

Tools for easier O-D Survey data collection

Project context



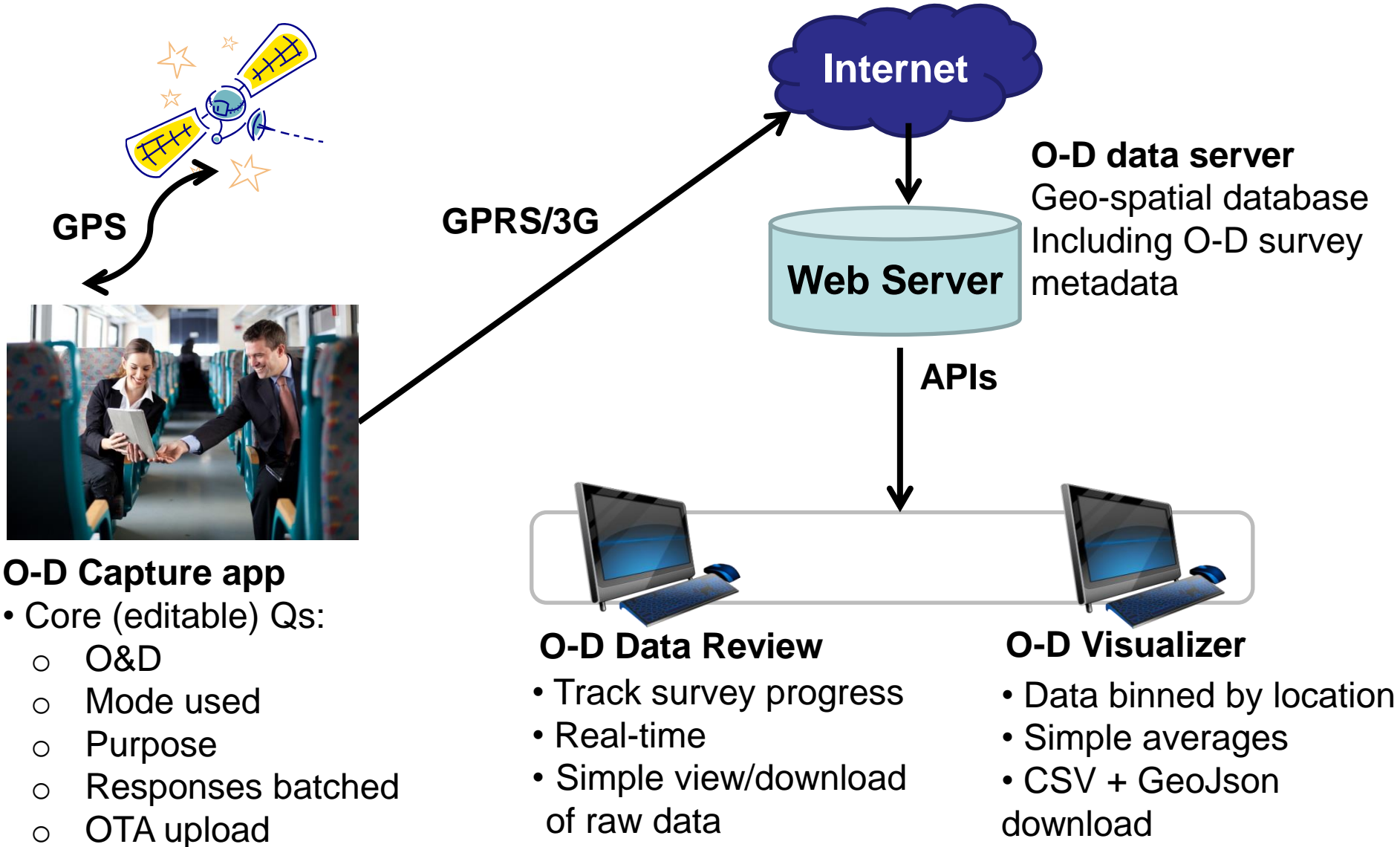
Possible approaches



Process improvement



System diagram



O-D Capture app

HTML5 app, not native

Phonegap Build

Backbone, Marionette, Leaflet, offline tiles via Mapbox

Surveys and Responses

- Surveys describe the trip
- Responses are the interviews for each trip

Live Surveys

NEW SURVEY

kpw1



ADMIN

No active surveys. [Start a new one!](#)



