MOBIWALLET:
MOBILITY AND TRANSPORT DIGITAL WALLET.

POLIS CONFERENCE
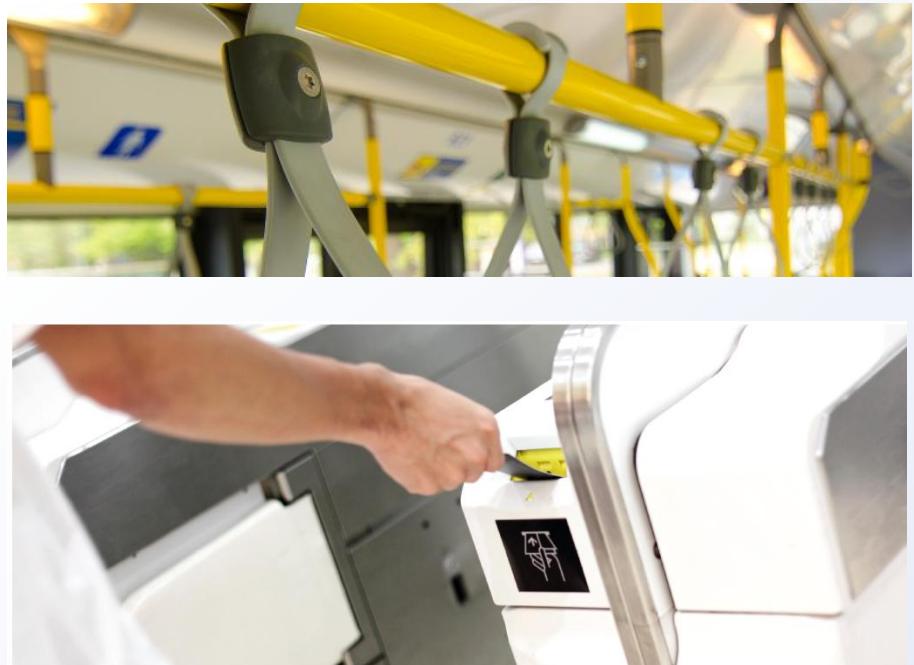
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19/11/2015

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The Project

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Main objective is to implement solutions for **Interoperable Fare Management,** fostering an integrated payment for any transport mode, public or private, and the provision of intelligent services to improve mobility, taking advance of the **latest ICT advances and Smartphone capabilities**

- **Coordinator:** INDRA
- **Partners:** 15, from 4 countries
- **Start Date:** 01/02/2014
- **End Date:** 31/07/2016
- **Cost:** 4,3M€
- **Estimated effort:** 592 PM

Funded by the EC through the EU Innovation and Competitiveness Framework Program (CIP)

Objectives

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Encourage modal shift and seamless intermodal mobility to entire cities and regions

Recommendations for Interoperability, best practices and guidelines

Promote an enhanced and sustainable mobility for all users

Know users acceptance, business models and sustainability

Improve the quality and offer new services to improve mobility

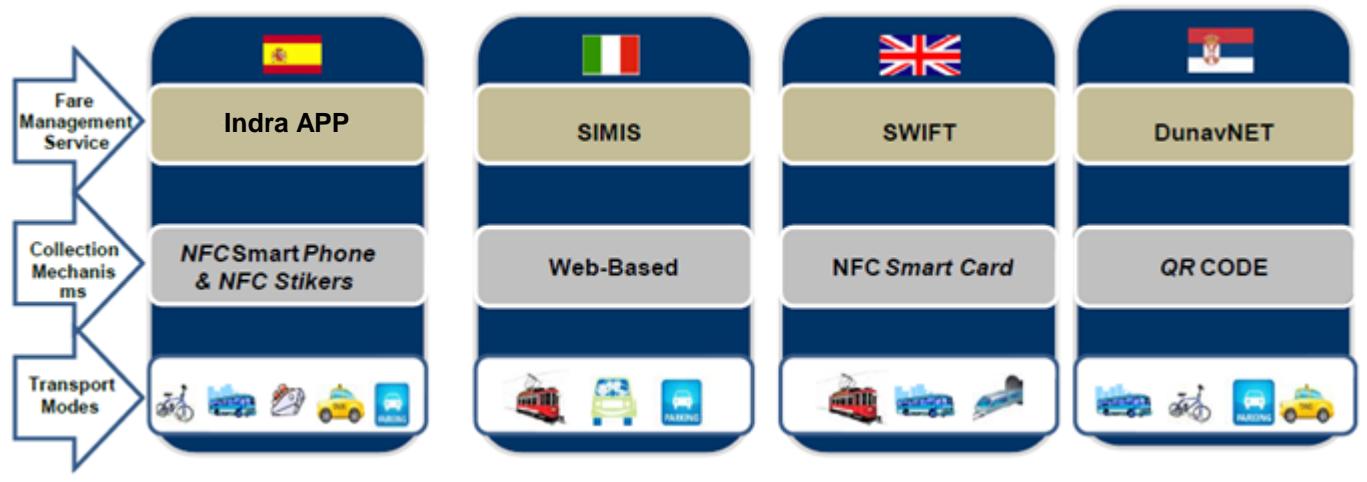Improve cross border transportation capabilities

