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GRSF
Global Road Safety Facility

DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting)

The World Bank's Tool for Crash Data Visualization, Evaluation and Reporting

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The World Bank, Singapore

JUNE 14, 2019

WHAT?

DRIVER – Data for Road Incident Visualization, Evaluation, & Reporting system

Web-based and open source system for geo-spatially recording & analyzing road crashes

A way to link multiple agencies as well as a means to standardize terms & definitions for reporting crash data

A suite of analytical tools to support evidence-based investments & policies & a platform for monitoring the impact of interventions

HOW?

Available wherever Open Street Map is available

Fields/variable easily modifiable

Can be adapted and maintained by local developer

DRIVER overview

https://roadsafety.gov.ph
https://thailand.roadsafety.io
https://vietnam.roadsafety.io
https://vidasegura.prefeitura.sp.gov.br/plataforma
https://brazil.roadsafety.io
https://bangladesh.roadsafety.io
https://mumbai.roadsafety.io
https://laos.roadsafety.io
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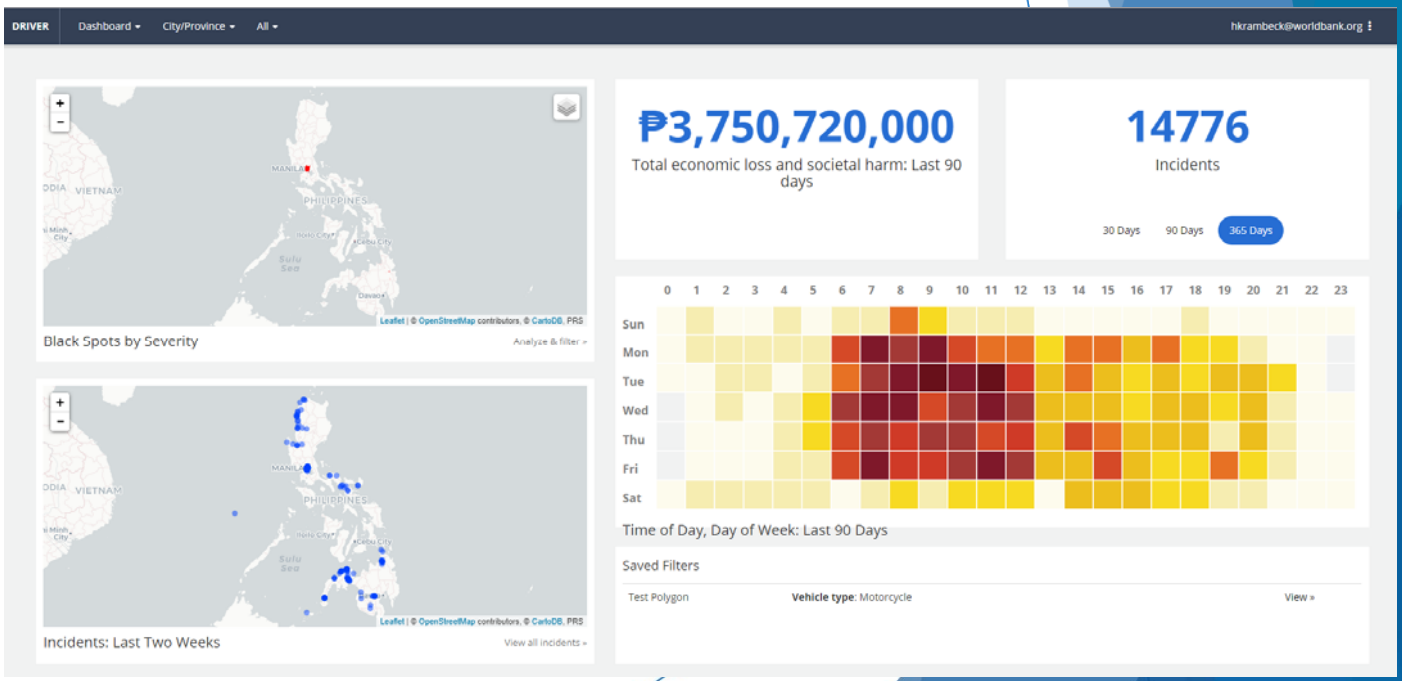

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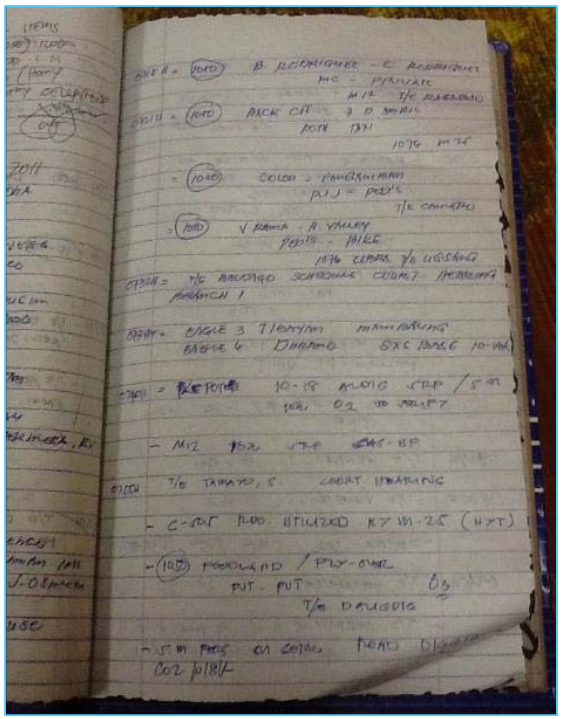
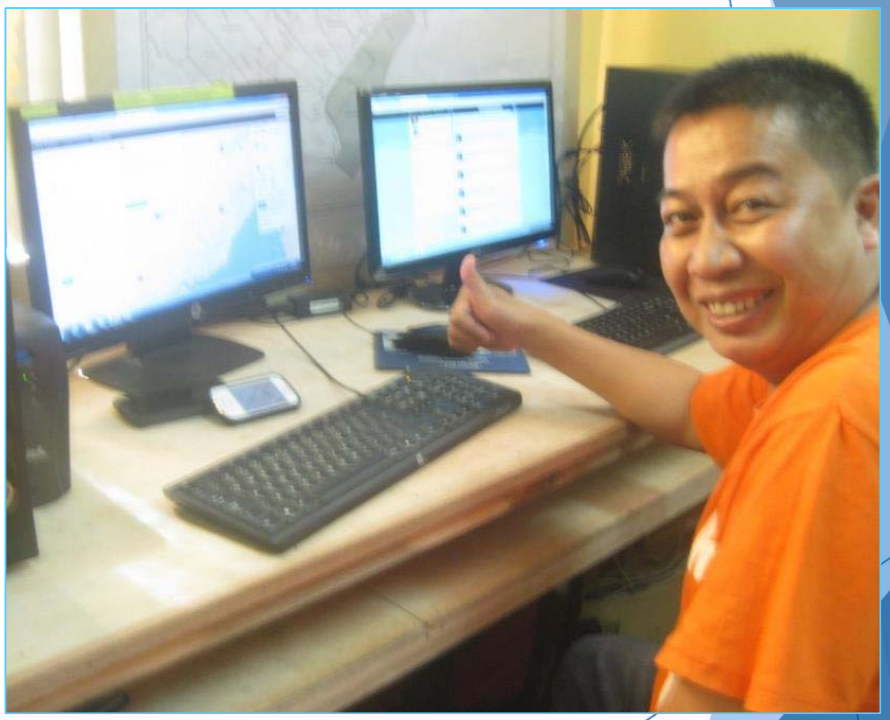
DRIVER – How did it start?





