Ridesharing Services Socioeconomic Impact

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Artificial Intelligence for Road Safety and Mobility Workshop

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The Ridesharing Project

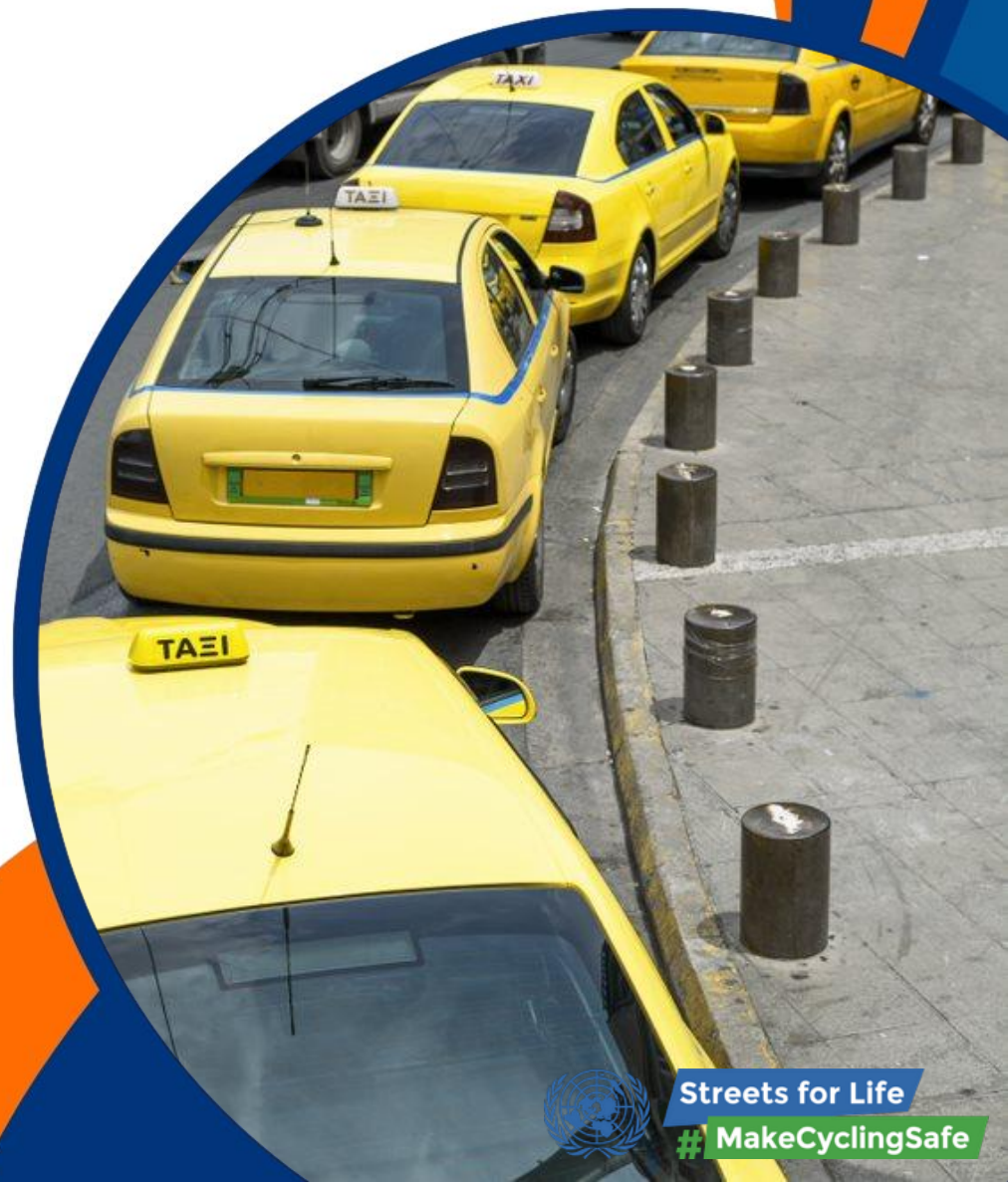
- In cooperation with Uber

- Duration:

