



Form & Map based Mobile OSM Tool for Field Survey and Validation

GeoThings Inc.

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July 2018

Something about GeoThings

- Trusted Developer of **Ushahidi** (2012)
- Development partner of **Sahana** (2012)
- Standard Editor/Contributor of **OGC** (Open Geospatial Consortium) and **ITU** (International Telecommunication Union) for Open GeoSMS and Q.3615 (2015)
- slayer was the board director of **HOT** (2017)
- Active participant of **OSM** and **HOT**

ADB pilot project (TA8884) was aiming to strengthen the disaster resilience with Spatial Technologies and **ICT Tools**

Target Countries are Armenia, Bangladesh, Philippines, and Fiji

We did the OSM Mapathon

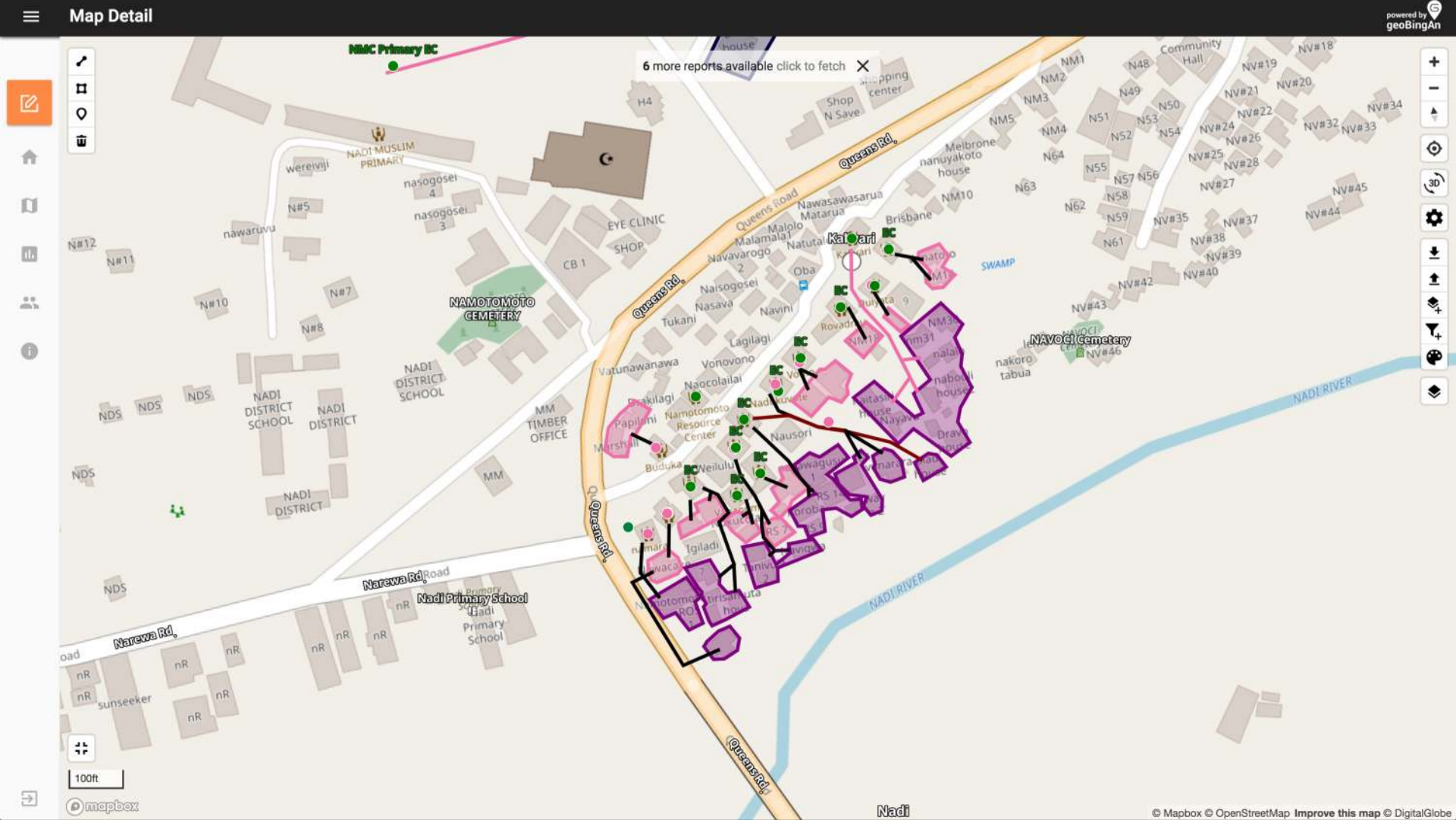
We did the field validation with local community

