

# From enforcement to co-projecting city logistics rules



istituto sui trasporti  
e la logistica  
fondazione

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# SoNorA Project Data



**Central Europe programme -**

**EU Territorial Cooperation**

**Duration: 40 months (Nov. 2008 – Feb. 2012)**

**Total budget: € 7.098.964,99**

**ERDF contribution:**

**€ 5.551.180,84 25**

**25 Partners from 6 EU countries**

**35 Associated Institutions from 9 EU countries**

# SoNorA Partnership

## Italy



Veneto Region  
(LeadPartner)



Friuli Venezia Giulia  
Region



Institute for Transport and  
Logistics Foundation



Venice Port Authority



Trieste Port Authority



Unioncamere del Veneto



Trencò



## Austria

Carinthian Region  
City of Vienna



## Czech Republic

South Bohemia Region  
Central Bohemia Region  
Usti Region  
Czech Railways



## Slovenia



Port of Koper



## Germany

German Association for Housing,  
Urban and Spatial Development



Saxony-Anhalt Region



Mecklenburg-Vorpommern  
Region



Thuringian Region



Berlin and Brandenburg Region  
University of Applied Sciences



Erfurt

University of Applied Sciences  
Wildau



## Poland

West Pomeranian Region



Gdynia Port Authority S.A.



Szczecin and Swinoujście Seaport  
Authority



Amber Road Cities Association



# Agenda

- Introduction***
  
- Findings from data analysis
  
- Business Case
  
- Back-Up

# General approach

## THE BUSINESS CASE IS STRUCTURED INTO THREE ACTIVITIES

### Mapping of critical issues

- Identification of the actors involved and of the critical issues related to the distribution of goods within urban areas

### Thematic Boards

- Setting up a thematic debate board between public and private actors, in order to evaluate critical issues and find shared answers

### Testing

- Pilot projects useful to test the effectiveness of the detected solutions
- Feedback and evaluation of the results of the pilot projects

