

# Improving Public Transport Through Digitization with Open Source Code and Data

Trufi Association e.V.

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TRUFI Association





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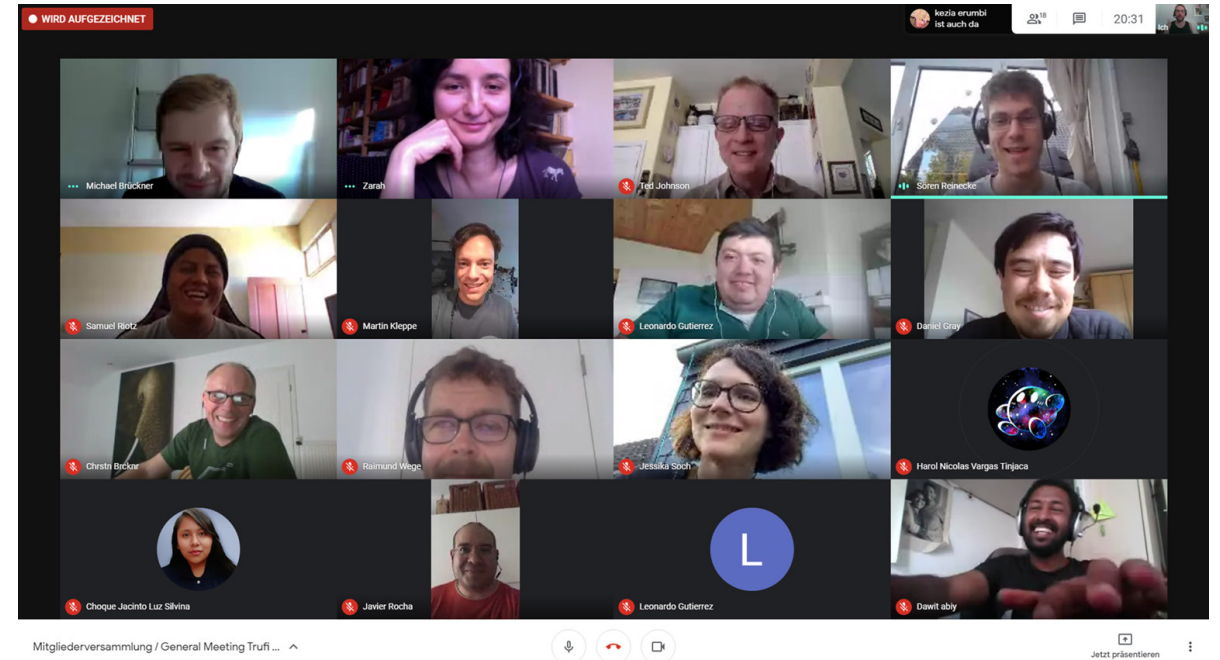


# About Trufi Association e.V.



# Trufi Association e.V.

- Non-profit start-up for informal public transport
- Active since Mai 2018 & officially an NGO since April 2019
- Mission: Improve public transport worldwide through digitization
- Vision: Seeing people especially in developing countries enjoy a modern, digital and easily accessible public transportation.

