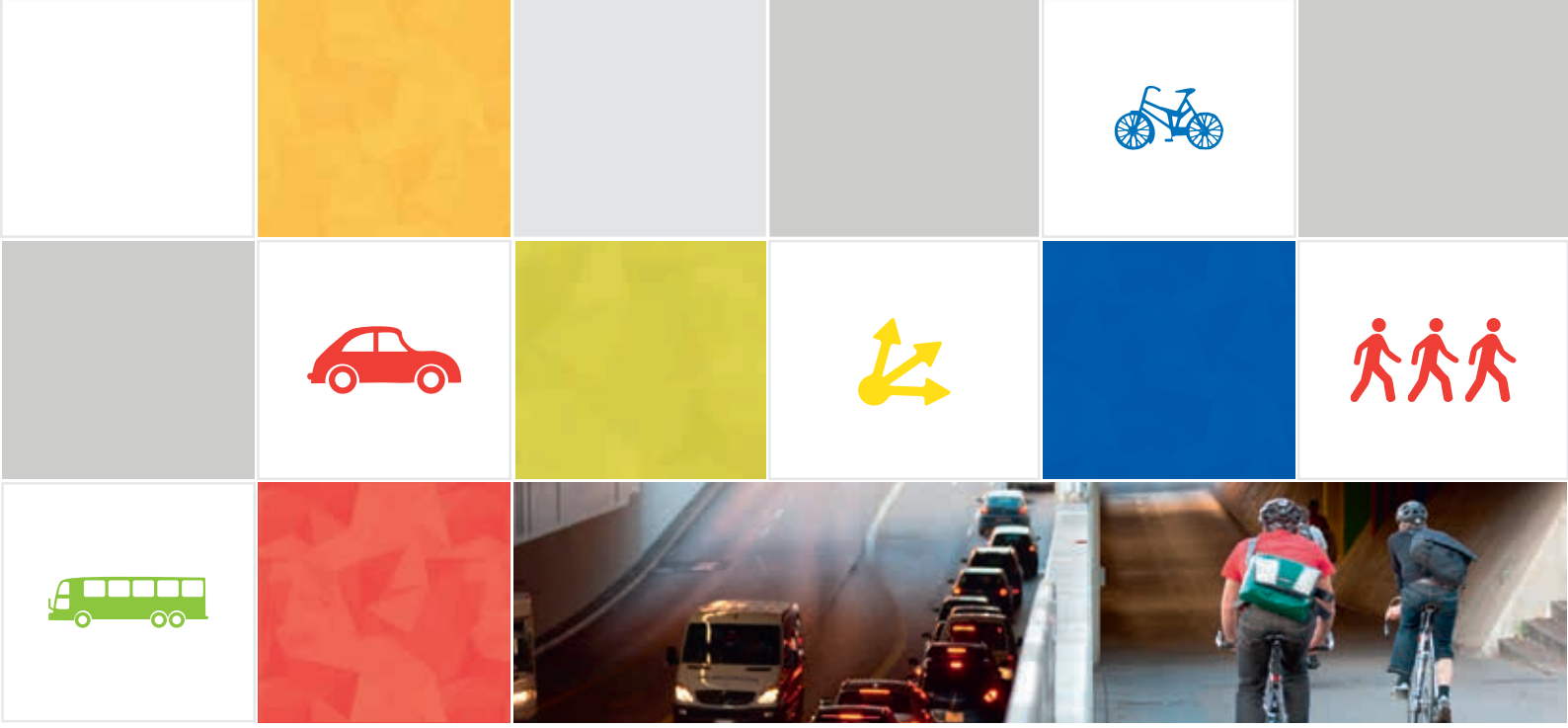

MyWay

EUROPEAN SMART MOBILITY RESOURCE MANAGER

NEWSLETTER

N°5, February 2016

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"This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 609023."

Dear Reader,

welcome to the fifth and final MyWay newsletter. After two and a half years of committing and challenging work, MyWay is now reaching successful completion of planned activities. Started in September 2013, the project progressed through the entire cycle of investigation, development, testing and validation of innovative solutions to make multi-modal journey planning and operation easier, more accessible, personalised and attractive for European citizens. During our research, we have been addressing a number of core challenging issues in this important segment of smart mobility services. We have achieved new and effective solutions that enable leveraging journey planning and transport information services available in our cities and regions and provide enhanced services to combine public and private mobility, delivering highly personalised travel solutions as well as active support prior and during the journey.

