



# CIPTEC

COLLECTIVE INNOVATION FOR PUBLIC TRANSPORT

## Promoting Sustainable Mobility by enhancing Public Transport

*Sustainable Urban Mobility: Confronting Air Pollution and Climate Change  
REMEDIO*

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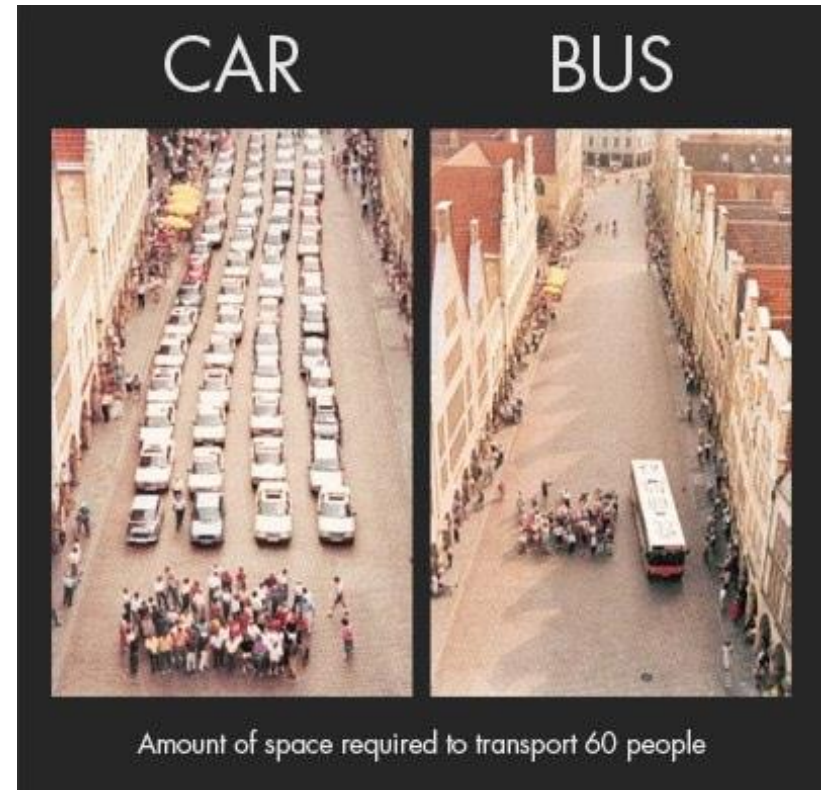
- Cities suffer most from congestion and poor air quality. Urban transport is responsible for about a quarter of CO<sub>2</sub> emissions from transport. (White Paper, 2011)
- PT has been widely recognised as the sector that enables congestion reduction and improves the quality of life.
- More investment in PT and increased use of PT can result in less congestion and in more efficient use of road space, lower energy consumption and less pollution.
- PT raises the level of economic activity and prosperity at a fixed level of congestion. (Walker J., 2016)



# PT tackles urban road congestion (2/2)

According to UITP:

- Buses use nearly **20 times less space** to transport the same number of people than private cars.
- Example: To carry 50,000 people per hour per direction it is necessary to have:
  - 175 m wide road used only by cars, or 35 m wide road used only by buses.
- A **45-seat bus** with only **5 passengers** emits less pollution than a **car** with **1.5 people**.
- PT emits **3.5 times less green-house gases** per passenger than private cars.