We planned the evacuation map with community

Let's start from Lesson Learned

What We did with ADB for a Pilot

Community Evacuation Map



This is the Reason for Field Survey



Building Details Collection

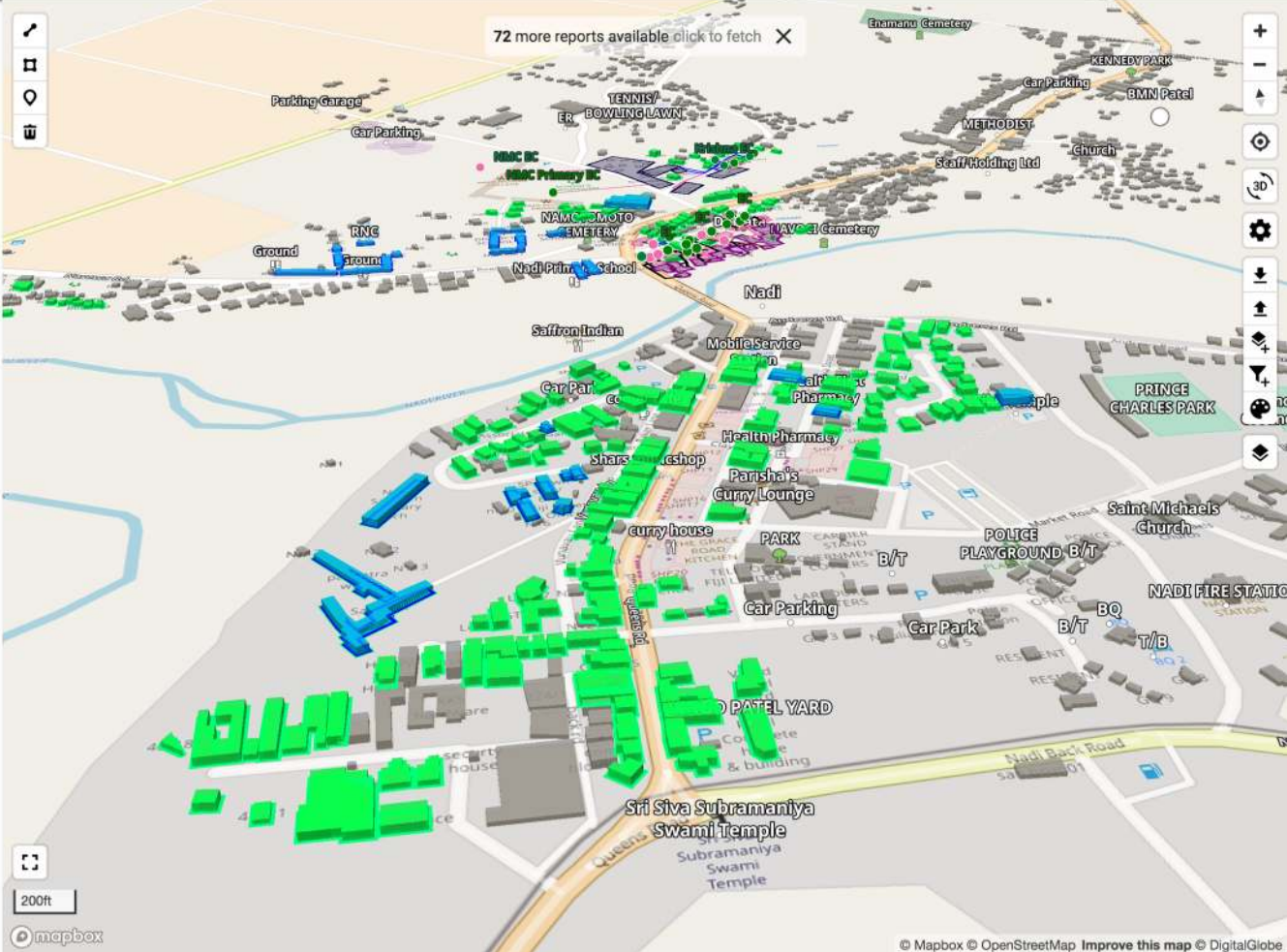
Map Detail

SELECTED REPORT X

MAP X

72 more reports available click to fetch X

Roofing Structure of House is not strong



mi***** to FJ Team Group
Cyclone Vulnerability

Roofing Structure of House is not strong

200ft

mapbox

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Green building means it has Building Material tag
Blue means its Amenity is Public (school, hospital, and so on)