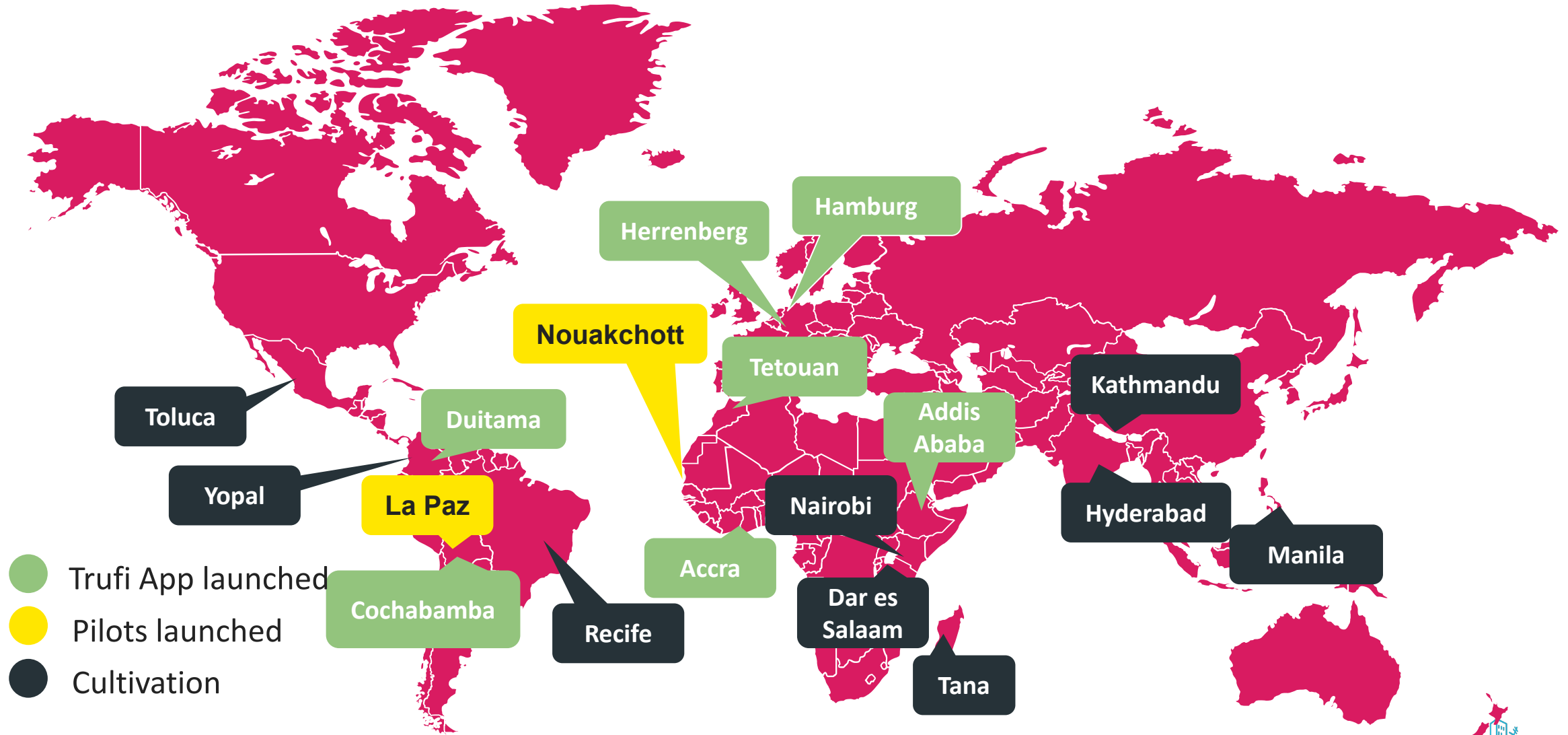


**40+**  
volunteers and  
fellows

**10+**  
women

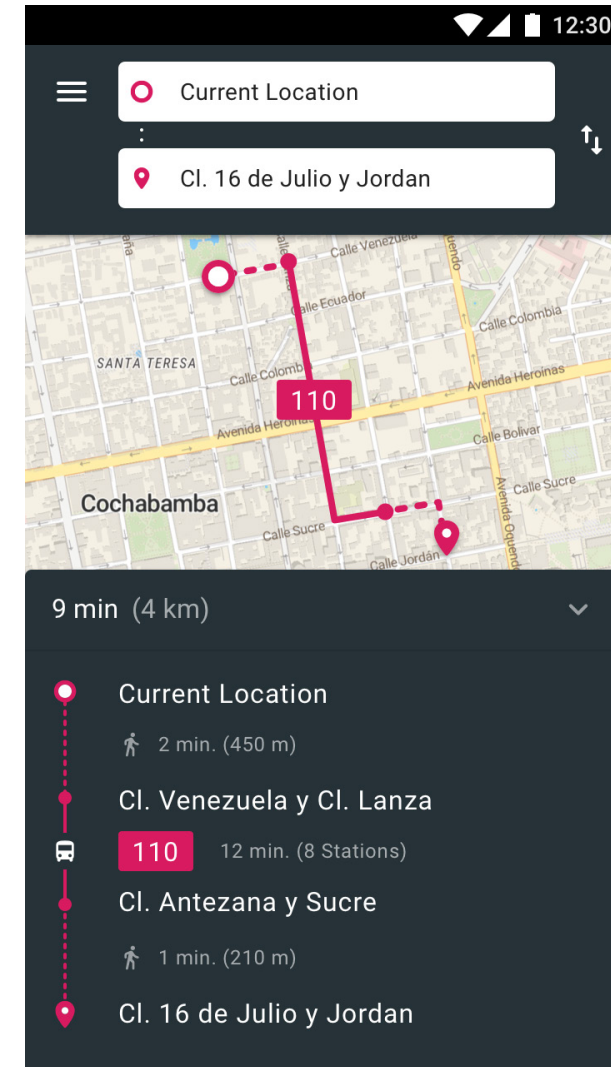
**10+**  
nationalities

# Trufi Association e.V. Network



# Flagship Product: Trufi App

- 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