Approach I

Design and provision of a **mobile fare management system** with unparalleled intelligence and functionalities, encompassing:

- o a **unified scheme seamlessly integrating various payment methods** suitable for a wide range of transport services

- o **enhanced travel functionalities** such as a personalized trip planning service

Approach II

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• **Contactless payment technologies**, such as web-based, 2D readers, or NFC open the door for new services that can effectively tear down interoperability barriers while offering a suite of extended services.

• In order to demonstrate these technologies and validate the benefits that they can have, **four pilots from across Europe** have been selected: in Santander (Spain), Tuscany (Italy), West Midlands (UK) and Novi Sad (Serbia).

• Each pilot includes **all the necessary stakeholders** in the value-chain to ensure an **effective deployment in each pilot** as well as ensure the sustainability beyond the pilot phase.

	Spain	Italy	UK	Serbia
Fare Management Service	Indra APP	SIMIS	SWIFT	DunavNET
Collection Mechanisms	NFC Smart Phone & NFC Stikers	Web-Based	NFC Smart Card	QR CODE
Transport Modes				

Consortium

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15 companies and government bodies from the **4 different countries** where pilots are developed, all playing a significant role in:

- o transport domain
- o ticketing solutions
- o embedded systems
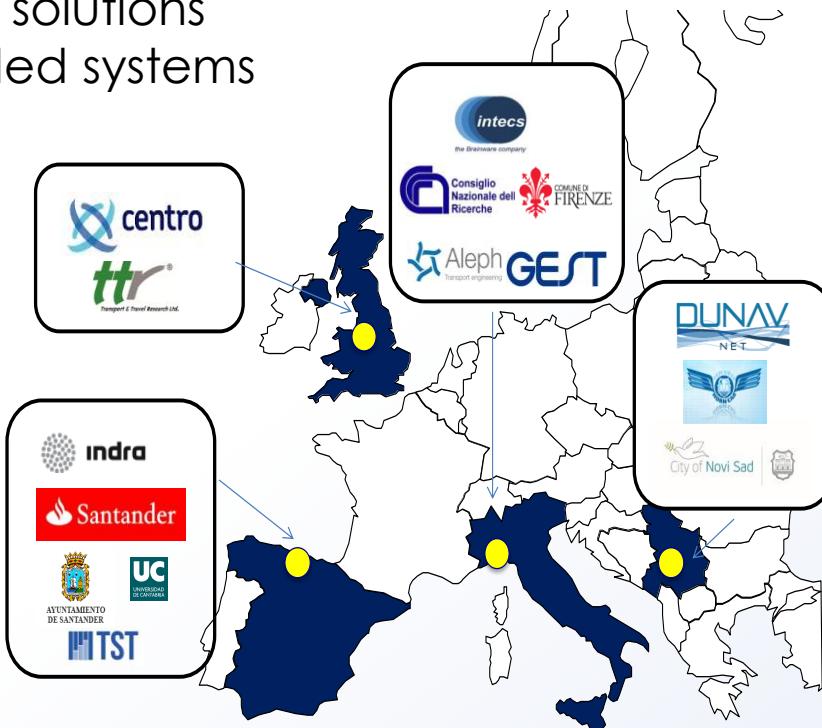
Project´s coordinator: indra

Pilots

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MobiWallet will include the participation of hundreds of users in **4 pilot cities** across Europe

Pilots performance and acceptability will be evaluated through questionnaires and workshops

On travellers and Transport Managers!

