TRUFI ASSOCIATION

DT4A Webinar - Building Open-Source Transport Data Collection Tools

www.trufi-association.org

Agenda

1. About Trufi Association e.V.
2. Informal Transport
3. Digitizing Informal Transport
4. Use Cases
5. Closing Remarks

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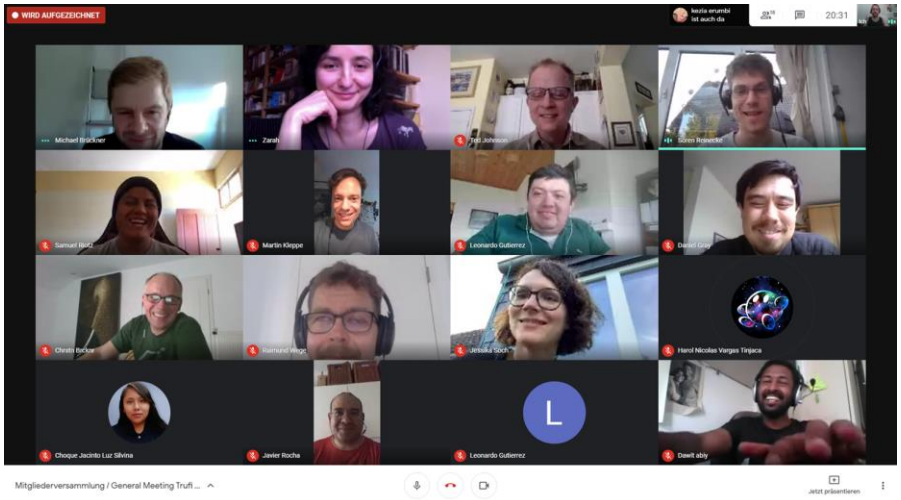
Trufi Association e.V.

- Nonprofit start-up for informal public transport
- First app in 2018; founded NGO in 2019
- Mission: Improve public transport worldwide through digitization
- Vision: People in developing countries choose public transport options because they are accurate, helpful and attractive
- Flagship Product: Multimodal Journey Planner, open source, cross-platform