### In-depth planning examinations organised in three fields of work:

#### NETWORKS ORGANISATION

- Organisation and framework of distribution and logistical networks

#### PROCESSES

- Operative processes and support instruments

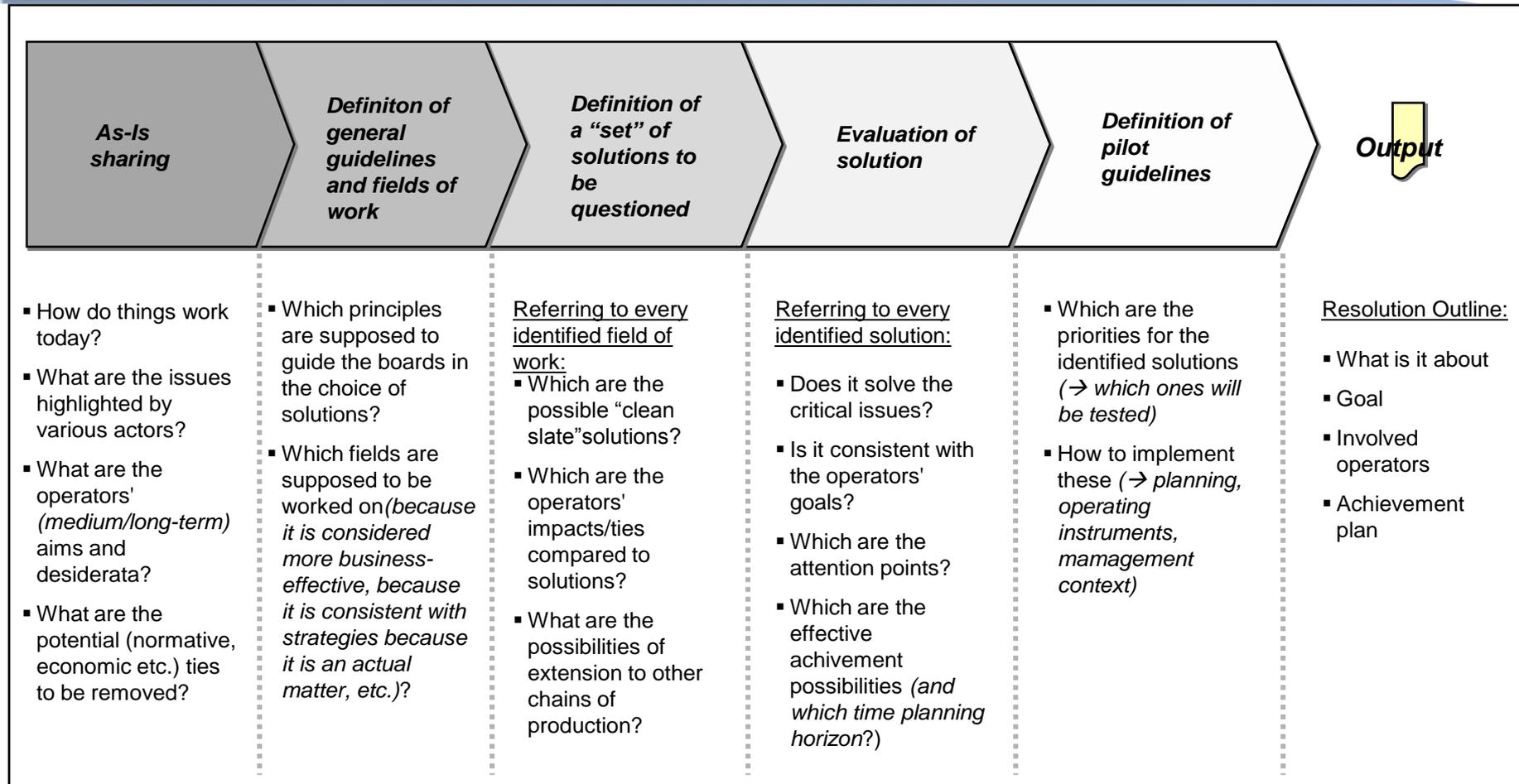
#### ADMINISTRATIVE MEASURES

- Regulations and other actions to be made by Local Administration for the distribution of goods within urban areas

### Goals for activities of comparison:

- To verify the consistencies/ ties existing between the organisation of complex logistical networks (on a widespread urban level) and the perspective of the urban distribution of goods
  - To share (between private operators and public administrators) the specific trends of their own sectors
  - To promote the Local Administrations' understanding of the operative planning models applied by the private operators
- To verify the consistencies/ ties existing between the processes of planning and management of complex logistical networks (on a widespread urban level) and the perspective of the urban distribution of goods
- To promote the understanding of the impacts of the administrative measures on the activities done by the logistical and distributive operators
- To make operative planning, simulation and evaluation instruments available for partners. These instruments need to be consistent with the administrative measures used for the urban distribution of goods
- To identify comparison and negotiation modes among Local Administrations in the perspective of a management of the first and last mile on a wider territorial scale

# BOARDS MANAGEMENT METHOD



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- Introduction
- Findings from data analysis***
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# GOALS FOR THE CRITICALITIES MAPPING AND THE PERFORMED ACTIVITIES

## Goals

Highlight the critical points:

- of the **public administrators**, referring to the urban emergencies linked to traffic and distribution of goods
- of **private parties**, referring to the inefficiencies and the economic impacts that can derive from public intervention in the distribution of goods within the urban area.