Spanish Pilot Overview

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Specific objectives:

❖to provide for an IFM solution that can **cover an entire city**, involving up to 5 different modes of transportation

❖to exploit the synergies between **N** contactless payment systems and **smartphone** technologies

❖Capable of **co-existing with current solutions**, requiring none/minimum hardware and software modification in operator´s side

Status:

Key concept:

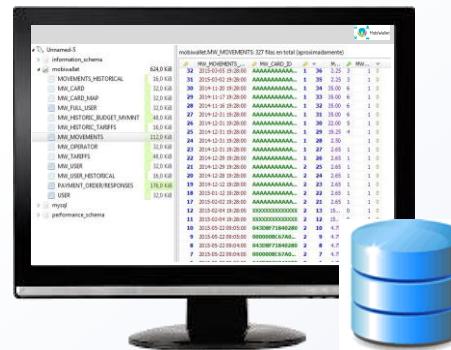*User "Virtual" Travell Wallet*

Technological Solutions implemented

MobiWallet

Medium for top-up and validation: Mobile APP + Sticker NFC

MobiWallet APP

NFC Sticker MIFARE CLASSIC 1K

Platform: Stores user´s data, virtual wallet and transactions.

Information centre: WebServices+DataBase

Payment Gateway: manage user´s credit and transfers to operators.

Operator 1 Account

Traveller Account

MW Account

Operator X Account

Different approaches adapted for each mean based on these common elements

Italian Pilot Overview

Due to the thousands of tourists and commuters which travel each day in the cities involved in the project (**Pisa** and **Florence**), the Italian Pilot aims to increase the efficiency of public transport services in synergy with private transport for a wide region

Specific objectives:

- to **reduce pollution emissions** and to improve urban mobility

- to deploy a **unified payment platform** which provides several interoperable transport services

Web Platform

Technological Solutions implemented

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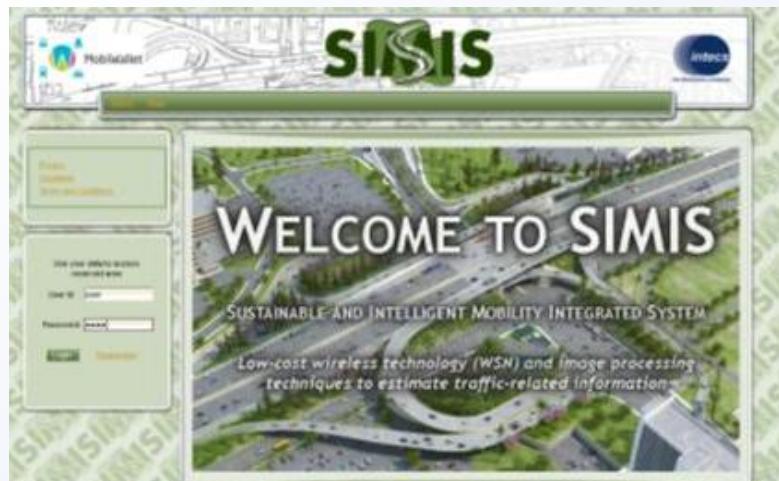
Scandicci (Florence)

Car parking payment via QR-code credit card. Tram ticket via SMS/PayPal.
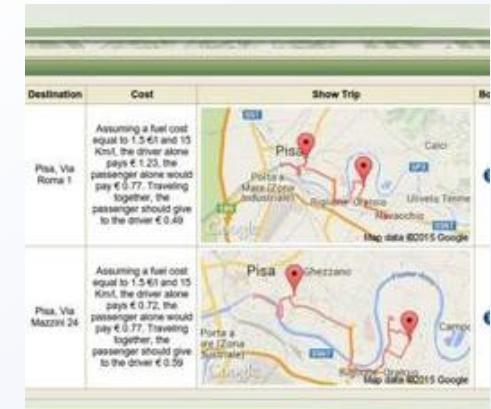
Pisa

