



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**

DIEB THINGS
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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 filed validation with local community

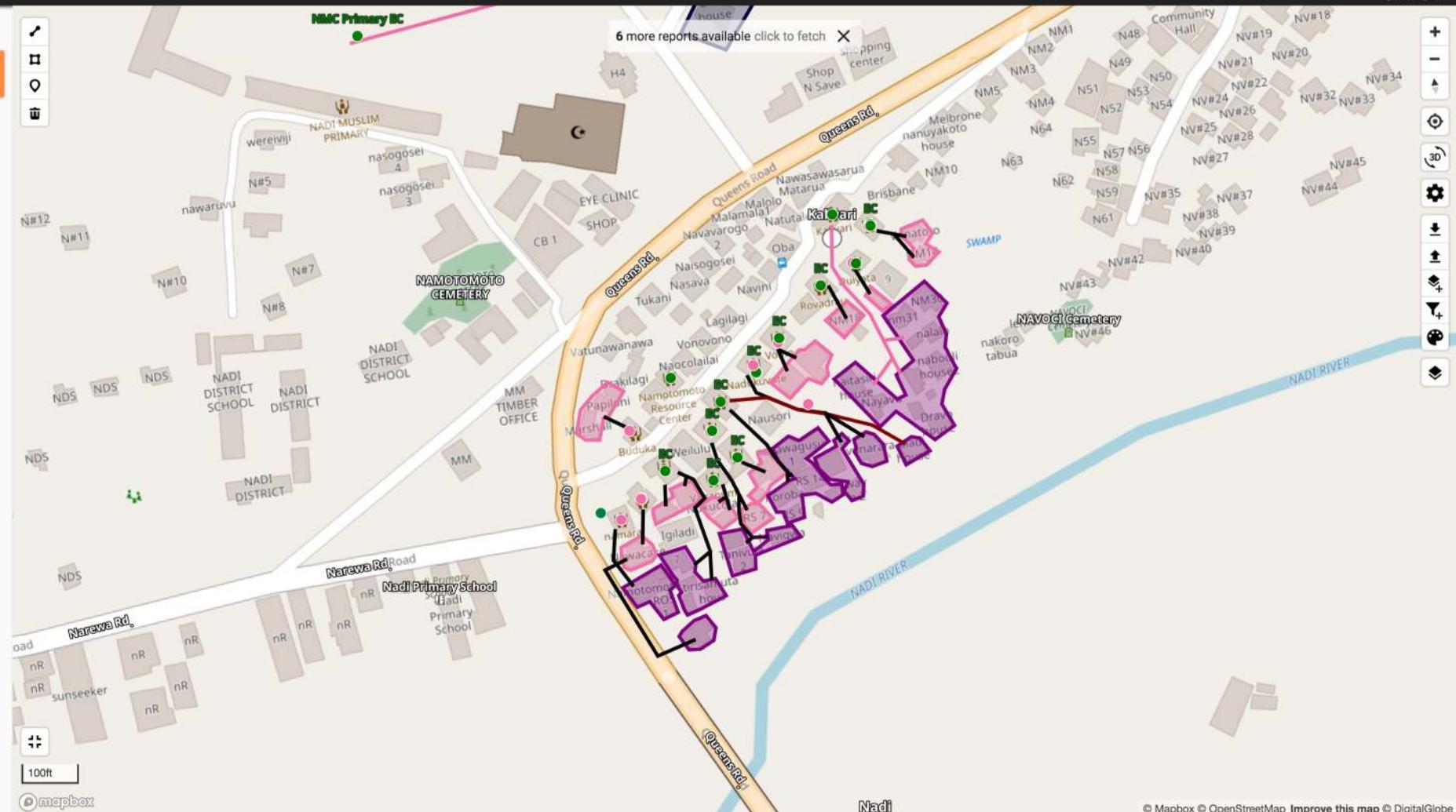
We planned the evacuation map with community

**Let's start from Lesson Learned
What We did with ADB for a Pilot**

Community Evacuation Map

Map Detail

powered by
geoBingAn



DIA
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This is the Reason for Field Survey



DIA THANGS
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Building Details Collection