Environment Details Collection

Map Detail

MY GROUP

MAP X

powered by geoBingAn

46 more reports available click to fetch

Enamame Cemetery

MINNEW PARK

Car Parking

BMN Patel

Methodist

Palais Car Park

Church Hall

Staff Holding Ltd

SAUNAKA GRAVEYARD

Unnamed Road, Nadi

alifereti***** to FJ Team Group
Flood Vulnerability

Network 3

town watching Flood DAV

The area/building was flooded before

Yes

Flood type

Riverine

Presence of flood early warning system

Yes

Availability of public information board for flood

No

Maximum level during recent floods

Above head

MC Primary BC

NAMOTOMOTO CEMETERY

Nadi Primary School

Queens Road

Nadi

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Flooded Before? Flood Type? Early Warning Available?
Public Information Board for Flood? Recent Flooded Level?



Evacuation Details Collection

Map Detail

CUSTOM MAP

rsau**** to FJ Team Group
Evacuation Capacity

road to evacuation centre

town watching evacuation adv

- Road condition: Good
- Stair condition on road slope: Good
- Sudden depression in the road: Yes
- Possible road barriers: Unstable structures
- Poor quality bridge, could be damaged by earthquakes: No
- Street light: Yes
- Dangerous electric poles/wiring on the road: Yes
- Available open space: Open

200ft

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powered by geoBingAn

About the Road to Evacuation Center,
Road Condition? Stair Condition? Sudden Depression? Possible Barrier?



Community-based Tsunami Drill Plan

Map Detail

MY GROUP

MAP X

powered by geoBingAn

4M

59 more reports available click to fetch X

grace.***** to FJ Team Group House

Lavena House

House

building address
Nabasovi village Koro

building material
wood

is it a temporary building?
no

building roof material
light metal sheet

is there a basement in the building?
no

building condition
good

slope of the building
moderate

100ft

mapbox

Community Hall

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Fiji National Tsunami Drill (March 1st, 2018)

"

Drill lead by NDMO (National Disaster Management Office) of Fiji
Video released by UNDP Asia and Pacific