Parking slots monitoring and payment

Pisa

Mobitickt "Park &Ride" Android app

Florence & Pisa

Car Pooling platform

United Kingdom Pilot Overview

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The UK pilot in **Birmingham** implements a **fare management engine (MobiWallet Engine)**, offering a complete public transport mobility solution for:

o planning a journey in real time

o selecting the most appropriate fare for specific journey needs

o purchasing a travel ticket from a recommended list (intelligent ticket options)

o Fulfil ticket purchases using NFC mobile technology or through remote network readers (ITSO technology)

Technological Solutions implemented

 MobiWallet

❑ Remote Fulfilment

Deployment of NFC and Remote Reader fulfilment services:

- New Swift NCF Application

- 100 Remote readers/collector's

Users can transfer their travel ticket purchase onto a Swift card using NFC technology through a mobile phone or ITSO technology through remote readers

❑ Journey Planner

Provides intelligent ticket options/results based upon journey's planned, using a new user friendly front end interface

Journey Results

From:	Sedgley
To:	Acocks Green Yardley Road
Leaving:	02/07/2015 13:00
Preferences:	Using bus, tram, train

Suggested routes

Order by: Departure time

🚶 › 🚌 229 › 🚶 › 🚋 › 🚶 | 8 mins | Walk to Dudley Street Stop SA Market Hall
🚌 › 🚶 | 15 mins | Take the bus **Arriva Midlands 229** towards Dudley (W Mids), Dudley Bus Station from Stop SA

Travel time
1hr 19mins £6.40 ⌄ | 5 mins | Walk to Tipton Rail Station

Depart: 13:52 Arrive: 15:11 | 9 mins | Take the London Midland train towards Smethwick Galton Bridge Rail Station

View full details → | 20 mins | Take the London Midland train towards Acocks Green Rail Station

Save route Keep me informed | 4 mins | Walk to Acocks Green Railway Station Yardley Road, Acocks Green

Serbian Pilot Overview

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Improve the management of the public transportation network in the city of **Novi Sad**