Create New Survey

CANCEL

Name of Surveyor

Name of Route being surveyed

Name of origin terminal

Name of destination terminal

Type of vehicle travelled on during survey

Name of destination terminal

Type of vehicle travelled on during survey

Capacity of vehicle travelled on during survey

Notes

CREATE SURVEY





Live Surveys

NEW SURVEY

kpw1

[ADMIN](#)

LAST RESPONSE: 4 HOURS AGO

edsa / shaw Trevor, Jeepney
(PUJ) [EDIT](#)

0

+ RESPONSE

UPLOAD COMPLETED SURVEYS

[Archive Surveys](#) (use if upload isn't available)





edsa / shaw

Trevor, Jeepney (PUJ)

CANCEL RESPONSE

Where did you start your journey?

SELECT LOCATION

What was your reason for being there?

Where is your final destination?

SELECT LOCATION

What is your purpose for going there?

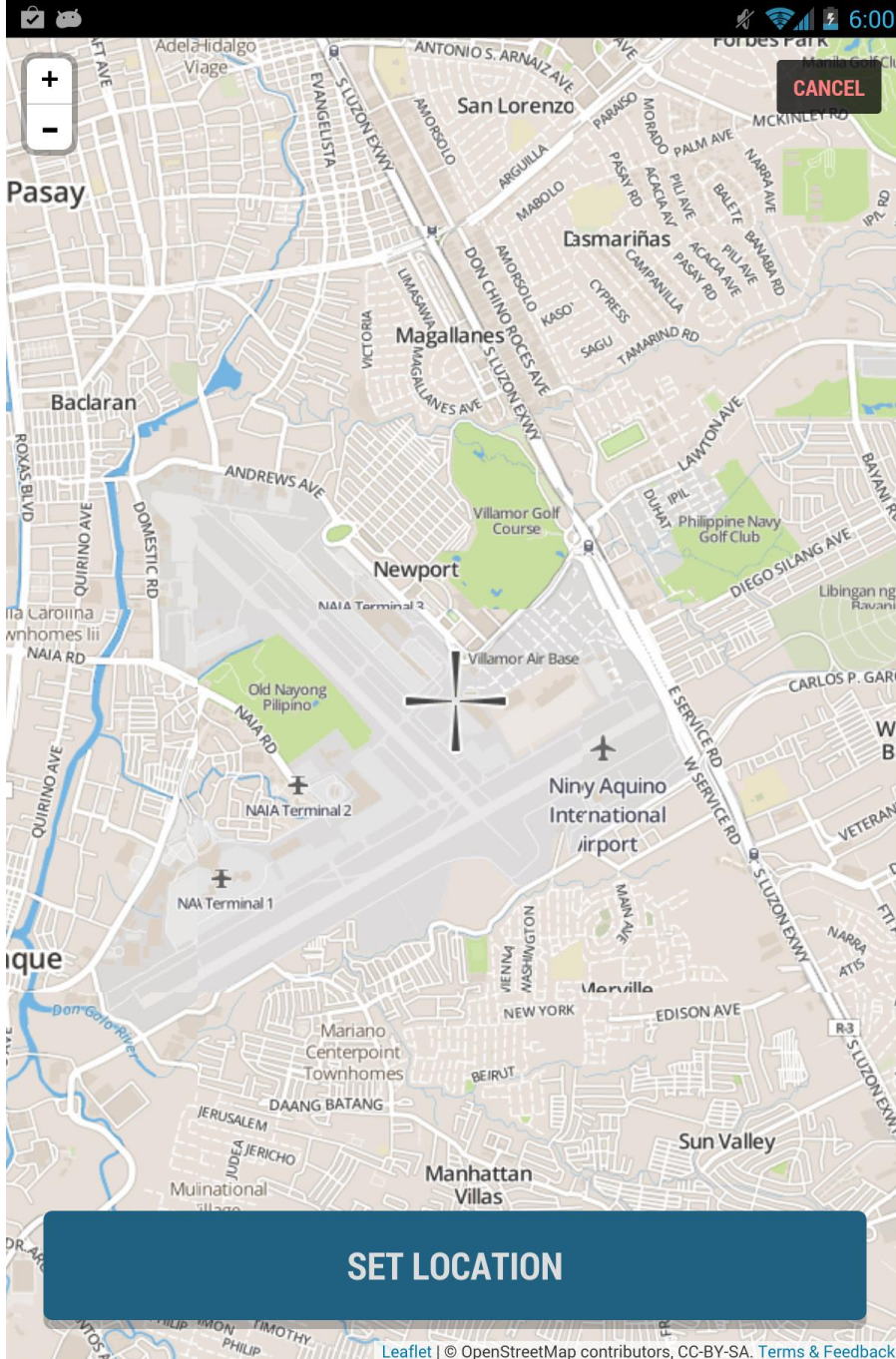
How many vehicles will you use to complete this journey?