≡ Map Detail

= SELECTED REPORT X



MAP X

72 more reports available click to fetch >



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

~~DEATHWINGS~~

Environment Details Collection

Map Detail

MY GROUP

MAP X

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Unamed Road, Nadi

aliferetj***** 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



0

100ft

mapbox

Enhmanu Cemetery

HENNEMAN PARK

Car Parking

BMN Park

METHODIST

Pala's Car Park

Scaff Holding Ltd

Church Hall

SAUNAKA GRAVEYARD

NIS KING LAWN

Obanaku BC

MC Primary BC

NAMOTOMOTO CEMETERY

Queens Road

Queenskirk

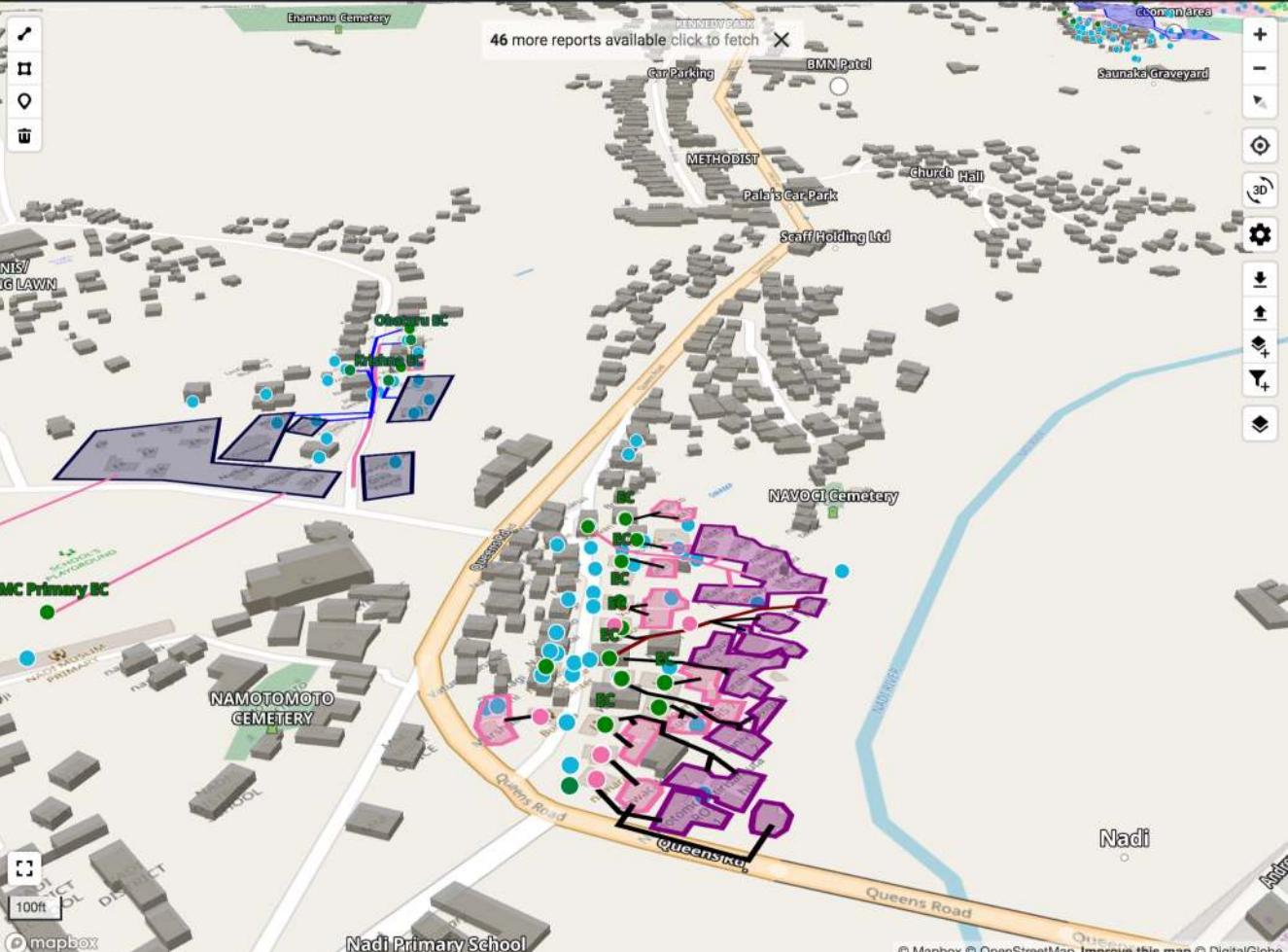
NAVOCI Cemetery

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?

DEATHWING

Evacuation Details Collection

Map Detail

CUSTOM MAP

powered by geoBingAn

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

mapbox

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

DEATHMARS

Community-based Tsunami Drill Plan

Map Detail

MY GROUP

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

Community Hall

59 more reports available click to fetch

MAP

100ft

mapbox

powered by geoBingAn

DEATHWING

Fiji National Tsunami Drill (March 1st, 2018)

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


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Resource Dispatching Status in Drill



Image 2
Image 2 of 2

X

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reports: loaded 68, available 68

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Evacuation Updates in Drill

Map Detail

SELECTED REPORT X

MAP X

Muanikau, Suva

Musudroka SGS to FJ Team Group Tsunami

Nukuhau Rd.

