



Guide2Wear in a nutshell

Guide2Wear analyses wearable information & communication devices and their potential benefits for the future traveller.

The main goals are:

- to implement a prototype of a public transportation (PT) navigation system to showcase applicable mobile services for future travellers. A smart watch combined with a smart phone was chosen to be the prototype with a door-2-door-navigation platform including the ticketing function and voice control/output.
- to analyse the use of wearable devices (WD) for an improved inter-modality and the use of environmentally friendly transport modes by focusing on information provision, payment support and passenger guidance
- to identify different user groups and their specific needs: senior citizens, mobility impaired persons etc.
- to characterise mobility types, behaviour & future trends

Partners



Supported by



Funding



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The Guide2Wear-Project Team



One of the Stakeholder Workshops held in Berlin



Smart watches & smart phones providing different functions



Project meetings

Kick-off meeting in Dresden, September 26th, 2014

- Participants: all project partners and representatives of two associated partners (Wiener Linien, DB Vertrieb GmbH)
- Topics: requirements, work to be done, tools & relevant dates

Project meeting in Stockholm, November 25th-26th, 2014

- Presentation of results in WP2 & WP3 and of future work
- Evaluation & interpretation of the results of the online survey
- Discussion about the computer assisted web interview (CAWI)

Project meeting in Leuven, March 12th-13th, 2015

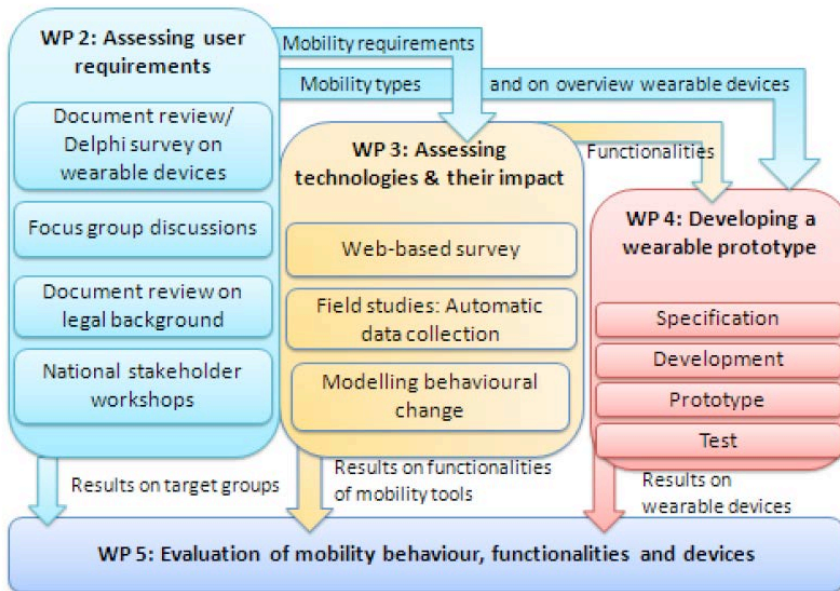
- Discussion of project quality management, evaluation & decision on prototype development
- Presentations of literature review and Delphi survey as well as evaluation of user needs and expert opinions on wearable devices: stakeholder workshop (Austria, Flanders, Germany, Sweden) and focus group interviews (Vienna, Donostia, Linköping and Leuven)

Project meeting in Donostia, September 3rd and 4th, 2015

- Presentation of results of field tests (including online questionnaire) in Austria & Germany (Tracking of people using new media, i.e. mobility cards in order to see if provision of information and tools leads to change to environmental friendly modes)
- Presentations of stakeholder workshop and focus group interviews, literature review and Delphi survey
- Presentation of evaluation tests of WP5: test persons with smart watch connected to smart phone with Guide2Wear prototype running on it had to fulfil predefined travel tasks
- Discussion on second demonstration area (Vienna, San Sebastian), final project meeting (Dresden, February/March 2016) and final conference in June 2016 (Vienna).