Which types of vehicles will you use to complete the whole journey?





SET LOCATION





edsa / shaw

Trevor, Jeepney (PUJ)

CANCEL RESPONSE

Where did you start your journey? ✓

SELECT LOCATION

What was your reason for being there?

Home/place of residence

Where is your final destination? ✓

SELECT LOCATION

What is your purpose for going there?

Work/Business

How many vehicles will you use to complete this journey?

2 Vehicles

Which types of vehicles will you use to complete the whole journey?



Work/Business

How many vehicles will you use to complete this journey?

2 Vehicles

Which types of vehicles will you use to complete the whole journey?

☒ JEEPNEY

☐ NON-AIRCON BUS

☒ AIRCON BUS

☐ AUV

☐ TRICYCLE

☐ MRT

☐ LRT

☐ TAXI

☐ CAR

☐ OTHER

How much will the whole journey have cost you?

2

How often do you make this journey?

7 days per week

SUBMIT RESPONSE

Live Surveys

NEW SURVEY

kpw1

ADMIN

LAST RESPONSE: A FEW SECONDS AGO

edsa / shaw Trevor, Jeepney
(PUJ) [EDIT](#)

1

+ RESPONSE

UPLOAD COMPLETED SURVEYS

[Archive Surveys](#) (use if upload isn't available)



O-D Survey Manager

Javascript app running in Dropbox

Runs in a browser window

Check location surveys were completed +
time/date

Real-time check-in on survey progress

O-D Data Visualizer

Problem

20,000 surveys, 40,000 lat/lon points - hard to see the results

Goal

Visualize the data to guide more detailed analysis

Tasks

- Bin the data to reduce the noise
- Create ways to slice and filter to your hearts desire
- Make it look pretty

