FUTURE
INTERNET
PPP

Instant Mobility

Multimodality for people and goods in urban areas

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Scientific Results, preliminary version

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Instant Mobility WP7.2
D7.5 Scientific Results – Preliminary Version

WP7.2	D7.5 Scientific Results – Preliminary Version
Authors	Merja Penttinen - VTT
Short Description	Task 7.2 "Scientific & technical dissemination" is dedicated to the gathering, editing, and dissemination of technical and scientific results created within the project toward the research and industry community and the dissemination of the project's innovation. This deliverable is the preliminary version of the scientific results.
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Contributions by:	Julie Castermans, ERTICO Patrick Gatellier, Thales Thierry Nagellen, Orange IFSTTAR, Volvo, DRL, Orange, MIZAR
Internal review by	Mahdi Zargayouna, IFSTTAR Michele Provera, CRF
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Deliverable Abstract (1 page)

Task 7.2 "Scientific & technical dissemination" is dedicated to gathering, editing, and disseminating the technical and scientific results created within Instant Mobility project. The focus is to target the research, industry, and standardization communities, and to disseminate project's innovation.

To ensure the technical and scientific dissemination of the project results, Task 7.2 is collaborating closely especially with WP3 "Use Case Scenarios", WP4 "Future Internet Enablers" and WP5 "Realisation and Prototyping". In addition, WP 6 "Societal issues" will also produce valuable and interesting results that can be disseminated in scientific forums.

This deliverable 7.5 "Scientific Results – Preliminary Version" is the preliminary version of the scientific results produced, and disseminated in the Instant Mobility project during its first 12 months. It will present the first technical and scientific dissemination activities such as conference and seminar participations, papers submitted, and other remarkable activities disseminating the results of the project. The deliverable also summarises the most important future dissemination plans, especially the plans towards ITS (Intelligent Transportation Systems) World Congress 2012 in Vienna.

The next and final version of the scientific results, D7.8, is due M21, i.e. December 2012 and will include the scientific and technical dissemination activities during the second year of the Instant Mobility project.

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1.   Introduction

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To ensure the technical and scientific dissemination of the project results, Task 7.2 is collaborating closely especially with WP3 "Use Case Scenarios", WP4 "Future Internet Enablers" and WP5 "Realisation and Prototyping". In addition, WP 6 "Societal issues" will also produce valuable and interesting results that can be disseminated in scientific forums.

The leader of the work package, VTT, will support partners, especially relevant works package leaders, in producing papers based on the scientific and technical results from the project by reviewing the draft papers. VTT will also keep watch on opportunities for publication of the results in relevant journals, conferences, as well as online and broadcast media, and promote further research activities by identifying topics suited for diploma and doctoral thesis papers.

This deliverable 7.5 "Scientific Results – Preliminary Version" is the preliminary version of the results of the scientific and technical dissemination in the Instant Mobility project during its first 12 months. As many of the work packages are just getting into the first technical and scientific remarkable results, the deliverable also includes already established further plans of the dissemination. The next and final version of the scientific results, D7.8, is due M21, i.e. December 2012 and will include the scientific and technical dissemination activities during the second year of the Instant Mobility project.

2. Objective

The objective of the task 7.2 "Scientific & technical dissemination" is to make sure that the relevant technical and scientific outcomes of Instant Mobility project are communicated widely, especially to the research and innovation bodies, and to make sure that the results achieved in Instant Mobility will be effectively known and reused. The task is closely collaborating with other technical work packages in Instant Mobility project as well as other dissemination, outreach and exploitation tasks. (Instant Mobility, 2011)

During this first year, Instant Mobility consortium focused its efforts on innovative scenarios descriptions which are now mature. Based on the technical on-going work regarding specific Future Internet enablers, new scientific and technical materials will be available in 2012 for the ITS community and for Transport and Mobility European conferences.

3. Preliminary results

3.1   Special session in ITS Orlando: "Future Internet for ITS"

A special session dedicated to Instant Mobility project *"Future Internet for ITS"* was organized during ITS World Congress in Orlando, Florida. The session gathered altogether 30 participants, and the preliminary results and further plans of the Instant Mobility project raised a lot of valuable discussion among the participants.

