

**Workshop**

**Urban Logistics Planning**

**Växjö 7 April 2014**

**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**

Transport White Paper COM (2011)  
Action Plan on Urban Mobility COM  
(2009)-490/5

**MOBILITY GOVERNANCE**

**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

**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 Gvmnts 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



In-Time /Cocities  
EU Projects

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

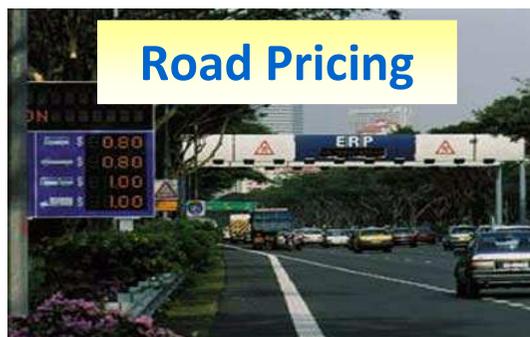
ITS and Sustainable Mobility



Courtesy: S nat



# “Back Stage “ ITS Systems (City side)



Road Pricing



Access Control



Infotainment



E-Ticketing



Traffic Control



Control Room



VMS



PMS



**and different static and semi dynamic data base**

# Systems Integration for Infomobility services

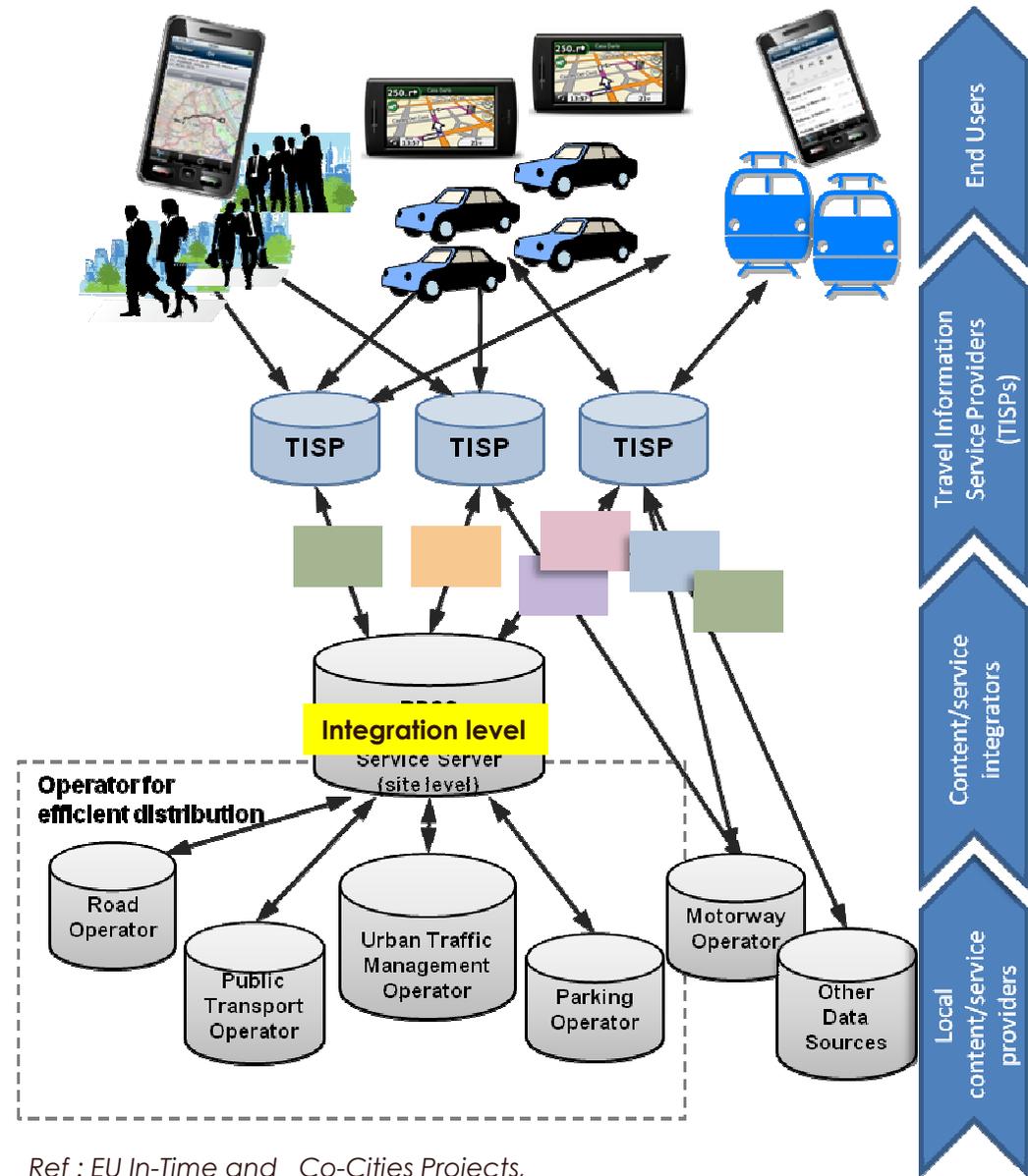
## Application context

- **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**
- ...



# 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



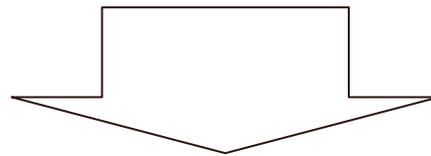
- **Private car trips are up 70% of total (in some case up 80%)**
- **Decreasing attractiveness of Public Transport** for citizens and increase the requirement of **flexibility for mobility services**
- **PT services** are oriented to **major axes** of mobility demand
- The **freight distribution impacts 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**



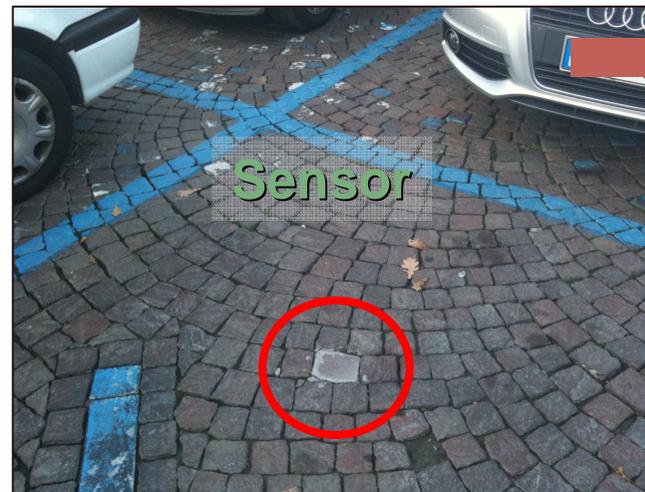
**Coordination of flexible mobility services**