Users' engagement and real-life validation have been central activities in MyWay. Users have been actively involved in all key phases of design, testing and validation of MyWay services. Three groups of users took part in three very challenging and diverse Living Labs in Catalonia and Barcelona metropolitan area, in Berlin capital region and in the mid-sized Greek town of Trikala. Their contributions and feedback have been essential to validate and refine MyWays user services and Apps as well as the underlying technologies, leading to products that significantly enhance the multi-modal travel experience in the involved sites and show wide potentials for replication and adoption in other European cities and regions.

MyWay will complete operations at the end of February 2016. The main achievements, the developed innovation and products delivered for market exploitation will be all illustrated in a project final event that will be held in Barcelona on 18th February 2016. The workshop will include a number of invited presentations illustrating the context for development of multi-modal journey planning and information services.

MyWay has reached completion of planned work but the activities in the sites and around the project will continue. We are strongly committed to further expand MyWay and to enable the transfer and take up of its effective solutions for multi-modal travelling in European cities and regions. The project website will remain online and continue to serve as a source of information about any update and development after the project end. Once again, let me thank you, all the readers and all who have followed us during these two and half years, helping us to make MyWay a success story!

Marco Boero
On behalf of MyWay Consortium

INTERVIEW

Marco Boero, Project Coordinator

1. What makes MyWay app different to other multi-modal journey planners?

The market of multi-modal travel planning and information Apps is very dynamic, with new solutions appearing virtually every month. MyWay provides a step forward by offering truly integrated, multi-modal, end-to-end travel solutions that combine at best public and private mobility services according to user's needs and preferences. Using MyWay, travellers can reach their destinations combining in a single, multi-modal, end-to-end trip traditional collective transport, like buses, metro and trains, with complementary mobility schemes such as car, bike or electric scooter sharing, demand-responsive transport, taxis and their own car.

Each travel solution offered by MyWay is strongly personalised and dynamically sensitive to the changing conditions of the urban environment. MyWay users have a personal profile and a sophisticated set of preferences that are considered every time a trip is computed. Every-day trip preferences are further expanded taking into account the real-time conditions of the environment, for instance traffic situations, transport delays and weather conditions, as well as any contingent need the user might have for that particular trip. Users are provided with different solutions whether they are travelling alone or with a group of friends, whether they are in a hurry or can enjoy a leisure trip, they are carrying a load, have temporary mobility limitations and other specific needs. Furthermore, user preferences and trip choices are statistically updated over time by the MyWay Trip Memory service, so that the solutions offered by MyWay are continuously adapted to the expectations of the travellers.

Finally, MyWay is not limited to the pre-trip phase. Thanks to the MyWay Trip Follower service, users receive a very useful, active support during travelling: they are promptly alerted by the App in case of any service disruption or significant deviation from their planned trip and, through re-planning of the current journey, they are able to receive the best options to continue and complete travelling.

2. What has been the most challenging task in the project?

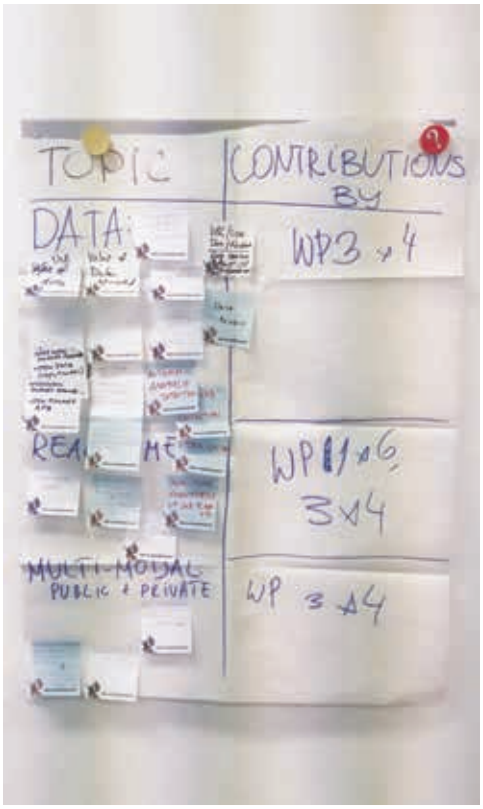
Throughout the two-and-a-half year research we have been addressing a number of technical challenges at the very heart of providing truly integrated, end-to-end, multi-modal travel support services. The federation of different journey planning resources through a 'meta-planning' model, the definition of suitable and workable models for handling user preferences and ensuring highly personalised travel solutions, the provision of high-quality travel planning and information results in a very complex service chain involving several transport stakeholders, are only a few examples.