…starting from the public city bus transport network

the intention is to extend it to other transportation means (such as rental bikes and taxis) and networks, promoting and encouraging the greater use of **alternative transport modes** other than cars
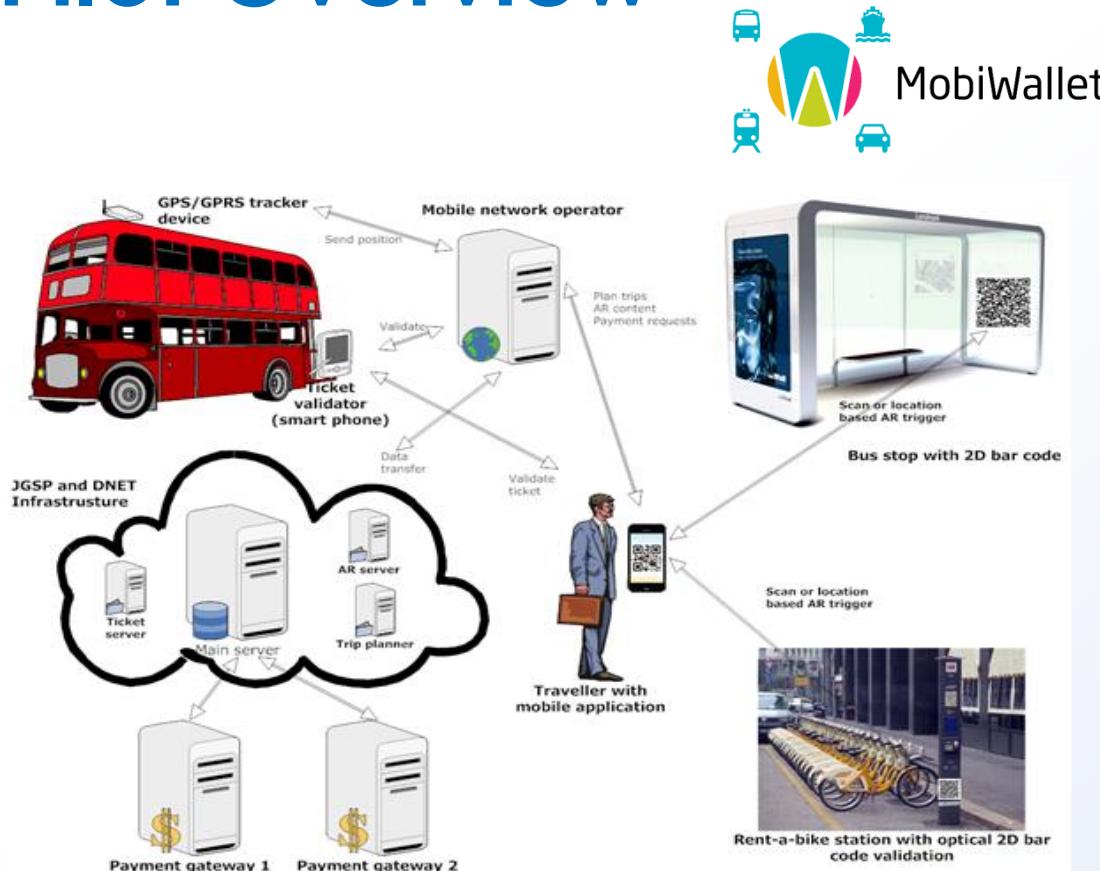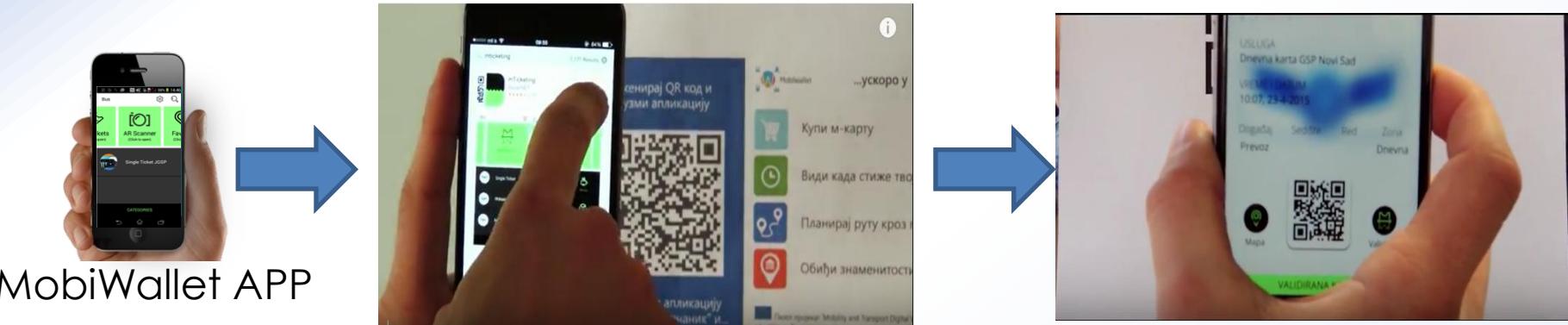
Technological Solutions implemented

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Ticket purchase & validation

MobiWallet APP

Bus stop located QR code sticker: initiate **AR interface** for **access to MobiWallet services:**
- Bus arrival times and position
- Maps with real time bus positions
- Tickets purchase