The session included the following presentations of the project:

- *"The EU FI-PPP programme and the Instant Mobility project"* by Patrick Gatellier, Thales

  In his presentation Patrick Gatellier presented the structure and goals of the whole FI-PPP programme, and what kind of transportation related problems Future Internet enabled services can target, and how can the services help.

- *"The Future Internet and its features relevant for ITS"* by Stéphane Petti, Orange Business Services

  Orange's presentation given by Stéphane Petti, concentrated into the specific features of Future Internet that can help in creating the future services for Intelligent Transportation. The capability of handling the big data, and to collect information from travelers are among the key enablers of the new services.

- *"ITS standards and technologies for Future Internet"*, by Rene Rembarz, Ericsson Eurolab

  Ericsson's presentation given by Rene Rembarz concentrated into the specific technologies and standards related to Future Internet.

- *"Trucks and the city within Instant Mobility"*, by Hossein Zakizadeh, Volvo Technology

  The presentation given by Hossein Zakizadeh also highlighted the current transportation related challenges in the urban areas. it also analyzed further the needed improvements, and available enablers. In addition, various service concepts and expected impacts were discussed.

- *"Innovative ITS services thanks to Future Internet technologies"* by Paul Kompfner, ERTICO

  Paul Kompfner's presentation concentrated into the sustainability challenges in the urban areas, the vision of the Instant Mobility project. In addition, the preliminary use case scenarios were presented and further analyzed.

Most of the presentations slides are available via Instant Mobility webpage: http://www.instant-mobility.com/index.php/public-documents/public-deliverables-2.html

3.2   Technical and scientific papers

3.2.1 *Use case scenarios (WP3)*

During the first 12 months of Instant Mobility projects, the first final results to be disseminated have been mainly produced by work package 3 "Use case scenarios". The use case scenarios were

iterated starting from definition and analysis. In the beginning, five (5) lead scenarios were used as a starting point for the work. Those were:

1) Multimodal travel made easy

2) The sustainable car

3) Collective transport 2.0

4) Trucks and the city

5) Online traffic & infrastructure management

The scenarios were further developed by the partners, with help of stakeholder input collected in workshops, and refined to three use case scenarios:

1) Personal Travel Companion

2) Smart city logistics operations

3) Transport infrastructure as a service

As the first scientific dissemination concerning the outcomes of the WP3, a paper "***Future Internet for a Personal Travel Companion service***"[1] was submitted to ITS (Intelligent Transportation Systems) World congress in Vienna, based on the above mentioned first use case scenario. Since the deadline for Vienna papers was already at the end of January – when the scenario work was still ongoing, it was decided that the paper will be submitted as a technical one, allowing more possibilities to modify and enrich it with more details after receiving the comments from the scientific board of the conference.

To summarize, the paper describes an Internet-based "multimodal travel platform" that provides information and services able to support new types of connected transport applications. The considered scenario a "Personal Travel Companion" is centered on multimodal travelers, including both drivers and travelers/passengers. The paper also discusses about the Instant Mobility project and its specific goals, and the requirements for Future Internet technologies. The future tasks in the Instant Mobility, including the preliminary plans for a prototype are also presented. (Zargayouna et. al. 2012)

3.2.2 Future Internet enablers (WP4)

In addition, work package 4 "Future Internet Enablers" had its first results and deliverables scheduled for the first year of the project. A technical paper "***Architecture methodology in the Instant Mobility project***"[2] was also submitted to ITS World Congress as a technical paper.

The paper describes in detail the architecture methodology used in Instant Mobility. It outlines the decomposition and synthesis approach for defining a rational, non-intuitive architecture that embraces conventional and Future Internet technologies, reflects the insights that have been gained from applying this methodology in the Instant mobility project. In addition, the paper also analyses and discusses the benefits and disadvantages of the outlined concept. (Beckmann et. al. 2012)

3.2.3 The results of the other work packages

Based on their timing, the other technical work packages, WP5 and WP6 are able to publish their technical and scientific results during the second year of Instant Mobility.

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[1] Submitted by IFSTTAR, THALES, DLR and ERTICO
[2] Submitted by DLR and IFSTTAR

3.3   Stakeholder workshops

To ensure the involvement of stakeholders in the different phases of the Instant mobility project, a series of stakeholder workshops is planned throughout the project. The workshops will concentrate in the most recent tasks and findings of the project, and will be targeted to both participating cities and ITS industry.