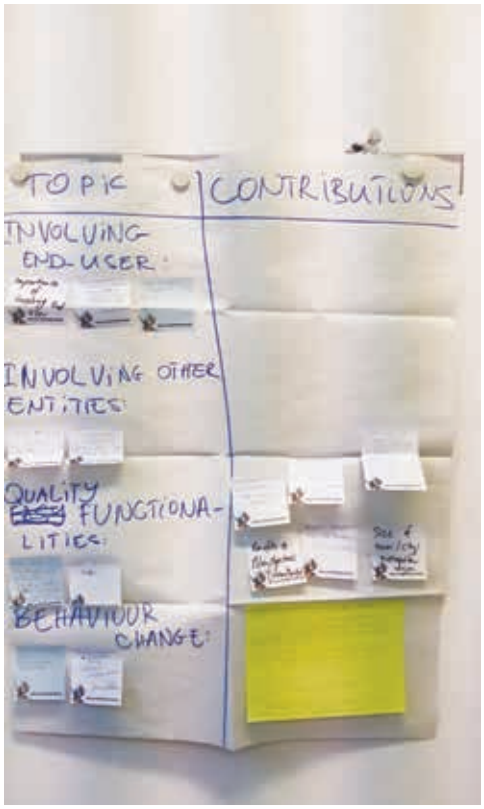
But perhaps users involvement in the validation of MyWay innovative solutions has been the most challenging and exciting task. Users have been always at the centre of MyWay approach since the very initial phases of the project. The set up and operation of three Living Labs in three rather diverse contexts, such as Catalonia and Barcelona metropolitan area, Berlin capital region and a smaller urban environment like Trikala, have been certainly a major challenge. A big challenge but also a rewarding one. Getting real-life users involved in all phases, from service design, scenario analysis and focus group validation through to on-street testing and assessment of MyWay App and services, has been for sure particularly demanding. But it was also very successful, as we believe we have achieved a powerful and solid solution ensuring enhanced, easier and highly personalised access to multi-modal travelling in cities.

3. What remains as a legacy beyond the lifetime of the project?

Since the time the project was conceived and met the interests of the three participating cities and regions, MyWay had the ambition to deliver solutions with high potentials for a successful take-up in the smart mobility market. MyWay implementations in Catalonia/ Barcelona, Berlin and Trikala will remain in use at different conditions and the various stakeholders involved locally are now assessing how MyWay services can be transferred to the local production environments. The experience done and lessons learnt with the local Living Labs have also provided the bases to facilitate the dialogue between the citizens and the transport stakeholders, to engage users in service discussion and co-creation, to stimulate development of transport innovation in a very interesting and creative setting.

All in all, the extensive validation in the three pilot sites enables us to offer a proven solution with very high capability for replication and adoption in other European cities and regions, both large and small ones. A group of MyWay technology and solution providers, including particularly ENIDE, Softeco, Nexusgeografics, CVUT and ICCS, are now entering more detailed exploitation agreements with a view of following up the piloting phase and start the commercialisation of MyWay products for multi-modal smart mobility services.





MyWay Evaluation Workshop in Aberdeen. Brainstorming on Policy Recommendations.

UNIVERSITY OF ABERDEEN CONDUCTING USER EXPERIMENTS

MyWay partner University of Aberdeen has been hard at work coordinating the design and delivery of Stakeholder Interviews, Scripted Journey Plans and Travel Diaries, as well as conducting user experiments on designing effective messages for voluntary travel behaviour change to enable MyWay to continue to develop its user offer beyond the life of the project.