- Guide2Wear started with providing the base for the prototype development (WP2 and WP3). The following graph shows the structured approach to the prototype development:



- In WP4 Guide2Wear evaluated the available technologies and user requests. Based on the results, it was decided to provide an application-prototype on base of smart watches with linked smart phones (SMART-WAY APP). The prototype supplied a public transport (PT)-navigation function enriched with additives, for example a showcase for ticketing and improved information for pedestrians.
- Deliverable 4.1 described amongst others watches that were selected to implement the app-prototype and the control elements for smart watches with relation to the specific needs of the prototype.
- Besides, the available information for and from the navigation process was described and a first suggestion for distribution of information and activities between phone and watch was provided.
- Based on these examinations and decisions the software architecture that was applied, the most important components, interactions and interfaces of the prototype were described.

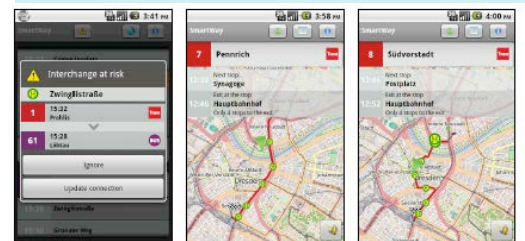
The Prototype: SMART-WAY Application



The application used was based on the SMART-WAY-app, aiming to support the PT user. Besides other parameters, the user can select a start and stop point, an address, the starting or arrival time and he can click on a map or the current position. A list of possible connections is provided to the user to allow the selection of the most appropriate trip.



The SMART-WAY-app also supports the user during the trip. It provides information about interchanges.



As soon as the SMART-WAY app identifies an interchange risk, or if the users don't follow the planned trip route, they will be informed. It offers to plan a new trip and – if selected – provides it to the users.





- Information is an important aspect for mobility decisions, dealing as driver or barrier for specific modes. Besides content, the presentation of the information is particularly significant for the acceptance. New media, such as wearable devices, offer new ways of presenting information in a convenient manner.
- The first steps of Guide2Wear were mainly related to providing an overview on the technological state of the art (WP3) as well as on user requirements and the legal background (WP2). The combination of all findings led to the decisions concerning hardware selection, software functions and design, manifested in the prototype description (WP4).
- The second phase (WP4, WP5 & WP6) is used for the development, test and demonstration of the prototype as well as for gaining a deeper view into the influence of new technology on mobility behaviour. One of the main tasks is the evaluation of the project results and impact.

Project results

- Various wearable devices, such as smart glasses, bracelets, rings, clothes and watches were evaluated and information about their relevance was collected (D 2.1 & 3.1.). Beside watches, especially glasses were expected to be an attractive tool for information in the sphere of PT. On the one hand, they allow to fade in the information into the visual field and on the other hand, the integrated camera can be used for localisation as well as for supporting tasks (e.g. handling of ticketing machines).
- However, the attitude towards smart glasses was not entirely positive since participants believed that it could distract the traveller (prevent the traveller from seeing what is happening around him).
- The results of the evaluation, especially the analysis of expert and user prospects indicated that smart watches connected with smart phones have a much higher potential (D3.2). Therefore, decision to support smart watches was taken.
- The evaluation of available smart watches came to the result that valuable functions mainly depend on a combination of smart phone and smart watch. A deeper discussion of these topics and a concept for the prototype development will be available in D4.1.

Prototype testing

- The prototype will be evaluated based on the test for functionality in WP4.
- Empirical data and other material collected previously will be synthesized into comprehensive and empirically well-founded insights on user groups, usage patterns and user requirements for future and current technologies for seamless travelling.
- Finally, recommendations are developed for policies supporting advancements of wearable devices and for future research.

Outlook

- A final project meeting is scheduled to take place in Dresden in February/March 2016 as well as a public conference/workshop that addresses relevant experts and stakeholders on the 13th of June 2016 in Vienna. At both events, project results will be presented as well as the prototype and its functions.

For more information please visit our website!

www.guide2wear.eu