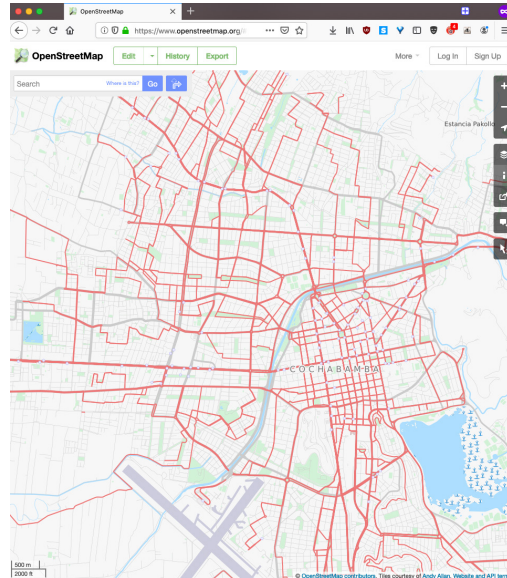
# Working Method



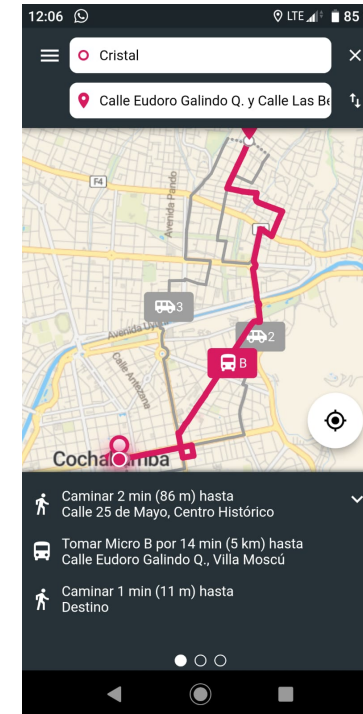
# Impact Driven: Empowering the Community



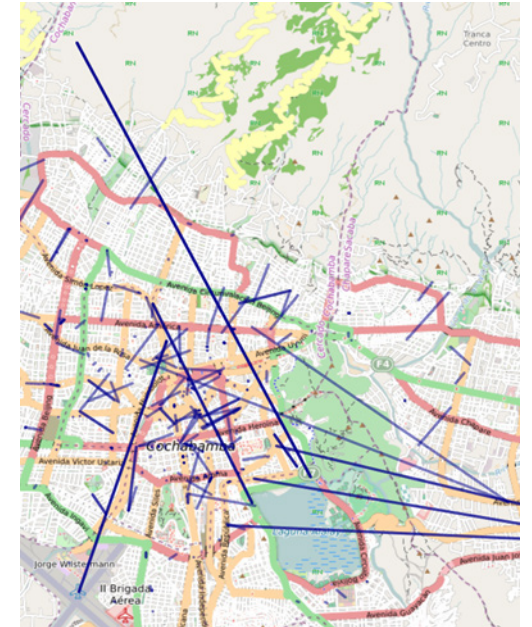
**We build and support  
OpenStreetMap communities &  
train them how to maproutes**