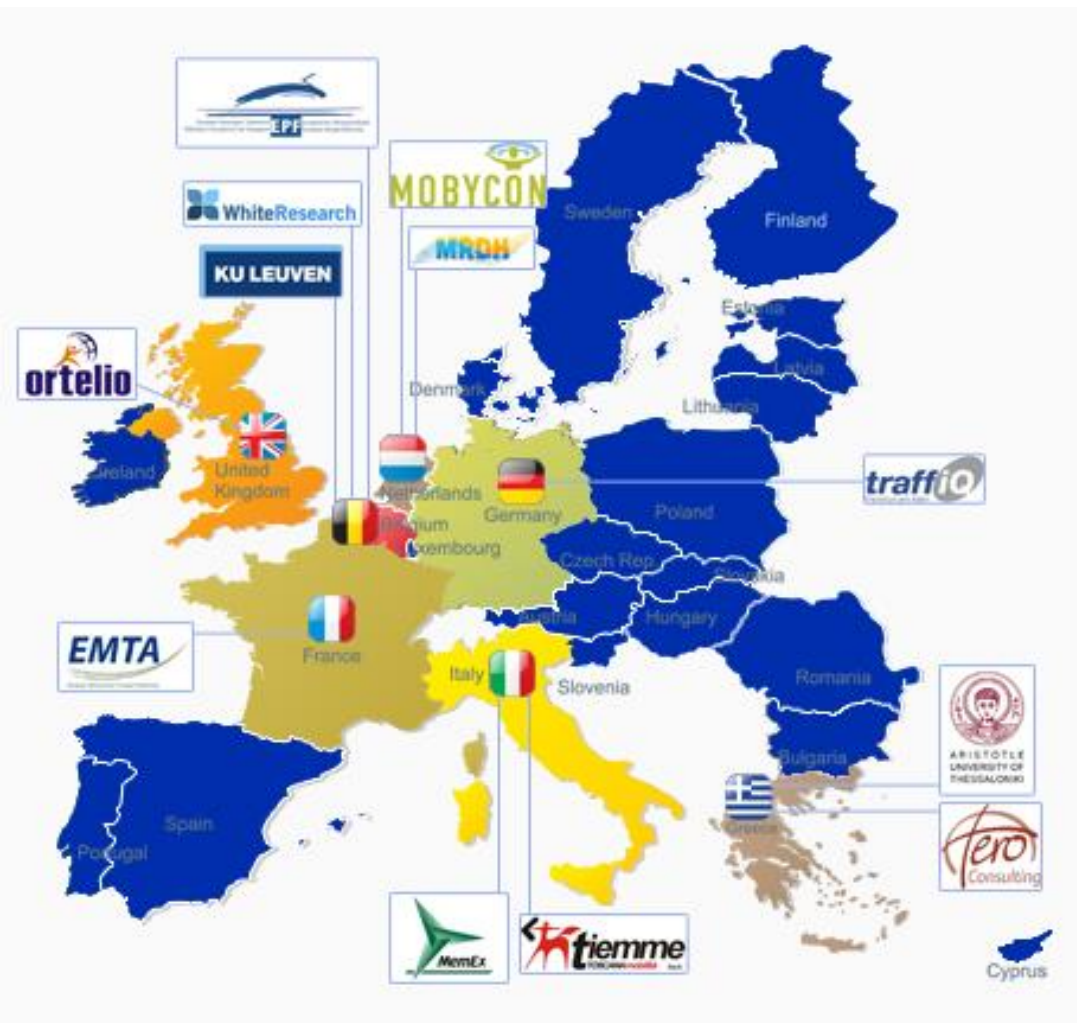


Source: <https://technicalfault.net>

- ✓ CIPTEC: **Collective Innovation for Public Transport in European Cities**
- ✓ A CIVITAS HORIZON 2020 project
- ✓ **Overall aim:** Make PT more attractive for reducing congestion and relevant impacts.
- ✓ **CIPTEC Ambition:** PT sector requires a cultural transition and re-orientation towards a more open, user-centered and innovative approach. CIPTEC aims to contribute significantly.



- ✓ Twelve (12) partners grouped in four (4) main categories in terms of their type and mission:
  - Universities (research groups)
  - Research consultancies and agencies
  - Public Transport bodies
  - Two European networks – “umbrella” organisations
- ✓ Duration: (3 years)  
01/05/2015-30/04/2018
- ✓ EU funding contribution/Total project cost: 3,498,350 euros







