



# NEW CONCEPTS FOR THE DISTRIBUTION OF GOODS

*Deliverable 10 of the Success Project*

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## FOREWORD



Jean YATES, Emil CALOTA, Denis LEROY

*As senior political representatives of the SUCCESS cities we have been personally involved in the project from its beginnings as a Proposal submitted to the CIVITAS Programme in 2004. We have been honoured to take part in the second phase of CIVITAS and we have been pleased to see how well the plans have been implemented in our cities and how our citizens have benefited.*

*The rich cooperation that has been the hallmark of SUCCESS, both between the cities and between local partners in each city, has resulted in greater understanding and mutual respect between different organisations and different cultures. This will have long-lasting effects that will benefit all who have been involved in the project.*

*We have been pleased to cooperate with the European Commission and the wider CIVITAS family, and have contributed to the CIVITAS Political Advisory Committee.*

*We trust that this document will provide useful lessons for others considering the adoption of measures similar to those that we implemented in the SUCCESS project.*

**Denis Leroy**, *Communauté Urbaine de La Rochelle, Vice Président en charge des transports*

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# 1 SUCCESS PROJECT

SUCCESS (Smaller Urban Communities in Civitas for Environmentally Sustainable Solutions) is a 4-year project, within the European Research and Demonstration Programme CIVITAS II, with 12 partners including local authorities, transport companies, universities and experts from La Rochelle (FR), Preston (UK) and Ploiesti (RO). The main objective of SUCCESS is to demonstrate that, with an ambitious package of mobility and traffic management measures, significant results can be provided regarding sustainable transport and energy policy in small and medium sized cities. SUCCESS addresses technical, social, environmental and economic aspects of an integrated mobility strategy. As a demonstration project, SUCCESS involves extensive investment in the participating cities, along with a large range of stakeholders and integrated packages of demonstration measures. Several actions have been engaged in each city ranging from controlled access zones to biofuels, from real time information systems to alternative modes for transport, from cycle and walking paths to integrated ticketing. In total, more than 50 different projects have been set up involving a large number of stakeholders leading to a very wide scope of sustainable mobility management and implementation.



The main goals of SUCCESS are:

- To demonstrate that vehicles using clean and alternative fuels can be an efficient choice for urban transport
- To demonstrate that, with an ambitious package of mobility and traffic management measures, significant results can be seen regarding sustainable transport and energy policy
- To demonstrate that accession countries, soon to be new member states, can learn from our previous mistakes and contribute to urban collective transport issues, while implementing at the same time actions promoting alternative transport modes
- To contribute deeply to many different related research and assessment activities such as new, all-inclusive training and communication initiatives supporting the project objectives

La Rochelle, Preston and Ploiesti represent well the medium-sized cities in Europe. Most of medium sized cities are built around an historical city centre. This city centre is quite often rich with several types of shops as well as craftsmen and small industries, with other commercial or tourist areas scattered around in the city. Commercial and industrial zones have grown up in the surrounding areas and are accessible within a short time.

Regarding transport, the main characteristics of such cities are their small surface area, the human size of relationships and their small investment capacity. Buses often provide the main form of public transport.

Medium sized cities generally have a low demographic density, with the population often spread over a large area, sometimes in surrounding small towns which are included in the "life zone". On the one hand this means short travel times, good accessibility and freedom for travelling, but on the other hand it makes collective transport very difficult to organise.

In such cities, relationships between citizens and between citizens and politicians are closer. The proportion of inhabitants involved in the city life is quite often higher than in larger ones: through different associations and clubs, inhabitants come to know each other more easily and have often direct access to politicians involved in these motors of the city life. So the city culture is more widespread and is shared by a many inhabitants.

Smaller cities have in general lower investment capacity; this capacity is not proportional to size and it is sometimes difficult for the local authority to raise financial levers to fund projects.

## 1.1 The Project Consortium Cities

### PROJECT CO-ORDINATOR :

Communauté d'Agglomération de La Rochelle (CdA), FR

### PARTNERS :

Ville de La Rochelle (Ville de LR), FR

EIGSI, Ecole d'Ingénieurs de Génie de Systèmes Industriels, FR

Lancashire County Council (LCC), UK

Preston Bus Ltd (PB), UK

Transport and Travel Research Ltd (TTR), UK/FR

Preston City Council (PCC), UK

South Ribble Borough Council (SRBC), UK

Primaria Municipiului Ploiesti (PMP), RO

Regia Autonoma de Transport Public (RATPP), RO

Universitatea Petrol-Gaze Ploiesti (UPGP), RO



## 1.2 La Rochelle

La Rochelle lies on the Atlantic Coast of Western France. The Urban Community of La Rochelle includes 17 surrounding towns and La Rochelle itself. 160,000 inhabitants live in this area of 20,650 hectares and the total population may reach 250,000 people in summer. Based on a strong maritime heritage with several ports (commercial, leisure, fishing), the economic dynamism of the Urban Community of La Rochelle is the main factor of evolution of the city and the foundation of the urban strategies among which policies in favour of the framework of life and urban ecology (sustainable transport and protection of the landscape) stand in first position.