**We make all routes publicly available  
on OpenStreetMap for free and for  
everyone**



**Our App finds the best  
multimodal door to door  
journeys**

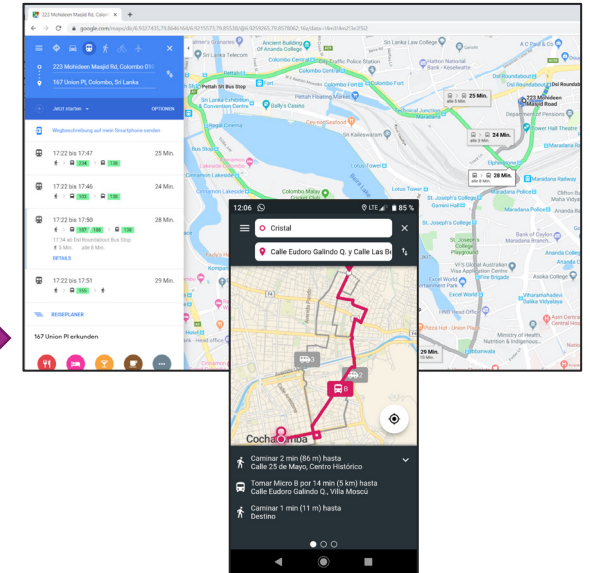
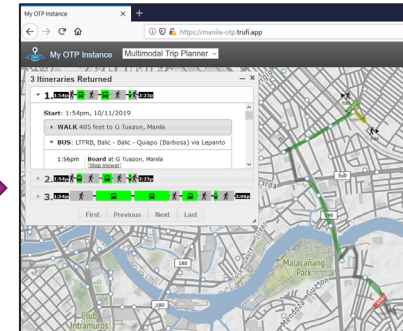