→ focus on two chains of production: MAD<sup>(1)</sup> and Parcel



- The principle performed activities*
- benchmarking on administrative regulations
  - benchmarking on city logistic experience (Italian and European)
  - in-depth interviews with pilot municipalities

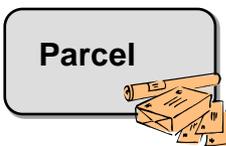
*The output products*

TASK 3.3 Technical Report 1/4: "European Benchmarking city logistic projects and comparison with Italian Projects"



- interviews with operators
- reconstruction of the function of the chain of production
- close examinations of the modes of delivery within the urban centres
- close examination of potential trends of development
- close examination on experiences of sustainable transport

TASK 3.3 Technical Report 2/4: The MD chain of production- trends and structure of distribution



- interviews with operators
- reconstruction of the function of network distribution
- Collection and analysis of data on movement in urban centres

TASK 3.3 Technical Report 3/4: "The parcel chain of production"- Network and processes of operative programming

→ The next slides include a summary of the principle emerging evidences

<sup>(1)</sup> Mass Alimentary Distribution

# ISSUES AND AIMS BY THE “PUBLIC ADMINISTRATION”



## What is happening today:

- **Lack of coordinated central direction (no decisions taken by the central government):**
  - Discontinuity of implementation of single local applications
  - Difficulty of the operators (above all in the “parcel chain of production”) in interfacing with a unique interlocutor at a widespread territorial level(regional );
- **Field of intervention limited only to the City Centre (limited traffic areas),** that focus only on small local operators with insufficient levels of efficiency and with limited capacity of investment and innovation;
- **The administrative regulation and limitations of access in the limited traffic areas are non homogeneous** with the following criticalities in the organisation of pick-up/delivery services and the fall in efficiency(the need of more means of transport for service);
- **Limit of parking in historic city centers,** that add to the time of loading and unloading for parcel operators.
- **“Good practices” are often not fully supported:**
  - The limits usually introduced concern only time frames of access for different types of vehicles (Euro; non Euro; etc.)
  - They don't intervene on the sustainability of the operators' behaviours (above all in terms of use of public infrastructure: roads and carparks) and their following logistical efficiency

## The “aims”

- Adopt **homogeneous and shared approach** (processes and instruments) to “govern” efficiently the “city logistics”

 [vai a Back up](#)

**Sources:** meetings with PA operators [Dir.ne Mobilità Regione Emilia Romagna (nov 2009), Comune Ravenna (dic 2009), Comune Ferrara (dic 2009), Comune Bologna (dic 2009), Comune Parma (gen 2010), Regione Veneto (feb 2010), Comuni di Padova, Vicenza e Venezia (mar 2010)] - Convention Sugar (gen 2010): Imola, Piacenza, Parma, Reggio Emilia, Forli, Modena, Bologna

# ISSUES AND AIMS BY THE “PARCEL” INDUSTRY



## *What is happening today:*

- **Difficulties in having a unique public interlocutor** to discuss with (with the following difficulties in communication with more operators at the local level)
- **Limitations and hours of access are not homogeneous** in limited traffic areas:
  - Restricted and differentiated hours of access from one municipality to another
- **Today, the “parcel” chain of production is already optimized and the regulatory interventions introduce inefficiency** (with increasing cost impacts on the chain of production and on externalities<sup>(1)</sup>):
  - The restrictions are scarcely efficient **towards inefficient carriers** that cause the congestion and have non-ecological means of transport.
- **Limited facilitation of parking in historic city centers** to speed up loading and unloading

## The “aims”

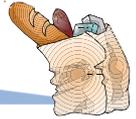
- **To get benefit from being the ones who have «good practices»**
- **To make the regulations on parking access uniform** in historic city centers

 [vai a Back up](#)

**Sources:** raccolta dati e incontri con player internazionale della filiera parcel (DHL), documentazione AICAI

<sup>(1)</sup> Traffico, inquinamento

# ISSUES AND AIMS BY THE “RETAIL – MASS ALIMENTARY DISTRIBUTION” INDUSTRY



## What is happening today:

- Today **the Mass Alimentary Distribution chain of production is already optimized. The Public Administration rules introduce inefficiency** (sub-optimal paths, addition of means of transport) with costly impacts on the chain of production and on the externalities<sup>(1)</sup>
- **Difficulties in having a unique public interlocutor** to discuss with (with the following difficulties in communication with more operators at the local level)