Messages which clearly promote the benefits of the innovative modes integrated into MyWay, such as car-sharing, car-pooling and electric vehicles, have been successfully validated using inter-rater agreement experiments. A correlation between travel attitude segment and preferences for messages that highlight the benefits of certain modes has also been demonstrated. This has allowed to propose an algorithm which selects specific mode-benefit messages for users in particular segments. A paper on this work was well-received in a presentation to the 48th Annual Universities' Transport Studies Group conference, held in Bristol, UK, 6th-8th January 2016.

The project partners hope that this will enable MyWay to develop and improve the feedback aspect of the Voluntary Behaviour Change User Statistics Dashboard in future by giving users suggestions about which modes to use to improve their statistics, according to what they prefer to improve. The partners at the University of Aberdeen will shortly conduct further message experiments that could well confirm whether different segments prefer messages to be expressed in terms of a potential gain from changing or a potential loss from not changing behaviour.

University of Aberdeen has hosted the consortium over 26th-27th January for an Evaluation Workshop to discuss the project's success. Partners have discussed the analysis of all the evaluation evidence, including technical data, mobility data from MyWay, user background questionnaires and Travel Diaries, usability findings (including from the Scripted Journey Plan tests), stakeholder evaluation from Stakeholder Interviews, and user opinion from the Subjective Evaluation Questionnaires. Thus, the evaluation will consider soft and hard factors, taking into account the technical success of the project but also considering usability, user acceptance and impact on travel behaviour. As a result of the Evaluation Workshop the Policy Recommendations that MyWay will produce will also be refined.

MYWAY PROVIDES USERS WITH A MORE REALISTIC PICTURE ABOUT EXISTING MULTIMODALITY

The participation of Going Green in MyWay project has been very interesting and fruitful.

The discussions and brainstorming about multimodality and the new modes of transport has opened our minds and provided us with a more accurate knowledge about this new reality. At this point, we trust that MyWay project is providing the customers with a more realistic estimation for existing multimodality and a number of new combinations never seen before.

On the other hand, the availability of an accurate user profile and his/her preferences about the existing modes of transport is also a very significant point. It may help us to analyse the whole population and be able to offer them a more suitable solution for mobility.

Finally, we consider that the knowledge and experience achieved during this project is very valuable and strategic for the company and it will help us defining our future as providers of solutions for mobility.

Barcelona express bus

CATALONIA: A STEP FORWARD TO BETTER MOBILITY SERVICES THANKS TO MYWAY

The participation of the Government of Catalonia and the Metropolitan Transport Authority of Barcelona within MyWay project has been very fruitful and useful in several ways. On the one hand, the possibility to introduce and test new modes of transport such as the private and public bicycle systems, motorbikes or taxi within the multimodal journey planners has been a very important step forward, from the administration's point of view, to improve the information given to the citizens.

The current multimodal journey planner in Catalonia called 'Mou-te' ('mou-te.gencat.cat' in web version) includes all the information related to Catalonia public transport system as well as its combination with private car, which is a great advantage in those areas where the public transport supply is not attractive enough. MyWay project has opened even more possibilities including more public and private modes and providing the combination of different modes of transport.

Moreover, the possibility to consider users' profile and mobility preferences for the routes' calculation is essential from the public sector perspective. Citizens have different preferences when it comes to their mobility needs (from young to elderly people) and understanding their behaviour and providing them with the most suitable solutions is a key issue. Finally, we consider of great value all the knowledge and experience achieved during the MyWay project and it helps us to define and develop our next steps in strategic projects such as 'T-Mobilitat' and 'Mou-te', putting citizens in the core of information policies. For information, 'T- Mobilitat' is a holistic project which implies a new global concept for Catalonia's ticketing system: a new contactless smartcard, a new fare system and new ways of information and communication.

Inaugural event in DTES La Rochelle

Event at Universitat Autónoma de Barcelona (UAB)

EXECUTION OF PHASE 2– CATALONIAN LIVING LAB

During the last 4 months of 2015, from the beginning of September to the end of December, the Phase 2 of Catalonian Living Lab was executed, in which an ambitious participation target was defined.

