Workshop

Urban Logistics Planning

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Urban Logistics Plan in the perspective of mobility governance and smart city

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EMERGING TRENDS in Urban Mobility Policy

EU Strategies
Best Practices in Towns/Urban Areas
Sustainable Urban Mobility Plan- SUMP

Emerging Transport Paradigm
Avoid – Shift - Improve

Avoid unnecessary travel by integrating land use and transport planning (TOD), Increase virtual and physical connectivity, improve cooperation among modalities
Shift travels to public transport more efficient and green modalities,
Improve fuel and vehicle technologies

Action Plan on Urban Mobility COM (2009)-490/5

MOBILITY GOVERNANCE

The Town with the “best” liveable, green and high socio-productive system present an extended, efficient and quality Public Transport Services

The current economic crisis forces the Gvmts to adopt new solutions and approach……
Smart Mobility: Main Axes of Intervention

- Systems and ICT infrastructures
  - Access Control and enforcement systems
  - Traffic Light coordination, traffic sensors network...
  - Integrated Parking management, Variable Message Signs
  - Integrated payment and e-ticketing systems
  - Infomobility services pre and on trips,

Qualification and differentiation of PT services (BRT-BHLS, DRTS etc.)

Urban logistics services (city logistics, last mile distribution, consolidation Centre, etc.)

- Integration of different modalities (FS-Bike, FS-TPL, P&R schemes, etc) and services interoperability

Additional Green (?) Measures (bike sharing, bike station, collective taxi, car pooling, car/van sharing, bike lanes, e-mobility, etc.)

MIXED SOLUTIONS by TECHNOLOGIES and INFRASTRUCTURES......

but also... ORGANIZATION/OPERATION and NORMATIVE....
Multi-modal Travel & Traffic Info Services

Sample application scenario

- **Planning & pre-trip information**
  - **End User desired destination**
  - **TTIS provider** route planning (car, walk) on-trip navigation
  - **Local Systems**
    - PT Journey Planning
    - PT info (static, dynamic)
    - Parking Info (static, dynamic)
    - Traffic events

- **On-trip navigation**
  - **Car**
  - **Walk**
  - **Public Transport**

- **Congestion avoided thanks to on-trip information**

- **Public Transport Journey Description**

- **On-trip navigation**
  - **Origin**
  - **Destination**

Sample application scenario: ITS and Sustainable Mobility

Courtesy: Softeco-Sismat

In-Time /Cocities EU Projects

Multi-modal Travel & Traffic Info Services

In-Time /Cocities EU Projects
“Back Stage “ ITS Systems (City side)

- Road Pricing
- Access Control
- Infotainement
- E-Ticketing
- Traffic Control
- Control Room
- VMS
- PMS

and different static and semi dynamic data base
Systems Integration for Infomobility services

Application context
- Local RTTI contents/services by Local Authorities (Regional, city level)
  → base services
- Independent Travel/Traffic Information Service Providers (TISPs) → Value-added services

Issues and barriers
- Different local technologies
- Different data formats
- Different access services
- Different responsibilities
- ...

Ref: EU In-Time and Co-Cities Projects.

Courtesy Softeco-Sismat
Urban Public Transport in Urban Areas

- PT network based on dedicated and priority corridors
- Management of the quantity/quality of PT services acting on regularity/commercial speed/reliability and comfort

→ approach BHLS-BRT

- FTS Flexible Transport services (feeder, DRT services, ..)
- Coordination with Green modalities (collective taxi, bike sharing, bike station, pedestrian,..)
- Cooperation/integration with other mobility services (Comodality/Interoperability,..)

We should work on the *behavioral changes towards Public Transport solutions* also of the *relevant City stakeholders* who need to change their thinking, and adjust their programs and investments accordingly in favor of solutions including PT measures/services
The Small and Medium Towns context

- Private car trips are up 70% of total (in some case up 80%)
- Decreasing attractiveness of Public Transport for citizens and increase the requirement of flexibility for mobility services
- PT services are oriented to major axes of mobility demand
- The freight distribution impacts are relevant in historic centres
- Parking management plays a key role in mobility policies with negative impacts on urban conditions, if not correctly planned
- Emerging Technology-ITS scenario for managing the mobility (Access Control, Infomobility, VMS, etc.)
- Bike Trips and pedestrians are increasing with alternative “green mobility services”
- Emerging “political sensibility” for mobility services operated in clever manner, as indicated by SUMP
Main trends in added value area like small island

**People**: rethinking the PT offer (from the Operator and Authority point of interest) with new organization and services and in **perspective of a cooperation and integration with other modalities**

**Goods**: development of new **logistics services** focused to "last mile" distributions services and a to answer to self-supply of the shop keepers

**Parking**: development of new **schemes integrated with green services and PT flexible services**

**Coordination of flexible mobility services** for people and goods,
Integrated with added value Green Services
working on the flexibility, accessibility, info and efficiency aspects
Treviso (LIFE + PERHT project) Solution by Parking system
FLEXIBLE TRANSPORT SERVICES

Flexibility in:
Route to be taken
Timing of service
Service schemes
Vehicle to be used
Involved operators
Tariff policies