Yanuea Pl.

50ft

mapbox

Suva Grammar

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.

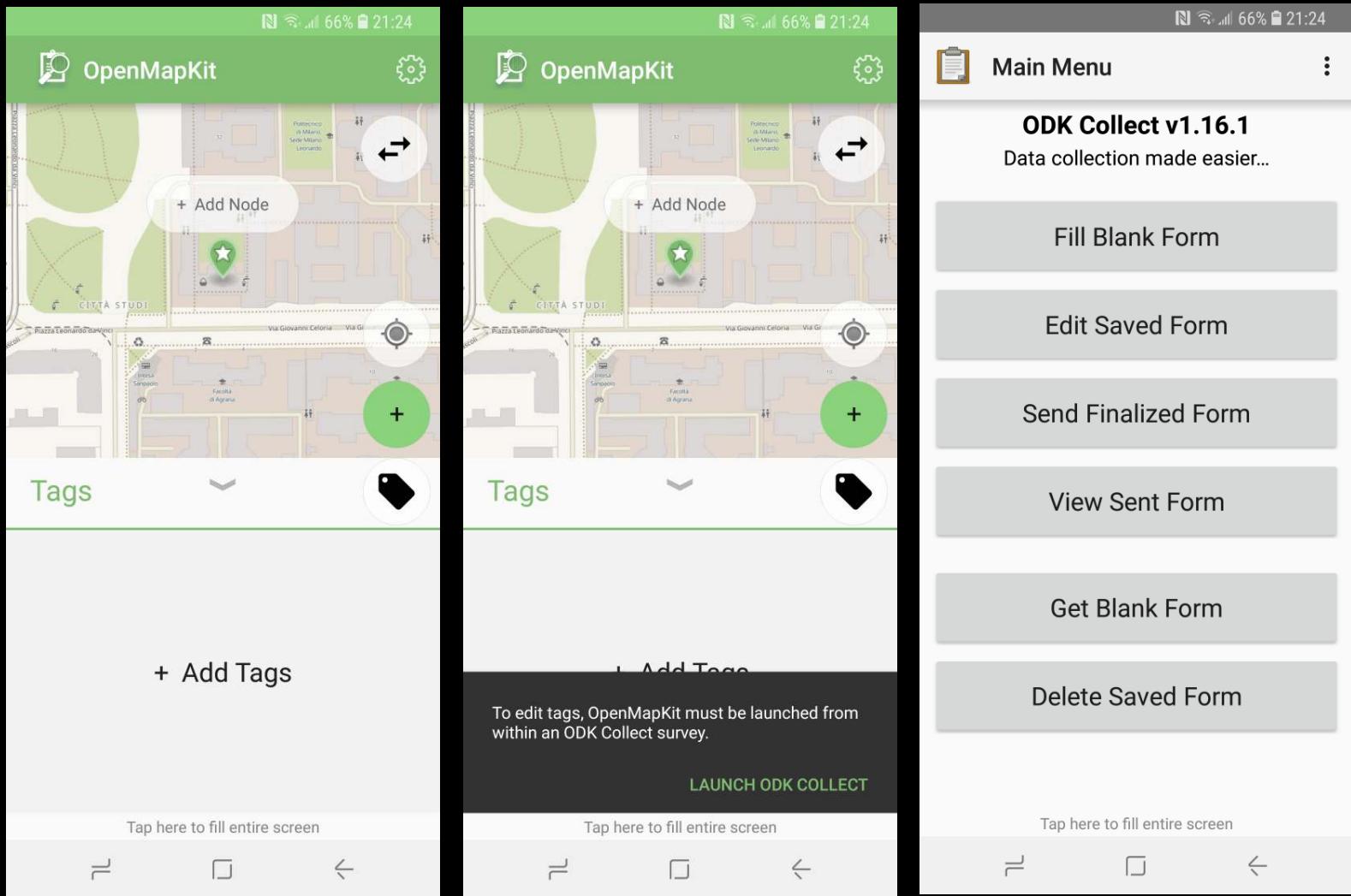
DIA THINGS
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geoBingAn in Emergency Operation Center



DÉTHIERS

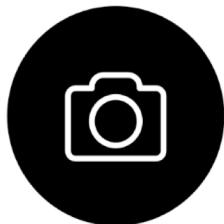
We Love OpenMapKit + OpenDataKit



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Start from 1:25"

~~DEATHWING~~



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

GeoThings

-  Create category
-  Manage category
-  Invite member
-  Manage member

>Create category

OK

Category name



Do you want to add a form to this category?