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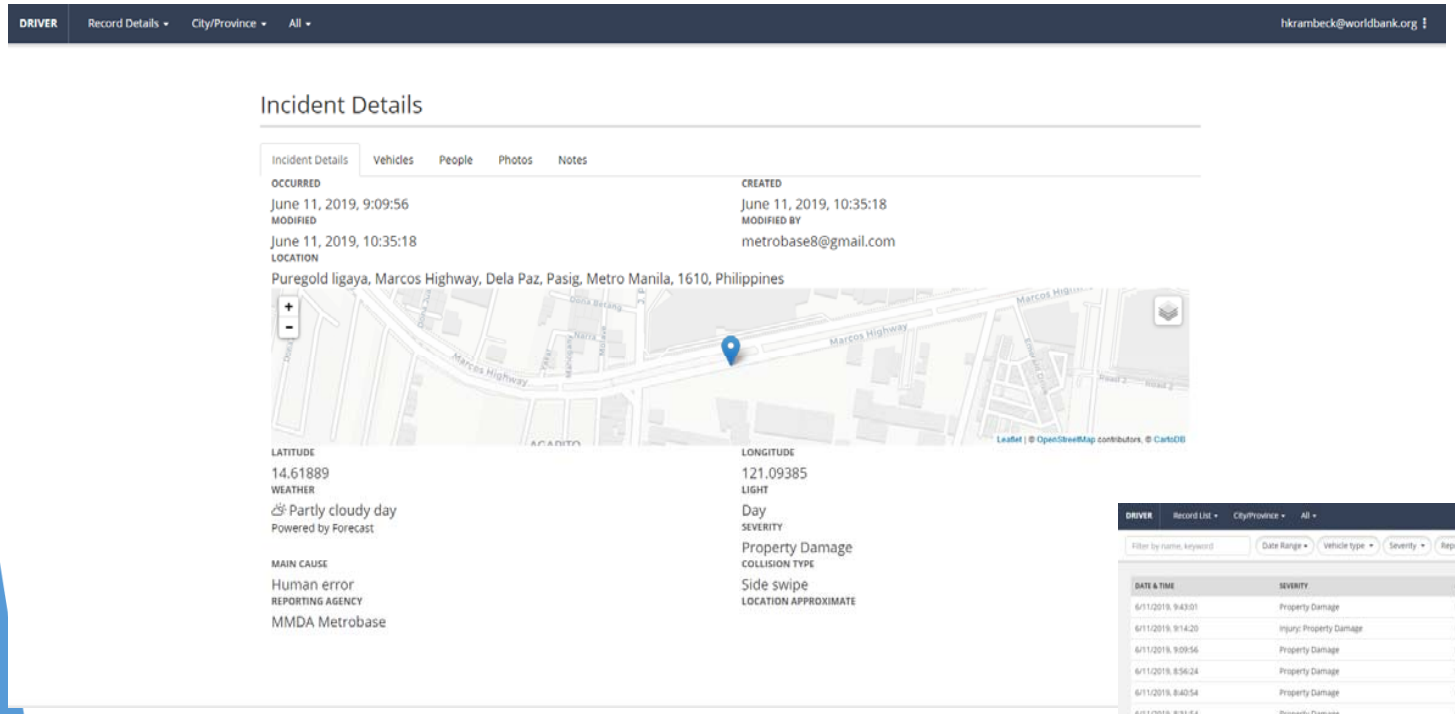
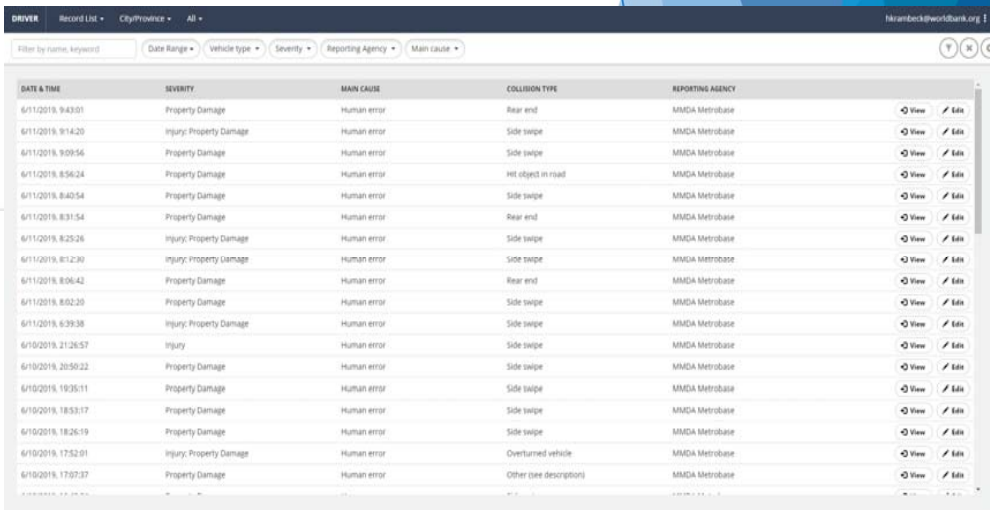
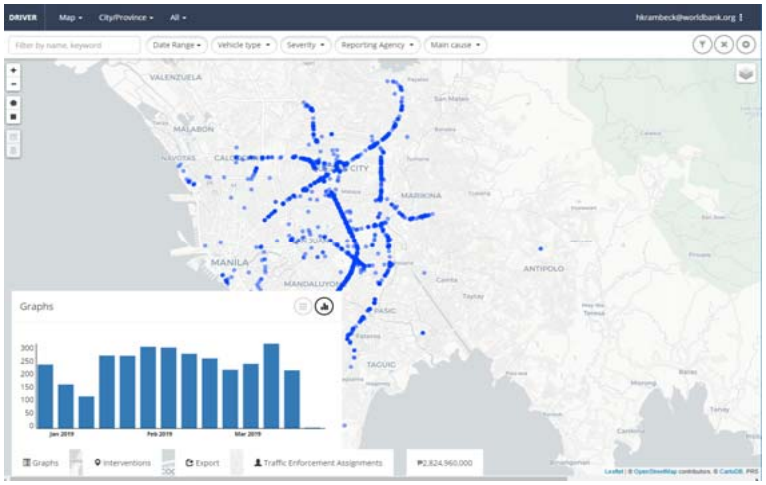
DRIVER – How does it work?