for people and goods,

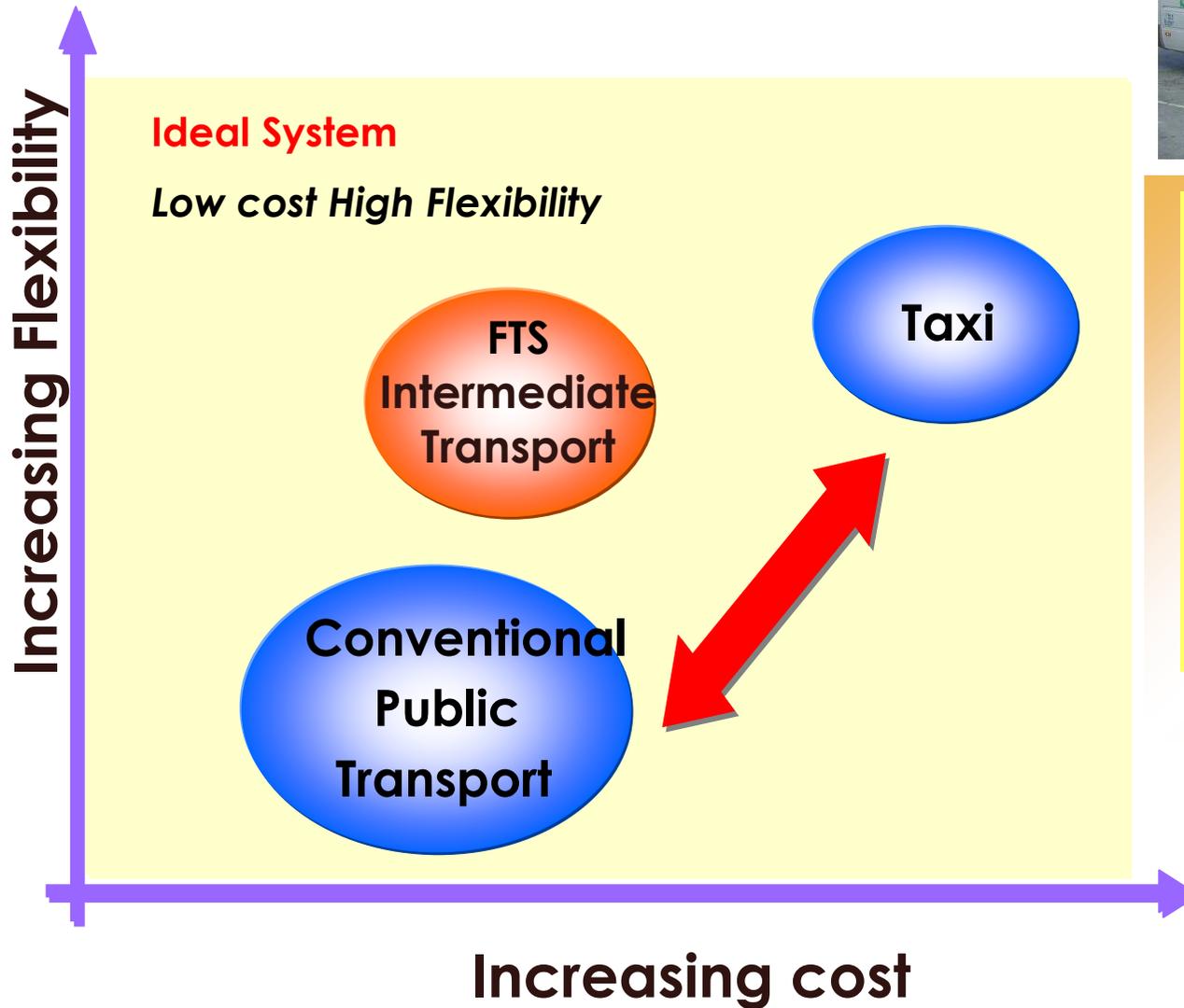
Integrated with added value Green Services

**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



# 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: 03<sup>rd</sup> 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



Co-funded by the Intelligent Energy Europe  
Programme of the European Union

# ENCLOSE Project – Main Specific Objectives



## *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



|  | Lucca<br>Italy   | Trondheim<br>Norway  | 's-Hertogenbosch<br>The Netherlands   |
|--|--|--|---|
|  |   |   |    |
| <b>Services/<br/>Measures<br/>implemented<br/>in ENCLOSE<br/>Pilot towns</b> | B2B services for freight operators concerning the provision of palletized goods transportation to businesses with FEV;   | Mail distribution (large and small envelopes) in Trondheim city centre by using electric-vehicles replacing 5 diesel vehicles  | 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 |
|  | 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) | Parcel distribution in Trondheim city centre by using electric and hybrid vehicles replacing 5 diesel vans   | Demonstrating and enhancing the use of fully electric busses for transport of people with bulky purchases   |
|  | Freight operations integrated with leisure mobility, operated by FEV: dedicated delivery programmes providing services for tourists and travelers, luggage transport to/from hotels, etc   | 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 | Town delivery services using biogas vehicles  |