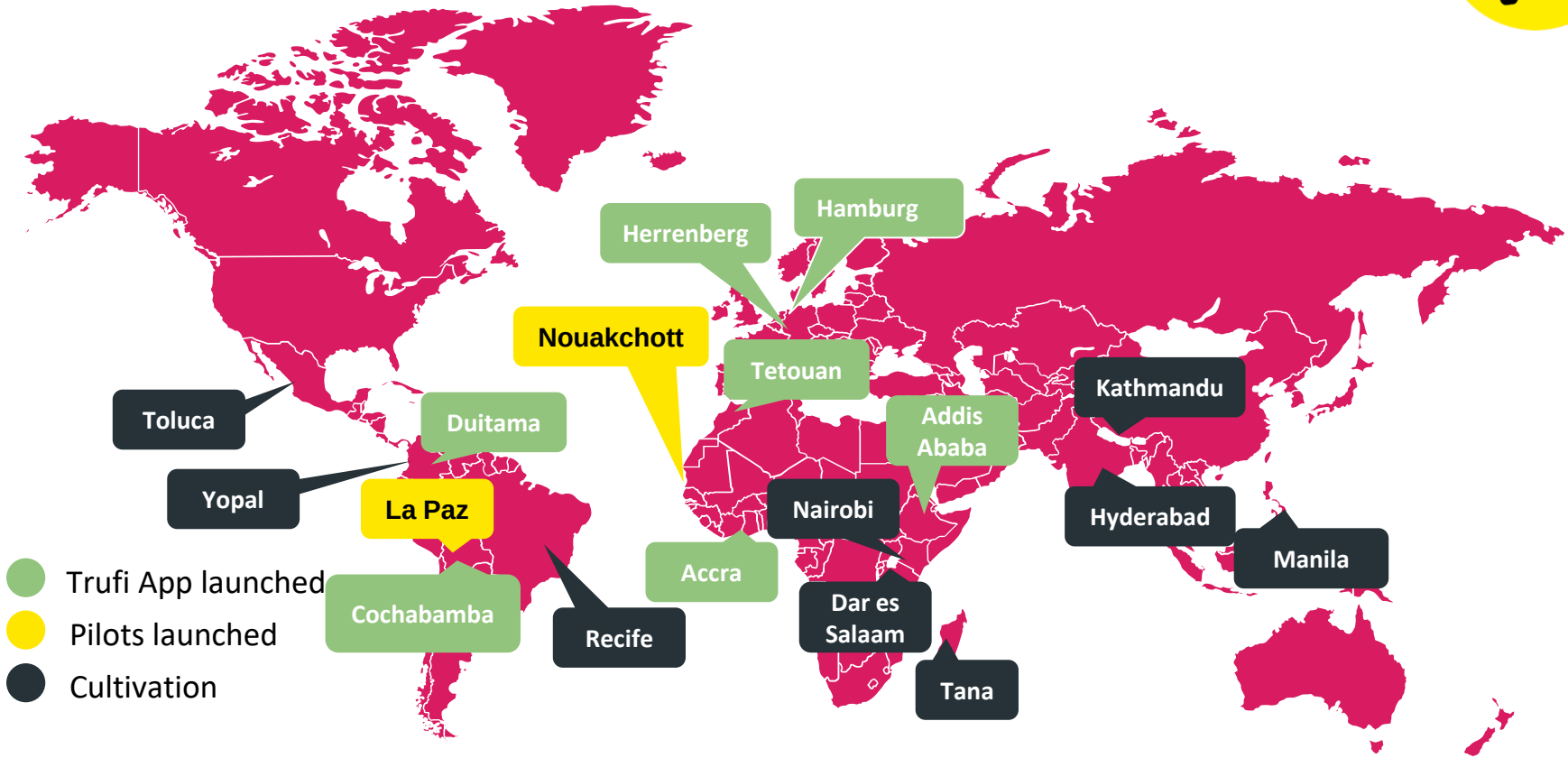


40+
volunteers and fellows

10+
women

10+
nationalities

Trufi Projects



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Informal Transport - What is it?

- Informal
  - No official stops
  - No schedule
  - No documentation of bus lines
  - No official transport network, but private agencies
- Semi-Formal
  - Mixture of formal and informal transit: Metro in Addis Ababa, minibuses or Gondolas in La Paz
- Typical in Latin America, Africa and Asia

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Informal Transport - What are the challenges?

- The digitization standard (GTFS) is designed for informal transport
- Run by a lot of different operators
- Often the authorities have no information at all
- Vehicles stop anywhere to drop off and pick up passengers
- Subject to route changes without coordination with central authority

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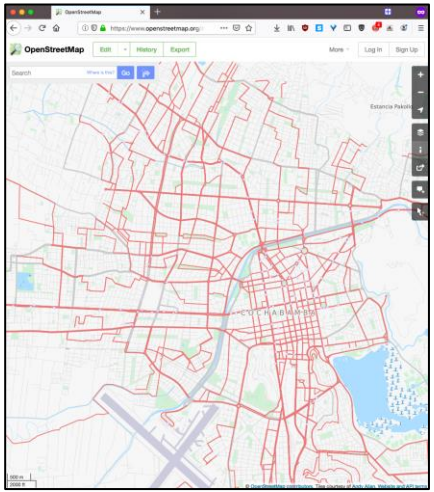
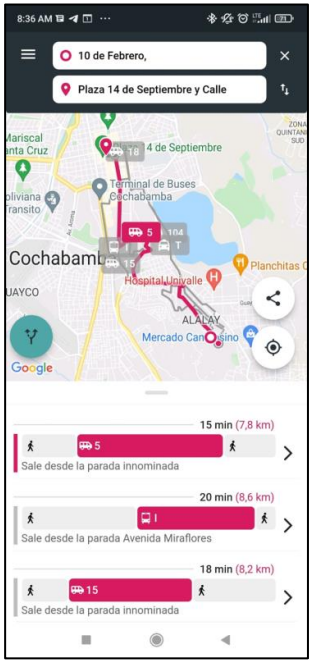
Impact Driven: Empowering the Community