**We help cities plan better transport  
links with journey patterns from our  
user data**

# Technology: Digitalizing Informal / Semi-Formal 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,agency
2 LRTA,Manila Light Rail Tra
3 LTFRB,LTFRB,http://www.ltf
4 MRTC,Manila Metro Rail Tra
5 Maritime Industry Authorit
6 PNR,Philippine National Ra
7 FORT,The Fort Bus,http://b
```



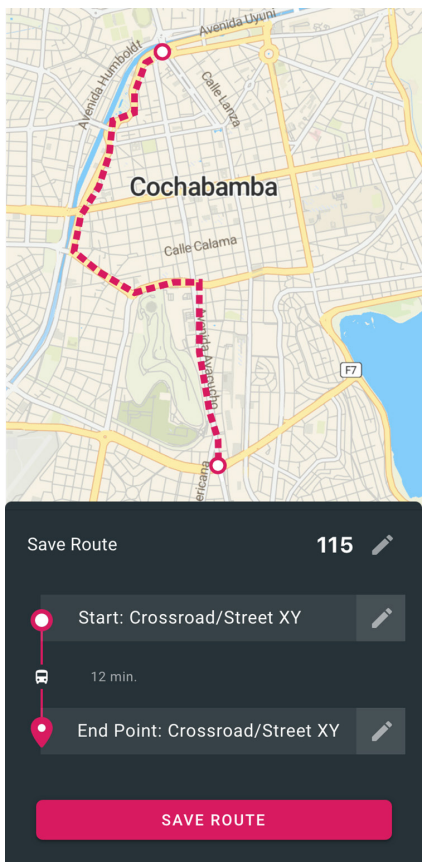
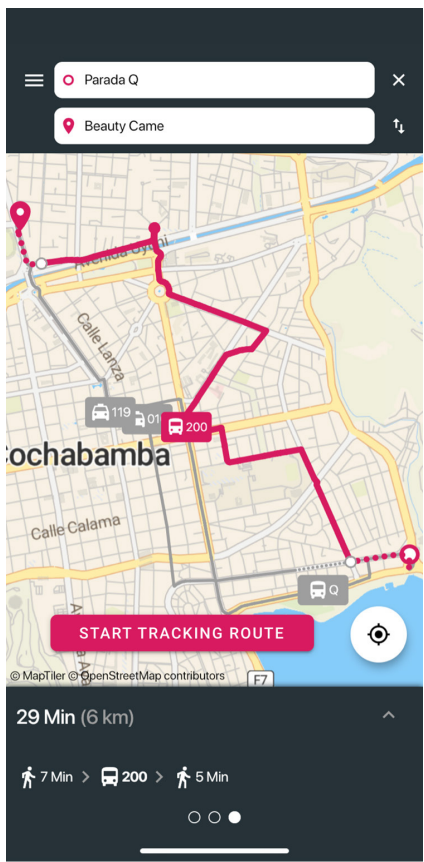
Collect and digitalize the data

Create a standard GTFS format from the data

Provide server to make door-to-door route planning