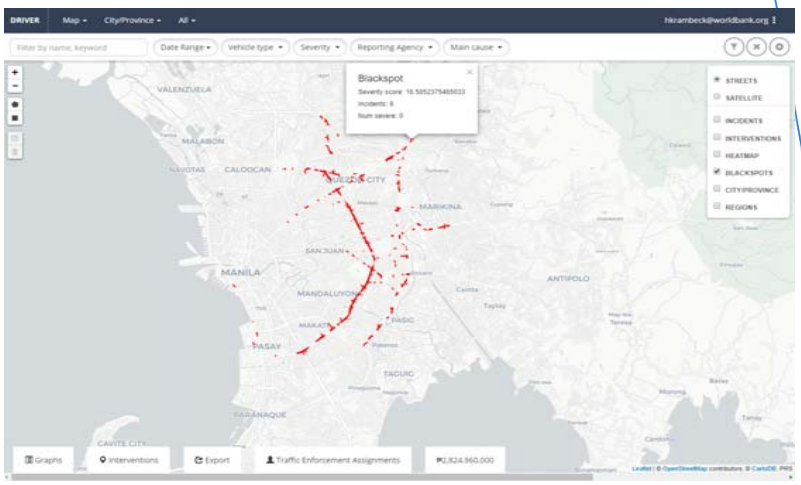
The Interface – Incident recording

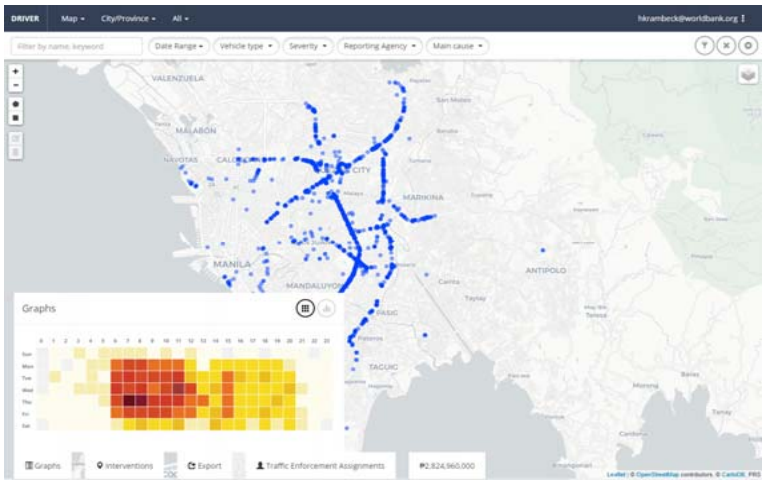


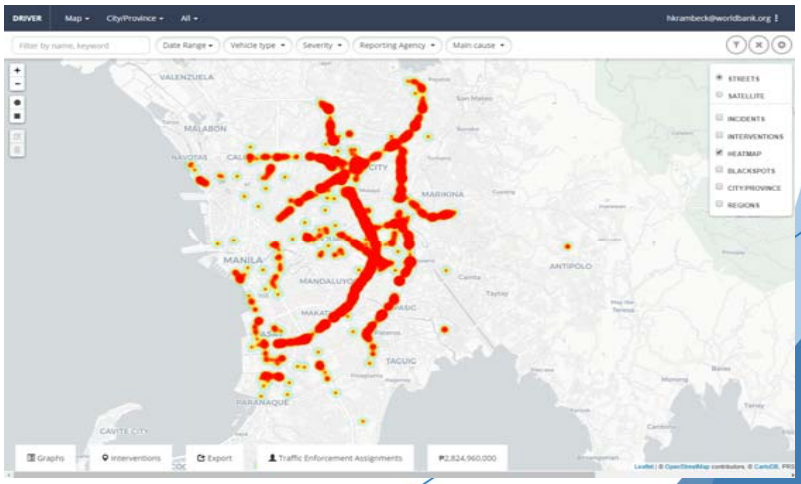


The Interface – Incident visualization and analysis









Smartphone app

ROAD INCIDENT DATA SYSTEM

Incident Reporting

The Philippine Incident Reporting app allows for in-the-field data entry into the Road Incident Data System to capture reports.

Sign-in to account

Contact DOST Support

Incident Details Next

WHEN DID THIS INCIDENT OCCUR?

01/01/2015 00:00

INCIDENT TYPE

Traffic Accident

COLLISION TYPE

Head On

MAIN CAUSE OF ACCIDENT

Human Error

WHERE DID THE INCIDENT OCCUR?

25th St and 5th Ave

WEATHER CONDITIONS

Clear

LIGHT CONDITIONS

Daytime

Incident Photos Next

Take photos of documents, incident details, weather and road conditions, vehicle defects, and other things you might need to reference again in the future.

Take a photo

DRIVER pilots

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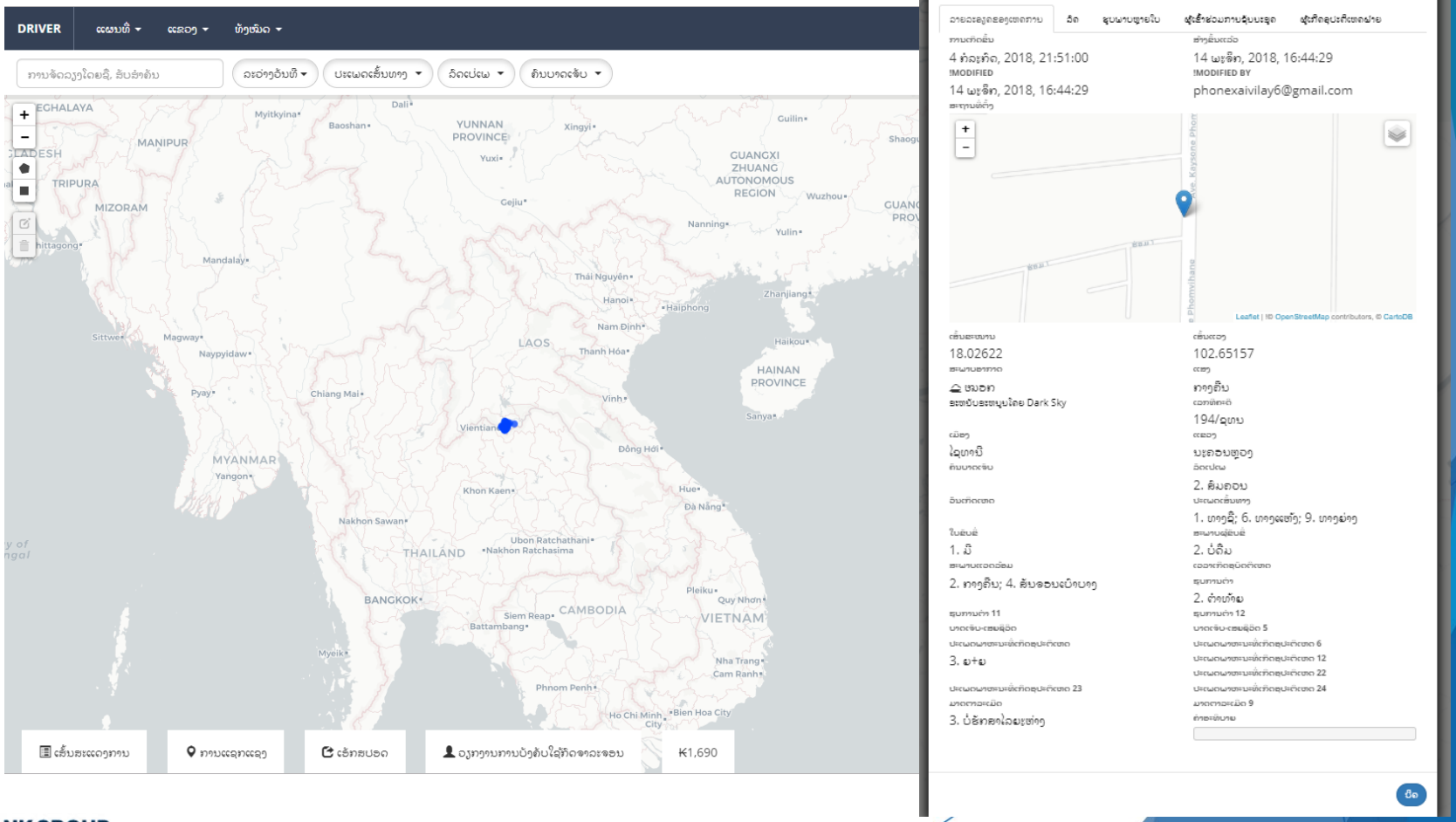
Vientiane