During the first 12 months of the Instant Mobility project, two stakeholder workshops were organized. The main purpose and the main outcomes of each are described more detailed in the following chapters.

3.3.1 *The first workshop, Brussels October 2011*

The first stakeholder and exploitation workshop was targeting to the needs of the cities in regards to the created scenarios. It was organized in co-operation with WP3 in Brussels in October 2011. The objectives of the workshop were as follows:

- To explore the concerns and the aims of the cities and other participants. To discuss, how the Internet-based solutions could help in solving the problems.

- To validate the Instant Mobility scenarios and to understand what is missing or needs to be modified.

- To start a dialogue with potential candidate cities to host a pilot implementation of Instant Mobility applications in the second phase of the FI-PPP programme.

The workshop gathered together 40 participants, and included presentations of the participant cities: Rome, Toledo, Istanbul, Trondheim and the Basque Region, and the current issues they are facing in the area of transportation and related information services. In addition, the preliminary scenarios created in WP3 were presented in the workshop.

The main challenges the city participants raised were congestion (and related environmental issues), and the urgent need to shift the balance from individual to collective transport modes. Efficient and sustainable management of goods distribution and commercial vehicles in cities, and the lack of reliable online & real-time information across transportation modes were also concerning the city representatives. (Instant Mobility, 2011)

It was discussed, how internet technology could influence people to choose greener means of travel and transport through multimodal real-time and personalized information, including also online ticketing. Moreover, Internet could help in collecting data from travellers and vehicles moving in the city, and making real-time (and forecasted) information accessible online. This would help travellers, and to improve overall traffic management. In addition, the environmental impacts could also be reduced. (Instant Mobility, 2011)

In conclusion, the Instant Mobility project was seen producing technologies and services that could support better collaboration between public and private mobility actors in the cities. The project is seen to contribute in making mobility information more complete, reliable, and available for users. It also shows how Future Internet technologies can help in integrating existing services to create next-generation mobility for all. (Instant Mobility, 2011)

The report of the workshop is also available via Instant Mobility webpage: http://www.instant-mobility.org/index.php/news/past-events/127-workshop-on-im-future-scenarios.html

3.3.2 The second workshop, Rome March 2012

The second stakeholder and exploitation workshop was organized in Rome in connection with the March 2012 consortium meeting, as recommended by the reviewers. Altogether 85 participants attended the workshop organized in ATAC premises.

The workshop was targeting especially to
- the local mobility and transportation related challenges in Rome,
- the capabilities of the Future Internet in relation to the challenges in the urban areas,
- social acceptability of the Instant Mobility/Future Internet enabled services,
- the current Instant Mobility scenarios and related functional and non-functional requirements, and
- the challenges and the next steps in the Instant Mobility project.

In the beginning of the workshop, Peter Fatelnig (EC, FI-PPP) gave an informative, challenging and also encouraging presentation of the Future Internet and its capabilities. He reminded the consortium, that even in the economic downturn, Internet has been able to provide new jobs. He also highlighted the European strengths and encouraged to focus on those sector not fully "internetlized" yet. The overview and the capabilities of the Future Internet were also explained in details in Andrea Bragagnini (Telecom Italia) presentation.

The coordinator of Instant Mobility, Patrick Gatellier, presented the main ideas and the expected outcomes of the Instant Mobility project, emphasising that the project is about all mobility related issues, not only transportation. The main goal of the project is to help travellers and drivers to be more informed, and to participate in creation of the new services.

The ATAC representative, Luca Masciola (Head of business process integration department) gave the audience a very informative and interesting presentation of the issues the city of Rome is facing. To summarise, over 6 million trips are made in Rome every day. In addition, to the almost 3 million inhabitants living in the city, over 23 million tourists visit the city every year. The most important issues to be solved are:
- optimization of the transportation network usage (including all modes of transportation)
- traffic congestion
- correct and timely mobility information, real time traffic management, safety and security
- enhancing park-and-ride area usage
- facilitate events and incidents management.

Sustainability was seen as one of the major goals. The challenges and the means to get people to change from private modes to the public ones was discussed a lot. It was mentioned that the increased fuel prices have been already seen to have some impact on the usage of public transportation in Rome.

