Our aim is to have a model as close to real life infrastructure as possible, so a big part of our job is to improve the OSM data.

Transferring GOAT to new study areas therefore also involves high mapping activities, for example, adding missing path-connections or verify information of Points-Of-Interest.

With our project we also enthuse new mappers for OpenStreetMap.

### Accessibility Analyzes

- Calculation and visualization of walking and cycling isochrones, which represent the area that can be reached in a dedicated time from a starting point.
- Visualization of walkability by calculating gravity-based accessibility measures, which are visualized as heat-maps.
- Development of your own scenarios and examination of corresponding changes in accessibility.

### Technical Architecture

- GOAT is a WebGIS-application which involves various software including libraries and programming language.
- Interaction is made possible by the classical server-client architecture of the web.

- GOAT’s database efficiently stores and organizes information, which can be accessed, managed and updated appropriately.
- GOAT is an open source project (License GPL-3.0) where you are welcome to contribute code, collect data or improve the documentation on our website via GitHub.

### Our Contribution to OSM

- Our aim is to have a model as close to real life infrastructure as possible, so a big part of our job is to improve the OSM data.
- Transferring GOAT to new study areas therefore also involves high mapping activities, for example, adding missing path-connections or verify information of Points-Of-Interest.
- With our project we also enthuse new mappers for OpenStreetMap.

### How do we improve OSM data?

- Organization of Mapping Parties
- Organized / paid mapping for consulting and research projects (On-site and off-site mapping, collection of Mapillary imagery - so far, we have captured 28,354 Mapillary images and used them to refine OSM data).
- Support of individual data collection by supervising Bachelor Thesis, Study Projects and Master Thesis, depending on the mapping needs related to the research question in the selected study areas.
- Providing a platform for mapping challenges (under development, will be launched soon).

### What have we contributed so far?

- 10,077 features created
- 8,378 features modified

### About GOAT

- What is GOAT?  
  - GOAT stands for Geo Open Accessibility Tool and is designed to interactively analyze walking and cycling accessibility to foster active mobility.
  - It is under development at the Technical University of Munich (TUM) and currently funded by the German Ministry of Transport and Digital Infrastructure (BMVI).
  - The tool is designed to be transferred to cities worldwide.

- Why to use GOAT?  
  - GOAT provides planners with decision support when planning for walking and cycling.
  - By modeling the effects of transport (e.g., building a new pedestrian bridge) and land-use measures (e.g., building a new school), GOAT serves as a suitable instrument for easy and transparent urban and transport planning.

- What are the main features?  
  - Calculation and visualization of walking and cycling isochrones, which represent the area that can be reached in a dedicated time from a starting point.
  - Visualization of walkability by calculating gravity-based accessibility measures, which are visualized as heat-maps.
  - Development of your own scenarios and examination of corresponding changes in accessibility.

### Using GOAT in Planning Practice

#### Exemplatory Planning questions that can tackled with GOAT:

- How good is the walking accessibility to kindergartens in different parts of the city?
- How many residents are served by certain public transport stops? Where can the perfect location for a new public transport be in order to serve as many residents as possible?
- What is the effect of a new pedestrian or bicycle bridge on the accessibility of a neighborhood?
- How does the accessibility of a place change if there is temporary closure of a walkway?
- How many people can reach a certain destination within 10 minutes walking distance? How does this change if only barrier-free paths can be used?

### Learn more:

- [https://www.open-accessibility.org](https://www.open-accessibility.org)
- [https://github.com/goat-community/goat](https://github.com/goat-community/goat)

---

**Technical University of Munich**

Chair of Urban Structure and Transport Planning
TUM Department of Civil, Geo and Environmental Engineering
Technical University of Munich