Tools Used

HTML / CSS / JavaScript



Data-Driven Documents

<http://d3js.org/>

Crossfilter

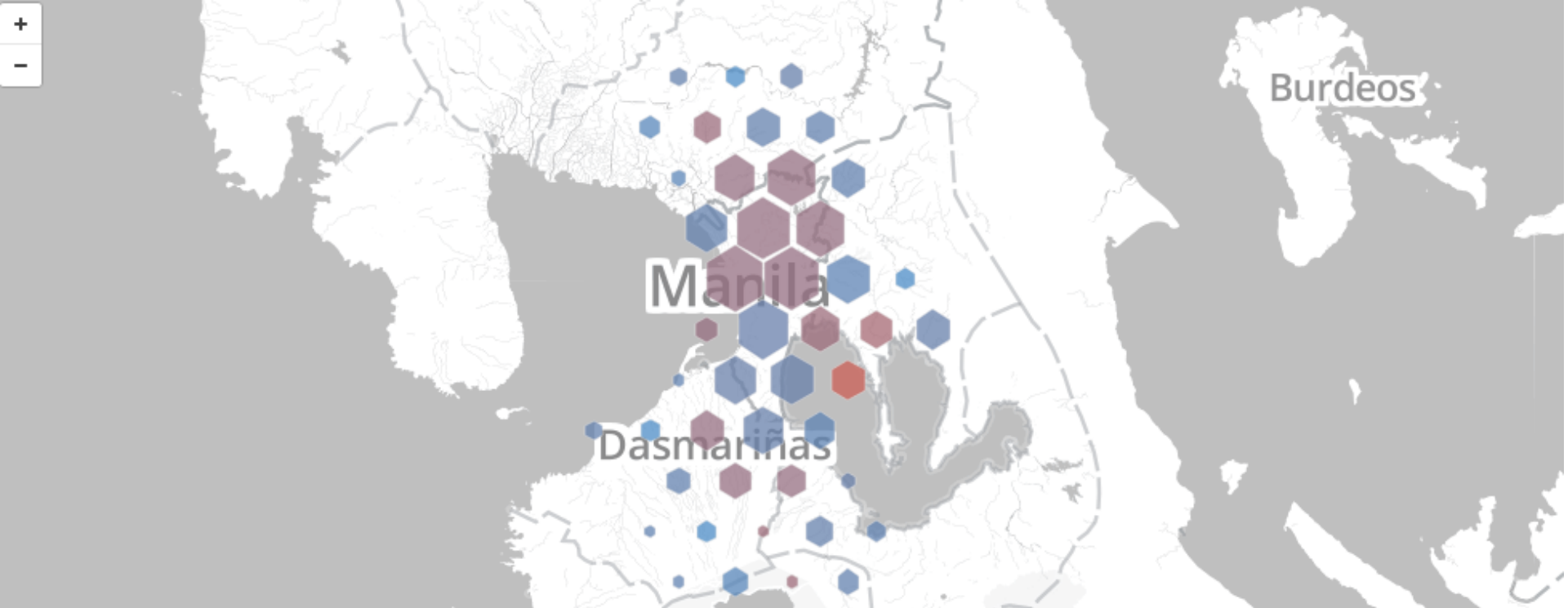
<http://square.github.io/crossfilter/>

twbs / **bootstrap**

<http://getbootstrap.com/>



<http://leafletjs.com/>



Hexbins 19

☒ Origins

☒ Destinations

☐ Origins within Map

☐ Destinations within Map

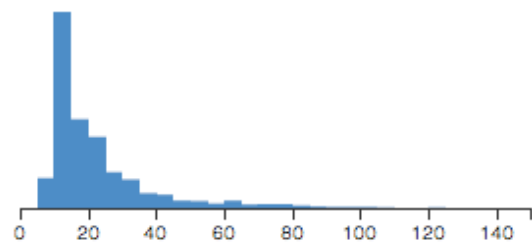
 CSV

 20,081 Records

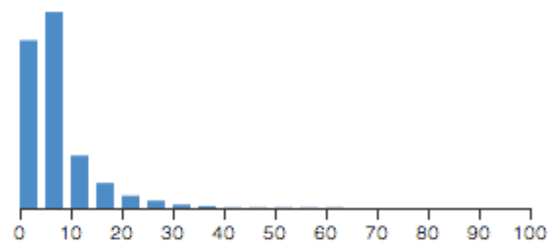
 GeoJSON

 Reset

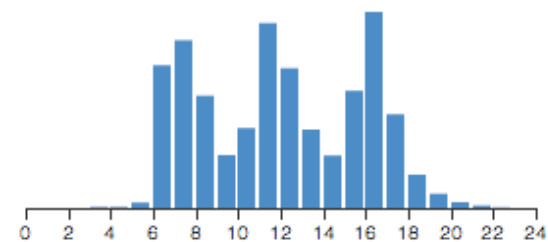
Cost



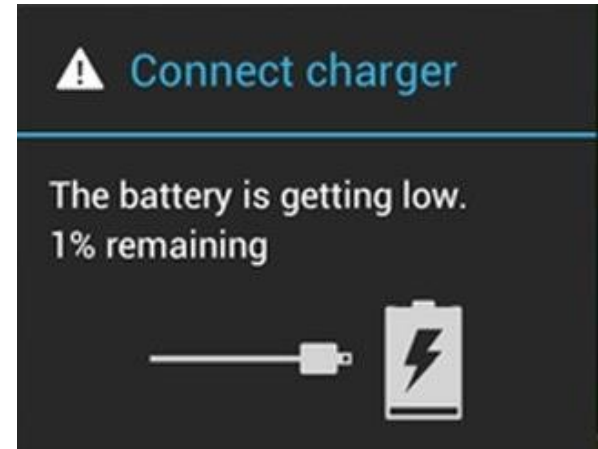