# ENCLOSE Soft measures in follower towns

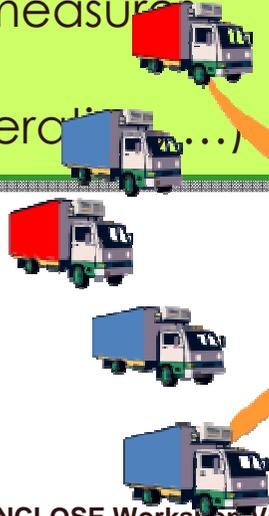
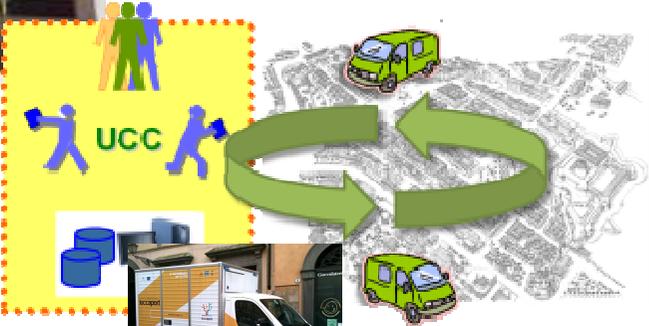
|  | <b>Alba Julia</b><br>Rumania   | <b>Almada</b><br>Portugal  | <b>Balchick</b><br>Bulgaria   | <b>Burgos</b><br>Spain  | <b>Dundee</b><br>UK  | <b>Serres</b><br>Greece  |
|--|--|--|---|---|--|--|
|  |   |  |    |                    |                       |   |
| <b>Soft measures in ENCLOSE follower towns</b> | Regulation in the Transylvania. Boulevard area of commercial vehicles time windows, restrictions for high capacity vehicles, penalties for no respecting the rules, etc. | Create a loading & unloading regulation  | 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  | New regulation for the historical centre access, with special processing for loading-unloading tasks  | Increase the enforcement levels of loading bays within the city centre                                   | Awareness campaigns to the shopkeepers, transport operators and general public regarding the need to respect the city logistics policy   |
|  | Organizing an Awareness Raising Campaign involves a partnership between the Municipality and the media   | Loading & unloading timeframes   | Time limitation of the vehicles' access to the near coastal area, as well as to other heavy trafficked ways. Limitation of the time accessibility of the logistics and public transportation as well as private cars during the touristic season. | Card system on loading and unloading for shop owners and hostelry owners (for non-labelled vehicles). | The council intends to procure 39 Electric Vehicles as replacements for existing Diesel/ Petrol vehicles | Improving the visibility of the (un)loading areas. Increasing the number of these places according to the shop keepers' needs. Development of a booking platform in order to properly assign these areas to the transport operators. |