The Urban Community of La Rochelle has been involved for several years in improving urban transport and more specifically in introducing clean vehicles, developing new concepts for sharing vehicles, bicycles, in implementing Park + Ride, and even starting the "car-free day". Clean transport is not the only environmentally friendly improvement introduced in the town. Other actions have already been started to make the city one of the best in the country for environmental issues. Among these are "master planning" for wind turbines in urban areas, an observatory for air quality (ATMO existing since 1976), coastal protection studies (with La Rochelle University) and littoral management, electric boats for collective transport in the harbour. So SUCCESS is clearly part of the global environmental strategy of the local authority for improving quality of life in all of the city's communal areas.

## 1.3 Preston

Preston is England's newest city – city status was granted in 2002. It has a population of 129,000 plus suburban areas in South Ribble (combined population 250,000). Preston is the administrative capital and largest commercial centre of Lancashire in the North-West of England.

Preston is, however, an ancient place, receiving its Charter in 1179 - its historic Preston Guild is celebrated every 20 years with the last celebration in 1992. Preston has a strong economic and retail base. The area is also on the threshold of major regeneration, which will see a transformation of Preston's inner urban areas. This transformation is community-led with the Council and its key partners giving full support. The Council - in partnership with the private sector - is also working on a multi million pound scheme to redevelop Preston's City Centre through better retail, transport, housing, office, leisure and other mixed uses. Preston's student population is acting as a major catalyst too. With over 30,000 students, the University of Central Lancashire in Preston is the sixth largest and one of the fastest growing Universities in the UK.

Preston is already a UK leader in the field of transport telematics through its involvement in the UK UTMC programme and Lancashire County Council was recently awarded the title of UK Local Transport Authority of the Year 2004. The planned major regeneration of the city centre has created

an opportunity for SUCCESS to support a step-change in the provision of sustainable transport systems within the city.

## **1.4 Ploiesti**

Ploiesti City is located in the south of Romania 60 km north of Bucharest, the capital of Romania. Ploiesti is the capital of Prahova County and is located south of the Sub-Carpathian hills and north-west of the confluence point of two main rivers, Prahova and Teleajen. The municipal economy is characterised by a concentration of large and very large businesses. The population of Ploiesti went from 56,460 as indicated by the December 1912 census returns, up to 252,715 in January 1992. At the end of the year 2001, the population had slightly reduced to 248,688.

Ploiesti City (5,844 ha) is intended to become the nucleus of a metropolitan area, which will include some nearby villages adding around 70,000 new inhabitants to the administrative area. The road network has a radial-ring structure and extends from the city to the neighbouring villages. The municipal roads comprise over 800 streets with a total length of 324 km. East and West ring belts mean around 5,300 vehicles transit Ploiesti each day.

Ploiesti is situated at the crossing of the European Corridors IV and IX.

Ploiesti is a railway hub providing connections between Bucharest, Transylvania and Moldavia. The city has several railway stations for passenger and goods transportation.

Ploiesti is also an important national and regional motorway hub. The municipality lies at the confluence point of the North-South and East-West axes, respectively at the crossroads of Transylvania-Bucharest (Danube River or the Black Sea) and Moldavia-Oltenia (the sub-Carpathian connection).

The local transportation company RATP, which is municipality owned, provides connections to all areas within the city. The municipal vehicle fleet comprised 193 buses, 62 trams and 10 trolleybuses carrying about 70 million passengers annually.

## 2 LA ROCHELLE

### 2.1 EXTENSION OF URBAN FREIGHT DISTRIBUTION CENTRE

#### 2.1.1 City Context

The problem of the deliveries in city centre became a preoccupation of the towns which look for innovative solutions. In France, the law SRU (law relative to the Solidarity and Renewal Urbain) allows them to plan within the framework of the “plan de déplacements urbains” – Plan of urban displacements - PDU *“the stake in coherence of schedules and weights and dimensions of the vehicles of delivery within the perimeter of public transports. It takes into account needs in surfaces necessary for the good functioning of the deliveries to limit the congestion of ways and parking areas”*. The urban logistics is thus in full evolution as the experimental experiments of starting of centres of urban distribution (CDU).