To tackle this objective (more than 150 participants recruited), several recruitment actions were planned and executed in coordination by the Catalonian partners. The project took advantage of the wide contact network of the local partners with key local authorities and stakeholders in order to get their support on the trial. Two were the main objectives on the strategy followed: to promote MyWay locally as an innovative mobility solution which covers all the Catalonian region and to get the maximum number of participants spread over the whole region.

Aligned with this strategy, different dissemination and recruitment events were held. The most important one was the launch event, which brought together a total of 85 attendees. It was celebrated on 16th October at the "Department de Territori I Sostenibilitat (DTES)" being hosted by GENCAT during the Sustainable Mobility Week. The conference discussed the following topics: project objectives and ambition, live demonstration of the app and capabilities, and Phase 2 recruitment. Next to the launch event, two more physical events took place. The first one, at the UAB University as part of their demonstrations on sustainable mobility. There, an exhibitor was in charge of providing information mainly focusing on recruiting students. The second event was held at "Barcelona Activa", a Barcelona city innovation and entrepreneurship center, where MyWay and the living lab were presented in front ot more than 40 CEOs of different start-ups located in the center.

To complement these actions, other communication channels were used such as Twitter, publishing daily news, websites of local partners and stakeholders, newspaper articles and a commercial Web Page of MyWay, which was created during Phase 2 to share information on how to download MyWay App or how to participate in the trial. Apart from achieving high recruitment numbers, the other challenge was to keep the participants active during the whole phase. To keep their interest active an incentive strategy was defined though a contest that encouraged the usage of MyWay and the completion of evaluation activities was awarded with several prizes, such as Smartphones, transport tickets and free minutes of electric scooter. Finally, more than 300 user questionnaires were gathered achieving also a good rate of participants that were active during all the phase.