2018
Initial Study

2021
Update

2023
Update



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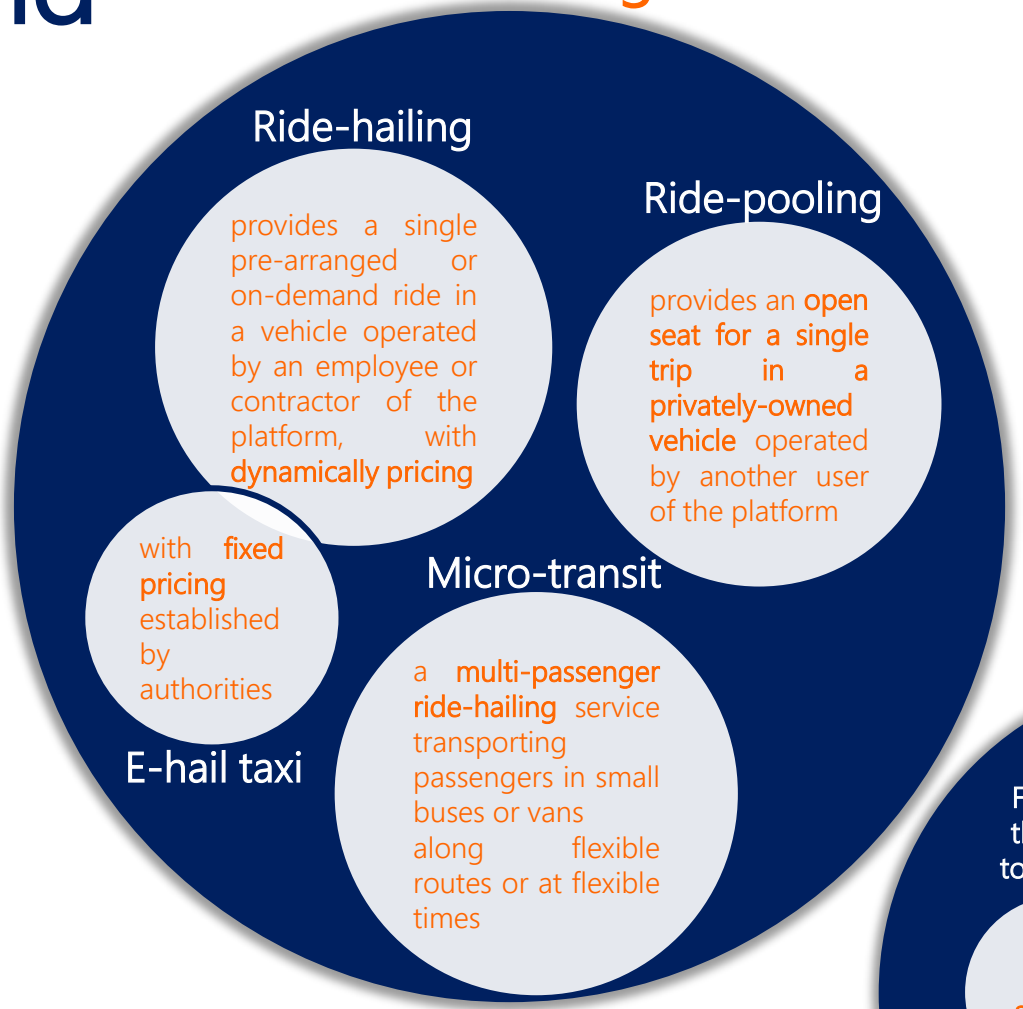
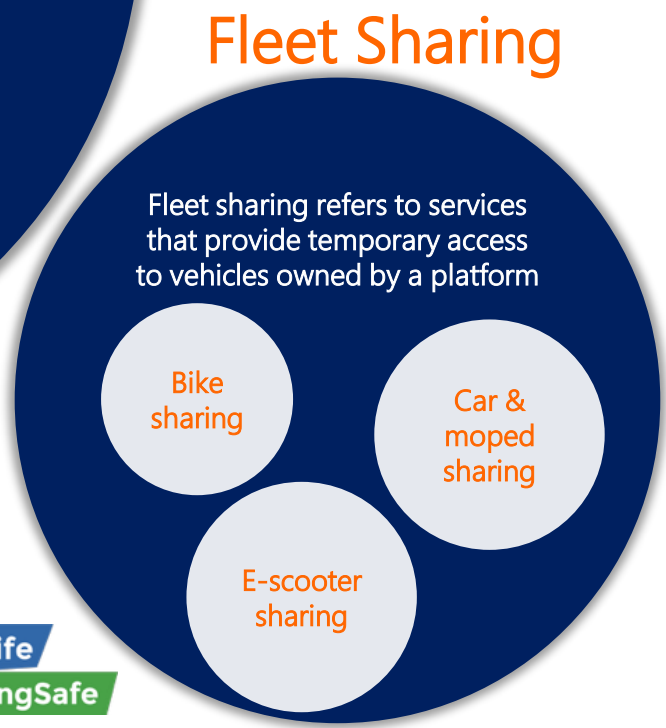
Background

