ITC for Urban Logistic.
The case of Emilia-Romagna Region

Bruxelles, 18 marzo 2010
Workshop - Intelligent Transport Systems for Urban Areas

ENVIRONMENTAL PROBLEMS

Emission distribution % in Emilia-Romagna - INEMAR data 2007 for the Integrated Regional Transport Plan PRIT 2010-2020
EMILIA-ROMAGNA: SOME DATA

Land: 22,124 km²
Capital city: Bologna
GDP/habitant: 22,050€
Industrial centres: 10
Population: 4,337,966
Provinces: 9
Communes: 341
Universities: 5
Entreprises: 387,434

More than 90% have less than 50 employees (the average firm has 3.5 employees)

REGIONAL POLICIES FOR SUSTAINABLE MOBILITY

- Support to local policies: antismog actions; development of Local Transport Policies TPL, collective transport or alternative transport
- 9 Provincial Plans for air quality (strategic plans of intervention on mobility and accessibility)
- Regional Agreements for sustainable mobility with Provinces and municipalities with a population over 50,000 inhab. concerning:
  - Engagement of local authorities for the rational use of energy and antismog limitation (total traffic block for 10 hours on Thursday and stop for 10 hours for vehicles ante Euro 1 (petrol) and Euro 2 (diesel) from Monday to Friday)
  - 7 specific financing measures up to 50% with local authorities for a total investment of 159 mil € of which 68 mil of regional funds
Contribution to substitute DPF: 5MLN € ➔ 678 DPF installed on buses in 2008

2010: New Contribution to substitute DPF: 1.5 MLN € expected 1,250 DPF on commercial vehicle

Contribution for the transformation of cars Methane/LPG: 10MLN € ➔ 15,700 vehicles (other founds)

Contribution for projects on Infrastructures for logistics and Co-Financing of infrastructures on logistic nodes

Ecological conversion of the “local delivery” fleets

From 2002 to 2008: average reduction of PM10 by 15% and reduction of the number of daily excess by 19%, even with meteorological adverse conditions (constant rise of days without rain or wind)
REGIONAL PROGRAMME FOR URBAN LOGISTIC 2003-2009

- Development of a common shared methodology
- Preparation of guidelines for the regional strategy
- Financing analysis and project design
- Financing and implementation
- Support and promotion for municipalities

European Projects CITY PORTS and MEROPE
Publication of guidelines for a regional strategy
DGR 1432/03 for Regional Projects
European Projects CITY PORTS and MEROPE
L.R. 30/98
Regional Agreements on sustainable development 2003-2005 MEASURE 5. Financing of urban goods distribution projects at 50%
Implementation of URBAN LOGISTIC projects
Partecipation to european projects SUGAR, SONORA: comparing best solutions
Antismog coordinated policies

INTEGRATED SOLUTION

INTEGRATED SOLUTION:

A set of tools and technical solutions consistent with a specific context, but applicable to different urban models.

Such solutions consist of three main aspects:

1. Logistics and technologies: logistics, ICT, transport technologies
2. Policy: regulations, planning systems, communications, supporting technologies
3. Organization and stakeholders' involvement
### REGIONAL PROGRAMME ON URBAN LOGISTICS

#### Interventions

**Measure 5:** Study and realisation of actions of Urban Logistics in 12 cities

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<tr>
<th>URBA N AREAS</th>
<th>PROJECT DESIGN FUNDS</th>
<th>REALIZATION</th>
<th>TOTAL CONTRIBUTION (A + B)</th>
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<td>European Proj. City Ports</td>
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<td>MEASURE 5</td>
<td>First estimation of the investments programme</td>
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<td>Efficiency of goods vehicles, signal instruments and ITS Coordinate d intervention of Urban Logistics</td>
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#### MAIN ELEMENTS OF THE ON-GOING PROJECTS

- Governance of access and of journey, regulation and optimization of road infrastructures through definition of time slot, lanes and dedicated areas, optimal journeys for vehicle typologies.
- Measures for the consolidation of loads and efficiency of transport and reduction of number of vehicles that enter city centres (regulatory and organisative measures; platforms for urban distribution - CDU; regional coordination)
The Center of Coordination and Control is the tool that allows the local administration to govern the actions of city logistics.