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Mumbai

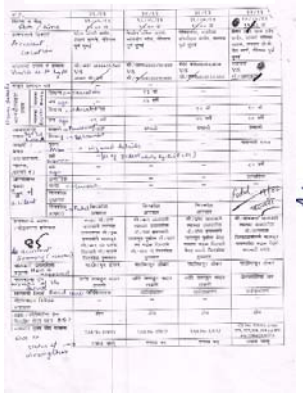
WHAT

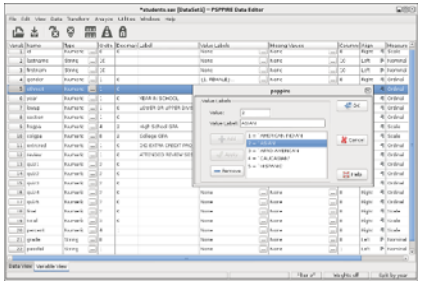
SHORT-TERM

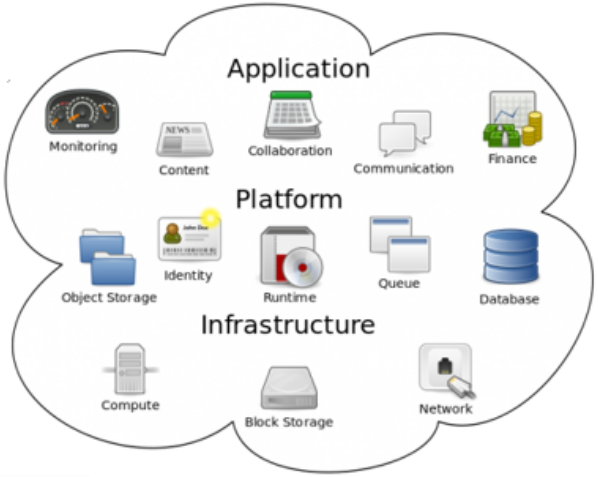
CRASH SCENE

MEDIUM TO LONG-TERM

Field Police







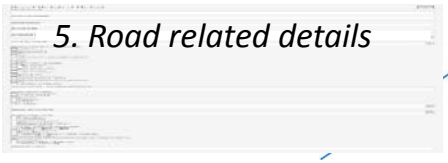
Field Police

Tablets

or

Phones

5. Road related details



Engineering

Department

Health

Department

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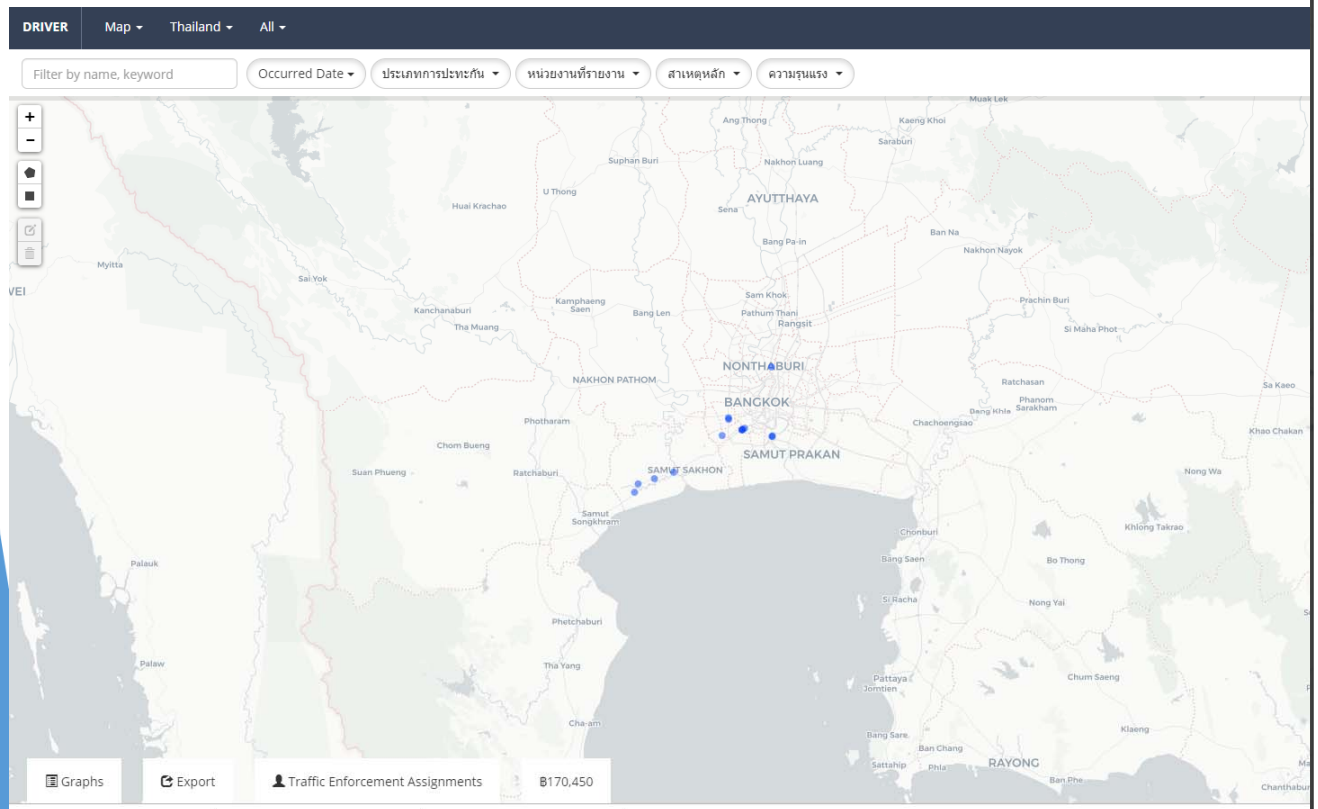
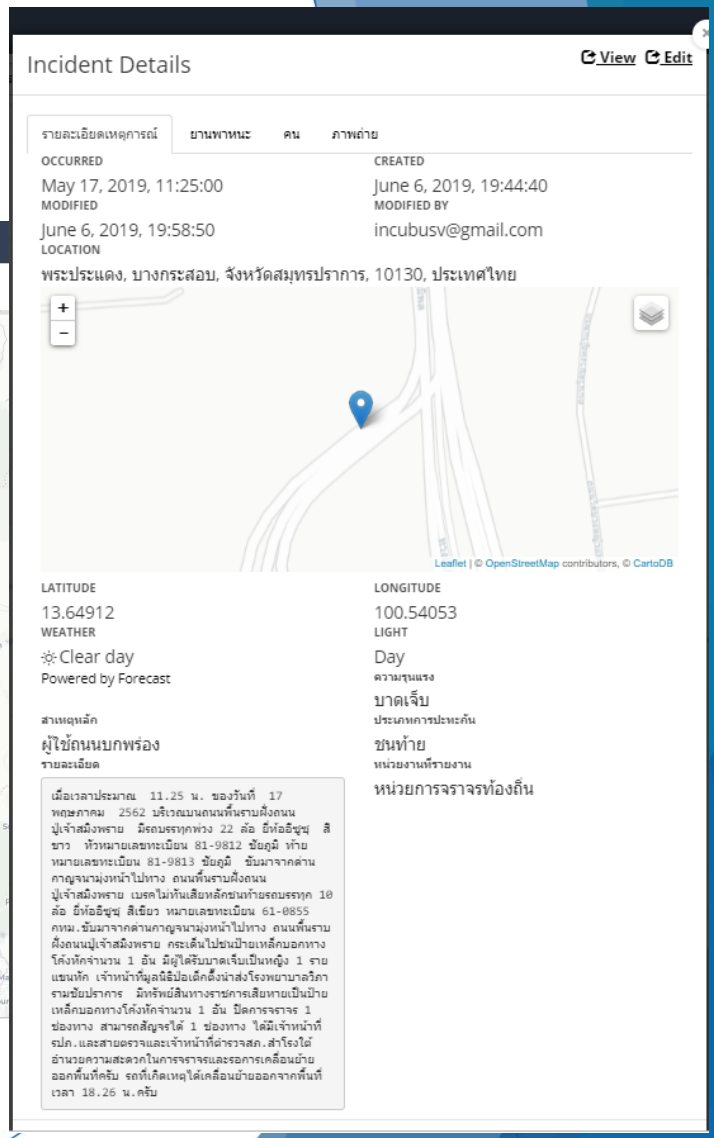
Bangkok