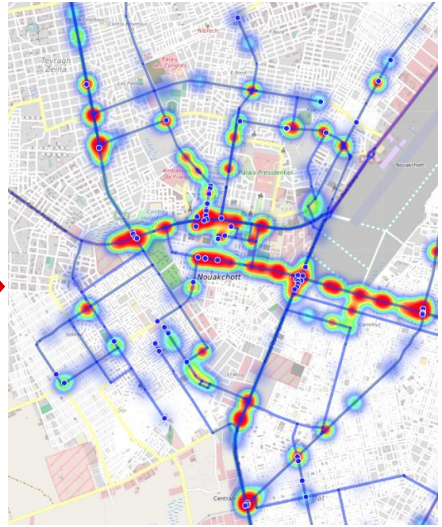
Community building



Adding in Openstreetmap



App Deployment



Data used to improve planning

Data Generation - Digitizing Informal Public Transport Data

- Teach a team to track routes
- Digitalize timetables from books
- Collect existing routes from GIS apps such as Google Earth or ArcGIS.

```
1 agency_id,agency_name,agenc
2 LRTA,Manila Light Rail Trar
3 LTFRB,LTFRB,http://www.ltfr
4 MRTC,Manila Metro Rail Trar
5 Maritime Industry Authority
6 PNR,Philippine National Rai
7 FORT,The Fort Bus,http://bc
```

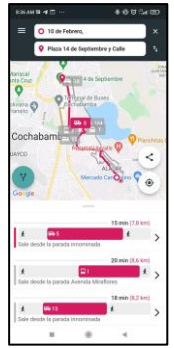
“trufi-osm-to-gtfs”-script

OpenTripPlanner

moovit

Ualabee

transit



Collect and digitalize the data

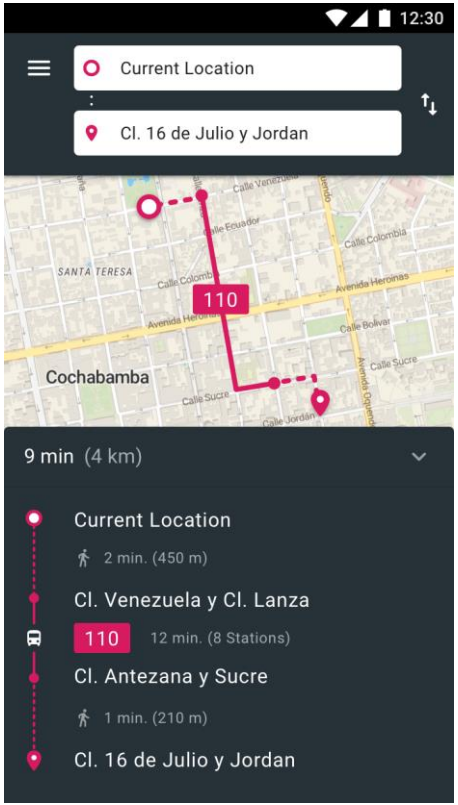
Create a standard GTFS format from the data

