Summary

Applications (apps) are adopted when they offer effectiveness (the product is useful, the user gains something), ease (the app is easy to use, the use is self-explanatory), and engagement (a nice design, opportunities for fun and games, etc.). These three EEE factors are not equally important, however, as a certain hierarchy exists. The gain or usefulness is paramount; this is a basic need. If an application does not provide reliable travel information, a person will not be eager to reuse it. The 'ease' dimension is sometimes characterised as a dissatisfier: if an application does not provide ease of use, the user feels less satisfied. The 'enjoyment' dimension is in this context a satisfier: users are pleasantly surprised when applications have enjoyable aspects, but they are not necessarily dissatisfied with the app if such aspects are missing. Whether an app is actually used (as opposed to simply downloaded) depends on the abovementioned factors. In addition, the characteristics of the users themselves are also relevant, as is the situation or context in which the app is used. The dimensions and aspects that determine if a person uses or does not use an app are compiled in a structured framework, which can be used to estimate the apps ex-ante in terms of their potential contributions to the mobility objectives of the Ministry of Infrastructure and the Environment (IenM).

Travel information, apps and mobility policy

Travellers need travel information to greater or lesser degrees, depending on their particular situations. This information can be provided in various ways, such as for example via websites, in-car systems, radio, and Dynamic Route Information Panels (DRIP's). In recent years a variety of apps have been developed that can be used on smartphones. Such apps are interesting for travellers, as they offer the possibility of arriving at one's destination faster, easier, more affordably and more comfortably. Because the use of apps can lead to changes in mobility behaviour, the apps can also potentially contribute to the Ministry of IenM's mobility policy objectives. IenM would like to monitor the development and implementation of apps that can help achieve these mobility objectives. The question is how to determine (ex-ante) which contributions an app provides.

Structured framework

Based on a literature study and interviews with experts, the KiM Netherlands Institute for Transport Policy Analysis has devised in this study a structured framework that can clearly determine the requirements that apps must meet in order to be adopted by users. This framework can moreover help IenM's' Optimising Use' (Beter Benutten) programme monitor (the development and/or use of) apps according to their degree of effectiveness. If people alter their mobility behaviour because of their use of an app, this is interesting for policy.

Although the framework offers guidance, one user differs from the next. The ways in which a person assesses 'gain', 'ease' and 'enjoyment' is dependent on that person's personal characteristics, such as sense of direction and the extent to which he or she is open to new experiences. Whether the route is known or unknown, the motive for undertaking a trip, and the situation en route (for example, bad weather conditions) also influence the need for information. When using this framework, it is important to recognise these subtle distinctions.

Contribution to policy objectives

In this research, KiM uses the structured framework developed for this project to describe a number of mobility apps. In addition, we also examine the ways in which the expected behavioural reactions contribute to the policy objectives of IenM's 'Optimising Use' (Beter Benutten) programme. By detailing the various dimensions, aspects and factors, we are thus able to estimate whether people will use a certain app and, consequently, possibly modify their mobility behaviour. Such behavioural modifications can potentially benefit policy. The structured framework is deployed in such a way as to offer an initial determination of a mobility app's potential viability.