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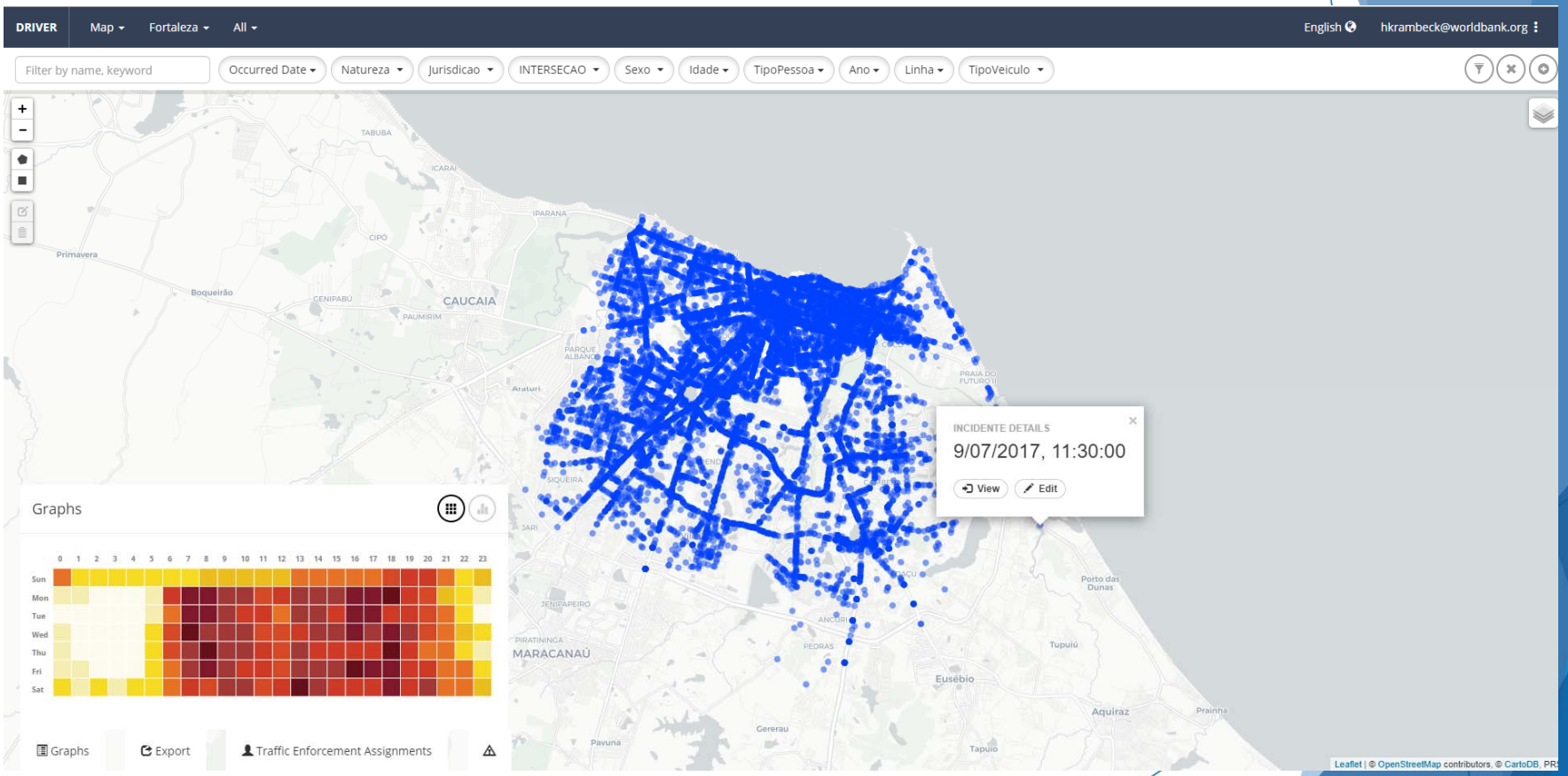
Fortaleza



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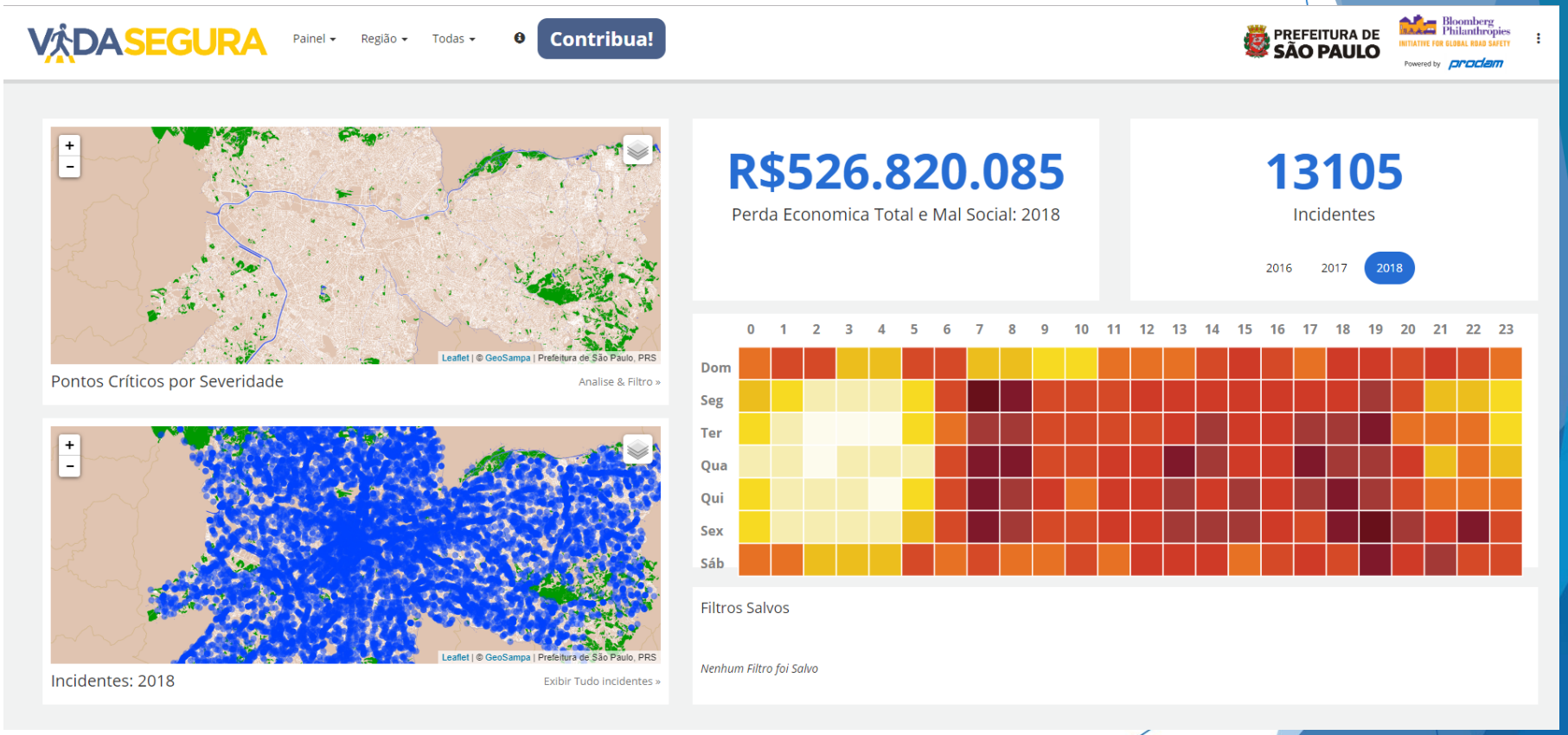
Sao Paolo



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DRIVER – How to locally adapt it?

