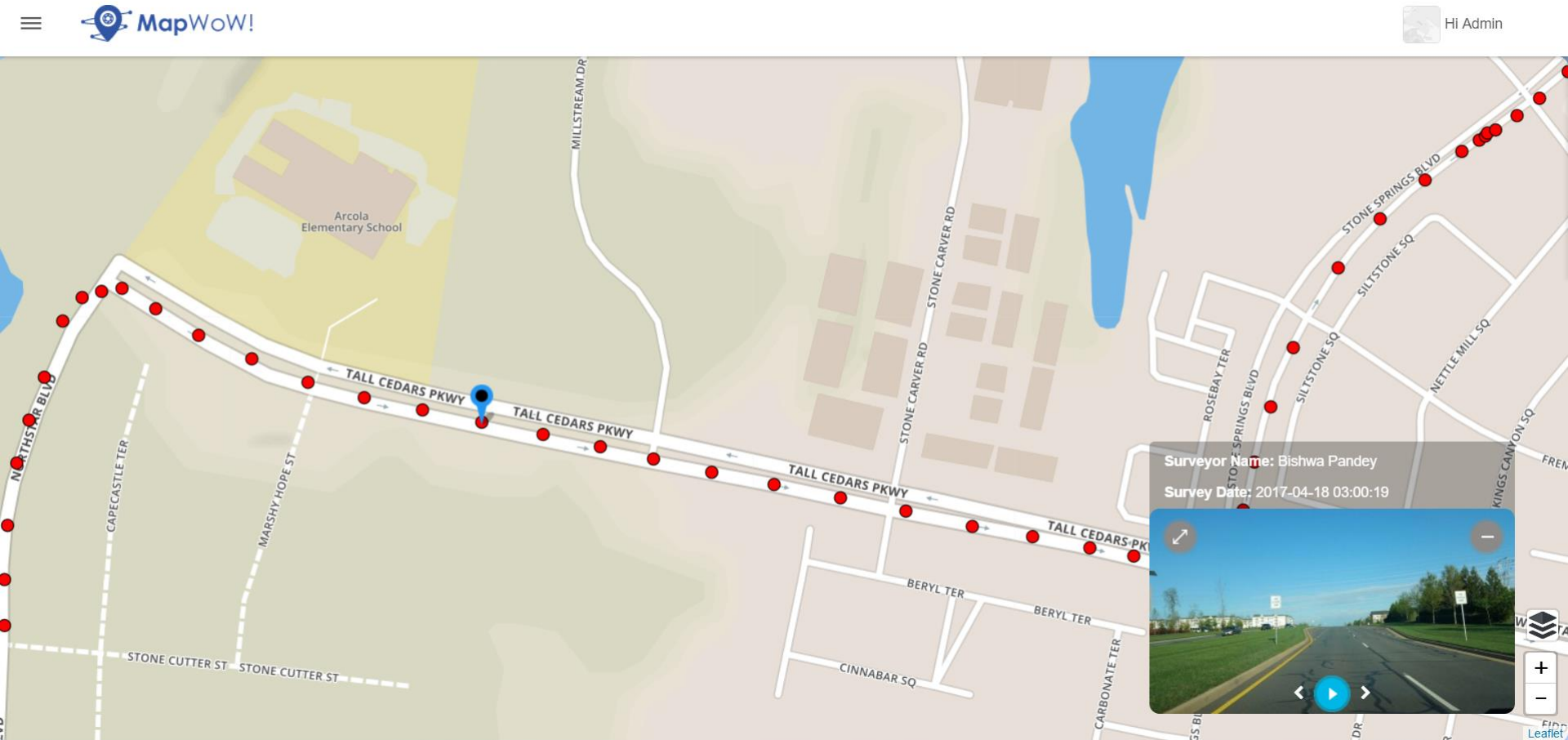
Bethesda March 16 2018
Project Details

Export CSV Export Shape File

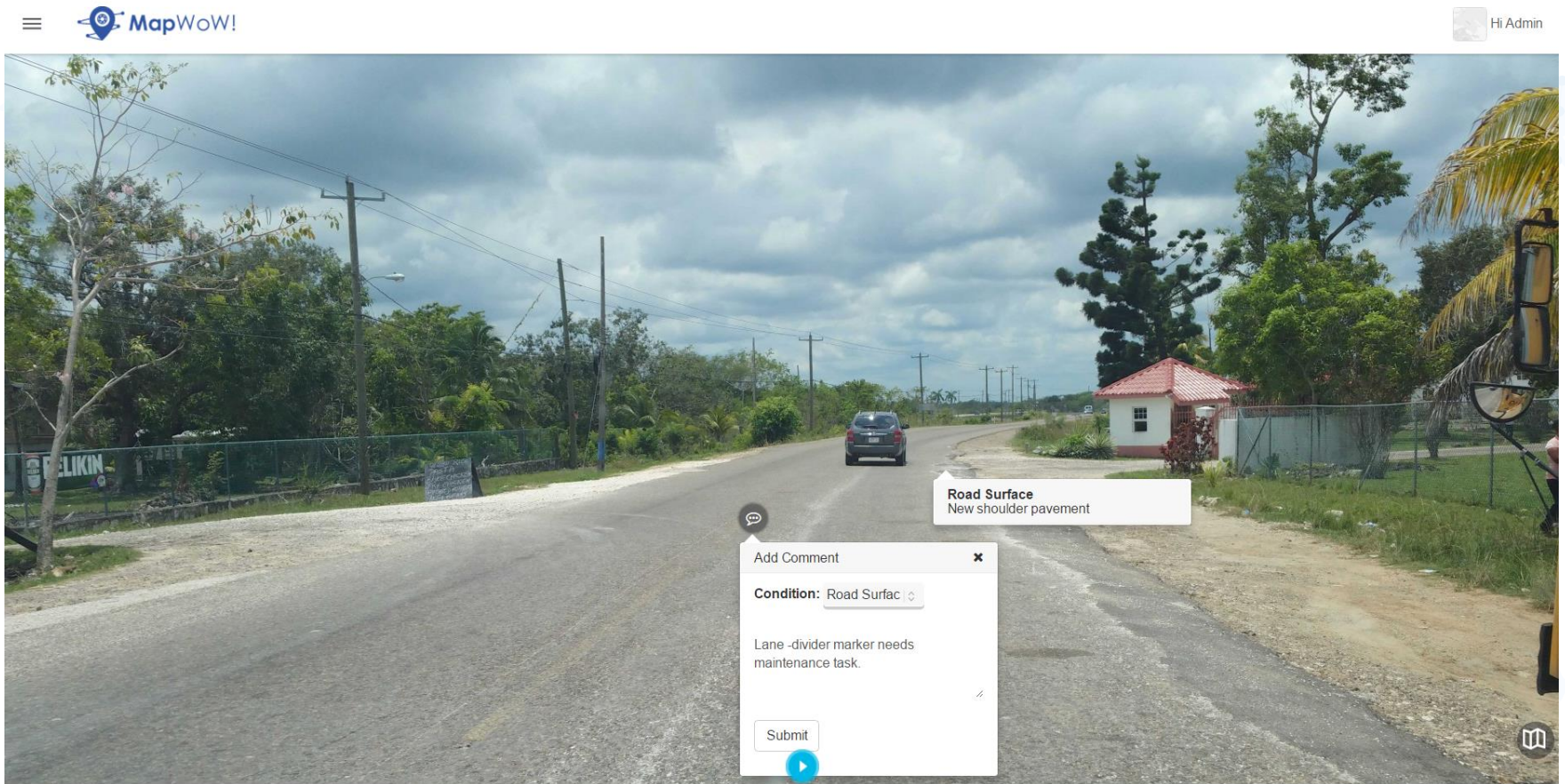
Navigating through collected data



Collapsing picture, bigger map



Ability to tag pictures – triggering maintenance/monitoring



Live Demo

<https://mapwow.spatialedge.net/>

MapWoW! is an Enterprise System

MapWoW!

- Admin Dashboard
- System User Management >
- Admin Configuration >
- Surveyors Management
- Project Management
- Log Management


ADD PROJECT

Home / Project List / Add Project

Title* Phoenix

Zoom Level* 12

Start Location*



Map Satellite Arizona State Fair Phoenix Sky Harbor International Airport Phoenix Art Museum Heard Museum

Map data ©2017 Google Terms of Use

search

Create a new project

MapWoW!

- Admin Dashboard
- System User Management >
- Admin Configuration >
- Surveyors Management
- Project Management
- Log Management

ADD MOBILE USER

Home / Mobile Users / Add Mobile User

Email* bishwa@nepcol.com

Full Name* Bishwa Pandey

Phone* 6179955026

Address

Time Zone (GMT-06:00) Eastern Island

Create a new user

MapWoW!