Ideal System
Low cost High Flexibility

Increasing Flexibility

Increasing cost

FTS Intermediate Transport

Taxi

Conventional Public Transport
City logistics in Small and Medium Historic Towns

Freight distribution in historic centres is more complex due to:

- transport environment
  - old road infrastructure, narrow streets, …
- more strict access regulations
- presence of heritage and historic assets to protect
- higher risks for pedestrian safety

... with higher impacts (pollution emissions, noise, energy consumption, etc.) and higher costs of logistics operation.
ENergy efficiency in City LOgistics Services for Small and Mid-sized European Historic Towns (SMHTs)

Starting date: 03rd May 2012
Duration: 30 months
Project Coordinator: MemEx, Livorno - (Italy)
Project budget: € 2.105.958
Funding from EU: 75%
16 partners from 13 EU countries
Implementation of

- **Pilot services** in 3 SMHTs: Italy (Lucca), Norway (Trondheim), The Netherlands (s’Hertogenbosch);
- **Feasibility and transferability analysis** and **Soft measures** in 6 SMHTs: Spain (Burgos), Portugal (Almada), UK (Dundee), Romania (Alba Julia), Greece (Serres), Bulgaria (Balchik)

Development of

- **Sustainable Urban Logistic Plans** (SULPs) in the overall 9 ENCLOSE towns

Building

- a common methodology for the development of SULPs for European SMHTs integrated with Sustainable Urban Mobility Plans
## ENCLOSE logistics services in Pilot Towns

<table>
<thead>
<tr>
<th>Services/ Measures implemented in ENCLOSE Pilot towns</th>
<th>Lucca (Italy)</th>
<th>Trondheim (Norway)</th>
<th>'s-Hertogenbosch (The Netherlands)</th>
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</thead>
<tbody>
<tr>
<td>B2B services for freight operators concerning the provision of palletized goods transportation to businesses with FEV;</td>
<td>Mail distribution (large and small envelopes) in Trondheim city centre by using electric vehicles replacing 5 diesel vehicles</td>
<td>Set up of specific partnership agreements (B2B) between shopkeepers, transport companies and other stakeholders aimed at improving the efficiency of town delivery services by using biogas or CNG vehicles</td>
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<tr>
<td>B2B services for local businesses concerning the provision of forwarding services toward any destination outside the target area, operated by FEV, in partnership with other national or international freight operators (reverse logistics processes)</td>
<td>Parcel distribution in Trondheim city centre by using electric and hybrid vehicles replacing 5 diesel vans</td>
<td>Demonstrating and enhancing the use of fully electric buses for transport of people with bulky purchases</td>
<td></td>
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<tr>
<td>Freight operations integrated with leisure mobility, operated by FEV: dedicated delivery programmes providing services for tourists and travelers, luggage transport to/from hotels, etc</td>
<td>Pallets distribution in Trondheim city centre and transport between Trondheim city centre and Trondheim Post terminal by using electric and hybrid vehicles replacing 1 diesel truck</td>
<td>Town delivery services using biogas vehicles</td>
<td></td>
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<tr>
<td>Soft measures in ENCLOSE follower towns</td>
<td>Alba Julia (Rumania)</td>
<td>Almada (Portugal)</td>
<td>Balchik (Bulgaria)</td>
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<td>Regulation in the Transylvania Boulevard area of commercial vehicles time windows, restrictions for high capacity vehicles, penalties for not respecting the rules, etc.</td>
<td>Create a loading &amp; unloading regulation</td>
<td>Limitation of the vehicles' access to the coastal area. Limitation of the space accessibility of the logistics and public transportation, as well as private cars during the touristic season.</td>
<td>New regulation for the historical centre access, with special processing for loading/unloading tasks.</td>
</tr>
</tbody>
</table>
Urban Logistics

- Trips and delivery planning
- Fleet monitoring and Track&Tracing
- Intelligent unloading and loading areas
- Urban Consolidation Center
- Services “last mile”, “park&buy”....
- .........

Key role of Public Administrations
- city distribution policies and regulations
- control and enforcement measures
- incentives
- PPP (e.g. UCC building, operation,...)
Main objectives and Strategic Lines
Reference to SUMP
General Context
Logistics Context, Needs and Critics
Baseline

Suitable Service, Measures, InfraStructures
identification

Organization Dimension
Business Model
Costs and energy assessment
Responsibility and role

Realization Plan and Normative/Regulation

Consensus Process
Local Stakeholders discussion and assessment table

if OK

if Not

Promotion Plan

Road Map for adopting SULP at Municipality level
**SULP concept in ENCLOSE project**

- A specific plan for managing urban logistics processes and designing solutions within mid term horizon
- A set of suitable measures/solutions/services able to satisfy the urban freight mobility needs of people and businesses
- Aims to reduce air and noise pollution, greenhouse gases emissions and energy consumption related to urban logistics processes and to enhance the overall attractiveness of urban areas
- A tool for defining the common vision and priorities lines, analysing and identifying suitable solutions and evaluating the related impacts finding a consensus on the possible set of solutions among the different actors and Local Authorities

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**SULP is a key part of SUMP devoted to identify and integrate urban logistics solutions**
Buses with High Level of Service

Fundamental characteristics and recommendations for decision-making and research

Results from 35 European Cities

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