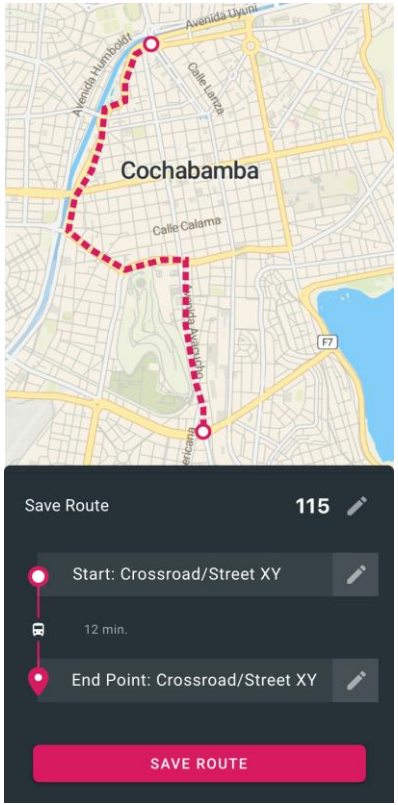
Public domain release

Interoperable data

Flagship Product: Trufi App + Route Tracking

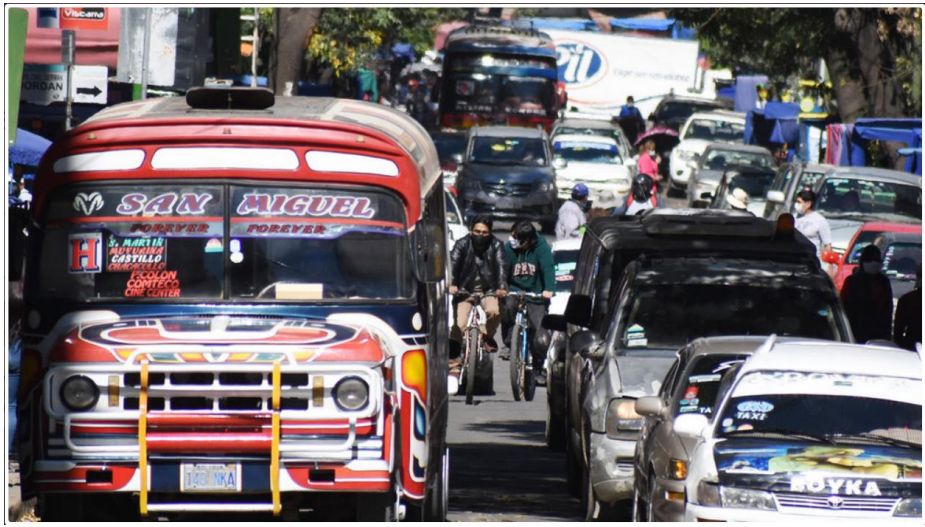
- Open Source Multi-Modal Journey Planner
- Built on Flutter with OpenStreetMap and Map Tiler
- Full Door-to-Door navigation
- Customizable / White-Label Solution
- Released as Open Source under an AGPL license
- Route tracking allows users to contribute to data quality





Tool summary

- Communities
- “trufi-osm-to-gtfs”-script
- Route tracking feature
- Presets for JOSM that help with the provisioning of public transport data to OSM
- „GTFS Editor Plugin“ for IDEs to facilitate changes in the GTFS data in the open trip planner (currently being developed)
- Trainings and mapping workshops
- Online course in the making



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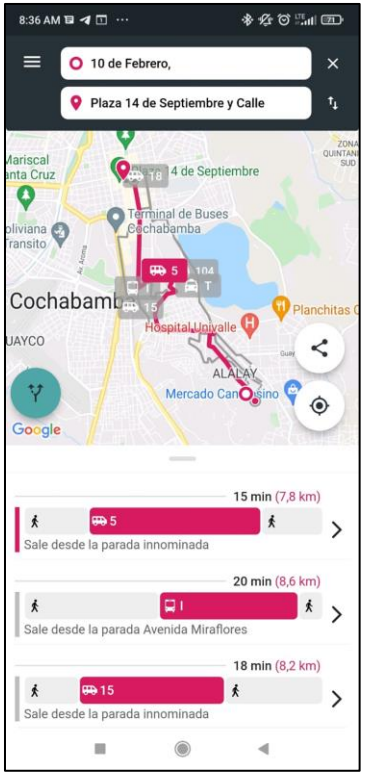
Nouakchott, Mauritania – Mapping Services

