



Data Privacy Policy

1 Implementation and Adherence to the Data Privacy Policy

We, the Institute for Transport Planning and Systems (IVT) at the ETH Zurich, Stefano-Francini-Platz 5, 8093 Zürich, Switzerland, in cooperation with the University of Basel and the Zurich University of Applied Sciences (hereafter, “**we**”), provide you with a smartphone application (hereafter, “**the app**”) within the scope of the study entitled Mobility Behaviour in Switzerland (MOBIS). The app allows us to track and record your daily movements and mobility behaviour for the smartphone study within the scope of the overall MOBIS study. Additionally, we record your responses from online surveys (hereafter, the MOBIS study, the smartphone study, and all online surveys are referred to as “**the study**”). Your private information is of the utmost importance to us, especially with regard to the collection, processing, and use of personal data. We, therefore, provide you with information related to data privacy in the study.

Please read the data privacy policy carefully before agreeing to participate in the study. We commit to adherence to the data privacy policy as described in the following. **By agreeing to participate in the study, you consent to the collection and use of your data in accordance with the data privacy policy.**

2 Purpose of Data Collection

Mobility behaviour in Switzerland is increasingly dynamic and diversified in its development. Traditional methods of data collection, such as travel diaries, are unable to incorporate this reality in an accurate manner. By using the app, we aim to generate a better overall picture of your mobility behaviour in this study. This will contribute to the improvement of transport policy (e.g. building roads or expanding public transport).

3 Description of the Study

The purpose of the app is to gain new insights into mobility behaviour. We aim to measure key indicators such as transport mode choice, travel times, and transport capacity as well as identify hot spots for different transport modes.

4 Data Collection Methods

4.1 Survey Data

We collect survey data using the online survey platform Qualtrics.

4.2 Movement Data

We collect your movement data (hereafter, “**trip data**”) using the app. We perform transport analyses using trip data, which allows for the determination of key mobility indicators (e.g. transport mode choice). Furthermore, we identify trip purpose by way of long-term location patterns and perform spatial analyses.

Traditional methods are not suitable for the accurate measurement of trips with different transport modes (inter-modal trips). The app directly measures individual mobility behaviour



and automatically detects the transport mode. As a result, mobility behaviour is measured much more accurately than traditional methods such as surveys or traffic counts.

As soon as you activate tracking in the app, spatial coordinates, times, and trip conditions are collected. We have developed algorithms that can interpret these data points as trip segments with different transport modes and attach attributes such as duration and distance of the trip segment. Trip purpose and transport mode choice is calculated by way of geomatching using data from the OpenStreetMap project (e.g. public transport lines). Allowing tracking for multiple days creates movement profiles over this time period.

Even though movement profiles are pseudonymised, identification of home and work locations for individuals is possible due to recurring location data. As such, the movement profiles include personal data. These data are subject to the same strict confidentiality requirements as your personal login data (username, e-mail address).

The app for both iOS and Android provides:

- the smartphone model
- the operating system version
- the app version
- location data
- the movement activity as process by the smartphone (e.g. “motorised” or “by foot”) as well as the data listed under 4.2.

5 Classification and Scope of Collected Data

The following summarises the data collected

- Primary identification data
 - Username and e-mail address for contact, recruitment, and reimbursement for participation
 - Login credentials for the app
- Survey data
 - Questions regarding mobility
 - Demographic data
- Smartphone app
 - Time and location
 - Coordinates and accuracy (determined by GPS chip)
 - Gyroscopic sensor data (determined by smartphone sensors)
 - Movement activity from operating system
 - Accuracy of movement activity
 - User agent (make and model of smartphone, operating system version, app version)

6 Data Processing

6.1 Processing of Survey Data

The survey data will be downloaded from Qualtrics to a secure server at the IVT and statistically analysed. The survey data of participants in the smartphone study will be linked to their trip data.

6.2 Processing of Trip Data

After collection, the trip data are sent to an ISO certified computer centre (Google Firebase server) via Wi-Fi or mobile network connection (if activated) and then to a secure internal server of the IVT, to which only the study team has access. The data collected by the app



are transmitted in a cryptographically secured manner. The raw data are processed on our server using the analyses described above.

7 Data Storage

7.1 Data Storage in the App

The app only stores collected trip data and the participant number. No other personal data are stored. As soon as the trip data are transmitted to the server, the tracking data in the app are deleted.

7.2 Data Storage on the Server

The trip data are temporarily uploaded from the app to a Google Firebase server in encrypted form after which it is stored on a secure server at the IVT (see above). The trip data are stored for a maximum of one week on the Google Firebase server and are deleted as soon as they are migrated to the IVT server. The survey data are stored in compliance with data privacy requirements on a secure server at the IVT.

8 Data Dissemination

The data are used for scientific publications. Results are presented in the aggregate, which eliminates the possibility of identifying individuals.

9 Distribution to Third Parties

The collected data are not distributed to third parties and only used for research purposes. At the conclusion of the study, the data will be stored for future research projects in the ETH Zurich data archive, such that new methods and research questions may be analysed.

10 Contact with Participants

We will use your e-mail address to send information relevant to the study. We will inform you about your mobility behaviour, provide you with access (i.e. links) to online surveys, and brief you on any potential changes in the data privacy policy or study protocol. If you agree at registration, we will provide you with information on the results of the study and may contact you with regard to participating in future studies.

To avoid unnecessary e-mails and cookies, we collect the following information on the sent e-mails: whether and when an e-mail was opened, and whether any links were clicked on. This information is subject to the same strict privacy regulations as all other personal data. If you do not agree to the collection of this information, please contact the study team (mobis@ethz.ch).

11 Data Deletion

You reserve the right to block or delete all of your data at any time. To exercise this right, send an e-mail with the subject "Please delete data" to mobis@ethz.ch from the e-mail address with which you registered for the study. Your data are removed from the live system and do not enter any further analyses.

Deletion of your data is irrevocable and takes place on all storage and backup locations. For technical reasons, however, data are not deleted immediately on the backup servers.

All data saved in the app are deleted upon deletion of the app.



12 Data Subject Rights

12.1 Right to Information

You may request information on which personal data are processed by the ETH Zurich in this study pursuant to Article 8 of the Data Privacy Act (DSG; SR 235.1).

12.2 Right to Revoke and Right to Object

You may object to and/or revoke consent for the use of your data at any time, independently of the above clauses.

The lawfulness of the processing of your data up until the point at which you object to or revoke consent for the processing or use of your data remains unaffected.

12.3 Right to Amend, Delete, Block, and Restrict

In addition, you reserve the right to amend, block or delete your data collected and stored as part of the study (Article 8 of the Data Privacy Act, DSG; SR 235.1). We explicitly state that legal requirements may exist requiring us to continue storing your data. In this case, the data can only be blocked.

12.4 Contact for Exercising Data Subject Rights

The responsible party for the processing of your data is the Institute for Transport Planning and Systems at the ETH Zurich.

13 Contact

E-Mail: mobis@ethz.ch