## The “goals”

- In the short term: **to preserve the “win-win” perspective** between PA and Retailer (*contain the impact of the policies on the efficiency of the value chain of production*)
- In the medium/long term: get indication from the Public Administration in order to **select investment to expand the business in the City Center**

 [vai a Back up](#)

**Sources:** *gathering of data from public sources* (Federdistribuzione, Istat), *gathering of data and meetings with Italian player in the chain of production “Mass Alimentary Distribution”* (Coop-Centrale Adriatica)

<sup>(1)</sup> Traffic, pollution

# AGENDA

- Introduction
- Findings from data analysis
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# THE SOLUTIONS FOUND WHICH LEAD TO THE BUSINESS CASES

Two main streams have been investigated to find the solutions to be tested via a Business Case

## A - THE HARMONIZATION OF THE ACCESS TIME SLOTS IN CITY CENTRE

- Experimenting such a solution in the historic city centers of some pilot municipalities, on the basis of a structure which is consistent with the need for efficiency and sustainability of services and the limitation of congestion and pollution.
- **Such testing is actually on going (to be finalized by the end of feb. 2011)**

## B - THE INTRODUCTION OF AN ACCREDITATION PROCESS TO PROMOTE «GOOD PRACTICES»

- Introduction of systems, with criteria and homogeneous rules, that let the Public Administration to pre-select operators with “sustainable” characteristics, in order to give them less restrictive/more favorable conditions to access the City Centre (pilot case to be run shortly);

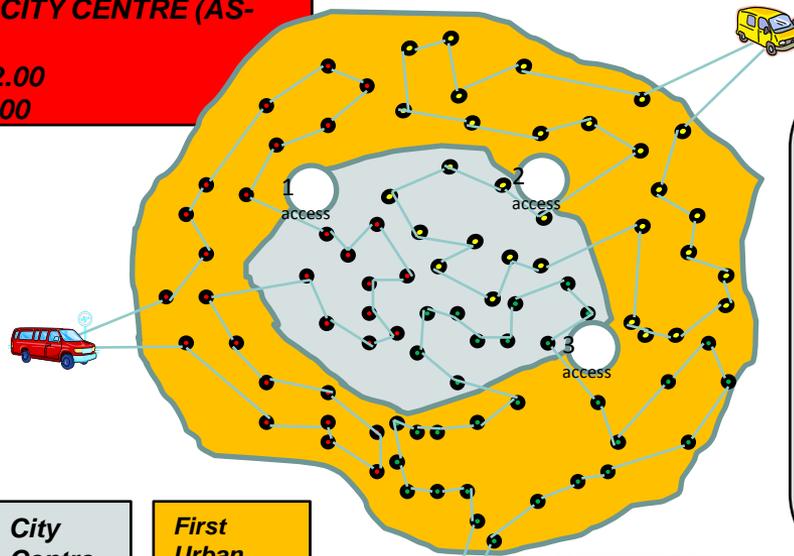
(1) Grande Distribuzione Alimentare

# A - HARMONIZATION OF ACCESS TIME SLOT PILOT REGGIO EMILIA (1/2)

- The Business case developed in Reggio Emilia aims to evaluate the benefit deriving from the **enlargement and armonization of the access time slot to the city centre**
- The benefit for the logistic operator **are not in terms of fleet reduction**, since the number of vehicles which serve the city centre is limited (three), so that is not possible to save fraction of a vehicle
- On the other hand the re-organization of the routes which can be made with the enlargement and armonization of the access time slot, **reduces the number of physical access to the City Centre** of vehicles dedicated both to the First City Belt and City Centre, with the following results:
  - **Reduction of pollution and congestion in the City Centre**
  - **Optimization of the routing system of the logistic operator**

