2nd Advanced City Cars showcase execution
Orta San Giulio

<table>
<thead>
<tr>
<th>Deliverable no.</th>
<th>D 1.5.1.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissemination level</td>
<td>Public</td>
</tr>
<tr>
<td>Work Package</td>
<td>1.5.1</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Gianfranco Burzio (CRF)</td>
</tr>
<tr>
<td>Co-author(s)</td>
<td>Daniele Stam (Un. Roma La Sapienza)</td>
</tr>
<tr>
<td>Status (F: final, D: draft)</td>
<td>F</td>
</tr>
<tr>
<td>File Name</td>
<td>D1.5.1.7 _submit_v2</td>
</tr>
<tr>
<td>Project Start Date and Duration</td>
<td>01 May 2006 - 31 December 2011</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

1. Preface .................................................. 3
2. Description ............................................. 3
3. Orta San Giulio - Ex-post ......................... 4
4. Conclusions ............................................. 8
1. Preface

This document shows the results of the analysis of questionnaires collected during the second Advanced City Car showcase, that CityMobil project has organised in May 2010 in Orta San Giulio (Italy).

2. Description

The Orta San Giulio (Italy) showcase public operation started on May 21st 2010 and ended on May 28th 2010. The site and vehicle setup for the showcase were made in different days in the previous weeks: April 8th, April 30th, May 20th. Two Advanced City Cars were showcased. Figure 1 reports the site in which the showcase was done, named Piazza Motta.

Other events organized in parallel included a press conference on May 21st, and a conference on May 21st. The programme of this conference included a visit to the showcase.

In order to explain to the public the goals and benefits of the use of Advanced City Cars and cyercars in urban transport, the showcase in Orta San Giulio featured an exhibit with posters, videos, a static concept of a future electric car from FIAT/Piedmont Region (Phylla).

A video explaining the Automatic Car Sharing with Advanced City Cars-Dual Mode vehicles concept (produced by INRIA in cooperation with CRF) was showed in the old city tower, just over the poster/concept exhibition.

An evaluation survey was conducted throughout the showcase. 155 answers have been collected. This report shows the results on their analysis.

![Figure 1 Showcase site: Piazza Motta in Orta San Giulio](image)
3. Orta San Giulio - Ex-post

3.1 Data collection methods
In the Orta San Giulio showcase five of the Acceptance indicators (usefulness, ease of use, user satisfaction for the on demand service, integration with other systems, user willingness to pay) and four of the Quality of Service indicators (perceived comfort, perceived level of privacy, perception of safety, fear of attack) were measured in the ex-post survey through specific questions. One indicator belonging to the Transport Patterns, system modal share, was also measured through the survey.

For all of them the ex-post evaluation was obtained through the questionnaire answers. 155 people answered the questionnaire after that they used the new system during the showcase.

The interviewed people were submitted to a set of 12 questions, subdivided in the following categories:

- The first 2 questions were related to the evaluation of the system in terms of acceptance and quality of service, and allowed to calculate the 9 acceptance and quality of service indicators. For each indicator the performance was measured by assigning a value from 1 to 5, in order to quantify the level of user satisfaction (where 1 means completely dissatisfied, 2 somewhat dissatisfied, 3 fairly satisfied, 4 very satisfied, and 5 completely satisfied), with the exception of the user willingness to pay, which is quantified through money rankings.

- The next 4 questions were about the transport habits and the reaction to the introduction of a system based on the Dual-Mode Vehicles, and allowed to calculate the system modal share indicator, by calculating the percentage of people willing to use the Dual-Mode Vehicles if they were available;

- One further question was free and concerning suggestions to facilitate the use of the Dual-Mode Vehicles;

- The last 5 questions were related to the users' main characteristics (age, gender, education, occupation, income).

10 indicators were therefore totally quantified in terms of ex-post evaluation, all belonging to the reference set provided in the evaluation framework of the CityMobil project.

3.2 Indicator measurements and results
The ex-post evaluations of the 10 indicators measured through the Orta questionnaire are reported in Table 1.

For eight of the indicators (usefulness, ease of use, user satisfaction for the on demand system, integration with other systems, perceived comfort, perceived level of privacy, perception of safety, fear of attack) the evaluation was obtained as the average value of the user satisfaction performances, in a ranking from 1 to 5, as explained in the previous section 3.1. As reported in Table 1, both the four acceptance and the four quality of service indicators showed similar values.

For all of them the values were reported including the second decimal place, thus allowing to show the best performing ones.