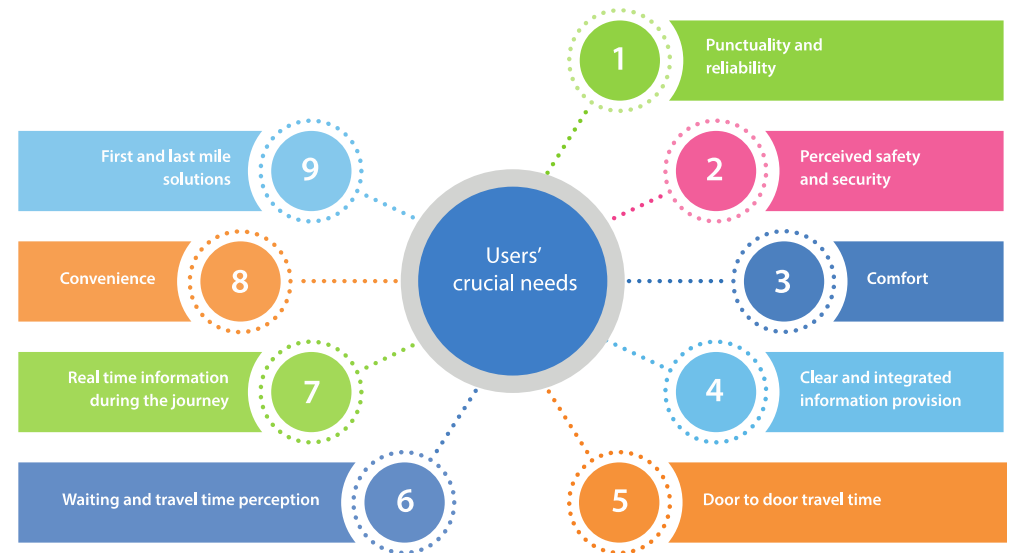
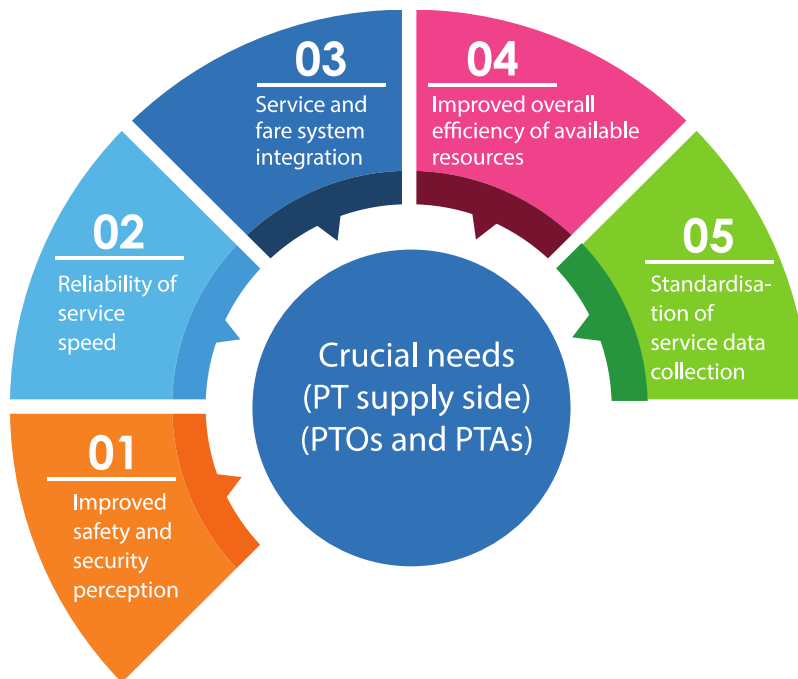
# Main results and Achievements





## ■ Crucial parameters for mapping the current PT situation

- ✓ Mapping of the main PT stakeholders at local level and an analysis of their requirements



- ✓ Classification of passengers into groups and identification of their needs.



# Answering to market & societal trends affecting PT

Innovative Technologies



Population ageing



Social Innovation



Globalization



Sustainable Lifestyles



Flexible Economy



Urbanisation



Shared Economy



Environmental degradation



Individual Empowerment



Harmonisation of EU Legislation



Corporate social responsibility



Enhancement of Urban Governance



Transforming families and household sizes



Urban Sprawl



**Research method:** Questionnaire survey, 441 respondents (153 fully completed quest.), from 7 EU countries (April-May 2016), analysis with SPSS 23 statistics

## Methodological process:

*From Sep. 2015 until June 2016*



**≈200 innovations  
identified by  
consortium  
(PT, OT, OB)**

**31 most promising  
innovations, worked  
out in detail  
(11 PT,10 OT,10 OB)**

**These are  
feeding the  
'toolbox'**

**Research methods:**

voting by  
consortium

validation by experts  
(interviews, online  
questionnaire, workshop)

## **CIPTEC co-creation workshops**

- ✓ Implementation of 8 co-creation workshops, 2 in each one of the aforementioned cities
- ✓ Application of various co-creation and evaluation methods
- ✓ In total 209 participants attended the workshops
- ✓ A total of 165 concepts came up