## ACCESS TO CITY CENTRE (AS-IS):

- 10.00 – 12.00
- 16.00 -18.00



City Centre

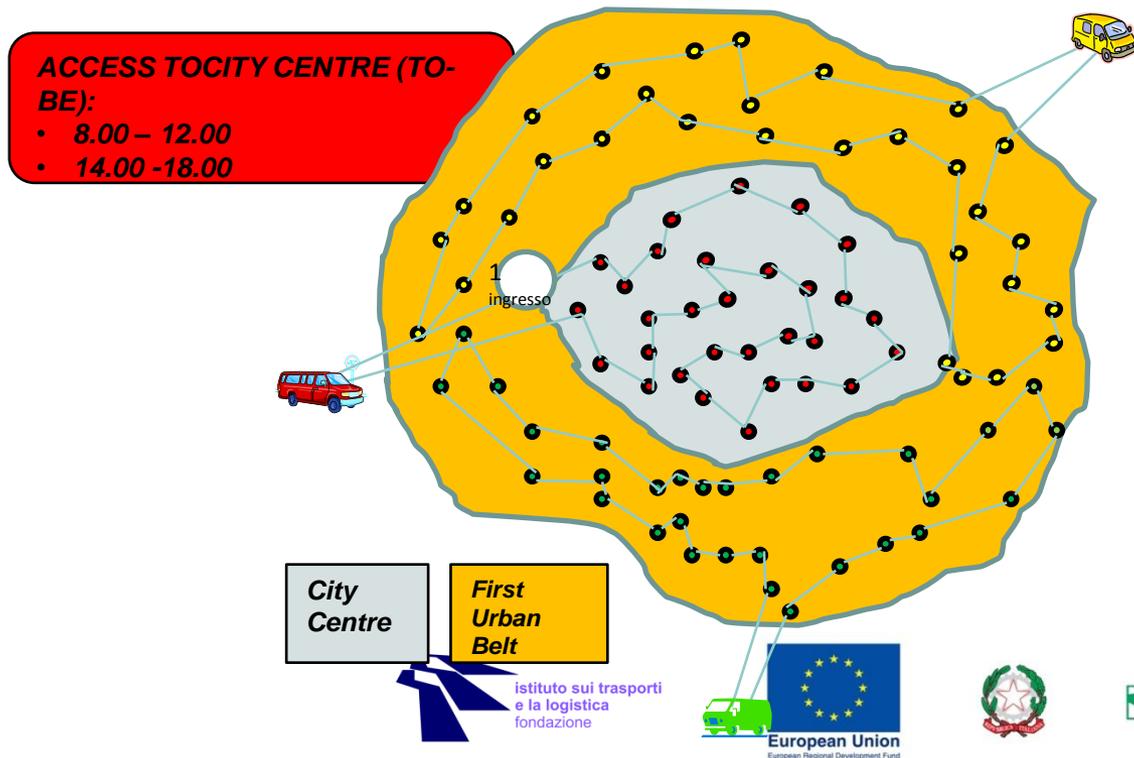
First Urban Belt

- Numbers of vehicles of the Logistic Operator working in the City Centre → 3
- Average stop / route in the City Centre → 60 (40 deliveries – 30 in the morning and 10 in the afternoon + 20 pick ups)
- Average time spent for one stop → 8 minutes in the City Centre, 6 in the remaining Urban Area
- Number of vehicles requested → the morning time slot (120 minutes) forces the logistic operator to use at least 2 vehicles (30 deliveries x 8minute = 240 minutes). **As a consequence the routing system is designed to have vehicles dedicated both to the City Centre and the First Belt**



# A - HARMONIZATION OF ACCESS TIME SLOT: PILOT REGGIO EMILIA (2/2)

- The firsts results of business case pilto run in Reggio Emilia underlines that:
  - Number of access to the City Center → decrease from 3 to 1
  - Optimization of routes by the logistic operator :
    - one vehicle fully dedicate to the City Centre (RED VEHICLE has 60 stops x 8 minutes = 8hours)
    - 2 vehicles dedicateted 6 hours per day to the First Urban Belt (GREEN AND YELLOW VEHICLE HAVE 60 stops x 6 minutes= 6hours)