Concerning the acceptance indicators, three of them (usefulness, ease of use and integration with other systems) were evaluated about 3.7, whereas integration with other systems value was about 3.6.
Table 1 Indicator evaluations in user acceptance survey of the Orta showcase

<table>
<thead>
<tr>
<th>Evaluation Category</th>
<th>Impact</th>
<th>Indicator</th>
<th>Ex-post evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance</td>
<td>User acceptance</td>
<td>Usefulness</td>
<td>3.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ease of use</td>
<td>3.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>User satisfaction for the on demand service</td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integration with other systems</td>
<td>3.73</td>
</tr>
<tr>
<td></td>
<td>Willingness to pay</td>
<td>User willingness</td>
<td>2.20€</td>
</tr>
<tr>
<td>Quality of service</td>
<td>Comfort</td>
<td>Perceived comfort</td>
<td>3.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived level of privacy</td>
<td>3.55</td>
</tr>
<tr>
<td></td>
<td>Perception of safety and security</td>
<td>Perception of safety</td>
<td>3.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fear of attack</td>
<td>3.57</td>
</tr>
<tr>
<td>Transport patterns</td>
<td>Modal change</td>
<td>System modal share</td>
<td>82%*</td>
</tr>
</tbody>
</table>

* result obtained soon after people of the interviewed survey tested the dual-mode vehicles.

Figure 2 shows their values. Usefulness and integration with other systems are the best indicators, with 3.73 as performance rate.
Ease of use is little less performing, with a rate of 3.70.
User satisfaction for the on demand service is the less rated indicator, with 3.57 as performance rate. It has however a 0.16 gap from the two best rated indicators, meaning that the users were well-disposed to accept the new system in all of its characteristics, considering it as useful, easy to use and well integrated with the other systems and being at the same time satisfied by the on demand service.

With regards to the quality of service indicators, all of them were rated about 3.6, as reported in Figure 3. Perception of safety was the best performing, with 3.62. The system was also perceived as comfortable, with the rate of 3.60. The last two rated indicators, fear of attack and perceived level of privacy, was rated 3.57 and 3.55 respectively.

The quality of service was therefore evaluated as homogeneously satisfactory, with the average rate of 3.6 for the four indicators, and 0.07 as the difference between the evaluations of the best rated indicator and of the less rated one.
The fifth acceptance indicator, user willingness to pay, was evaluated by quantifying the money users would be willing to pay to use the service. Seven different answers were proposed in the questionnaire to quantify such money: 1) Nothing, 2) Less than 0.5€, 3) Between 0.5€ and 1€, 4) Between 1€ and 2€, 5) Between 2€ and 3€, 6) Between 3€ and 4€, 7) More than 4€.

Figure 4 reports the distribution of the answers within the survey of interviewed people. More than 80% of the interviewed people were willing to pay more than 1€ to use the service: 32% would pay between 1€ and 2€, 24% between 2€ and 3€, 14% between 3€ and 4€, and 12% more than 4€.

People willing to pay less than 1€ was subdivided in: 10% between 0.5€ and 1€, 4% less than 0.5€ and 4% not willing to pay to use the system.

Therefore interviewed people were generally willing to pay to use the service.

To quantify the average value they would pay, the weighted average of the answers were done. For each one of the possible answers, the intermediate value of the range considered was assumed as the value to be paid (for example 1.5€ for the answer "Between 1€ and 2€", 3.5€ for the answer "Between 3€ and 4€"), with exceptions of the answers "Nothing", where the value 0 was considered, and more than 4€, where the value considered was 4.5€.

With such assumptions, the average value people would pay to use the service is 2.20€, as reported in Table 1.
The transport patterns indicator evaluated, system modal share, was calculated directly from the fourth and the fifth question of the questionnaire, regarding the mode of transport used at the moment by the interviewed people and the possibility to use the Dual-Mode Vehicle if they were available respectively.

The value obtained through the survey analysis was 82%, meaning that eight out of ten people would use a Dual-Mode Vehicle to his/her travels if they were available in Orta. This outstanding value is due to the fact that people were interviewed soon after they had "touched" and "tasted" the new concept of vehicles presented in the showcase. They showed therefore to be completely well-disposed to accept the use of such new vehicles; even if the value obtained is larger than the real feeling of people, it is however a valid index of the good feelings of Orta people for the use of dual-mode vehicles instead of the conventional vehicles, thus providing a very good result for the future developments.

4. Conclusions

The Orta San Giulio showcase provided therefore good results in terms of acceptance and quality of service perceived by people who tested the vehicles.

The advanced city car concept was well accepted, making it to be perceived as useful and well integrated with other conventional systems, other than easy to use. The vehicles were also perceived as safe, comfortable and people would feel secure and with a sufficient level of privacy when using them.

Furthermore the innovative functions provided generated a quite enthusiastic reaction of the potential users, who declared to be willing to pay to use the service and who would use such vehicles instead of the conventional private cars. Even if the high value of 82% of the sample willing to use such vehicles seems to be due to the high quality of the vehicles tested, it is however an important index of the good user feeling about such innovative concept of transport.