Safari njema | Buon viaggio

Polisocial Award 2018
20 11 2019 - Developing Apps
The Project

Safari Njema aims at dealing with the challenge of **reducing transport poverty** in large urban areas in Africa.

It builds on three major design perspectives: **incremental disruptive innovation**, place based approach, data driven co-design.

**Team:** 22 people from DMAT, DASTU, DEIB, DIG, DESIGN

**Area of Interest:** Maputo Mozambique
The Data

Average daily number of data points per user: ~150
Collection window: January 31st 2019 - ongoing
Collection area: Greater Maputo (Mozambique)

<table>
<thead>
<tr>
<th>Data fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timestamp</td>
<td>Timestamp of the data point in ISO-8601. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of &quot;+hh:mm&quot; indicates that the data/time uses a local time zone which is &quot;hh&quot; hours and &quot;mm&quot; minutes ahead of UTC. A time zone offset of &quot;-hh:mm&quot; indicates that the date/time uses a local time zone which is &quot;hh&quot; hours and &quot;mm&quot; minutes behind UTC.</td>
</tr>
<tr>
<td>Cuebiq ID</td>
<td>Proprietary hashed ID uniquely identifying each device (no personally identifiable information is collected)</td>
</tr>
<tr>
<td>ID Type</td>
<td>Device OS representation: 0 = Android; 1 = iOS; Nothing = Unknown</td>
</tr>
<tr>
<td>Latitude</td>
<td>Decimal version of the latitude</td>
</tr>
<tr>
<td>Longitude</td>
<td>Decimal version of the longitude</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Data point accuracy expressed in meters</td>
</tr>
<tr>
<td>Time Zone Offset</td>
<td>Time zone offset of the position of this device</td>
</tr>
</tbody>
</table>
The Data

Sample of data at Estàdio de Zimpeto
The Data

Sample of data at Rua de Xipamanine
Estimation along time of the number of people in selected POIs, e.g.:

- People in a district
- People at a Chapas and/or Machimbombo Stop
- People moving along a Chapas and/or Machimbombo route
Estimation of user specific mobility patterns
The Data

Estimation of vehicle velocity along time and space

Estimation of people flows between districts or towns along time
The Data

Estimation of weather and calendar on people mobility
The Data Quality

The Data are a **biased sample**:  
- Distribution of people having and using a smartphone is not uniform across social classes and urban neighbourhood

- Distribution of people having a Cuebiq app installed is not uniform across people having a smart phone

Solutions:  
- Data Integration: census data, facebook data

- DataSet Increase: increasing the dataset by adding an app to the app list of Cuebiq
The Data Quality

- DataSet Increase: increasing the dataset by adding an app to the app list of Cuebiq

Developing an application for students to be used in the area of Maputo:
- Sharing notes
- Sharing lifts to uni
- ...

Developing application for Chapas’s driver:
- Traffic information
- Timetable
- ...

Safari njema | Buon viaggio

Polisocial Award 2018
20 11 2019 - Developing Apps

Anna Calissano - PhD DMAT  anncalissano@polimi.it
Paola Riva- PhD DIG and PM paola.riva@polimi.it