- Admin Dashboard
- System User Management >
- Admin Configuration >
- Surveyors Management
- Project Management
- Log Management

PROJECT LIST

Home / Project List

+ Add New

All

S.N	Title	Created Date	Status	Actions
1	Android Test GG	12th Apr. 2017	assigned	Edit Delete Assigned Users(1)
2	Phoenix2	12th Apr. 2017	assigned	Edit Delete Assigned Users(1)
3	April 12 Project X	12th Apr. 2017	assigned	Edit Delete Assigned Users(1)
4	Android April 12 Project C	11th Apr. 2017	assigned	Edit Delete Assigned Users(2)
5	AT GG	12th Apr. 2017	pending	Edit Delete Assigned Users(1)
6	Android Test	12th Apr. 2017	assigned	Edit Delete Assigned Users(2)
7	Android Test EE	12th Apr. 2017	assigned	Edit Delete Assigned Users(1)

10 Test backend R 12th Apr. 2017 [Edit](#) [Delete](#) [Assigned Users\(2\)](#)

Assign a project to the new or existing user

Data review and edits

MapWoWI

Admin Dashboard

System User Management

Admin Configuration

Surveyors Management

Project Management

Log Management

Bishwa Pandey

BISHWA PANDEY'S WORK DETAIL OF PROJECT (VIRGINIA, MARYLAND AND DC)

Home / Project List / Assigned Users For project(Virginia, Maryland and DC) / Bishwa Pandey's work detail of project (Virginia, Maryland and DC)

Project info:

Title: Virginia, Maryland and DC

Status: Completed

Created date: 27th May, 2017, 12:05:53 PM

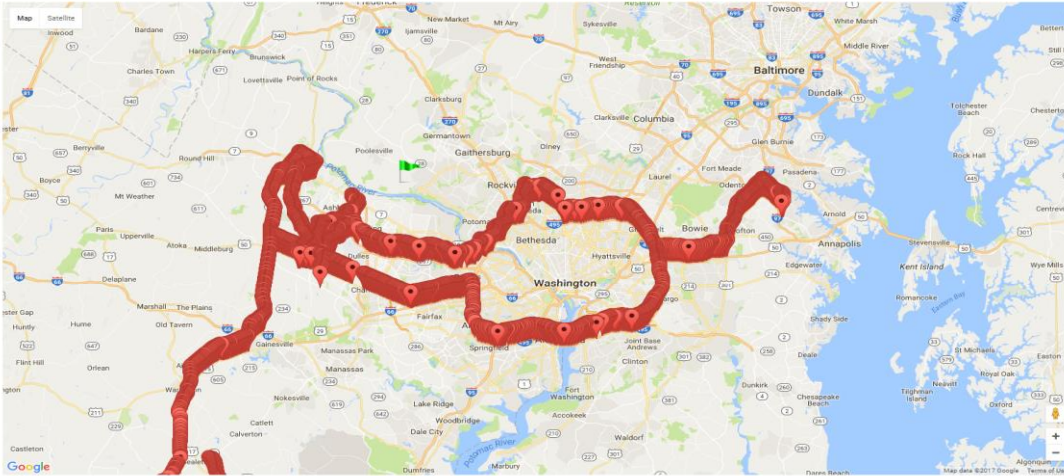
Surveyor Info:

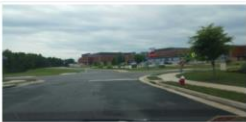
Name: Bishwa Pandey

Status: In Progress


Assigned Date: 27th May, 2017, 12:06:02 PM

Approve







Show Detail




Show Detail




Show Detail




Show Detail




Show Detail



Show Detail



Show Detail



Show Detail

Post-processing/
Admin
module

Data publication into GIS system

Project info:
Title: Belize and San Pedro
Status: **ASSIGNED**
Created date: 25th Apr, 2017, 08:05:50 PM

Surveyor Info:
Name: Bishwa Pandey
Status: **INPROCESS**
Assigned Date: 25th Apr, 2017, 08:06:06 PM

Approve Review and approve

Map Satellite

Latitude: 17.90992784
Longitude: -87.9783516
Location
Orientation: rightLandscape
X_Dimension: 201
Y_Dimension: 358
Color Space: RGB
Size: 14723

Successfully Approved.

S.N	Assigned Date	Surveyor	Status	Actions
1	26th Apr, 2017	Bishwa Pandey (bishwa@nepcol.com)	Approved	Delete Detail (2258 Data)

Showing 1 to 1 of 1 entries

Live Demo

<https://admin.mapwow.spatialedge.net/system/login>



Bishwa Pandey

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

bishwa@nepcol.com

Team of 25 developers, data scientists
and product manager

Offices in:

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