Car-pooling in the Port of Valencia

MED-UTC TechCamp
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VALENCIA PORT:

- 4.83 millions TEU

Ferry passengers: 616,960
Cruise passengers: 412,328

Spain and Med Mobility Plan 2012

Workers at the port premises: 6,500
Largest city in Spain

792,086 inhabitants

SUMP 2013

- 145 km of bike lanes
- 275 stations and 2,750 public bikes
- Bicycle use 15%
- Speed reduction zone
- Pedestrian zones
Testing actions in Valencia in the framework of SUMPORT

- Update of the existing Sustainable Mobility Plan of the Port of Valencia, and integration with the city SUMP (Act. 3.4)
- Implementation of an e-bike sharing system (Act. 3.7)
- Update of the existing car-pooling system for the port workers (Act 3.8)
The car-pooling pilot

Valenciaport Foundation will test a car pooling system in the port, allowing workers of the port to share their own cars, reducing the number of vehicles with low occupancy (only one person onboard).

This system is particularly useful for destinations with a high number of daily commuters, such as the journey home-workplace, in this case the Port.

6,500 workers at the Port premises.
Objectives and anticipated contribution to sustainability targets

- Reduction of emissions and noise disturbance produced by commuting from/to the port area
- Promotion of the rational use of the private car among the port workers
- Improvement of public space in the port area
- Savings in fuel costs
Methodology - Approach

- Review/analysis of the existing web application
- Selection of test users to assess the existing tool and its functionalities
- Assessment of existing tool, by testing new profile creation, routes, requests for itineraries, etc.
- Meetings with test users to assess problems, deficiencies, usability and potential improvements
- Definition of technical requirements for improvement and for development of smartphone application, through benchmarking existing mobile apps and gap analysis for meeting the users aspirations
Evaluation of the pilot through Key-Performance Indicators

- 12 KPIs selected:
  - No. of Avoided cars
  - No. of Avoided Km
  - CO$_2$ Avoided emission
  - No. of Users
  - No. of Registered users
  - Level of satisfaction (e.g. convenience of modal shift, better quality of life)
  - Level of awareness (e.g. perception of available facilities for greener mobility)
  - No. of Trips shared/ avoided
  - Km of Trip length
  - No. of Key-actors and stakeholders identified and mapped
  - Stakeholder group involved in participatory activities
  - Report on analysis of problems and opportunities

Environmental and societal benefits

Promotion of shared mobility

Pilot action maturity and acceptance
Preliminary Impact Assessment

- Assuming: 3,000 vehicles owned by workers at the port, App utilization rate 2%, 2 passengers/car as new average occupancy and 20km average trip length:

<table>
<thead>
<tr>
<th>Number of vehicles avoided due to the measure implementation</th>
<th>30</th>
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<tbody>
<tr>
<td>Number of gasoline vehicles avoided</td>
<td>12,529,128</td>
</tr>
<tr>
<td>Number of diesel vehicles avoided</td>
<td>17,470,873</td>
</tr>
<tr>
<td>Consumption reduction (gasoline)</td>
<td>44,352,81 kWh</td>
</tr>
<tr>
<td>Consumption reduction (diesel)</td>
<td>50,228,06 kWh</td>
</tr>
<tr>
<td>Total consumption reduction</td>
<td>94,580,87 kWh</td>
</tr>
<tr>
<td><strong>Total primary energy reduction</strong></td>
<td>105,930,57 kWh</td>
</tr>
<tr>
<td>Annual CO2 emissions avoided (gasoline)</td>
<td>10,98 tCO2</td>
</tr>
<tr>
<td>Annual CO2 emissions avoided (diesel)</td>
<td>13,22 tCO2</td>
</tr>
<tr>
<td><strong>Total CO2 emission savings</strong></td>
<td>24,20 tCO2</td>
</tr>
<tr>
<td>Economic value of the emissions avoided</td>
<td>11,527,51 €</td>
</tr>
</tbody>
</table>

4,870,76 L 5,081,67 L
1st Step: Carpooling app/website review

2nd Step: Selection of “test users”

3rd Step: Testing phase with “test users”

4th Step: Identification of potential improvements

5th Step: Definition of the specifications for the App’s fine-tuning

6th Step: Communication plan and dissemination among the Port Cluster
Thank you for your kind attention
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