Sustainable Urban Mobility Plans: the case of Valletta, Malta

Dr Maria Attard
Senior Lecturer in Geography and Director of the Institute for Sustainable Development, University of Malta

Workshop on the Design and Implementation of Sustainable Urban Mobility Plans
Fiera del Levante, Bari 13th April 2012
The islands of Malta
Relevant socio-economic and transport indicators for Malta. *(Source: National Statistics Office, 2009)*.

<table>
<thead>
<tr>
<th>Description of Indicator</th>
<th>1997</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total land area (incl. Gozo and Comino)</td>
<td>316 km²</td>
<td>316 km²</td>
</tr>
<tr>
<td>Percentage of built-up land</td>
<td>16%</td>
<td>27%</td>
</tr>
<tr>
<td>Population</td>
<td>384,176</td>
<td>410,290</td>
</tr>
<tr>
<td>Population density per km² of built up area</td>
<td>7607</td>
<td>4809</td>
</tr>
<tr>
<td>Licensed vehicles on the road</td>
<td>245,044</td>
<td>271,338</td>
</tr>
<tr>
<td>Percentage private vehicles</td>
<td>75%</td>
<td>76%</td>
</tr>
<tr>
<td>Private passenger vehicles per 1000 inhabitants</td>
<td>478</td>
<td>503</td>
</tr>
<tr>
<td>Estimated annual vehicle km for private vehicles</td>
<td>9000 km</td>
<td>9840 km</td>
</tr>
<tr>
<td>Share of car as percentage of all trips</td>
<td>71%</td>
<td>71%</td>
</tr>
<tr>
<td>Length of road network</td>
<td>2227 km</td>
<td>2254 km</td>
</tr>
<tr>
<td>Estimated number of vehicles per km of road</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>Public transport modes</td>
<td>Bus, ferry &amp; taxi</td>
<td>Bus, ferry &amp; taxi</td>
</tr>
<tr>
<td>Public transport patronage in million passengers</td>
<td>34</td>
<td>32</td>
</tr>
</tbody>
</table>

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*a* Data estimated for the year 2000 and 2005, respectively.

*b* Based on 1998 National Household Travel Survey.

*c* Based on ticket sales for the island of Malta on the scheduled bus service.
Modal Choice

Modal Choice 1989-2010

- Car Driver
- Car Passenger
- Bus
- Minibus/Coach
- Motorbike
- On Foot
- Other

Percentage Distribution

- 1989
- 1998
- 2010
But before we continue....
Valletta

- Walled City built by the Knights in 1500s
- UNESCO World Heritage Site
- Daytime population 50,000 (night time population 7,000)
- Area of $0.8\text{km}^2$
- Commercial and administrative centre
Valletta

- Together with Floriana they are built on a peninsula
- Access is limited with daily traffic of 35,000 vehicles accessing the peninsula (14,350 vehicles entering Valletta)
- In 60s Police licence was introduced to be later called V-Licence
Space utilization within the City

- 2,985 on-street parking spaces
- Patterns of (parking) usage in the City show full capacity is reached by 0800am
- Resultant effects:
  - congestion & pollution
  - impact on historical buildings
  - legalisation of parking on pavements
Valletta and Floriana
A Strategy to increase accessibility

- Cabinet Committee on National Projects
  - 4 Cabinet Ministers and Parliamentary Secretary
- Integration of a number of projects
- Commissioning of a report by a number of experts
- Strategy document (2005) including all stakeholder views
Controlled Vehicular Access System

- Camera technology with data communication infrastructure
- ANPR
- Billing and payment gateway
- Bill notification system
- Enforcement
- Exemptions as set by the Authority
- Verification of vehicle details is via a direct link to the national vehicle database
Charging Zone
Controlled Vehicular Access System

• Exemptions are on the basis of registration

• System however has an automatic identifier to exempt:
  – Emergency and police vehicles
  – Public transport vehicles
  – Electric vehicles and motorcycles

• Residents are automatically exempted based on the number of sleeping nights within the zone

• On average the exempted vehicles rose to approx. 7 per cent of the total vehicle fleet.
Total Cars Parked Every Hour

