Holistic information + Smartphone = more sustainable travel practices?
The MyWay approach

Kate Pangbourne\textsuperscript{1}, David Quesada\textsuperscript{2}, José Fernández\textsuperscript{2}, Michal Jakob\textsuperscript{3}, Judith Masthoff\textsuperscript{1}, Stefano Persi\textsuperscript{2} and Marco Boero\textsuperscript{4}

\textsuperscript{1}: Department of Computing Science, University of Aberdeen, Scotland, UK
\textsuperscript{2}: ENIDE, Barcelona, Spain
\textsuperscript{3}: Ceske Vysoke Uceni Technicke v Praze, Prague, Czech Republic
\textsuperscript{4}: Softeco Sismat Srl, Genoa, Italy
• Introduction to MyWay
• Technological Approach
• Methodology
• Results
• Next Steps
• Impact
• Conclusions
Introduction to MyWay

• The vision is to contribute to reducing congestion and GHG emissions and improve local air quality
  • Improving efficiency of road journeys
    • Routing (e.g. avoiding congestion or disruption)
    • Less time cruising for parking
  • Making sustainable travel choices easier
    • Better interchange information and direction
    • Encouraging cycling and walking as integral part of multi-modal journeys
    • Encouraging park and ride
Technological Approach

- MyWay ‘meta-planning’ approach
  - Enables a better balance between public & private modes
  - Stimulates service cooperation and market development
  - Enhances personalisation
  - Fosters transformative technologies in smart mobility
- The MyWay platform is making significant technical advances in three main areas
  - Expressive representation framework for flexible mobility services
  - Mobility resource discovery and allocation algorithms
  - APIs and protocols for integrating resource allocation into journey planning
Conceptual Design Principles

- Open flexible design for integration with other services and systems
- A MyWay Open API interconnects all main parts and 3rd party systems
- Scalable application with flexible deployment model
- Loose-coupling of components to allow extension, adaptation and maintenance
- Meta-planner concept integrates and combines the detailed routes from sub-planners
- Collaborative design
- Compliance with relevant EU standards and existing standards in software engineering and ITS
• Three Living Labs for live testing and evaluation
• Three trial phases, with pilot and real users
• Used vivid usage scenarios presented as narratives to focus groups to validate proposed functionalities and gather/prioritise user requirements
• Pre-testing software interface through Expert Usability Evaluation using Neilson’s heuristics
• Subjective and objective validation of concept, technical functioning, usability and user acceptance
• Monitoring impact on mobility behaviour
| Living Labs |

<table>
<thead>
<tr>
<th>CATALONIA population</th>
<th>BERLIN population</th>
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<tbody>
<tr>
<td>7.75 MILLION</td>
<td>3.5 MILLION</td>
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<table>
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<th>TRIKALA population</th>
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<td>76.000</td>
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16 focus groups, > 140 participants across the three Living Labs

Target groups: students, commuters, and retired over 60s; convenience sample recruited via web advertisement and e-mail

14 scenarios, locally customised

Across all focus groups, it was clear multi-modal journeys need more support for key stress points:
- finding a parking place at an interchange
- reducing waiting times and providing ‘real time’ waiting times
- having reliable information during disruption.

Other popular features include:
- Map-based interfaces (some value including points of interest)
- Including weather information and integrating more modes
- Cost/prices and ability to book (but trust in paying via smartphone split participants)
Focus Group Results (2)

- Segmentation helped us to understand differences between the individual focus groups, particularly in relation to the relevance of different MyWay features to different types of user.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Barcelona</th>
<th>Berlin</th>
<th>Trikala</th>
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<tbody>
<tr>
<td>Devoted Driver</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Image Improver</td>
<td>4</td>
<td>1</td>
<td>18</td>
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<tr>
<td>Malcontented Motorist</td>
<td>16</td>
<td>3</td>
<td>9</td>
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<tr>
<td>Active Aspirer</td>
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<td>Practical Traveller</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Car Contemplator</td>
<td>3</td>
<td>1</td>
<td>6</td>
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<tr>
<td>PT Dependent</td>
<td>8</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Car-free Chooser</td>
<td>4</td>
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The Pre-Phase Living Lab is a pilot trial of the basic journey planning functionality with 36 pilot users and 13 real users.
### Next Steps: Phase One Trial

| City Information | - Explore the map showing different city information such as points of interest, public transport stops, parking and bicycle sharing  
|                  | - Search for an address with the autocomplete control. |
| Journey Planning | - Select an address as origin or destination using either autocomplete control or clicking on the map.  
|                  | - Quick journey planning for immediate trips (only origin and destination).  
|                  | - Custom journey planning allows:  
|                  |   - Selecting a departure time;  
|                  |   - Viewing recommended routes classified by: fastest, most ecological and most comfortable; and  
|                  |   - Viewing the full list of calculated routes.  
|                  | - Explore the selected plans graphically with the itinerary, journey segments and modes presented the map.  
|                  | - Detailed information for the steps of the selected route showing: departure time, distance, time, travel mode, origin and destination. |
| User Profiling   | - User registration, login and user profile.  
|                  | - Custom journey plans taking into account trip history and previous choices. |
| Trip Follower    | - The user can indicate when to start and stop his/her trips being monitoring by the system in order to improve personalized results. |
| Context Awareness| - Real time information about traffic and weather (not at all Living Labs). |
| User Feedback    | - Users can report problems or issues, send feedback about MyWay and about the trip plans. |

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Next Steps: Phase Two Trial

• Four month trial from September 2015
• Full user evaluation
• Functionality validation using scripted journeys based on subset of scenarios
• Analysis of KPIs, including impact on mobility behaviour
• Broadest functionality, including support for voluntary behaviour change
• Integration of the more innovative modes (e.g. Motit in Catalonia)
• Between 200-600 trial users across all three Living Labs
Impact

MyWay is a smart application aimed at consumers of mobility services who want flexibility and convenience

• It provides users with a more integrated overview of locally available transport modes, giving users the tools to choose innovative modes
• It shows users the best plans by personalised criteria to support sustainable change
• It supports seamliness by reducing user uncertainty for the first and last mile, interchanges, disruption and parking
• It collects anonymisable data on actual behaviour and perceptions of service quality which will benefit public and private stakeholders

The meta-planner approach use of personalisation also provides a platform for targeted travel behaviour change campaigns
• This paper describes the on-going MyWay project, funded under EU FP7
• The methodology combines user research, collaborative design and expert usability evaluation to support a Living Lab approach to field testing
• MyWay’s basic functionality has undergone a pilot trial
• The functionalities included in the Phase One trial are described
• The planned functionalities for the final Phase Two trial are outlined
• MyWay has potential to have real impact in the field of smart mobility by impacting on consumer choice and gently influencing behaviour
• MyWay addresses significant gaps in the provision of holistic information to users and in generating useful data for public stakeholders and transport providers.
THANK YOU!

k.pangbourne@abdn.ac.uk

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Further Information:
Project coordinator: Marco Boero, SOFTECO SISMAT SRL, Via de Marini, 1-WTC Tower, 16149 Genoa. E-mail: Marco.boero@softech.it