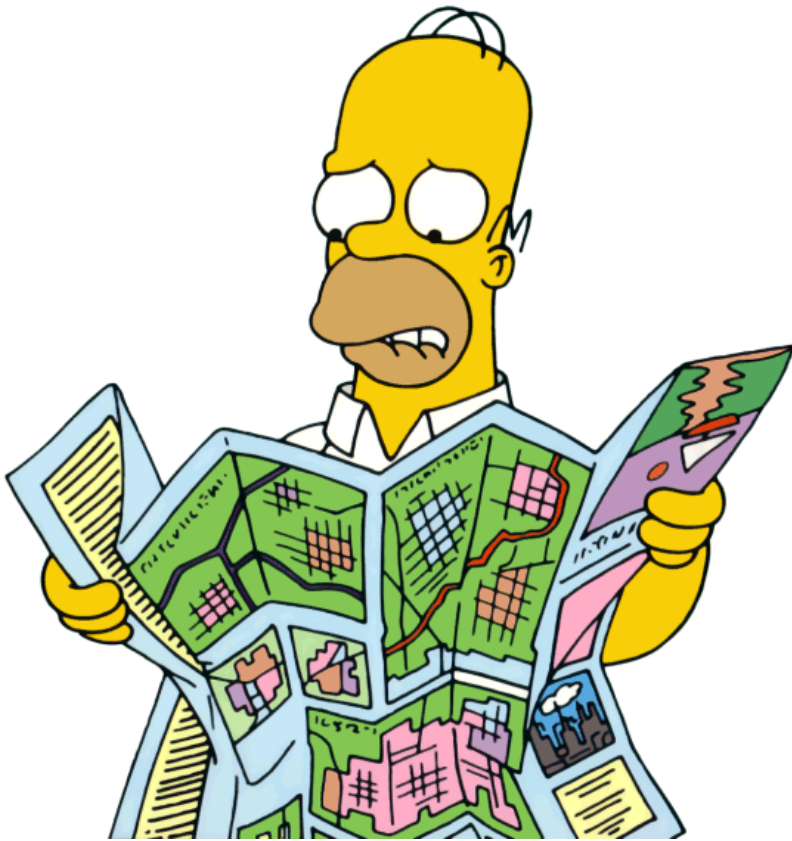
Distance



Time



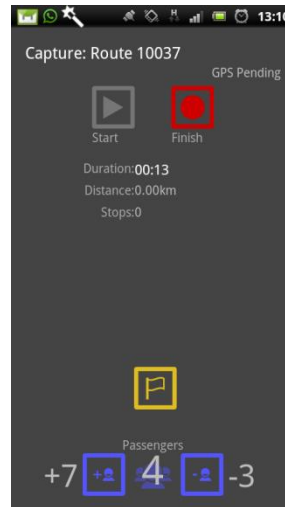
Implementation challenges



How we're using the data

21,000
responses
collected
in 6 weeks

+



+



=



(Building transport
models!)

Other potential uses

Transit route usage surveys

Transit user / consumer research

Roadside driver interviews

Stop/station usage surveys

Questions / Suggestions / Ideas?



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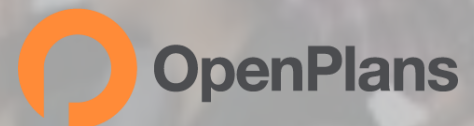


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