- Urban population growth, expected to reach 82% of the global total in 2050, coupled with increased short distance trips is intensifying the challenges of urban mobility like congestion
- Sustainable urban mobility aims to meet modern needs promoting eco-friendly and innovative travel services, and controlling the use and ownership of private cars
- Innovative on-demand transport services like ride-hailing, are on the rise globally, spurred by technological advances notably smartphones, geo-localisation possibilities and ease of public access to internet
- Despite various legal, institutional and social challenges, urban travelers are increasingly embracing those services for their affordability, accessibility, and convenience

Transport on-demand

- Transport services with a car and a driver, which happen on demand of the passenger, is and has been an important part of the mobility offer available to citizens
- These services are usually carried out by taxis and/or Private Hire Vehicles with driver (PHV)
- Due to technical developments, pre-booking has basically become 'instantaneous pre-booking', blurring the differences between taxis and PHV
- Traditionally, taxi fares are set by authorities and PHV prices are negotiable between service providers and customers
- Today, when hailing a PHV on an online-app, it is generally the ride-hailing company which establishes the price dynamically for the offered service





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Objectives

Scope

The scope of this study is to **identify and quantify the socio-economic impacts** of introducing real-time, fee-based ridesharing services in Athens

Objective

The objective is the **ridesharing impact assessment in the social welfare** of Athens conducting a Socioeconomic Analysis with a time horizon up to 2030

Methodological Approach

Define Ridesharing **Business Models** for Athens

Define Scenarios for the Socio-economic Analysis

Demand Analysis for Ridesharing via a Stated Preference Survey

Estimate the Initial Investment & Operational **Costs**

Estimate the Ridesharing **Benefits**

Estimate the **Economic Performance** per Scenario through NPV & IRR

Business Models

Given current conditions and prospects in the Athens transportation market, service provision and possible legislative regulations, a fairly regulated market could consider 2 alternative business models for introducing ridesharing services:

Scenario A (Fully licensed service provision)

It assumes that ridesharing services are **offered by car-rental companies and travel agencies**, as a car-hiring service with professional drivers

It is based on **OECD's recommendations** according to their country assessment report for Greece, in which the following is stated: "We recommend abolishing the minimum duration of the service for car-rental-with-a-driver. By removing the artificial segmentation of the market, consumers will benefit from choosing freely from a wider range of services".

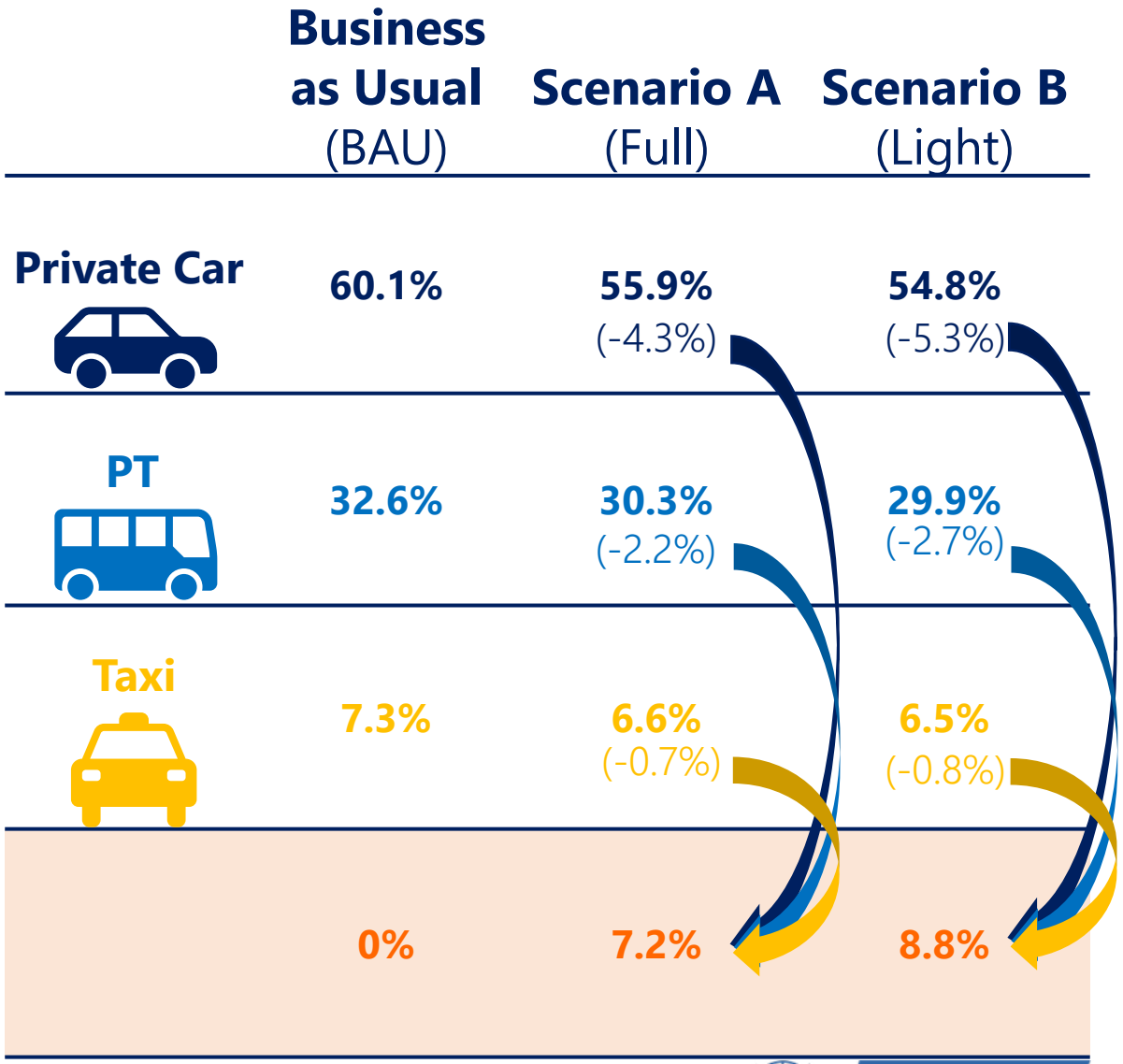
Scenario B (Light licensed service provision)