# B - THE ACCREDITATION SYSTEM (1/3)

The general aim of an accreditation system, **coherent with the needs for regulation and management of City Logistics processes**, is that of introducing rules and homogeneous criteria. These criteria should let the Public Administrations pre-select the professional operators of road transport, and of distribution of goods in the first and last urban mile. **These operators have to be able to respect predefined conditions of efficiency and sustainability of their own organizational-managerial processes and of their own technological and functional equipments.** In particular, operators that:

- ➔ ▪ Respect organizational-managerial, technological and operational (vehicles and systems) parameters of efficiency and sustainability in the processes of distribution of goods in the first and last urban mile;
- ➔ ▪ Have adequate infrastructures for the consolidation of the loads;
- ➔ ▪ Adopt behaviours and processes coherent with the needs of best management for the public infrastructures (streets and carparks), and for the best control/reduction of pollution and congestion;
- ➔ ▪ Provide the Public Authority with the managerial information necessary to monitor and regulate the system

In order to give the operative conditions to the Public Administration (regulations of access and parking in LTAs) which do not draw on their managerial efficiency and are less restrictive in comparison to the other operators' ones, that are not efficient and have unsustainable distributional processes.

# B - ACCREDITATION ASSUMPTIONS (2/3)

The success and efficiency of the accreditation system here proposed correlate to the realization of a few assumptions:

- **The homogeneous accreditation criteria** of the whole referred territory (not only in the municipal field) are essential for every operator working on a wider scale (for example, the big operators of the “parcel chain of production” and of the MD) . They need to operate in a context with certain rules that allow them to reliably plan their investments for the car fleet updating.
- **A “control room”** for both the Public Administration and the private operators, that defines:
  - potential routes of preferential access for the more sensitive LTAs, in order to reduce the congestion and speed up operations: (less congestion, less consumption and less emissions);
  - preferential conditions to park in areas with insufficient endowment of loading and unloading parking lots;
  - sensitive areas on which specific solutions can be studied, in collaboration with accredited operators
  - support solutions for the operators who do not have the requested qualities for accreditation (study and offer of specific services like “van sharing” or the “taxi for goods”)
- Wider **time slots** for the accredited parties: in particular it is essential for them to access during the following time slots: 6-12 (deliveries on the parcel and MAD chain of production) and 15-18 (pick-ups for the parcel chains of production);

# THE “FORS” CASE (LONDON)

In order to effectively define the ideal characteristics for an accreditation system in the City Logistics processes field, various peculiarities, advantages and limits, referring to another important ongoing experience, were analyzed and evaluated. This experience is relative to the **FORS** (Freight Operator Recognition Scheme) initiative, developed in London:

- It is an initiative promoted by “Transport for London” (TfL) Agency, which operates in the field of the sustainable transport of goods;
- It aims at improving the delivery of goods in London, through the definition of a **standard of qualification** for the operators of transport, in order to better the efficiency in terms of performance, and of environmental and road safety;
- It also aims at persuading the operators that transport goods to **pursue the best managerial practices** through two objectives

FORS is not a system that pre-selects the operators, but a **system of free, voluntary qualification** open to all the businesses using commercial vehicles in the Capital, exclusively motivated by a series of induced benefits for the accredited operators

Strong Points	Weak Points
<ul style="list-style-type: none"> <li>▪ The system intervenes in the managerial models in the organisational (of the enterprise) and functional (of the operators) behaviours.</li> <li>▪ Several qualification levels are scheduled, in relation to the different operators’ grades of consistency with the purpose of the system</li> <li>▪ The system foresees a reduction and a simplification of the controls on the accredited/qualified operators’ vehicles</li> <li>▪ The system favours the spread of the best practices</li> </ul>	<ul style="list-style-type: none"> <li>▪ A voluntary system of qualification that delegates the regulation of the incoherent behaviours to the market</li> <li>▪ The policy does not distinguish between specification on different levels of qualification yet</li> <li>▪ The three levels of qualification do not directly correspond to different advantages: it is only the market that rewards</li> <li>▪ The system is focused only on the energy efficiency (consumption/emissions) and not on the managerial efficiency (saturation of means of transport and time slots)</li> <li>▪ The system does not intervene on congestion</li> <li>▪ The system does not take into account the operators who pass occasionally, but only those who are always present</li> </ul>