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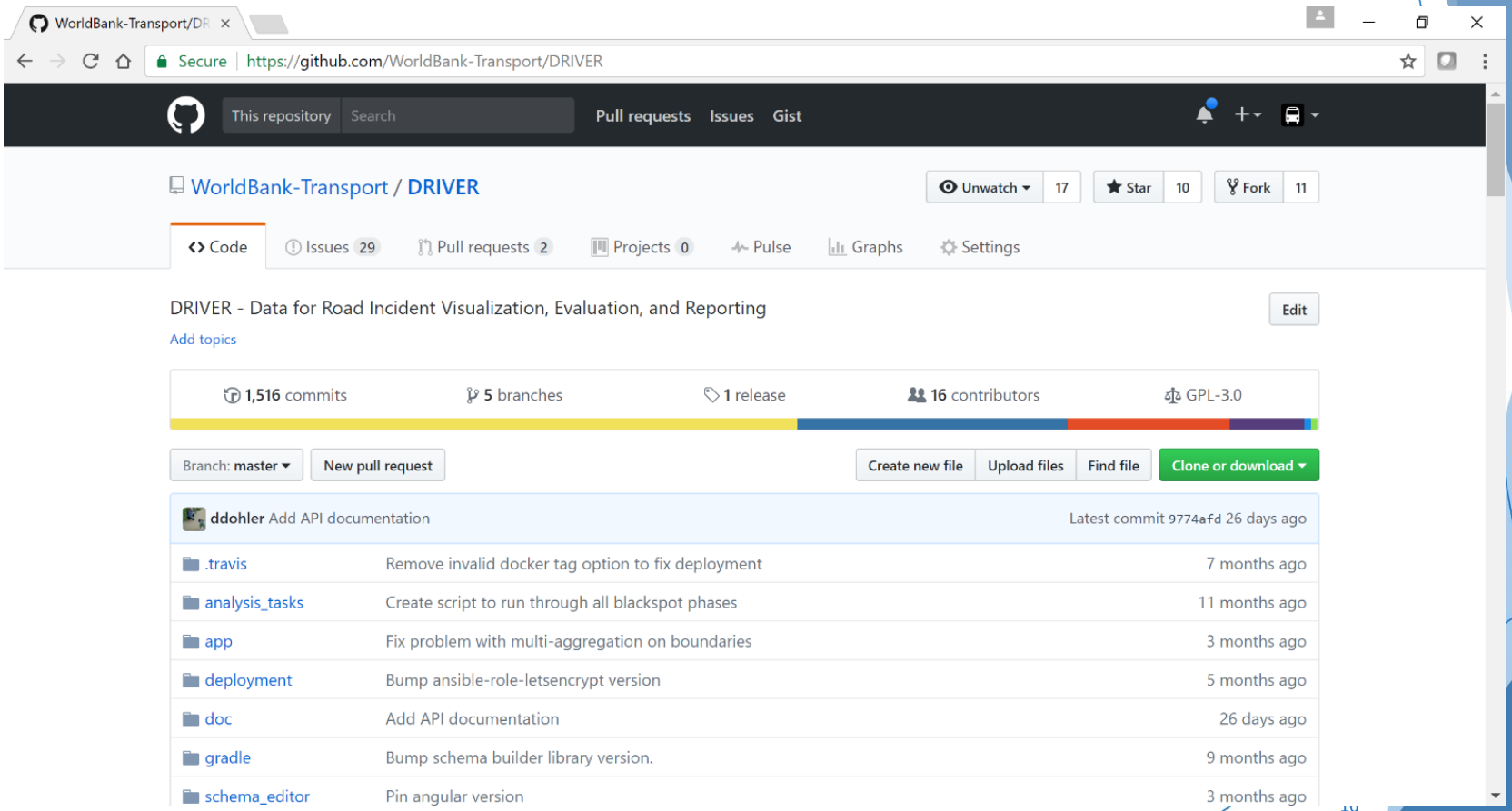
Local adaption – github repository



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Local adaption – draft TORs

Development

This section describes the competencies for a DRIVER developer.

Core competencies

- Proficient in a Linux environment, including shell scripting
- Knowledge of infrastructure tooling such as Vagrant, Ansible, and Docker
- Web development experience, specifically Python/Django and Javascript/Angular, including knowledge of HTML/CSS
- Experience with a relational database system

Preferred competencies

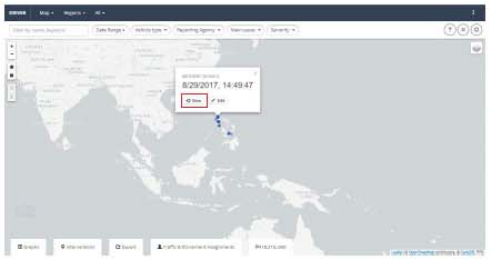
- Experience with:
  - PostgreSQL
  - Redis
  - Nginx
  - Gunicorn
  - Celery
- GIS experience, specifically using Windshaft
- Knowledge of statistics and R
- Knowledge of these additional technologies is also beneficial:
  - NFS
  - OAuth2
  - Javascript package/build tools (Grunt and Bower)
  - Monit
  - ufw

Local adaption - manuals

EDITING AND DELETING INCIDENTS

Analysts may also edit incidents already recorded in DRIVER. To edit an incident, go to the Map first, then click an individual incident you wish to edit by selecting one of the blue location pins.

Once selected, a pop up will appear that will prompt you to either view or edit an incident. Click "Edit".



The Incident Input form will appear again. You may edit details of the incident from here, and also delete them.

To save edited data, click the "Save Incident" button on the right.

To delete an incident, the click "Delete Incident" button on the right.

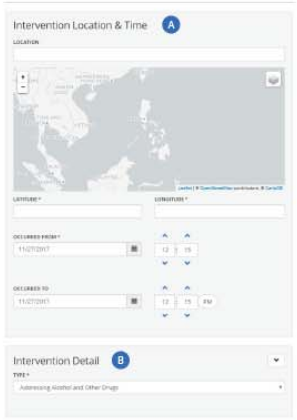
ENCODING INTERVENTIONS

Interventions are actions made by Analaysts in order to alleviate a road incident. These may come in the form of disciplinary action, road safety precautions, etc.

To access add an Intervention, analysts must first go to the Map and click the "Intervention" tab found below.

Clicking on this will prompt the "Add Intervention" button to appear. Click this.

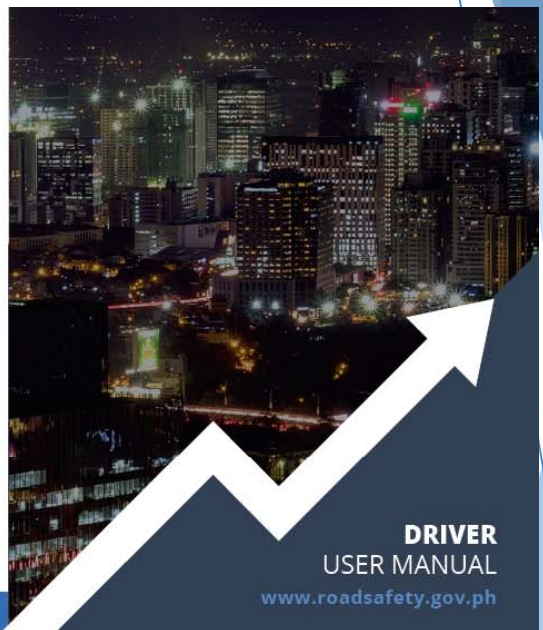
Intervention Input Form



(A) **Intervention Location & Time**
Record location, time, etc. where the intervention took/ will take place.

