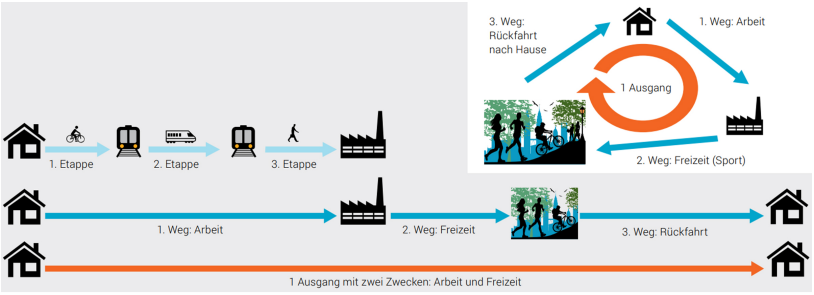
Project

Feasibility of mobile apps for surveys of travel behavior

Smartphones can be used to record various data relating to the travel behavior of individuals. Working on behalf of the Swiss Federal Statistical Office (BFS), EBP carried out a study to assess the feasibility of using a mobile app to conduct Switzerland's national survey of travel behavior.

The Mobility and Transport Microcensus (MTM) is Switzerland's most important survey of travel behavior. Once every five years, federal workers in Switzerland use a computer-based system to survey around 60,000 randomly selected individuals. These individuals are asked to provide information relating to their travel behavior on a given reference day.
Technological advances in recent years have introduced new means of conducting surveys of travel behavior. For instance, mobile tracking systems can be used to record the travel behavior of individuals over the course of the day. In addition to the means of transportation used and the purpose for which individuals travel, algorithms can be applied to derive individual travel stages, complete trips and complete per diem travel cycles.



Relationship between the parameters stage, trip and complete per diem travel cycle

(Source: BFS, ARE – Mobility and Transport Microcensus)

Client

Swiss Federal Statistical Office

Facts

Period	2018 - 2019
Project Country	Switzerland
Survey (MTM) frequency	Once every 5 years
Market study	Structured interviews
Field test duration	1 week

Contact persons

Marco Rothenfluh
marco.rothenfluh@ebp.ch

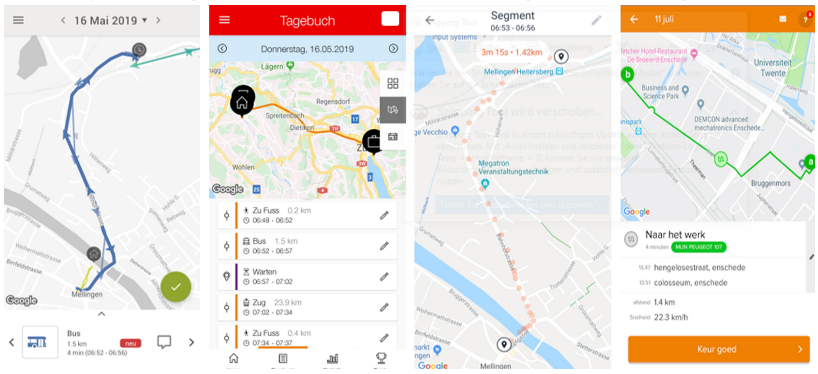
Dr. Nadine Rieser
nadine.rieser@ebp.ch

What requirements do apps need to meet to gather travel data?

In the framework of a feasibility study, we examined the various technical requirements that apps need to meet to properly facilitate the gathering of travel data. What app designs enable optimal user interaction? What data are necessary to derive the relevant specifics of travel behavior? What are the best ways of enabling connections to external databases? What are the relevant data-protection requirements?

Benchmark analysis of existing apps

We carried out a one-week field test to evaluate various existing applications in terms of their accuracy and user friendliness. We also conducted interviews with the app developers to gain a better understanding of how they work.



User interfaces of various app providers

Follow-up pilot study with a smartphone app

The results of our feasibility study provided the BFS with the information it needed to make further decisions concerning the development of the tools it uses to conduct its surveys.
In the framework of the MTM 2020, the BFS is now planning to carry out a pilot study with a smartphone app. The aim of the study is to provide answers to the following questions:

- Will a smartphone app enable one to gather all of the relevant travel data on a given reference date?
- To what extent are prospective participants actually willing to participate in a survey via smartphone?