mTicket validation performed optically by scanning the QR code placed in each bus
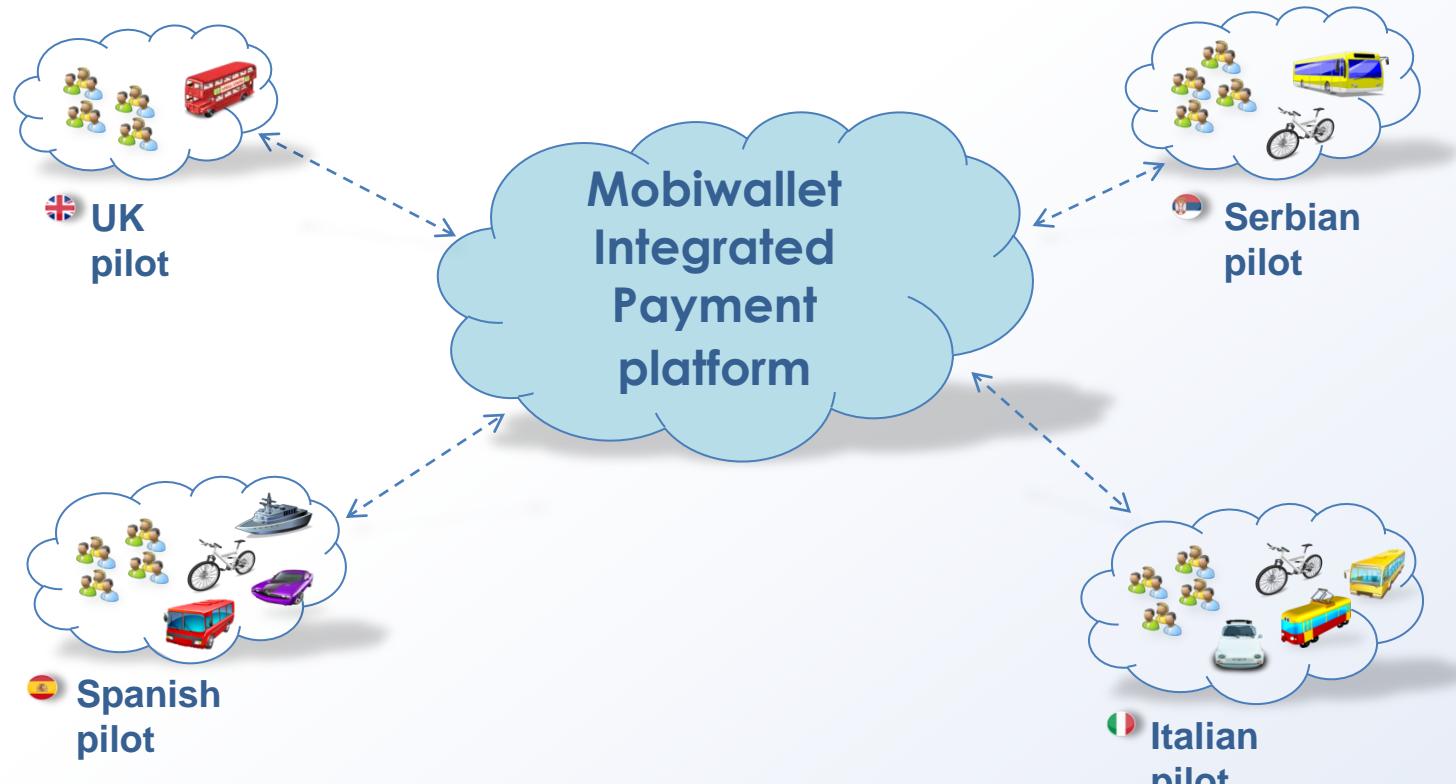
Additional information services

▫ Information on air pollution and quality in real time
▫ Tourist information

Global view

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Different scenarios, technologies, services and transport modes are involved in each pilot, but **sharing the same approach, methodology and common vision** of the project towards achieving **interoperability** at pilot level, and, ultimately, at cross border level.

UK pilot

Serbian pilot

Mobiwallet Integrated Payment platform

Spanish pilot

Italian pilot

Evaluation

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❑Success is being measured through an extensive **evaluation programme** that is consistently measuring progress across all 4 pilots throughout the project.

❑Following an **incremental approach**, first results are being gathered from pilot operation with the first users, while new functionalities and improvements are being sequentially included.

❑Evaluation across the cities is **standardised** and based on the results gathered through snapshot surveys, pre, through and post-trial surveys, focus groups, balanced score-cards and analysis of broader base line data

❑The objective of the evaluation works package is to provide a detailed understanding of the project with the intention to understand the potential for **full-scale deployment** across European Cities.

Current achievements

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❑ Main software **components deployed** in each of the pilots, including: APPs, Web-based platforms, payment gateways, information and planner services, fare engines.

❑ **Installation** of remote readers and validation equipment through the cities and modes involved.

❑ Systems have been put into operation and the **first volunteers** have registered and started to use them in their daily trips.

❑ **Feedback** received from users (travellers and operators

❑ First achievements towards **interoperability among pilots**

Future steps

☐ **User's recruitment and tests** will continue for the next months, in order to evaluate:

- the performance of the systems
- the success of the initiative
- the possibilities of a large scale deployment

☐ Investigating opportunities for closer **interoperability** among pilots

☐ Generate **recommendations** for Interoperability, best practices and guidelines

☐ **Exploitation** and sustainability analysis

More information....

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