In addition, the three created Instant Mobility use case scenarios were presented with the related functional and non-functional requirements. All of those raised questions and discussion in the audience. Moreover, the preliminary findings of the work package 6 "Societal issues" were presented. Although no detailed analysis of the collected data was available, the most important fact raised was the number of people interested in the Instant Mobility services. In both Istanbul and Rome, over 1000 people had already participated the online survey. In addition, over 300 had responded already in Nice.

To conclude the workshop, Paul Kompfner (leader of the work package 3) encouraged the audience to participate the discussion of "why aren't the presented scenarios reality already now?" Many ideas were raised, and will be reported in details in the Instant Mobility webpage.

The presentations given during the workshop are also available in the dedicated Instant Mobility projectplace, and the detailed report and presentations will also be added to the Instant Mobility webpage soon.

3.4   Other presentations in seminars and conferences

The technical results of the Instant Mobility project, especially project targets and the first results of work package 3 have been presented in many Future Internet related conferences and seminars, such as:

- FIA (Future Internet Assembly), May 2011

- Future Internet Summit, June 2011

- European Innovation Summit, Future Internet&Smart Cities, October 2011

- Future Internet Innovation day, Helsinki November 2011

- FI-PPP program meeting, January 2012

The presentations are available via Instant Mobility webpage: http://www.instant-mobility.org/index.php/public-documents/public-deliverables-2.html

In addition to the above mentioned international forums, many partners have been disseminating the results nationally. E.g. Orange and VTT have been presenting the capabilities and preliminary results of the Instant Mobility project for the national "Smart Cities" programmes. IFSTTAR and Thales will also present the Instant Mobility project in the "New Technologies for transportation" Forum in May 2012.

3.5   Demonstrations

To demonstrate the technical capabilities and achievements in the project, Instant Mobility is planning to set up two demonstrations to ITS World Congress Technical Showcase. One demonstration will be focusing on the data processing capabilities and scalability of Instant Mobility services. The second one will be demonstrating the HMI of the multimodal/ridesharing service with in-car and mobile units.

3.6   Standardization work

As described in Instant Mobility D7.6 "Standardization and regulation recommendations – preliminary version", Instant Mobility is closely following related standards to use some subset functionalities with some major issues:

- o   Improvement of geographical location services
- o   Implementation of message-oriented multimodal services (ITS)
- o   Deployment of devices-as-sensors and vehicles-as-sensors services
- o   Deployment of secured and certified services

Details of the standardization work and its major outcomes are presented more in detail in the deliverable 7.6.

3.7   Co-operation with other FI-PPP projects

There is a dedicated work package, WP2 "Program collaboration" which aims at organizing the information exchange between the Instant Mobility project and the other usage area projects (task 2.2), Infinity (task 2.3) and Core Platform (FI-WARE) (task 2.1) in FI-PPP programme (*figure 1*).
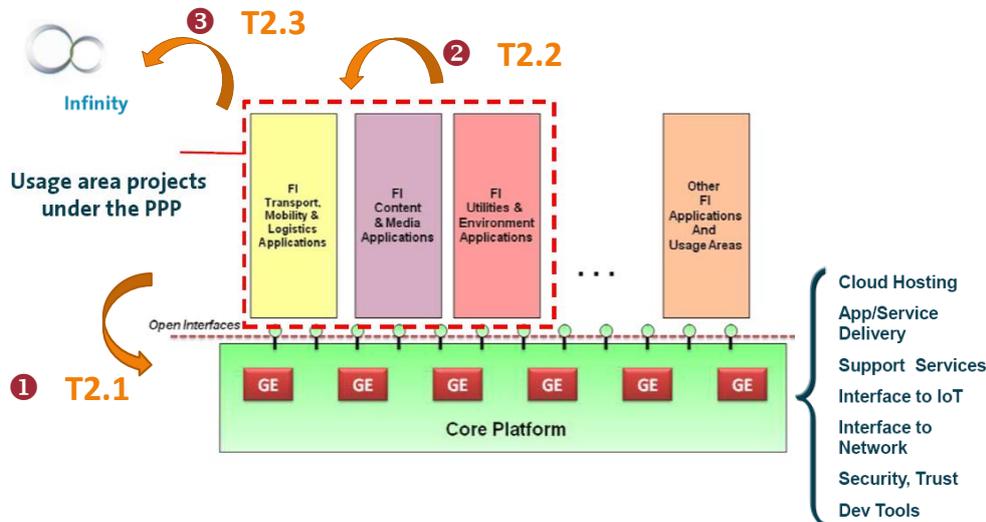

Figure 1. Co-operation between Instant Mobility and FI-PPP projects (WP2).