Create app and enable routing in OpenStreetMap and Google Maps

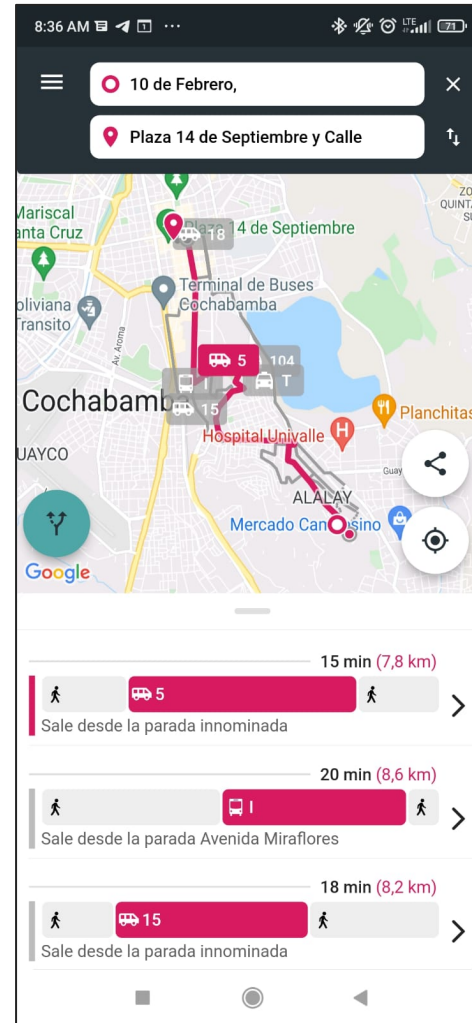
# Community Crowdsourcing: Keeping the Data up to Date



# Use Cases

# Cochabamba, Bolivia – Trufi App

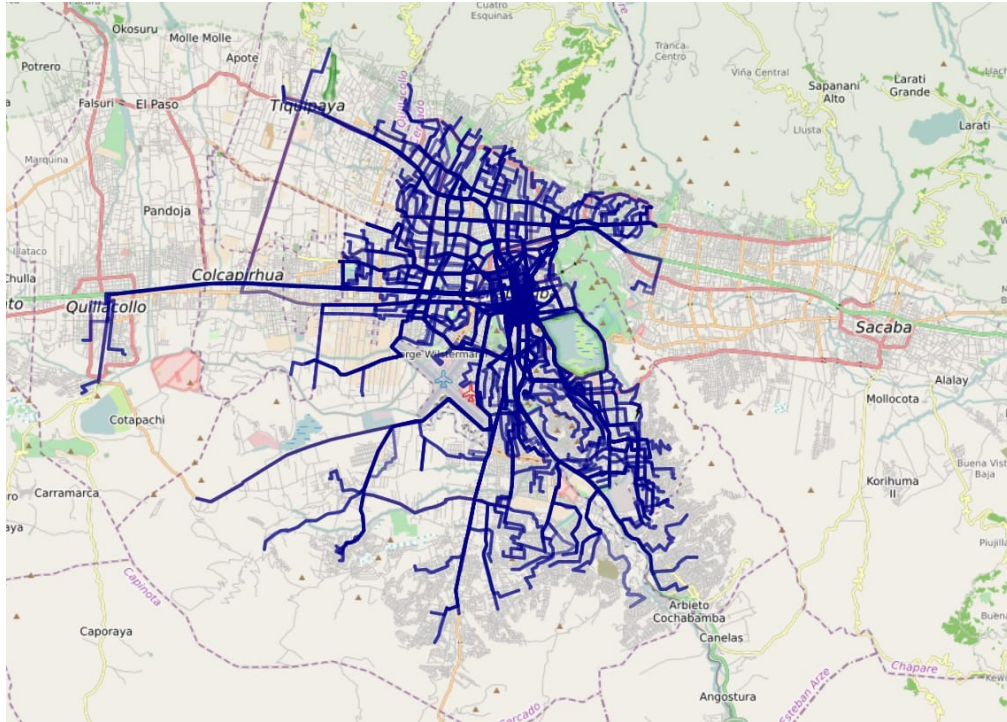
- Bus collection by OSM community
- Primary contact: Head of Transport Agencies
- Local partner: SIRcode.io and Nexion SRL
- Uptake: 5.000 users within first two weeks after Go Live
- Currently more than 20.000 users



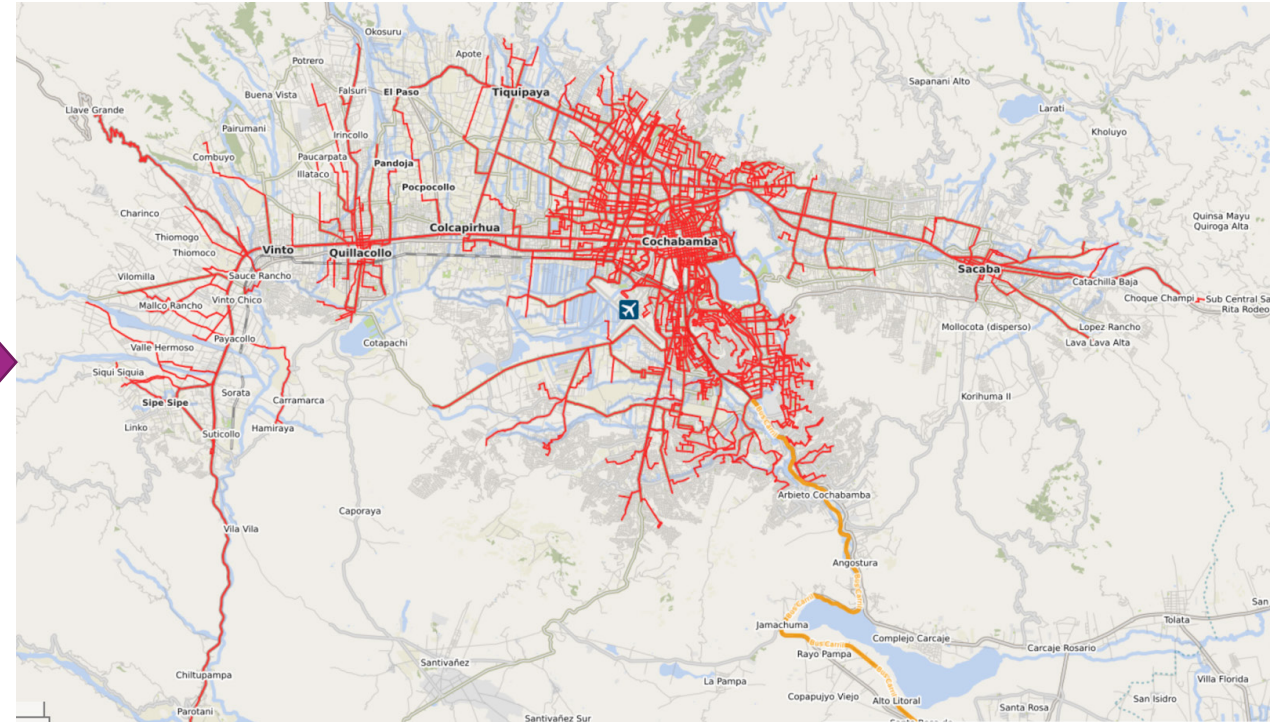