Is this category only visible to admin?

Notify members when there is a incoming report in this category?

Manage category

+

About Development

About Data

OSM Damaged Buildings Assessment

Business Trip



Customize Your Survey Form

The image shows five mobile phone screens side-by-side, each displaying a different step in the survey form customization process. The screens are arranged horizontally, separated by small gaps.

- Step 1:** Shows a section titled "Damaged condition" with a dropdown menu set to "Single option". Below it is a list of radio buttons: "none", "minor", "major", and "destroyed". There is also a link to "Add an option OR Add an 'Others' option".
- Step 2:** Shows a section titled "Caused event" with a dropdown menu set to "Text input". Below it is a text input field with placeholder text "Type in the event name of this disaster".
- Step 3:** Shows a section titled "Type of this event" with a dropdown menu set to "Single option". Below it is a list of radio buttons: "earthquake", "typhoon", "flood", and "fire". There is also a link to "Add an option OR Add an 'Others' option".
- Step 4:** Shows a section titled "Assessment type" with a dropdown menu set to "Single option". Below it is a list of radio buttons: "initial", "revision", and "Add an option OR Add an 'Others' option".
- Step 5:** Shows a section titled "Material of this building" with a dropdown menu set to "Single option". Below it is a list of radio buttons: "cement_block", "brick", and "Add an option OR Add an 'Others' option".

Each screen has a top bar showing signal strength, battery level (60%), and time (05:03). The bottom of each screen features a blue "Edit form" button, a grey "Preview" button, and a back arrow icon.

HOT Damage Tagging Proposal from Bgirardot

https://wiki.openstreetmap.org/wiki/User:Bgirardot/HOT_Damage_Tagging_Proposal


DÉTHIERS
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Town Watching with Community in Taiwan



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

DÉTHIEN

Team up with the Girl Scouts of Taiwan



Deliver the trusted crowdsourcing disaster information

DEATHWING
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One Use Case about Shelter Information

Map Detail

MY REPORTS ▾

MAP X

powered by geoBingAn

Edificio 3, 20133 Milano MI

slayer Shelter

example of evacuation

crisis mapping - shelter

Need Assistance
Electricity

How many persons evacuated
100

Structural damage
No

Disaster
Earthquake

0

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

DIA
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One of our Practices for Flooding Drill

~~DEATHWING~~

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



Remote Sensing



Field Survey & Validation



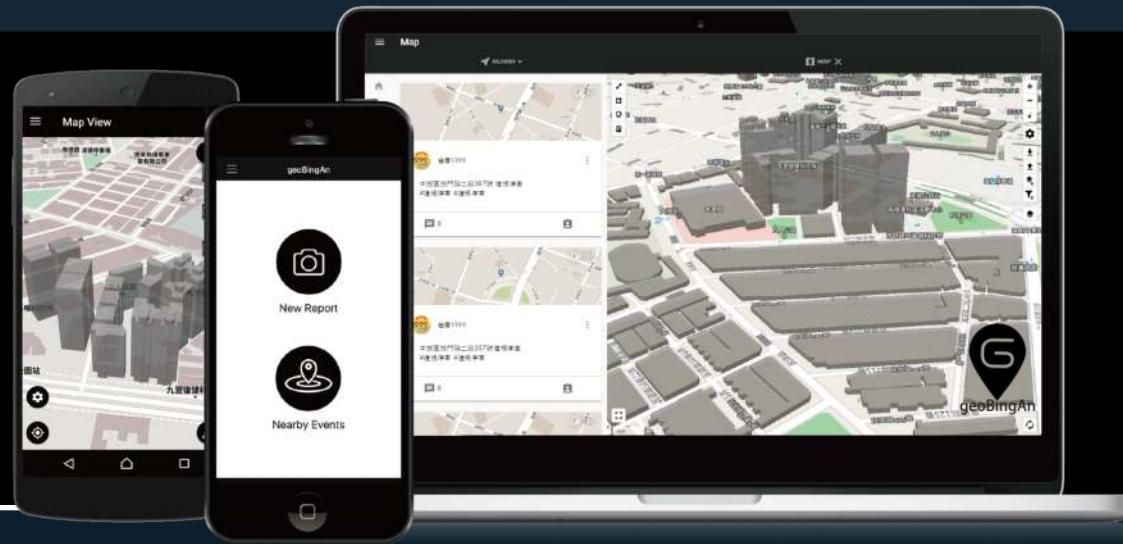
IoT & Crowdsourcing



Open Data with CitySDK



Urban Planning



But we are still struggling with the proper tagging on OSM



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Question and Comments?

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A stylized, handwritten signature of the company name "GeoThings Inc." in black ink, with a red underline underneath.