# Urban Logistics

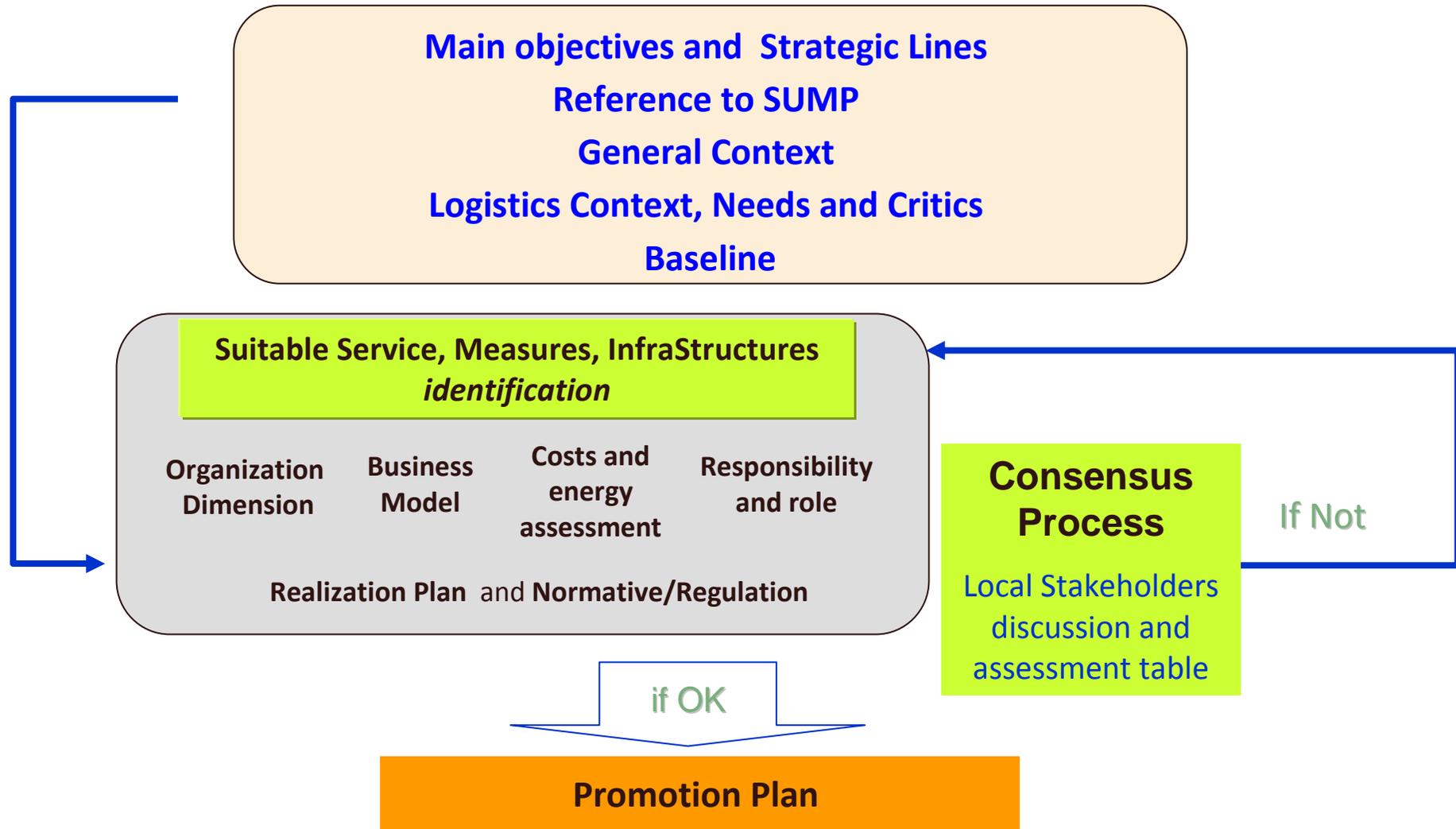
- ❖ Trips and delivery planning
- ❖ Fleet monitoring and Track&Tracing
- ❖ Intelligent unloading and loading areas management
- ❖ Urban Consolidation Center
- ❖ Services “last mile”, “park&buy” .....
- ❖ .....



**Key role of Public Administrations**  
 city distribution policies and regulations  
 control and enforcement measures  
 incentives  
 PPP (e.g. UCC building, operations .....)



# SULP Structure



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

**SULP is a key part of SUMP devoted to identify and integrate urban logistics solutions**

## Infomobility Systems and Sustainable Transport Services

Edited by  
G. Ambrosino, M. Boero, J.D. Nelson, M. Romanazzo

## Buses with High Level of Service

*Fundamental characteristics and recommendations  
for decision-making and research*

*Results from 35 European Cities*



Final report - COST TU0603

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