# THE ACCREDITATION SYSTEM PROPOSED TO THE PILOT MUNICIPALITIES OF THE SO.NOR.A. PROJECT

Characteristics	Parameters
<ul style="list-style-type: none"> <li>stable practicality at a widespread local level</li> </ul>	Logistical network articulated at a regional level Local operating headquarters Regular clients in the field of reference
<ul style="list-style-type: none"> <li>efficiency of operations and processes</li> </ul>	Saturation of means of transport: -number of stops per route(number of clients served per trip/day by only one vehicle) -average replenishment of vehicles(weight/volume) Presence of planning and organisational processes for the routes Presence of processes that control the fleet Availability of infrastructure for the consolidation of loads
<ul style="list-style-type: none"> <li>sustainability of the fleet</li> </ul>	Endowment of (at least) Euro4 vehicles Endowment of low impact vehicles for sensitive areas (bifuel, hybrids, etc.) Endowment of vehicles with a size which is adequate to the urban area they are serving (not too big)

# THE LEVELS OF QUALIFICATION

Status	Characteristics	Territorial field	Given conditions	Duration
A. Operators of distribution with articulated territorial and logistical networks	<ul style="list-style-type: none"> <li>-Stable efficiency in a widespread local territory (with at least a regional logistical network with a hub in the region)</li> <li>-Stable local presence (operative headquarters or clients)</li> <li>-High operating efficiency</li> <li>-High efficiency in processes( management systems for controlling routes and vehicles)</li> <li>-Adequate car fleet (euro/low impact)</li> </ul>	Regional accreditation	<p>Conditions of maximum efficiency (hours of access) in the whole regional field</p> <p>Preferential conditions for parking and/or parking lots dedicated to the loading/unloading in the whole regional field</p>	Long duration(semestral or annual)
B. Opertors of distribution with logistical local networks	<ul style="list-style-type: none"> <li>-Stable local presence (operative headquarters or clients in municipal /provincial field)</li> <li>-Good operating efficiency (high in local field)</li> <li>-Good efficiency in processes (management systems for controlling routes and vehicles)</li> <li>-Adequate car fleet (euro/low impact)</li> <li>-Willingness to manage the last mile in favor of the non-accredited operators (note: the courier services explicitly expressed no interest in the management of transport for the third party operators)</li> </ul>	Local/community accreditation	<p>Conditions of maximum efficiency (hours of access) in the whole municipal field</p> <p>Preferential conditions for parking and/or carparks dedicated to the loading/unloading in the whole municipal field</p>	Long duration(semestral or annual)
C. Local operators of transport endowed with an adequate car fleet	<ul style="list-style-type: none"> <li>-Stable local presence (operative headquarters or clients in municipal /provincial field)</li> <li>-Adequate car fleet (euro/low impact)</li> </ul>	Local/community accreditation	<p>Ample access opportunities in the LTAs with limitations during high traffic times</p> <p>Parking lots dedicated to the loading/unloading in the whole municipal field</p>	Long duration(semestral or annual)
D.Non accreditable operators	<ul style="list-style-type: none"> <li>-Operators occasionally in transit on the local territory (not A)</li> <li>-Discontinuous distribution/transport activity</li> <li>-Unfit car fleet</li> </ul>	Granting of municipal permits	<p>Temporary access and parking permits</p> <p>Time slots for limited access</p> <p>Offer of delivery services from accredited operators</p>	Short lived permits: daily or weekly

