PROJECT

METPEX

MEasurement Tool to determine the quality of Passenger EXperience

Funding: European (7th RTD Framework Programme)
Duration: Nov 2012 - Oct 2015
Status: Complete

Background & policy context:

The European Commission is working to improve citizens' quality of life and strengthen the economy by promoting sustainable urban mobility and increased use of clean and energy efficient vehicles. New political challenges have emerged in recent years, such as climate change, energy policy, air quality legislation and the difficulties of tackling congestion. The objective now is to enhance mobility while at the same time reducing congestion, accidents and pollution in European cities.

European cities increasingly face problems caused by transport and traffic. The question of how to enhance mobility while at the same time reducing congestion, accidents and pollution is a common challenge to all major cities in Europe and at the same time is one of the most important factors that motivated partners of this effort to propose this work. Efficient and effective urban transport can significantly contribute to achieving objectives in a wide range of policy domains. The success of policies and policy objectives that have been agreed at EU level, for example on the efficiency of the EU transport system, socio-economic objectives, energy dependency, or climate change, partly depends on actions taken by national, regional and local authorities. Although much research has been conducted on the integration of transport modes and travel information on the one hand, and travel behaviour and demand analysis on the other, these two streams of knowledge have not had adequate interaction hitherto. Furthermore, key stakeholders such as Transport Authorities, urban and regional local government and transport operators need to have access to these methods and results in ways that can be applied to policy formulation and analysis, towards implementation of integrated transport systems and increased accessibility.

Public transport is central to people's lives and well-being, especially vulnerable groups (e.g. less mobile, elderly and disabled). It is essential in providing access to employment, shops, services and leisure. The need to encourage greater public transport use is critical in achieving sustainability targets. For many, the perception and reality of public transport does not encourage use, especially when multimodal forms of transport are needed. A holistic understanding of passenger experience is critical to develop and support transport accessibility. Whilst previous research has focussed on different aspects of passenger experience, the diversity of tools developed limits their usefulness, effectiveness.

Objectives:

METPEX is a research project funded in the context of the 7th Framework Programme of the EU, aiming to develop and evaluate a standardised tool to measure passenger experience across whole journeys. METPEX stands for MEasurement Tool to determine the quality of Passenger EXperience and its results will be used to inform policy makers in providing inclusive, passenger-oriented integrated transport systems that are accessible by all citizens. The development of an inclusive, validated passenger experience measurement instrument is the first step in creating high quality, user centred, integrated, accessible public transport services, which are capable of attracting and retaining public transport users whilst meeting sustainability targets.

Specific S&T objectives include:

1. To develop an integrated approach to the measurement of the whole journey passenger experience that takes into account human (physiological, perceptual, cognitive, sensory and affective) socioeconomic, cultural, geographic and environmental factors.
2. To assess the costs of ‘inaccessible transport’ for different sectors of society (such as those from low income groups, rural communities, the elderly, disabled and those with lower levels of literacy).

3. To assess the extent to which the measurement of the passenger experience can be used to drive innovation and attention to transport quality from the customer’s perspective in the transport industry.

4. To evaluate the passengers experience from different regions of Europe and to support the integration of regional transport networks into an European transport network

5. To facilitate the harmonization of travel behaviour research and analysis across European Union Member States.

**Methodology:**

METPEX is a 3 year project allowing for the consolidation of previous research into the development of the measurement instruments, the design of methods, the extensive trialing of these in 8 sites across Europe, analysis and consolidation and presentation of results and development of cost benefit analysis and a new model of sustainable accessibility. The eight sites have been selected to represent the diversity of cities across Europe in terms of size, location, type of population, degree of association in previous projects, culture of inclusivity and progression and support of integrated, sustainable transport solutions. This diversity will provide a test of the measurement instruments developed.

The regional distribution of economy, housing and services like healthcare or education is one of the key drivers for mobility and transportation needs. Urbanization and suburbanization caused certain patterns of land use and transport connections interlinking e.g. areas for housing and working. A high level of accessibility provides the possibility to optimize both job opportunities and quality of life by combining individual choices. These possibilities are not equally shared. Europe has to face large-scale disparities of access to mobility and transportation on both intra- and international levels as well as of opportunities given by those circumstances. That's why one of the METPEX goals is to classify those different regional patterns of land use distribution in connection with regional accessibility.

The following aspects will be used for the classification:

? Regional disparities of job density, transportation infrastructure and accessibility with special regard on rural areas versus urban areas and agglomerations

? Different patterns of land use and transportation of European states

? Accessibility as a factor of in-/ex-/clusion due to regional disparities of service supply such as healthcare, education and quality of live

? Costs of accessibility for the different regional types

For the classification, criteria will be defined based on meta-analysis of studies on regional disparities of transportation infrastructure, accessibility, economy and population density for different European regions and countries. The results of this first step have to be matched with information on the cost for transportation infrastructure and operation as well as social costs on transport. The identified types will be described in detail by specific characterist

**Parent Programmes:**

**FP7-TRANSPORT** - Transport (Including Aeronautics) - Horizontal activities for implementation of the transport programme (TPT)

**Institute type:** Public institution

**Institute name:** The European Commission

**Funding type:** Public (EU)

**Other funding sources:** European Commission

**Partners:**

The METPEX consortium is coordinated by Coventry University and brings together 16 European partners, from 12 countries. The partners are: Interactions Limited, Signosis, ITENE, ZHAW, Eurokleis SRL, POLITO, ANGRE, KTH, INTECO, FIA, VTM Consultures, Smart Continent, SBoing, TERO, RSM.

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**Organisation:** Coventry University

**Contact country:** United Kingdom
Technologies:
- Information systems
- Sustainable urban mobility planning

**Development phase:** Research/Invention

**Transport mode:** Multimodal transport

**Transport sectors:** Passenger transport

**Transport policies:** Decarbonisation, Societal/Economic issues

**Geo-spatial type:** Other