Rethinking Mobility for Sustainability, Safety and Inclusion – 18 May

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Rethinking Mobility for Sustainability, Safety and Inclusion

Brazil - Program Trajectory

The Road Safety program began in 2014 with a broad diagnosis of the road safety system in Brazil and expanded over the years, having impacted different fronts.

- **2014**
  - Road safety diagnosis in Brazil aimed at understanding the results, processes, laws, and opportunities for improvement.

- **2017**
  - Creation of the ABI Foundation and expansion of the methodology developed in Brazil to multiple countries, such as South Africa, Dominican Republic, and India.

- **2018 - 2021**
  - Diagnosis of traffic statistics with all Brazilian states and development and implementation of RENAEST.

- **2010**
  - Launch of the first decade of action for road safety by the UN.

- **2015 - 2016**
  - Launch of the São Paulo and Federal District programs with results of a reduction in deaths by 11% and 35%, respectively, in the first year alone.

- **2018**
  - UNITAR (UN training body) and launch of the Management Practices toolkit for road safety.

- **2022 – 2023**
  - Development of the predictive algorithm aimed at predicting the occurrence of accidents and taking preventive actions.
Achieved results

The road safety experiences resulted in an 11% reduction in fatalities in São Paulo in the first year (61 deaths) and a 41% reduction in Brasília from 2017 to 2021, avoiding 525 deaths during that period. Both programs were institutionalized and remain active.
Achieved results

The application of the method aims at aligning forces and resources to the reduction of deaths in traffic.
Predictive model scope

Project objective
The objective of this stage was to develop and validate machine learning models to predict traffic accidents, **conducting experiments** and evaluating the applied techniques and metrics.

Assumptions of the experiments
- Experiments with RENAEST and PRF open data;
- Prediction of collisions in general (collisions, overturning and pile-up);
- Incomplete data is discarded for analysis.

Pilots for experiments

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Highway stretch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belo Horizonte</td>
<td>BR-230/PB, between km 0 and 100.</td>
</tr>
<tr>
<td>São Paulo</td>
<td></td>
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Model building

Ex
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Jan. 2022

RESULTS