SOLUTIONS FACTSHEET 5.4
Multimodal journey planners

IN BRIEF
A multimodal journey planner is a software application that allows users to plan a single trip using multiple modes of public and private transport. It is usually accessible on computers and other digital devices (e.g. smartphones). It provides integrated travel suggestions and encourages the use of sustainable transport.

EXAMPLES
Good multimodal journey planners allow travellers to make informed choices depending on their travel preferences and needs. Typically, they have access to real-time data; provide door-to-door routing with visual maps; show information of where to buy tickets (or have software with which to purchase them); and provide real-time travel information in case of disruptions. They should also be able to effectively compare door-to-door travel times, costs, and emissions between public transport and car journeys, and allow travellers book and pay for a journey regardless of how many types of transport they use.

There are two types of approaches related to multimodal journey planning systems and services. A large-system approach (big data), commissioned by cities or city regions, such as in Lyon (France) or Torino (Italy), or nationally like in the Czech Republic; or an open-data strategy, where data owners (city governments, network and fleet operators, service providers, etc) provide data in a standardised data-exchange format. Private companies can then use this data to develop applications for journey planning. In both cases, there must be a sound level of cooperation between all parties involved.

RESULTS
Multimodal journey planners help increase the use of public transport and reduce transport emissions and congestion. Public transport is more accessible to travellers, and travel times are more predictable (especially if real-time data is available). They show users new travel options, provide help on where and how to change between modes, and allow them to easily buy and hold tickets. Ideally, the different companies involved will also have more customers, and support a shift from motorised individual transport to public transport, include sharing systems and thus have a positive effect on the transport network and the environment.

TECHNICAL AND FINANCIAL CONSIDERATIONS
The main issues are opening up information and management systems run by different operators and linking them to dedicated platforms. Different standards for data and data exchange already exist to support such a move. The use of smartphones greatly increases the accessibility for travellers; however, data-security and privacy are issues that need careful consideration. Fairly distributing collected fares and guarding sensitive company data are also important, and here concepts such as using a trusted third party to
oversee operations are useful. Supporting projects that highlight multimodal solutions can be first step.

Ultimately, it should be a win-win situation for all, but the competitive situation between the different operators is a factor, especially when booking and paying for trips. They must incorporate existing information systems, and here it is possible to draw on experiences in Europe. The use of existing standards and data-exchange formats will greatly enhance the potential European cities to introduce similar multi-modal journey planners.

**POLICY/LEGISLATION**

Policies should encourage the cooperation of different transport operators, especially those belonging to the municipality. In Europe, the PSI Directive already defines which kind of data must be publically available and is a starting point, as journey planners need different types of spatial data in order to operate.

**INSTITUTIONS**

Public transport companies should take the lead, but they should also encourage other operators to participate. Very much depends on the level of cooperation between different stakeholders and the level of trust that has been built up. Independent start-ups and smaller operators can be more agile and help come up with creative solutions to support multimodal integration.

**TRANSFERABILITY**

Good multimodal journey planners require good cooperation between numbers of parties, the level of which can vary from city to city, region to region. In the absence of such cooperation, stakeholders must have enough time to build trust between one another, and ensure the willingness of all partners to contribute to such a system. Many transport operators already have an information system and allow booking and ticketing, but many only for their own transport options. Each city has its own transport structure and a solution will not always be directly transferable to another city. However, looking at existing different solutions and experiences can help support the implementation of multimodal journey planners in other cities and regions. In many cases, barriers are more on an organisational level than on a technical one.
CASE STUDY: VIENNA’S MULTIMODAL JOURNEY PLANNER (AUSTRIA)

Context
Viennese citizens have been able to use AnachB, a multimodal journey planner, since its creation in 2009. AnachB combines data from a range of sources provided by different transport operators and organisations (ranging from public transport, road maintenance, police, taxi companies, etc) to provide up to date traffic information for travellers.

In action
Vienna has integrated public transport under a common framework with harmonised tariffs and tickets. In 2006 the ITS Vienna Region was founded to support the development of high quality and up-to-date transport services. These services should consider and integrate all modes of transport (including Park-and-ride and Bike-and-ride facilities), all of which are available for free on AnachB.

A traffic model calculates the real-time traffic situation for the whole area, and this information is projected on a digital database known as the Graph Integration Platform (GIP), covering the whole network. Partners, municipalities and regional governments continually update the highly detailed GIP and use it day-to-day work for administrative purposes. Different partners can also use AnachB services for their own platforms and services, meaning they always have the most up-to-date information combined with their own individual services. Data from the GIP database is now also available to the public under the open government data policy.

Results
The development of GIP and AnachB helped bring together the operators and stakeholders relevant for supporting multimodal transport. High-quality and up-to-date information is now available to all of the partners involved and travellers know that all systems that use these databases have the same quality and reliability. Continually updated, it allows the users to choose between different combinations of modes of transport (public transport, cars, bikes, walking, etc.) and optimisation criteria, and provides other relevant information.
PARTNERS

The SOLUTIONS project consortium, consisting of partners from all over the world, brings together a wealth of experience and know-how from organisations, consultants, cities, research and technical experts involved in transport issues and solutions.