**ACTION'S AREA**

**DESCRIPTION**

- The Center of Coordination and Control receives requests for access to different areas of the city center for the distribution of goods and gives authorizations in respect of compliance with certain parameters (e.g., the use of EFV, charges etc.).
- To those who do not receive the authorization for access is still guaranteed the distribution of goods via the exchange service mode (for example, carried out by logistics operators affiliated) or in time slots (limited) access to the urban area.

- The Center of Coordination and Control is also the instrument to monitor the proper use of public infrastructure, such as: monitoring of the access (verification of credits and permissions to access); monitor compliance with the rules of use of loading / unloading bays.

**PAYMENTS AND PENALTIES FLOWS MANAGER**

- GATES CONTROL
- STOP MONITORING
- MONITORING MOVEMENTS
- TRAFFIC CONTROL
- FLOWS MANAGER
- TRAVEL PLANNING
- ROAD NETWORK MANAGEMENT
- ROAD CONDITIONS MANAGEMENT
- ACCESS PERMISSION MANAGEMENT
- PARKING SLOTS MANAGEMENT
- STATISTICS MODULE
- SIMULATION MODULE
- PARKING SLOTS MANAGEMENT
- PAYMENTS AND PENALTIES

**CENTER OF COORDINATION AND CONTROL: FUNCTIONS**
THEORETICAL APPLICATIONS: CITY OF IMOLA

LIMITATIONS
Yellow: area with physical restrictions
Blue: access control

WEB-PHONE RESERVATION of lading/unloading bays

APPLICATIONS: CITY OF PARMA

INFORMATIVE SYSTEM OF EcoCity
- Data receipt via FTP, e-mail, manual insertion
- Loading from our informative system
- Issue of an identificative BAR-COD label
- Combination BAR-COD ECOCITY with delivery operator number
- Progress of the delivery on-line
- Loadings and runs optimization
- Take care from our delivery vehicle

TRACEABILITY
- Data receipt Vehicle traceability with GPS-GPRS technology
- BAR-COD scanning with con CN3e laptop computer of last generation
- On-line of occurred delivery to ECOCITY server
- Info transmission via FTP, e-mail, to dealers according to their needs
- Transmission details: Delivery date, delivery time, contingent troubles via
APPLICATIONS: CITY OF BOLOGNA

INTEGRATED PLATFORM
- Equipped vehicles
- Bus control centre
- Enforcement cameras
- Web Maps
- SMS for info
- Traffic light control
- VMS
- Inductive loops
- Accident detection
- Cartography

VIDEO MESSAGE SIGNS NETWORK
- 47 VMS in the urban and metropolitan area
- Information about traffic rules, events

PARKING AVAILABILITY INFO SYSTEM
- 13 VMS for Parking Info
- 5 Car Park connected to the centre

ELECTRONIC PILLARS FOR PEDESTRIAN AREA CONTROL
- 13 VMS for Parking Info
- 5 Car Park connected to the centre
APPLICATIONS: CITY OF BOLOGNA

ITS NETWORK – ACCESS CONTROL

- **SIRIO** - 10 gates to LTZ
- **RITA** - 3 gates in “T” area
- **RITA** - 10 gates to control bus lanes
- **UNIVERSITY AREA** - 2 gates to control semi pedestrian area

**FIRST RESULTS**
- 10% TOAL PERMITS
- 27% DELIVERY PERMITS
- 28% DELIVERY VEHICLES

**“PAY-TO-ACCESS” TICKET**
1. Validation of the ticket
2. Sending secret code and car plate number, via:
   - SMS
   - WEB
   - CALL CENTER
3. If ok, SIRIO authorisation released

**Access trend**
- Tickets used: about 125 per day
- The system assures flexibility without increase too much accesses in the LTZ
APPLICATIONS: CITY OF BOLOGNA

VANSHARING

Virtual transit point

Features:

- Trip programming and connection to real time Traffic Control Centre (CISIUM) via On Board Equipment
- Advanced Vehicle Monitoring for a fleet network
- Rationalisation of load/unload procedures
- At least 30 vehicles fuelled by methane
- Parking area and transit point ("physical" deposit)
- Reserved parking slot remote booking and enforcement (Parking Booking System)

Thank you for your kind attention

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