In February, 2001, The ELCIDIS program (Electric City Distribution System) began in La Rochelle, supported by the European Union, the region Poitou-Charente, the ADEME, the General Council of Charente-Maritime, the CCI of La Rochelle, and the Community of town of La Rochelle.

The program proposes a solution allowing to manage better the transportation of goods in city by organizing their distribution (casting) by appropriate (clean) vehicles, by facilitating less generative deliveries of congestion and pollution.

The ELCIDIS program associates the implementation of a platform for loading/unloading and the deliveries by battery-driven vehicles in the city centre.

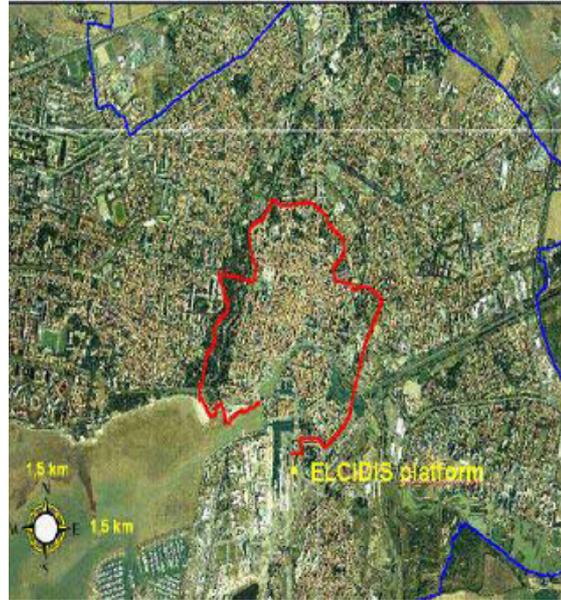
The Elcidis experiment shows that the forecasts on which this operation was based were not achieved. Since it was one of the first examples of such implementation in Europe, this is not surprising. The knowledge gained through these 3 years will allow the city to draw up a better strategic plan and to design a methodology for implementing such “city logistics” approach in similar medium sized towns.

Urban Community of La Rochelle had launched in February 2001, the Elcidis Platform during a former European Project. It is a city distribution centre using electric vehicles the program was initiated by the Urban Community of La Rochelle within the framework of a European project named Elcidis: Electric Vehicle City Distribution.

It was implemented as a result of the partnership between the Urban Community of La Rochelle, Europe, the General Council of Poitou-Charentes, the General Council of Charente-Maritime, the Chamber of Commerce and Industry, ADEME, PREDIT and EDF.

In the beginning, it was dedicated only to parcels distribution, but this evolved and Elcidis manages also pallets and has developed ancillary services. The platform is located in edge of the historical and commercial heart of the city of La Rochelle. The deliveries realised by ELCIDIS concern only the historic city centre (in red in the photo)

Conveyers, who cannot (Trucks of 3.5 tonnes and over are not allowed to enter the city centre after 07:30) or do not want to enter in the city centre, can discharge goods at the platform. Then, parcels and pallets are gathered by city's sector and are delivered to their recipients by electric vehicles.



The room has a surface of 777 m<sup>2</sup> : 727 m<sup>2</sup> to store and to handle and 50 m<sup>2</sup> for offices. The first operator of this platform was a local conveyer, "Genty Transport". The contract finished the 31.10.2006. Although this trial provided a wealth of insights, results did not meet the initial expectations in terms of quantity of distributed goods and number of carriers involved in the process.

The main reason was linked to the management of the whole system which was operated by the carrier: it was difficult for this company first to convince competitors to share the platform, then to carry on specific activities with the shopkeepers and various customers. Marketing activities were mainly realised by the Urban Community and the operator did not put enough effort in those in order to increase the distribution market. This of course had a negative impact on the works of the measure 10.2.

### 2.1.2 City Objectives

The overall objective is to significantly decrease the transport of any kind of goods in the town. It has to be considered within a global city logistics approach. This objective concerns the inner city centre as well as large commercial areas on the surroundings. More than any other WP this one must focus clearly on cost and time effectiveness since several types of stakeholders are concerned (deliveries, producers,).

Others objectives will be as follows:

- Pollution and noise reduction in the city,
- Improvement of security and reduction in severance,
- Simplification of urban traffic (reduction of traffic congestion).

In order to counter balance these trends, the first objective of this measure is to increase the flow of goods going through ELCIDIS. Several ways were to be considered concerning both the type of activities (diversification) and customers of ELCIDIS and the extension of the city surface covered by controlled city logistics. This should allow ELCIDIS to be independent and profitable.