(B) **Intervention Detail**
The details and the action taken by officials to alleviate the road incident

Editing & Deleting Interventions
Just like editing incidents, click on a pinned intervention on the map. This will show an "Edit" button. You may edit and delete interventions in the same way.



DRIVER
USER MANUAL
www.roadsafety.gov.ph

DRIVER is a web application aimed at improving road safety reporting and data analysis. It provides data entry tools, map interfaces, custom report and filter tools, multiple concurrent user editing, and data exports.

DRIVER

CONTACT US

DRIVER **0917-123-4567**
Email: **driver@driver.ph**

View the full DRIVER manual on **www.roadsafety.ph**

Visit DRIVER on **www.roadsafety.gov.ph**

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DRIVER – Next steps

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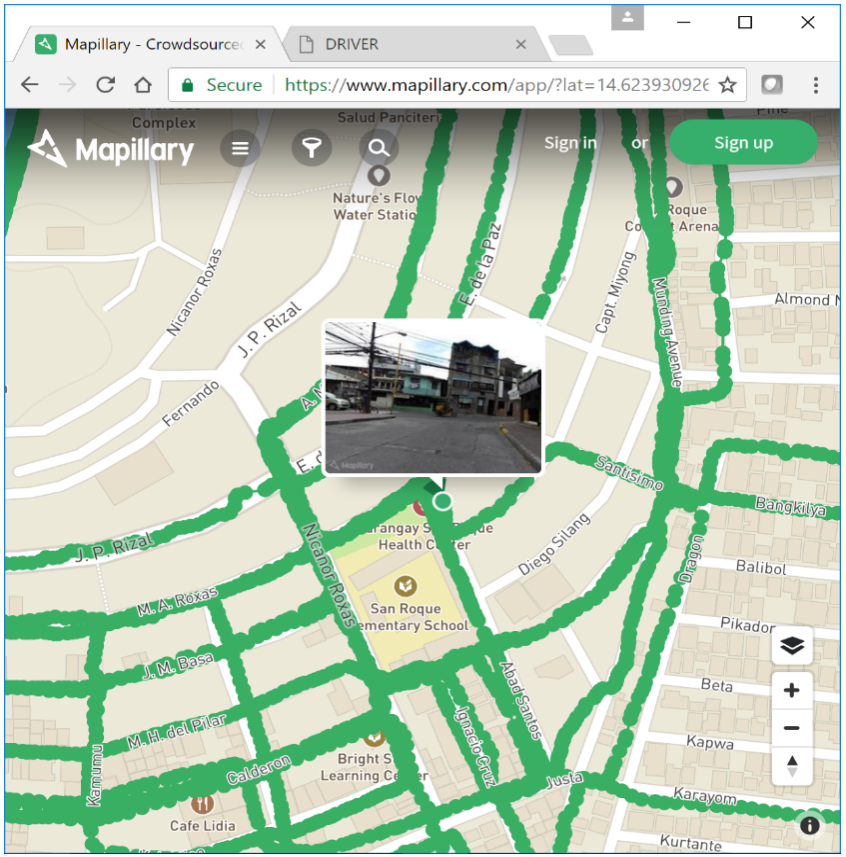
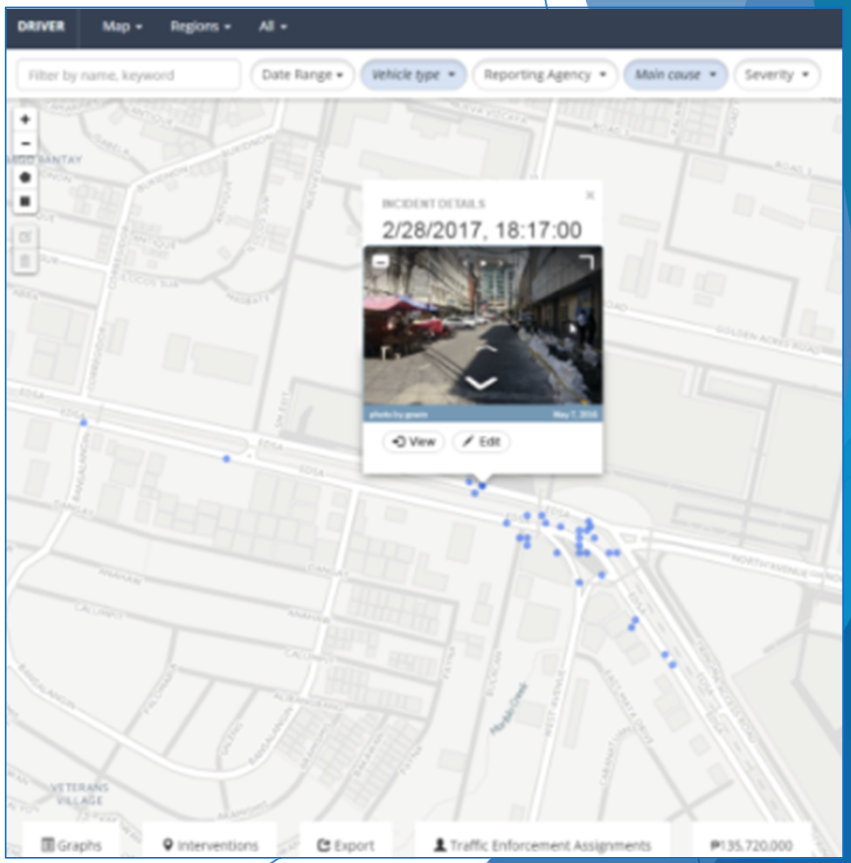
Future development - Mapillary





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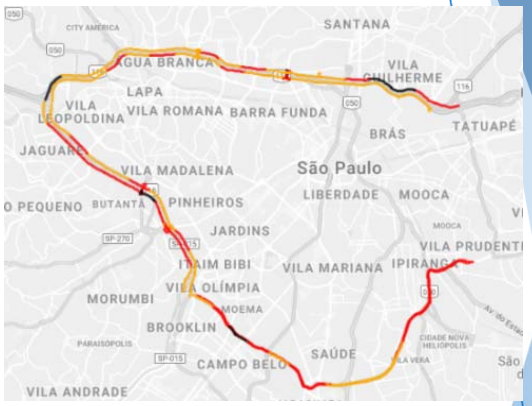
Future development - iRAP

iRAP's star rating gives a simple, objective measure of infrastructure safety for every road user type.