Figure 1: Intermodal Planning

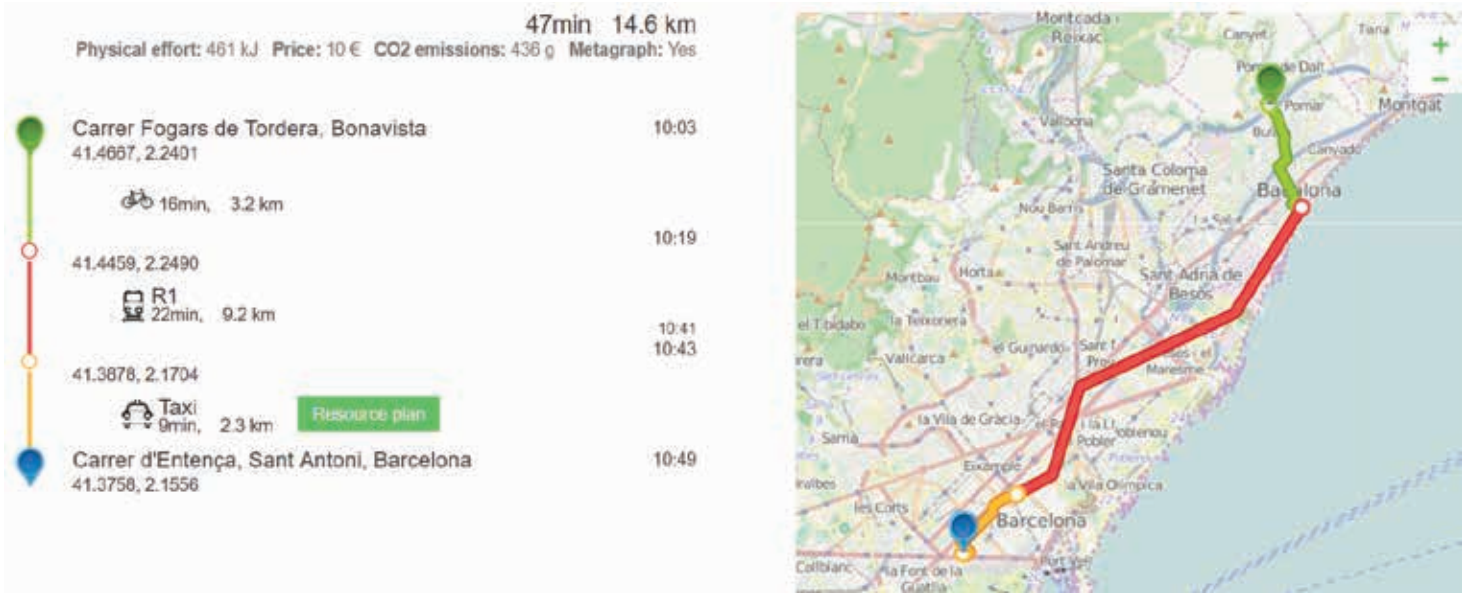
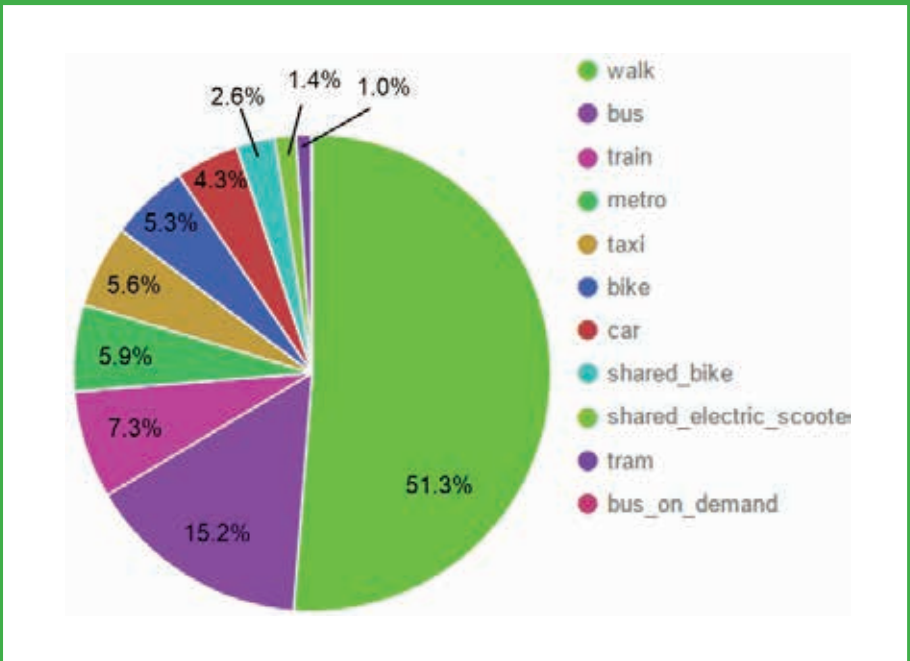


Figure 2: Metaplanning Results

Metaplanning-based technology for intermodal trip planning successfully tested by CVUT

Metaplanning-based technology for intermodal trip planning has been successfully tested in the 12-week main trial phase of MyWay project in Catalonia, Berlin, and Trikala Living Labs. The metaplanner successfully delivered 8614 trip plan responses to the end users while achieving fast response time, in particular in Catalonia (2300 ms on average) and Trikala (166 ms on average).

The greatest advantage of the metaplanner is the ability to deliver intermodal plans, i.e., trip plans that combine (shared) bike, (shared) car, shared electric scooter, and public transport in a meaningful way, solely based on existing single-mode planners, without requiring access to detailed road network, time table and other data. Employing the metaplanning approach, the MyWay trip planner managed to increase the modal share of public transport in the suggested trips. This is because the intermodal planning capability made it possible to wrap core public transport trip legs with private mode based first and/or last mile, thus making public transport usable even if trip origin and/or destination were not within a walking distance of the respective public transport stops. An example of such an intermodal plan is shown on Figure 1 - for the first mile a bike is used to reach a train station which is outside of walking distance.



Graph 1: Distribution of modes

FRAUNHOFER FOKUS PROVIDING RESULTS FROM BIG DATA GENERATED IN THE PROJECT

During the main trial phase of MyWay project, in each of the three Living Labs a different variety of sub-planners were connected to the MyWay meta-planner, thus offering the users added value through a multi-modal combination of different transport modes. Fraunhofer FOKUS has provided leading edge technology for the collection and analysis of big data generated throughout the project.