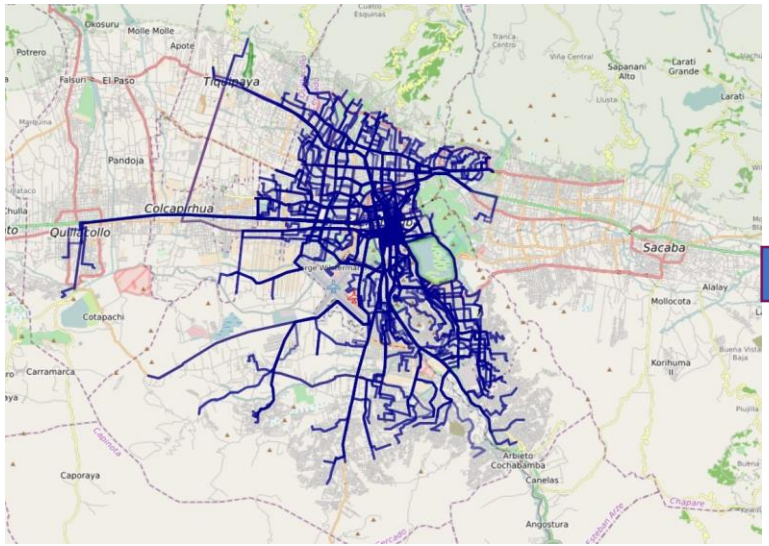
- Contracted by the city of Nouakchott for the mapping of semi-formal transport routes
- Built and trained the local community
- Generated OSM data, Mapped to GTFS and took mapillary photos
- Handed over all the generated data to the city
- Facts:
  - Kilometers travelled: 400
  - Hours travelled while tracing: 55
  - Bus and taxi routes traced: 59
  - GPS traces: 61
  - GTFS file generated
  - Social media campaign for the project

Cochabamba, Bolivia – Trufi App

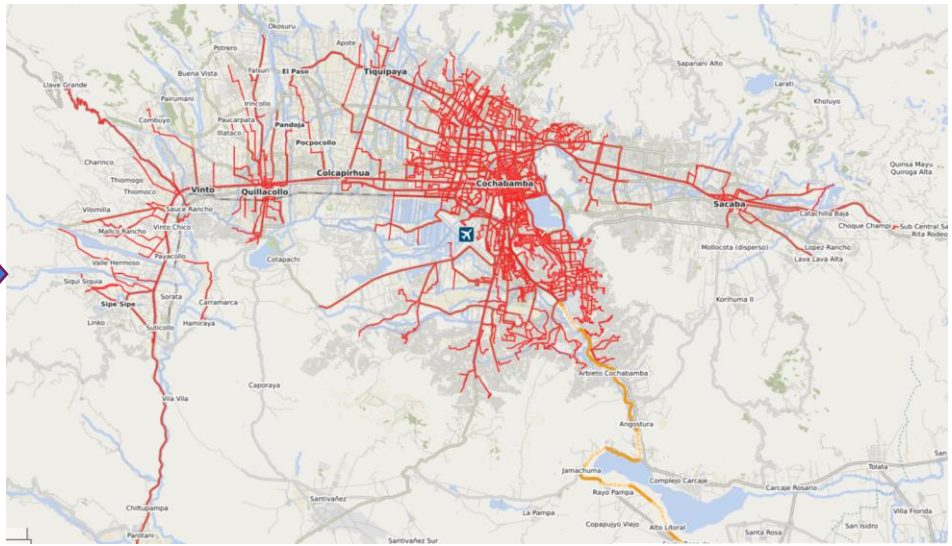
- Bus collection by OSM community
- Uptake: 5.000 users within first two weeks after Go Live
- Currently more than 50.000 downloads
- Very active community coordinated by our community manager
- A lot of contributors



Cochabamba, Bolivia – Trufi App



297 routes



437 routes

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Closing Remarks

- Collecting and maintaining open source data requires a collective effort
- Knowledge sharing as a key component of the whole process
- Open-source & open-data tools bring technological sovereignty to territories in the global south, avoiding dependence on large multinational companies
- Community ≥ Tools

TRUFI
ASSOCIATION

Thank you and welcome aboard!

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