IP4MaaS

The IP4MaaS project sought to advance the uptake of Mobility as a Service (MaaS) schemes in Europe, by analysing and testing existing technologies and assess them in terms of effectiveness, market acceptance, and user satisfaction.

Testing MaaS technologies to advance seamless multimodal mobility in Europe
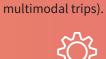
Advancing IP4 technologies

Instead of developing new technologies, the IP4MaaS project tested solutions developed under the Innovation Programme 4 (IP4) of the Europe's Rail Joint Undertaking (previously Shift2Rail), an initiative seeking to build a digital ecosystem for door-to door travel with railways as its backbone.

The main aim of IP4MaaS was to act as a bridge between the needs and requirements of Transport Services Providers (TSPs) and travellers with the technologies developed within Europe's Rail to expand the functions of the IP4 digital ecosystem and in particular of the Travel Companion (the travel application developed within Shift2Rail allowing users to plan, book and execute their multimodal trips).

Budget
€2.5 million

Duration
31 months
(December 2020 – June 2023)

Coordinator
UITP (the International Association of Public Transport)

Consortium
26 European partners

Testing in six EU sites

IP4 technologies were demonstrated in six European sites: **Padua**, **Liberec**, **Barcelona**, **Athens**, **Warsaw**, **Osijek**. For each demo site, the main mobility pain points were identified and it was assessed how IP4 solutions could help to solve them.

Athens
Greece

- Modes: **metro**, **bus**, **taxis**, **bikes** and **walking**
- Number of participants: **23** (phase 1), **36** (phase 2)

Enhancing multimodality by providing journey planning and integrated ticketing via a single app.

Results

- Users were enthusiastic about the attempts to develop a step towards MaaS in Athens.
- The assessment highlighted significant challenges, mainly related to technological and legal issues.
- Solutions drew attention to the need to address MaaS challenges for building a competing mobility service that is reliable, satisfies user needs and improves accessibility for all.

Padua
Italy

- Modes: **train**, **bus**
- Number of participants: **13**

Improving urban-surrounding connections and the efficiency of public transport services while reducing GHG emissions and unsustainable travel habits.

Results

- Users genuinely appreciated the application. The 'travellers' feedback' function was particularly appreciated.
- Training on how to use the app was considered important for properly realising its potential.
- Users would appreciate being able to find the app on widely-used app download platforms.

Liberec
Czech Republic

- Modes: **trams**, **buses**, **trains**
- Number of participants: **124**

In a mountainous area with scattered rural settlements, the demo wanted to achieve smoother travelling and improve the integration of all public transport modes.

Results

- Testers emphasised that the Travel Companion is user-friendly as it integrates all transport modes into a single travel solution and also supports eco-friendly transport solutions.
- Testers suggested a number of possible improvements to the app in order to further increase its user-friendliness and efficiency.

Osijek
Croatia

- **Modes**: bus, **trams**, **shared bike**
- Number of participants: **41**

Exploring the potential of creating a MaaS ecosystem in the Osijek area, gaining knowledge and experience and accelerating the future uptake of IP4 technologies.

Results

- The demo helped integrate traditional modes of public transport, namely GPP's trams and buses with innovative e-bike and bike-sharing services.
- The Journey Planner was found to be the best functionality, demonstrating the advantages of the synergies between bike sharing and public transport.
- Testers said that technological solutions would need further development to meet the growing demands for multimodal mobility.

Barcelona
Spain

- **Modes**: **metro**, **trams**, **buses**, **shared/on-demand buses**
- Number of participants: **31**

Testing the integration of transport-on-demand and public transport services on urban-rural connections. A focus group was also organised for a more deep and detailed testing of the solutions.

Results

- Feedback was highly positive. The focus group was successful, as the users understood the complexity of the system and the technical partners gained a better understanding of the users' needs.
- Testers reported issues and at the same time proposed improvements for the functionalities offered, contributing to inputs to enhance usability.

Warsaw
Poland

- Modes: **metro**, **trams**, **bus**
- Number of participants: **211**

The demo supported Warsaw's MaaS readiness by extending the understanding of creating MaaS schemes.

Results

- Feedback received via surveys was strongly positive, indicating that the TC application has a considerable potential.
- Participants said the app requires improvement and refinement if it is to be used on a large scale commercial basis.

Liberec-Warsaw
Long-Distance Demo

- **Modes**: **bus**, **train**
- Number of participants: **10**

Testing the multimodal cross-border connections between Liberec and Warsaw.

Results

- Testers were recruited internally, and were strongly satisfied with the IP4 idea itself.
- The aggregation of a large number of services within a single application and thus the possibility of using a single app for travelling in Liberec, Warsaw and cross-border was particularly well-evaluated.

Conclusions

The final evaluation demonstrated the viability of the IP4MaaS solution. Overall, the feedback from users and TSPs was positive, and provided significant inputs for improvement and enhancements to the proposed services.

- Users' mobility experience proved closely linked to the availability of effective digital applications.

- To encourage consumers to change their travel habits, defining a level of convenience for the change is needed. IP4MaaS proved that the idea of integrating TSPs within a large, EU-wide network enabled by IP4 solutions could create the ideal conditions to promote this behavioural change and overcome some of the current barriers for a large-scale MaaS adoption.

www.ip4maas.eu