To provide a descriptive example, Fraunhofer FOKUS analysed the distribution of transport modes in the trip legs of MyWay journey suggestions in the pie chart above. In other words, this diagram depicts how often each transport mode appeared in all trip suggestions. Obviously, half of all trip legs are walking as the user needs to walk to reach the transport stop or flexible mode. Also, when changing modes, the user needs to walk. The second most common mode is bus which exists in every city and covers large and even remote areas.

Moreover, train is also relatively common as it is used to cover larger distances in the Living Labs. Furthermore, the three modes metro, taxi and bike are very common as well, followed by car and shared bike. The least common modes are shared electric scooter and tram as they are only available in Catalonia and Berlin respectively. This analysis is only one example of the endless possibilities to gain valuable insights out of the wealth of big data provided by modern transportation systems.

ICCS FOCUSING ON INTEGRATING PERSONALISED FEATURES IN MYWAY APP

Smartphone devices are one of the current enablers for applications that optimise mobility patterns by taking advantage of the tremendous advance in computing.

Journey planning remains an everyday aspect that could benefit from such smartphone apps. A large amount of applications currently provides trip recommendations, i.e. manners of reaching a user defined destination. However, many aspects have not been fully exploited. Personalisation of journey recommendations, use of multimodal transports are only few examples towards better user experience and sustainability in the transport of persons. The introduction of such aspects to Smartphone applications is a task, requiring intuitive design and user interaction flow in order to make them acceptable and usable from commuters.

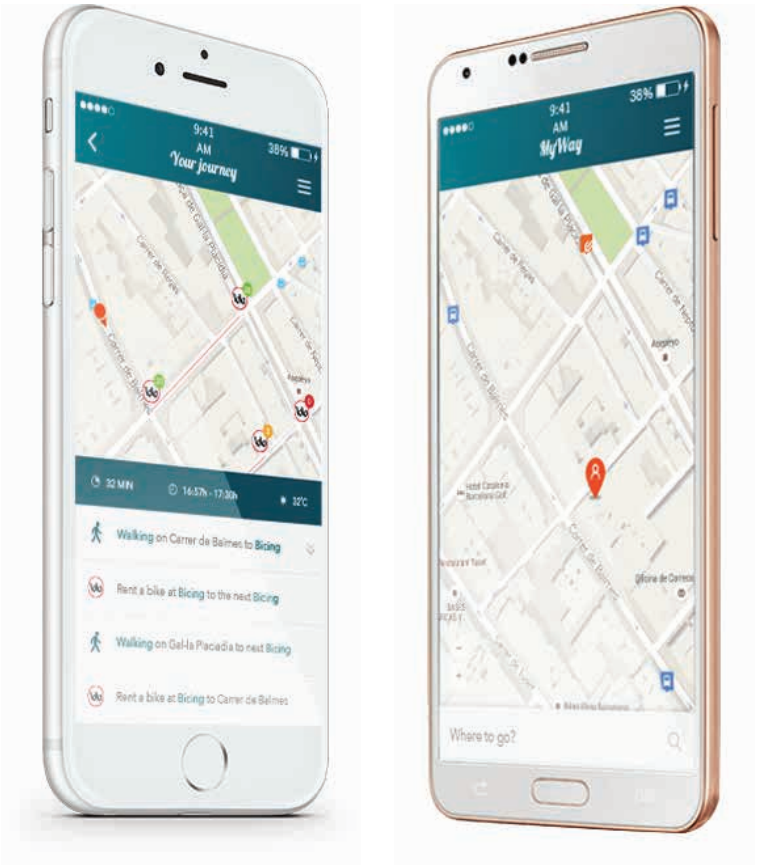
During MyWay, ICCS has focused on integrating the aforementioned features in MyWay Android App. This effort resulted in hundreds of downloads and thousands of requests for transport data at the fingertips of commuters. All efforts are now aligned towards the evaluation of data resulting from the trials in order to reveal opportunities towards solutions for a more efficient and sustainable transport system.

UPCOMING EXTERNAL EVENTS

MYWAY FINAL WORKSHOP:
Barcelona
18 February, 2016

Join us!

MyWay App: app.myway-project.eu



MYWAY PARTNERS

For more information about MyWay, please contact www.myway-project.eu

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