Resource Dispatching Status in Drill



Image 2
Image 2 of 2

Evacuation Updates in Drill

Map Detail

SELECTED REPORT X

MAP X

Muanikau, Suva

Musudroka SGS to FJ Team Group
Tsunami

reports: loaded 19, available 19

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Evacuation Updates in Drill



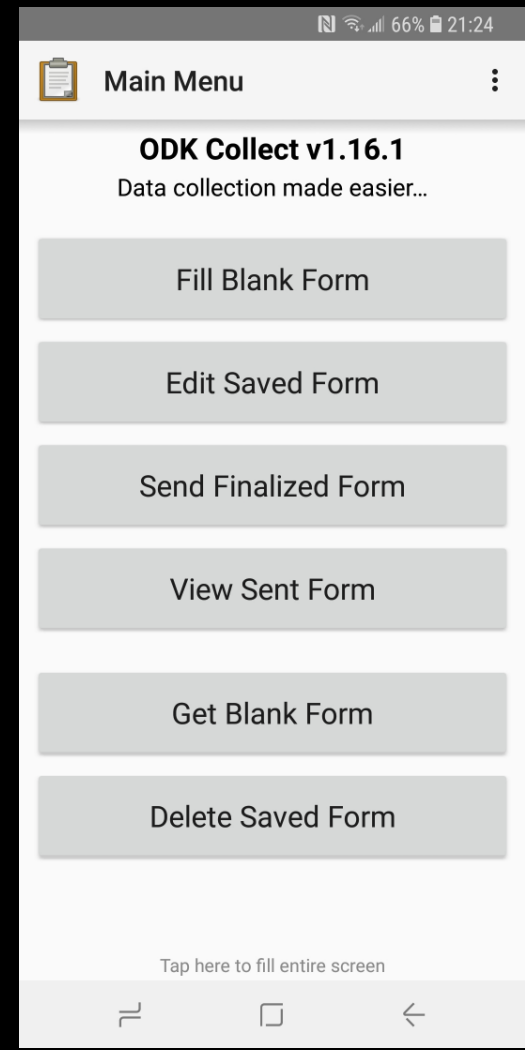
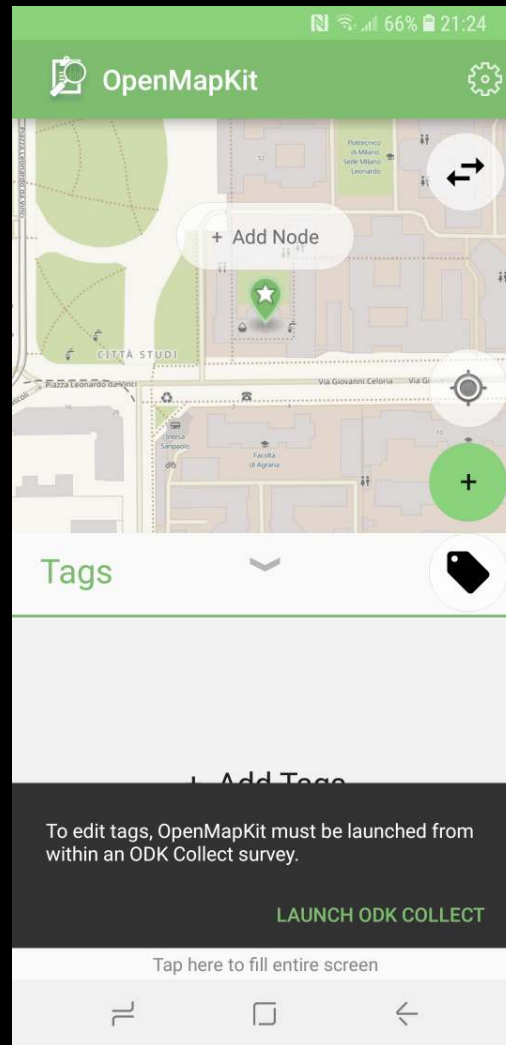
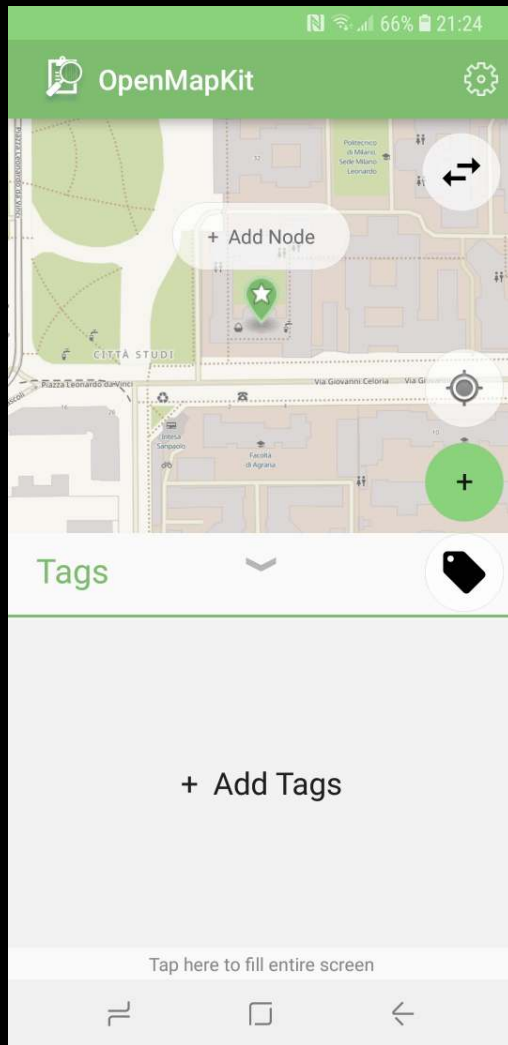
Image 1
Image 1 of 2

Department, Police Department, Health, Military, Fiji Roads Authority, Ministry of Education, Ministry of Health, Red Cross, Fiji Disable People Council, Secretariat of Pacific Community - Geoscience Program, Disaster Reduction Programme, Fiji Military Forces, and Fiji Navy.

geoBingAn in Emergency Operation Center



We Love OpenMapKit + OpenDataKit



Start from 1:25”