# B- FORESEEN IMPACTS (3/3)

advantages for the community and the PA	advantages for the Private Operators
<ul style="list-style-type: none"> <li>• Significant reduction of congestion (reduction in the number of local circulating vehicles and in cross traffic)</li> <li>• Significant reduction of pollution (a better accredited operators' efficiency leads to lower consumption and emissions;)</li> <li>• Low costs for the management of access and for the investments in technology control</li> <li>• Cancellation of investments in logistics (the accredited operators can offer services to the community, overcoming the necessity of the public building permits)</li> <li>• The Municipal Administration can adopt measures of intervention that are more incisive (ex. road pricing, limitations on parking, actions against inefficient operators) thanks to the agreements made on a widespread territorial level)</li> </ul>	<ul style="list-style-type: none"> <li>• The accredited operators will benefit in profitable conditions for access and parking, proportional to the level of efficiency and eco-compatibility of their car fleet</li> <li>• Clear and homogeneous regulatory benchmarks in order to plan investments on low impact infrastructures and means of transport;</li> <li>• Greater operative efficiency to follow the fall in congestion and the ideal parking conditions;</li> <li>• Involvement with the PA in the study of solutions for the support of non-accredited parties</li> </ul>

[www.sugarlogistics.eu](http://www.sugarlogistics.eu)

[www.sonoraproject.eu](http://www.sonoraproject.eu)



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Città	Tipologia veicoli in entrata	Note	Fascia oraria																							
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Reggio Emilia (B)	- veicoli con peso non superiore a 5 t	- ZTL da Lun-Sab																								
	- veicoli elettrici	- ZTL da Lun-Dom																								
	- veicoli con peso non superiore a 5 t	- Isola amb.le Lun e Giov - Isola amb.le Merc - Isola amb.le Mar e Ven																								
	- veicoli elettrici	- Isola amb.le Lun-Dom																								
Parma (delibera 2008) (B)	- trasporto merci appartenenti alle filiere dei tradizionali freschi e secchi, collettame, capi appesi, Ho.Re.Ca. (Hotel, Restaurant, Catering) - veicoli ecocompatibili (metano/gpl, bifuel o elettrico) e/o conformi alle norme Euro 3, Euro 4, Euro 5 - veicoli di peso =< 3.5 t - % di riempimento pari almeno al 70% della capacità di carico (in volume/peso) del veicolo - sistema di localizzazione che consenta la tracciabilità del veicolo	- ZTL e ZPRU																								
	- trasporto merci appartenenti alle filiere dei tradizionali freschi e secchi, collettame, capi appesi, Ho.Re.Ca. (Hotel, Restaurant, Catering) - veicoli ecocompatibili (metano/gpl, bifuel o elettrico) e/o conformi alle norme Euro 3, Euro 4, Euro 5 - veicoli di peso =< 3.5 t - % di riempimento pari almeno al 70% della capacità di carico (in volume/peso) del veicolo - sistema di localizzazione che consenta la tracciabilità del veicolo	- Isola ambientale e Via Mazzini																								
Piacenza (A)	- veicoli tradizionali (gasolio o benzina) - veicoli a basso impatto (metano, gpl, bifuel, ibridi ed elettrici) - veicoli tradizionali (gasolio o benzina) - veicoli a basso impatto (metano, gpl, bifuel, ibridi ed elettrici)	- ZTL																								

# SO.NOR.A OUTPUT O5.5.4 – AIMS AND GOALS (2/2)

## General aims of the output

- The Output aims to promote an integrated approach between Private Operators and Public Administrations within a National or Transnational context such as the **South – North Axis**.
- The Output aims to have the **logistic network effectively sustainable, both environmentally and economically**

## Operating goals of the output

- Create an inter-relationship **between Public Administration and Private Operator Big Operators** to facilitate the understanding of mutual needs and critical issues and to identify shared, concrete and sustainable solutions which might **be implemented all over the South – North Axis**
- **Identify solutions to manage the first / last mile:** optimizing the *structure of the logistic networks*, the operational planning (*routing, etc.*) and the choice of optimal procedures (lead-time reduction, etc..)
- **Identify solutions useful to lead decision-making processes** in the urban and metropolitan areas of Local Public Administration, to a higher level of **territorial scale (such as Central Europe and the South – North Axis)**. These solutions are also intended as an optimum scale useful to ensure congruence between the organisation of the first/last mile and the size of transnational corridors