During the first year, Instant Mobility project has been actively participated into meetings with usage area projects, to strengthen the collaboration, to disseminate the outcomes and to analyze the potential commonalities with other usage area projects.

3.8   Other dissemination activities

The other dissemination activities of the Instant Mobility project cover the

- Continuous updates of Instant Mobility webpage – 12 686 visitors between June 1st 2011 – March 26th, 2012.
- social media participation (LinkedIn group[3] and Facebook page[4])
- several releases for press and media:
    o Kick off meeting in Nice – local newspapers and France TV3,
    o Telefónica corporate press releases about their participation in FI-PPP-projects, including Instant mobility,
    o Telecom Italia has presented Instant Mobility in the corporate newsletter of "Research and Prototypes" department
    o Mizar contributed an article "*Cloud technologies for traffic monitoring and control*" to iMobility newsletter (Feb. 2012)
    o A virtual presentation of IM-project at the Volvo Tech Show Exhibition 2011. (May 2011)
    o Various local media participating and publishing about DHL's participation in Instant Mobility (press conference given during December consortium meeting in Madrid, Spain)
    o Dedicated Orange Business Newsletters for B2B communication
    o ATAC using a dedicated webpage both in English and Italian (www.atac.roma.it)
- Close co-operation with other smart mobility programs: TNO is a central partner in many national and EU-wide smart mobility programs, and also partner of hundreds of smart mobility SME's in the area of mobility and ICT.

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[3] http://www.linkedin.com/groups/Instant-Mobility-4350665
[4] https://www.facebook.com/pages/Instant-Mobility/160241434096621

- Nokia has been organizing internal meetings and workshops to raise awareness of Instant Mobility and its exploitation

In addition, Instant Mobility consortium is actively using a dedicated Projectplace to ensure the dissemination of all the progress, results and deliverables inside the consortium.

4. Future plans

4.1 ITS World Congress - Vienna 2012

ITS (Intelligent Transportation Systems World Congress 2012) Vienna has been selected as the most important dissemination forum for Instant Mobility results in 2012. The dissemination activities of Instant Mobility in Vienna will cover:
- two technical papers summarised in chapter 3.2
- one special session "*Multimodal journey made easy*"(combined with Viajeo-project)
- pre-conference stakeholder/exploitation workshop
- technical demonstrations
- dissemination video clips to demonstrate the scenarios
- updated project brochure

4.2 Stakeholder workshops

The next stakeholder and exploitation workshops have also been planned and scheduled to take place:

- in Istanbul, in connection with next consortium meeting (June 2012)

- in Toledo, in connection with the October consortium meeting

- during the ITS World Congress - Vienna (October 2012).

It was acknowledged that the Toledo and Vienna workshops are organized very close to each other. However, the expected audience of the two is different: more local stakeholders in Toledo, and wider international ITS community in Vienna.

4.3 Other conferences/addressed networks

Instant Mobility will be actively participating in FI-PPP programme organized events such as:
- 3rd European Summit on the Future Internet, 31.5-1.6.2012, Espoo, Finland
- FIA (Future Internet Assembly) in Aalborg may 2012

In addition, Instant Mobility project is closely collaborating with FI-PPP dissemination group

4.4 Technical and scientific papers

The planning of the further technical and scientific papers continues in close co-operation with the technical work packages WP3, WP4, WP5 and WP6. During the second year of the Instant Mobility project there will be plenty of technical and scientific outcomes to be disseminated. WP7 is supporting partners in finding the suitable channels to best target the scientific and industrial audience.

4.5 Analysis of Instant Mobility surveys

The Instant Mobility website will integrate the first results of on-going Acceptability surveys managed for 3 cities (Istanbul, Nice and Rome). Future results from new surveys, typically with Toledo city or for professional drivers will also be published, especially to share this feedback during the new stakeholders workshops.

5.   References

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