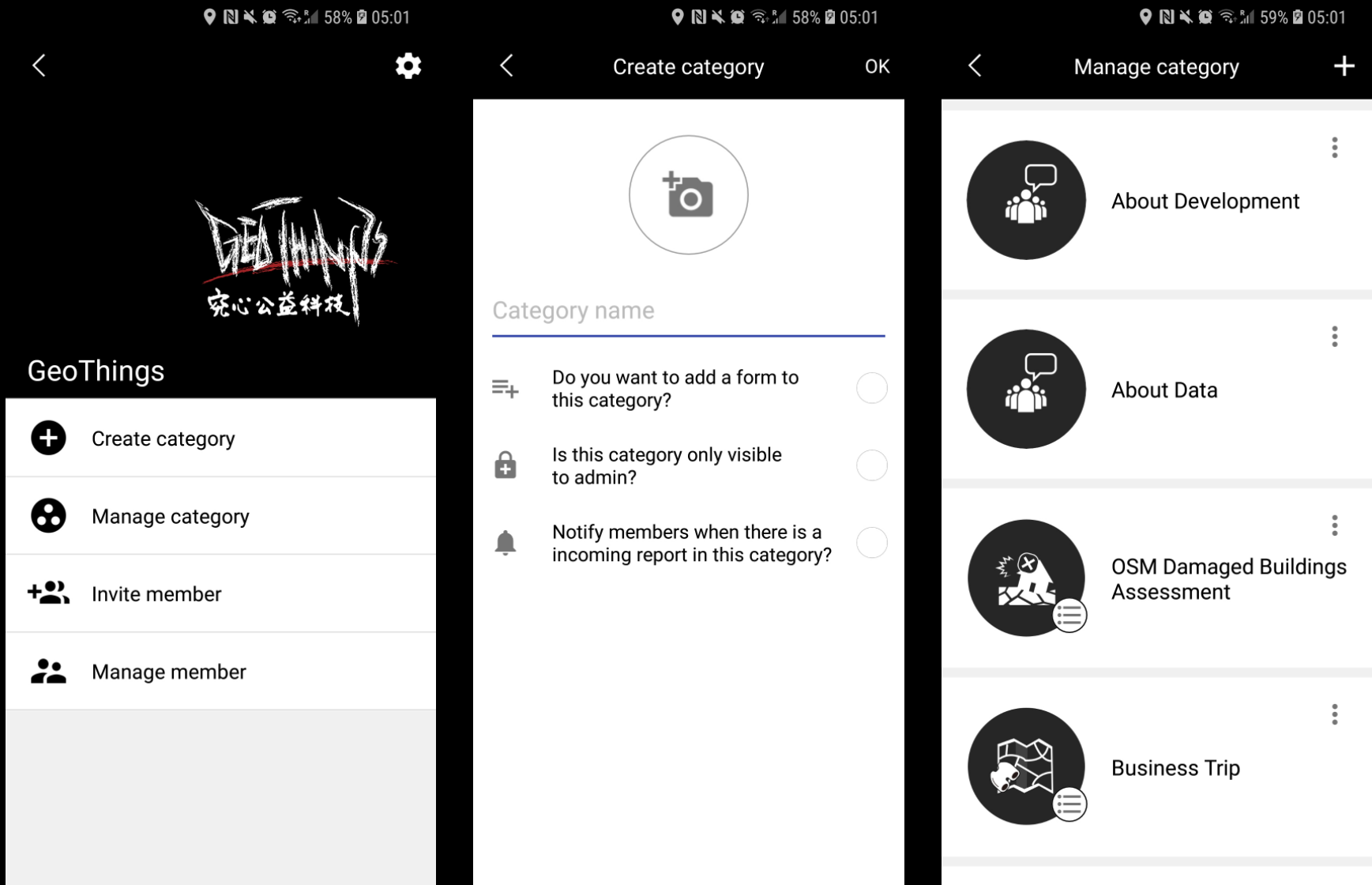
Add Report



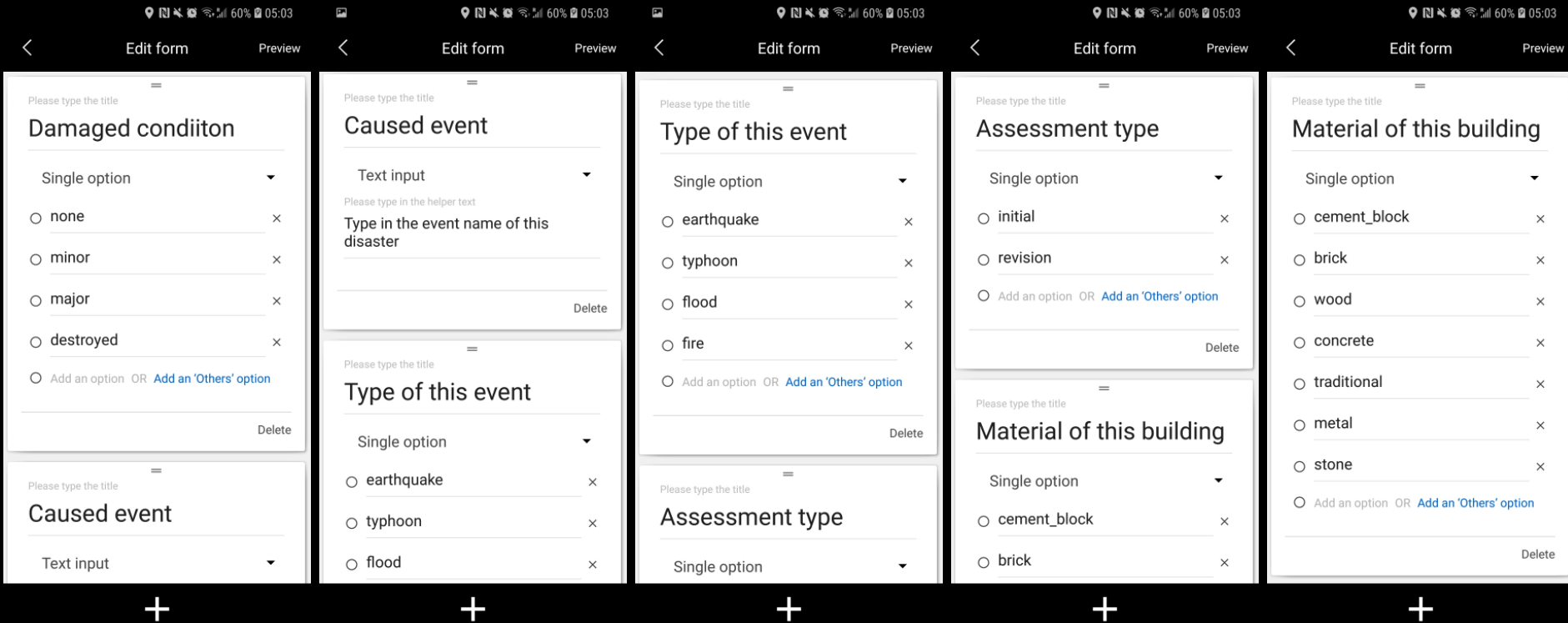
Report List

- Straightforward UI
- Offline access to GeoThings OSM Vector Tiles
- Offline access to Satellite Imagery by Mapbox
- Repositioning from Map
- Support photo, **audio log**, GPS trace
- Support mobile notification for task assignment
- Support **GeoSMS** to submit the updates

Create Group and Form with Simple UI



Customize Your Survey Form



HOT Damage Tagging Proposal from Bgirardot
https://wiki.openstreetmap.org/wiki/User:Bgirardot/HOT_Damage_Tagging_Proposal



Town Watching with Community in Taiwan



Make it easy for the community to contribute their knowledge to OSM

Team up with the Girl Scouts of Taiwan



Deliver the trusted crowdsourcing disaster information

One Use Case about Shelter Information

Map Detail

MY REPORTS

Edificio 3, 20133 Milano MI

shayer Shelter

example of evacuation

crisis mapping - shelter

Need Assistance

Electricity

How many persons evacuated

100

Structural damage

No

Disaster

Earthquake

0

Mapbox

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Shelter: Need Electricity, Evacuated 100 People,
No Structure Damage, Caused by Earthquake



One of our Practices for Flooding Drill

Some local government and community **DOESN'T** have ICT officer

Sustainable service is not developed by project-base funding

There's something we can push further with a group of great developers

User has full control on collected data
to go private, or to be exported in SHP/KML/GeoJSON

The Key is **Self-Sustainable**

To both developer and user

geoBingAn (究平安) Smart City SDK

Connect Citizen and IoT Sensors for the City Level Data Science and Service Development



But we are still struggling with the proper tagging on OSM



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Question and Comments?

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