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# Cochabamba, Bolivia – Trufi App



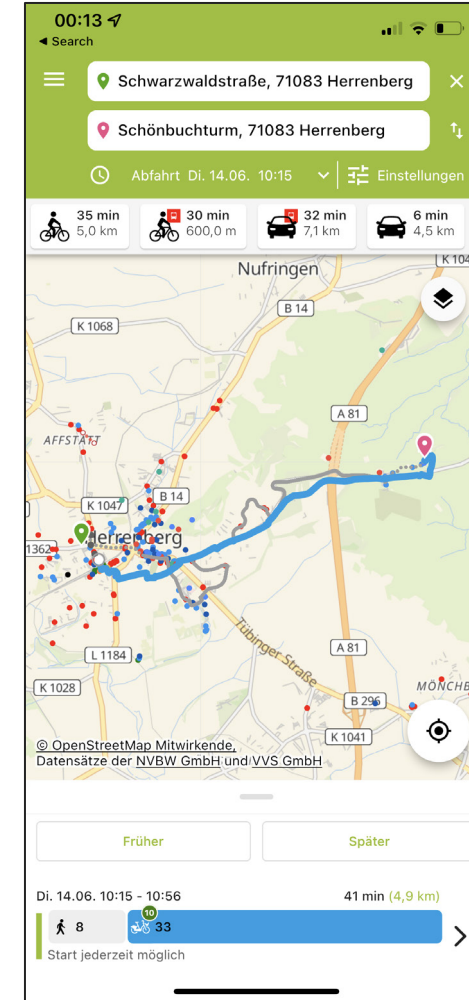
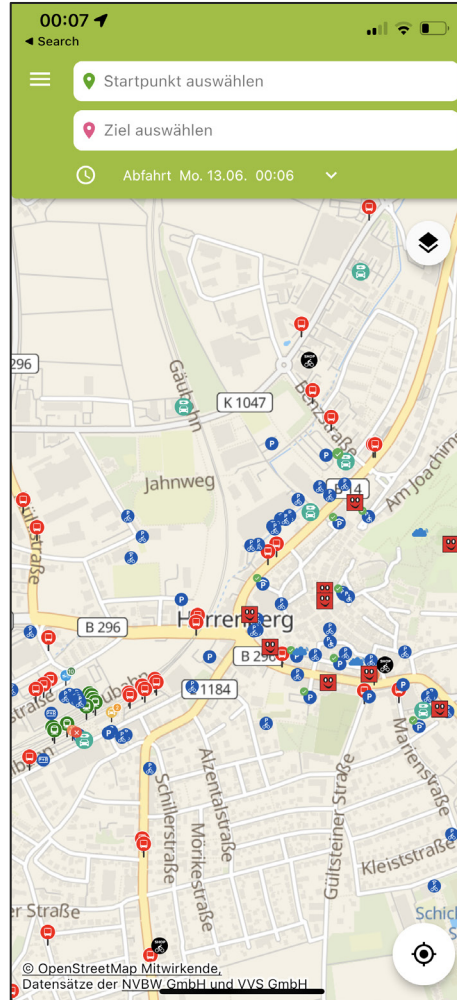
297 routes



437 routes

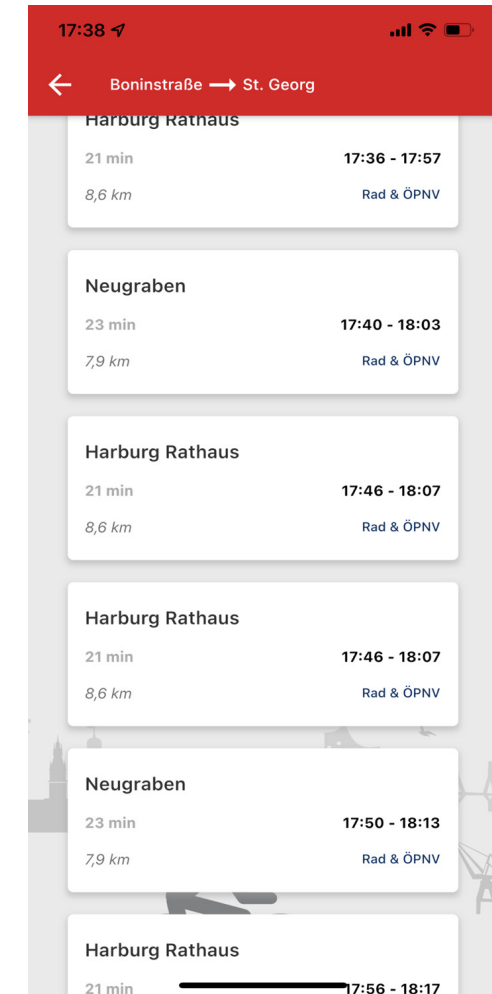
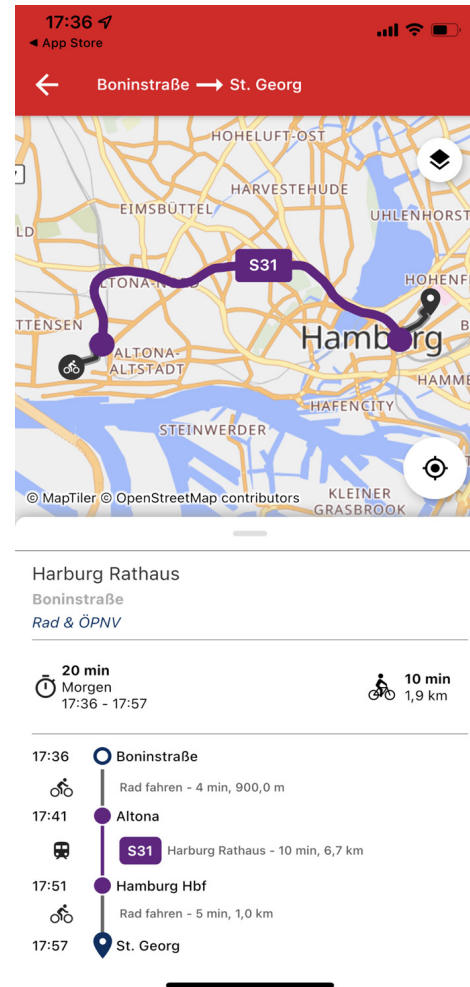
# Herrenberg, Germany – stadtnavi App

- Funded by the Federal Ministry of Transport and Digital Infrastructure
- One of five pilot cities in Germany
- Part of the “Clean Air Initiative”
- Links all local mobility offers
- Uses local real time data



# Hamburg, Germany – Not Without My Bike App

- Specifically built application for cyclists
- Integrates ferries and blocking times for bikes on public transport
- Individual routing that uses different parameters to suggest the best routes according to preference
- Plans to integrate the app in Hamburgs public transport app landscape



# Nouakchott, Mauretania – Mapping Services

- Contracted by the city of Nouakchott for the mapping of semi-formal transport routes
- Built and trained the local community
- 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



# Thank you for your attention!

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