

3rd Conference on Sustainable Urban Mobility, 3rd CSUM 2016, 26 – 27 May 2016, Volos, Greece

# The effect of major market and societal trends on public transport in European cities

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## Abstract

This paper considers future developments in public transport in European cities under the influence of major market and societal trends. In particular, the objective of the presented exercise is to examine how globally observed market and societal trends (such as the shared economy, the emergence of sustainable lifestyles, technological ubiquity and individual empowerment) will affect the demand for Public Transport services over the next 10 years in European cities. The research methodology is built upon mining transport experts’ perceptions of Public Transport Futures by means of the Delphi technique. The results designate the most pivotal market and societal trends and the expected shift in the behavior of travelers using Public Transport. The added value of this paper lies in the fact that it offers valuable insights into Public Transport Futures but also broadens the discussion on this under-studied topic.

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Peer-review under responsibility of the organizing committee of the 3rd CSUM 2016.

*Keywords:* public transport; urban development; collective innovation; cities; policy

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## 1. Introduction

CIPTEC (Collective Innovation for Public Transport in European Cities, 2015-2018) is a research project funded by the European Commission through Horizon 2020. It addresses the challenge for smart, green and integrated transport. CIPTEC aims to bring new thinking and innovative solutions (service concepts and business models) for public transport, in order to create a favourable environment for the growth of Public Transport across Europe. The first implementation phase (out of a total three) of CIPTEC investigates the state of play and the current level of innovation in Public Transport across European Cities. It also analyses current and future market and societal trends and the needs of Public Transport Sector stakeholders. For that matter, experts’ opinion plays a very important role throughout the implementation of the project and is sourced by means of extensive literature reviews, interviews and workshops.

The Delphi survey that is presented in this paper is part of the above work, aiming specifically to explore the effect of major and societal trends on public transport demand. In essence, this paper integrates novel socioeconomic developments into a public transport perspective. It highlights major points of consensus, as well as issues for which no clear consensus could be reached.

The paper commences by explaining how the CIPTEC consortium partners collectively identified the major societal and market trends with a significant effect on Public Transport and which these trends are (section 2). It proceeds with the explanation of how the presented research was designed, namely the research questions, the used method (Delphi survey) and how/when it was implemented, the survey participants' profiles and the research tool that was used to this end (section 3). The following section (section 4) presents the results of the conducted Delphi survey. It includes analytic tables of the collected and processed data and highlights the prevailing societal and market trends. The last section (section 5) provides the conclusions of the Delphi exercise that took place for the purposes of this research.

## 2. Identifying Societal and Market Trends with a significant effect on Public Transport

The first phase of CIPTEC began with the members of the consortium collectively identifying, appointing and categorizing the most important global societal and market trends with a significant effect on public transport. Initially, all CIPTEC partners were asked to give a short description of the most important trends that in their view will have a significant impact on public transport in the European Union (EU) context. In sequence, and by means of in-depth discussions, the most important trends were identified, grouped and organised into comprehensive major trends. After the consolidation of the trends, each one of them was analysed comprehensively regarding its characteristics and effects on public transport systems and services.

More specifically, the trends that emerged as more prominent include<sup>1</sup>:

- **Enhancement of urban governance:** Responsibilities are increasingly decentralized from central governments to regional and local authorities. More and more decisions are taken on the local level. City authorities are pressured to come forth as innovative and they pile up in their agendas measures and strategies to become 'innovative', 'smart', 'green', etc. (Hodgkinson, 2011). As the role of cities as engines of economic growth increases, city officials and decision makers face the challenging task of developing and maintaining efficient urban transport systems, among others (The World Bank, 2015).
- **Globalisation:** Economic and physical boundaries fade. The mobility of goods and people increases. Travelling becomes easier and more affordable. The growing number of travellers creates numerous challenges in terms of transport infrastructure and capacity, border crossing, intermodality, information for travellers and inter-operability of technologies with tourism service providers (International Transport Forum, 2015).
- **Shared Economy, Individual Empowerment, Social innovation:** Usership of transport vehicles gains ground over ownership (International Transport Forum, 2015); a well-known use case of this is the Uber ridesharing service. Citizens are able to reshape economic developments, redistribute power in politics through increased participation and propose innovative solutions for meeting social needs (ESPAS, 2015).
- **Population ageing:** Across Europe life expectancy increases, while birth rates decrease. Cities are called to accommodate a higher proportion of elderly people. Elderly people, however, face age-related physical and psychological constraints when it comes to mobility (EMTA, 2007).
- **Transforming families and household sizes:** A growing share of the European population remains childless or has children at a later age. Divorces increase. The sizes of families and households diminish (Eurostat, 2015a, 2015b). The shrinking average household size increases the number of potential users of public transport, especially in combination with shared "last-mile" services or walking/cycling.
- **Urbanisation and urban sprawl:** Cities become larger as more and more people inhabit central areas (urbanisation) (United Nations, 2014). Other parts of the population move away from central urban areas

<sup>1</sup> The original number of trends that were identified from CIPTEC is fifteen (15). For practical reasons however, the number of trends that was examined for the purposes of this research were reduced to ten (10) by merging some of them in larger groups.

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