It considers ridesharing services **offered by properly licensed individuals** in the form of small businesses

- **Market entrance** is allowed at a small fee, to any interested individual complying with pre-defined standards for vehicles and driver qualifications
- Services are only booked online, and telephone reservation or **street hailing are not possible**
- It follows the paradigm of **Estonia and Lithuania**; in these countries regulated real-time ridesharing offered by individuals is available, but street hailing is reserved for taxis only

Results – Stated Preference Survey

- We interviewed 440 Athenians, aiming at collecting information on the level of understanding and preferring ride-hailing services over other travel options, in the case of introducing real-time, fee-based ridesharing services in Athens
- A multinomial logistic regression model was developed to define the utility of private car, taxi, Public Transport and ride-hailing services
- Travel time, cost and comfort were selected for representing choice preferences
- The introduction of ridesharing in Athens:
  - is expected to have a positive impact towards reducing private car usage over the BAU scenario,
  - while it will slightly affect usage for public transport and taxis



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Results – Social CBA

For society

Road Safety

21
less **road fatalities**

116-150
less **road injuries**

Traffic

92-116
million
less hours travelling with private cars

2-2.6
minutes
travel time savings per average trip

Employment

17-36
thousand
addition full & part time jobs
by the market shifting from private cars

Urban Space

1.7-2.1
sq. km
urban space savings

For the environment

Fuel Consumption

29-37
million lt
fuel savings from private cars

Emission

71-90
million kg
CO_2 savings

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- Enhancing urban mobility through flexible, real-time ridesharing services, particularly in areas underserved by public transport
- Reducing private vehicle dependence, easing traffic congestion, and reclaiming urban space for citizens
- Supporting sustainable tourism and addressing seasonal transport gaps, especially in tourist-heavy regions like Greek islands
- Aligning with EU Sustainable and Smart Mobility Strategy by fostering multimodal, inclusive, and resilient transport networks

Scientific and Social Impact

Science:

- Application of a comprehensive Social CBA, easily transferable and adaptable to other countries

Society:

- Creation of new employment opportunities: up to 36,000 equivalent jobs projected by 2030 in Athens
- Reduction in travel costs and time for users, improving accessibility and affordability
- Environmental benefits through reduced CO_2 emissions, fewer vehicle-kilometers traveled, and decreased urban congestion

Future Challenges

- Regulatory harmonization: Balancing innovation with fair competition against traditional taxis and public transport systems
- Sustaining public acceptance: Building trust in ridesharing services among users traditionally reliant on private vehicles
- Ensuring equitable access: Avoiding mobility gaps, especially in peripheral and lower-income areas
- Integration into urban transport systems: Aligning ridesharing with broader multimodal transport planning initiatives

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