## CIPTEC crowdsourcing campaigns

### ✓ 5 crowdsourcing campaigns/platforms:

- *Thessaloniki, Frankfurt, Southern Tuscany and Rotterdam/The Hague and one European wide*
- ✓ **Aim:** (i) support the generation of innovative ideas for improving PT; (ii) stimulate dialogue among all parties involved in the PT sector.
- ✓ **486 ideas submitted, 8863 visitors (in total)**

*Outsourcing the work to the crowd*



Revealing hidden user groups, understanding user needs,  
selecting an appropriate innovation mix

- ✓ In CIPTEC, **Conjoint Analysis** was used to analyse preferences concerning eleven (11) selected existing innovative concepts.
- ✓ **Seven (7)** distinct groups/segments that demonstrate similar preferences with respect to their preferences in Public Transport innovations were identified.





## Motivating citizens and exploiting social labeling

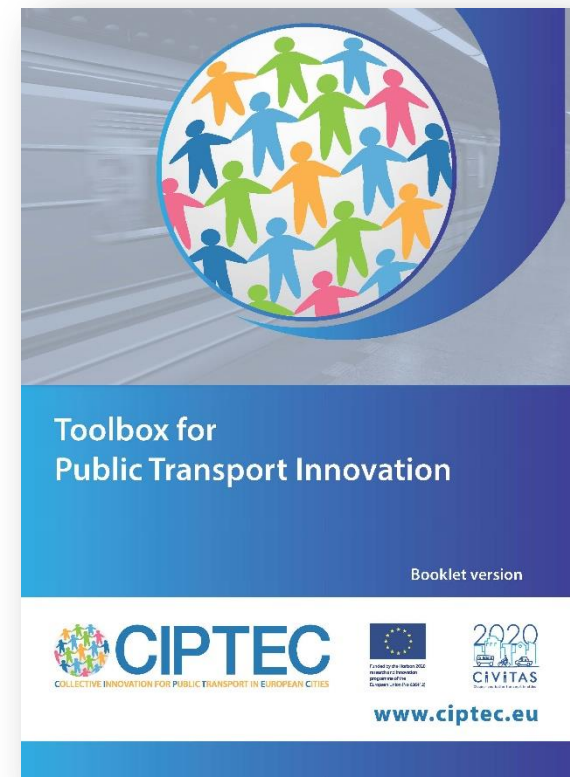
- ✓ In CIPTEC, **social labelling** has been used as a tool to influence transport choices.
- ✓ Both in **lab and field experiments** has been tested, whether labelling participants as environmentally concerned travellers ("**green label**") would encourage them to choose PT.
- ✓ In a period of about one month, we observed an **increase of 0.83% in Public Transport use** on experimental bus lines compared to control bus lines.
- ✓ Considering that this increase was realised simply by giving passengers a title, you can understand how ***social labelling is a powerful and cost-efficient method!***

## The CIPTEC toolbox for PT Innovation:

- ✓ aims in **capturing the generated knowledge** and **provides advice** on innovation introduction to PT stakeholders.

The **CIPTEC Toolbox** is delivered under **three** different versions:

- **Full version report**
- **Booklet version report**
- **On-line digital tool**  
(visit: <http://toolbox.ciptec.eu>)





- ✓ CIPTEC has produced several **policy suggestions on EU & local level**. Some selected:
- Crowdsourcing and co-creation should be used as means to create a competitive advantage for PT and eventually increase its attractiveness and market share.
- PTOs should carry out field experiments to test nudges designed to increase PT use.
- PTAs/PTOs should consider implementing Innovation Plans utilising the CIPTEC toolbox capabilities.
- Steps should be taken towards an integrated strategy to include social entrepreneurship practices and social policies in the management of PT systems.



# Expected long term impacts of CIPTEC **CIPTEC** COLLECTIVE INNOVATION FOR PUBLIC TRANSPORT

- ✓ Overall expected impact is to make PT more attractive to users, reducing negative impacts of private car use
- ✓ Utilization of innovative ideas resulted from CIPTEC collective intelligence
- ✓ Utilization of CIPTEC crowdsourcing platform and CIPTEC Toolbox
- ✓ Adoption by PT of a modern Marketing perspective that promotes creativity and innovation
- ✓ Adoption of appropriate mixes of innovations by PT stakeholders, maximizing their effects in attracting new users
- ✓ Mobilization of Social Entrepreneurs
- ✓ Utilization of CIPTEC Policy Suggestions



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