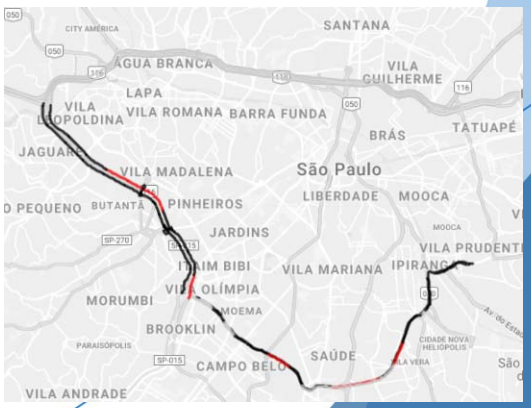
Vehicle Occupants

Motorcyclists



Pedestrians

Bicyclists



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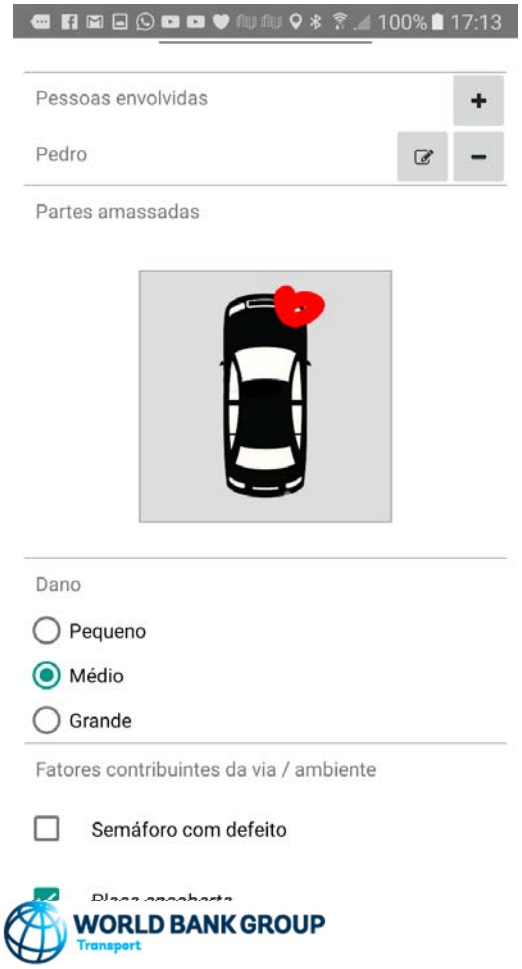
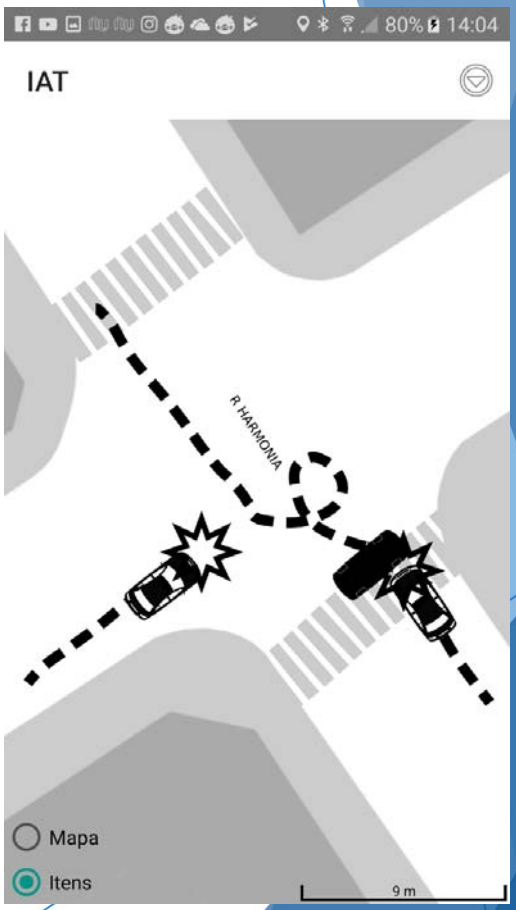
Future development – crash diagrams





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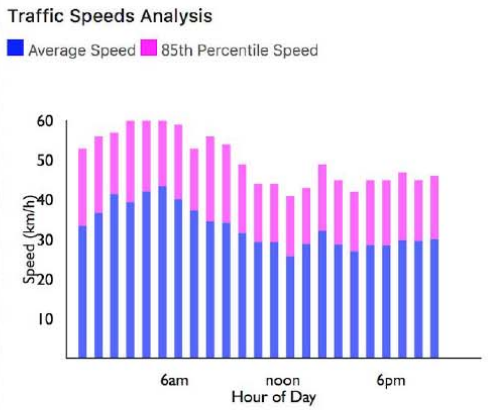
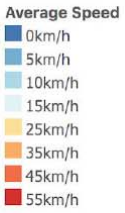
Future development – speed maps



Average Speed:
32.6 km/h

85th Percentile Speed:
53.6 km/h



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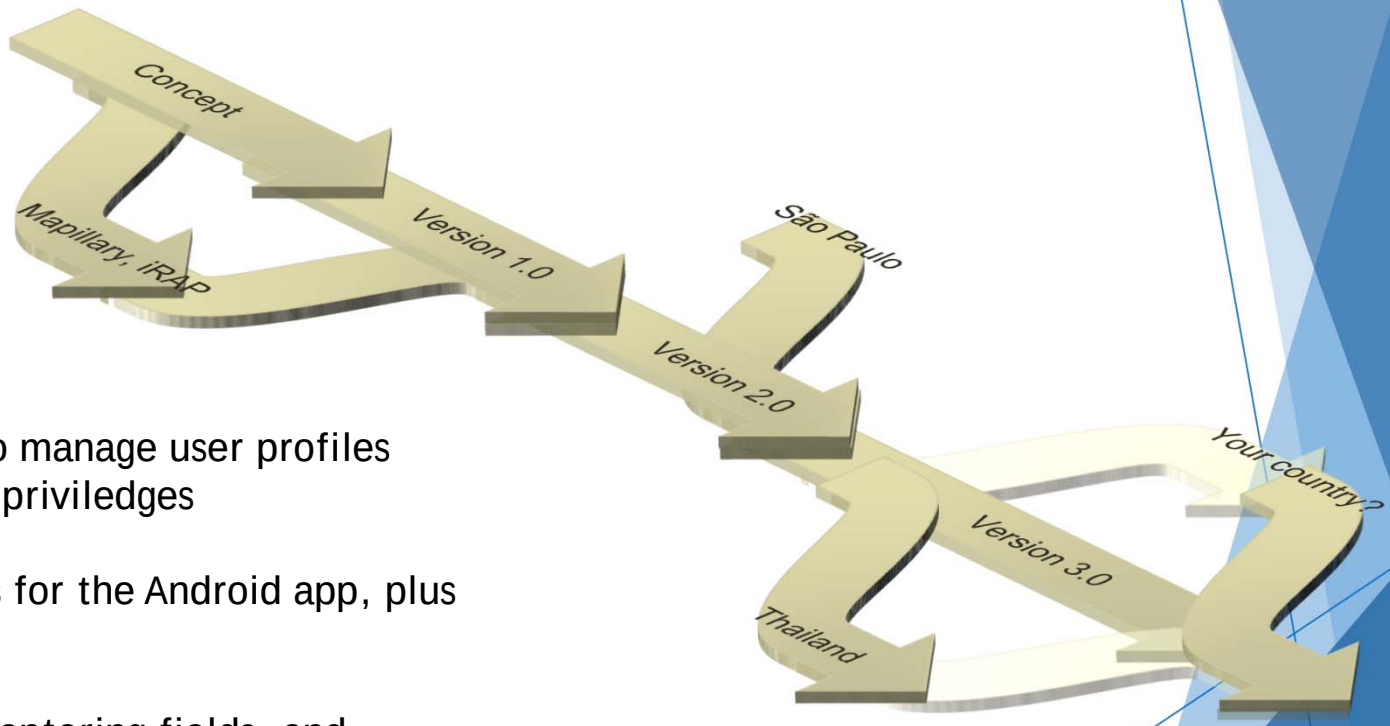
Future development



Different options to manage user profiles and administrative priviledges

New functionalities for the Android app, plus an iOS app.

Logic checks when entering fields, and advanced management of external sources

Thank you!

Available for free on Bank's open-source code repository:
https://github.com/WorldBank-Transport/DRIVER

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