Note: September 2007 - the survey was carried out till noon only.
Local Context

• Specific local circumstances affecting successful implementation
• Learning and negotiating process
• Timing (of the problem and the various projects)
• Goals worth pursuing (with public support)
• Revenue hypothecation (lack of it)
Number of cars entering Valletta May 07 to Dec 11

- **Number of vehicles entering the controlled zone**
- **Number of vehicles entering the charging zone**

**Legend:**
- Blue line: Number of vehicles entering the controlled zone
- Red line: Number of vehicles entering the charging zone

**Timeline:**
- May 07
- Aug 07
- Nov 07
- Feb 08
- May 08
- Aug 08
- Nov 08
- Feb 09
- May 09
- Aug 09
- Nov 09
- Feb 10
- May 10
- Aug 10
- Nov 10
- Feb 11
- May 11
- Aug 11
- Nov 11

**Data Range:**
- 2007 to 2011

**Number of vehicles:**
- 0
- 10,000
- 20,000
- 30,000
- 40,000
- 50,000
- 60,000
- 70,000
- 80,000
- 90,000
## Comparative analysis of Valletta, London, Durham, Edinburgh and Stockholm. (Compiled by authors)

<table>
<thead>
<tr>
<th></th>
<th>Valletta</th>
<th>London</th>
<th>Durham</th>
<th>Edinburgh</th>
<th>Stockholm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City size (population)</strong></td>
<td>7000</td>
<td>7.5 million</td>
<td>60,000</td>
<td>470,000</td>
<td>1.5 million</td>
</tr>
<tr>
<td><strong>Issues/Motivations</strong></td>
<td>Congestion and access</td>
<td>Congestion</td>
<td>Vehicle-pedestrian conflicts</td>
<td>Congestion</td>
<td>Congestion</td>
</tr>
<tr>
<td><strong>Type of Scheme</strong></td>
<td>Access Control</td>
<td>Congestion Charging</td>
<td>Access control</td>
<td>Congestion Charging</td>
<td>Automatic Number Plate Recognition (auto-charging)</td>
</tr>
<tr>
<td><strong>Technology Adopted</strong></td>
<td>Automatic Number Plate Recognition (control only)</td>
<td>Automatic Number Plate Recognition (control only)</td>
<td>Single automatic bollard</td>
<td>Automatic Number Plate Recognition (control only)</td>
<td></td>
</tr>
<tr>
<td><strong>Charge</strong></td>
<td>€0.82 per hour, max €6.52 per day</td>
<td>£5 per day, increased to £8 per day</td>
<td>£2 per day</td>
<td>£2 charge for inbound travel</td>
<td>€1.1, €1.6 or €2.1 per cordon crossing and time of day</td>
</tr>
<tr>
<td><strong>Support Measures</strong></td>
<td>Floriana Park &amp; Ride, city electric minicabs</td>
<td>Cathedral Bus park and ride service</td>
<td>Park and Ride</td>
<td>National and City Government</td>
<td></td>
</tr>
<tr>
<td><strong>Barriers Encountered</strong></td>
<td>Commuter Unions</td>
<td>Public Acceptance (minor)</td>
<td>Public Support</td>
<td>21% reduction in traffic in charged area</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Reduction in peak traffic, increased accessibility for Valletta</td>
<td>25% reduction in traffic in zone</td>
<td>90% reduction in traffic in charged area</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Scheme Status (2008)</strong></td>
<td>Operational</td>
<td>Operational</td>
<td>Operational</td>
<td>Not operational</td>
<td>Operational</td>
</tr>
</tbody>
</table>
Other measures to increase accessibility – Park and Ride
Other measures to increase accessibility – Public Transport

- Valletta already in 2007 the hub for the island’s public transport network.
- Reform introduced in 2011 changed the network of buses, retaining Valletta as one of the main interchanges – more monitoring of public transport use necessary to determine modal shift to support accessibility objectives for Valletta.
Looking ahead

• CVA charges have been absorbed by drivers so system is not ‘restrictive’ anymore.
• Valletta is undergoing large infrastructural projects which will affect its accessibility.
• Before changes are made to the CVA system or the charging structure, the new trends must be studied.
Thank You

Any questions?

maria.attard@um.edu.mt