The second objective was to define and to use the best associated clean vehicles.

The purpose is:

- to allow the platform to be autonomous and profitable at the end of this second phase of its life.
- to diversify the activities of the platform which, following the example of the road transport of goods is extremely dependent on the economic situation, proposing, besides the delivery of the parcel and the pallets for the handling carriers, the storage of goods, the delivery for small businesses as the florists, the caterers or still the home delivery for a supermarket.

### 2.1.3 Achievements



The main achievements of this measure were:

- New management and relationships with Urban Community
- Renewal and extension of the activities of the distribution centre
- Increase of customers and stakeholders

Unfortunately, due to the lack of suitable vehicles, the objectives for the renovation of the distribution fleet could not be reached. However, everything is prepared for the integration of these vehicles as soon as there are available and homologated on the French territory.

As a consequence, at the end of SUCCESS project, the commercial activities of ELCIDIS started to grow significantly and the trends showed a reasonably good future for it.

## 2.1.4 Implementation actions

### **Procurement**

This task was a very important issue in the process of re invigoration of ELCIDIS activities. Since one of the main reasons of the poor performance of the system was linked to the operator, it was necessary to find a company which will be really involved in the rebirth of the platform.

The first point was to find the best appropriate way to establish perpetual relationship between the operator and the Urban Community. An innovative partnership was set up, for the first time in France in this domain: the "Délégation de Service Public"; this type of contract allows the delegation of the operation of a public service to a private company. It was carried out at the same time for 3 new mobility services: ELCIDIS management, Car sharing operator and Electric and Hybrid buses operator in La Rochelle. So the same company would have the responsibility over these 3 areas. Apart from the obvious commonality of electric motorisation, other convergent points could be examined, such as for the goods transportation, the use of buses at non peak hours for transporting goods, the sharing of vans between ELCIDIS and car sharing subscribers,.....

According to the French law, the tender lasted 10 months:

- First declaration of interest call was launched in December
- Specification book was realised between September and January
- It was sent to the short listed companies in February
- Answers to the call arrived in April
- Negotiations and adaptations went up to the end of July
- The choice was made public in September.

The operation started on the 1<sup>st</sup> of November.

### **Technical**

Several actions were conducted in order to reorganise the whole process of the distribution platform:

- First a specification book has been elaborated prior to the call for tender;
- Then a first period of almost one year was dedicated to the analysis of the position and operation of the platform with regards to the global distribution of parcels and pallets in the Urban Community (technical and commercial aspects). This led to several modifications in the activities realised by ELCIDIS and the implementation of new tools;
- The next phase was the set up.



The major modifications concerned :

- The development of diversification activities, mainly the integration of externalisation tasks from the carriers;
  - The part time transfer of ELCIDIS vehicles to the Car sharing system (LISELEC);
  - The renovation of the warehouse and handling equipments;
- 
- The search and test of possible new vehicles, but no homologated ones could be found up to now;
  - The implementation of new IT software, hosted in the logistics base, and specifically planned for the management of services at the urban distribution activities. This software system includes hardware, software and communication technologies in order to control and operate with real time communication with the vehicles.
  - The set up of reporting methods from the operator to the Urban Community;



The technological solution and the telematics infrastructures at the platform foresee the use of Tools and services for the rationalisation of the information flows among the different actors involved in the logistics chain (B2B), the logistics system and the users (B2C). The system was realised in a way which will easily allow a later seamless integration of advances in solutions, providing tools and systems for the integration of the logistics system with the available information on the traffic and mobility and for the use of RFID technologies;

### **Partnership**

A new long term collaboration procedure had to be designed to work with carriers. Since the new operator is not a carrier, competition aspects fell and negotiations were conducted directly with each company. This included a revision of the tariffs.

### **Promotion**

Promotion was realised through direct contact with carriers and haulers as well as shopkeepers and their representatives.

## **2.2 DEVELOPMENT OF CUSTOMERS SERVICES ASSOCIATED TO GOODS DISTRIBUTION**

### **2.2.1 Context**

Transporting goods from outskirts to the city centre (and reverse) is the base of goods distribution but does not represent all the logistic flows. Added value can be looked for in other transports and with retailers and craftsmen in order to improve the economic and environmental sustainability of the whole system. This added value may come from new services delivered by goods operators in B2B or B2C relationships and may concern for instance:

- Home deliveries with clean vehicles;
- Delivering goods at P+R or at fixed locations : people leaving their car for work will find the shopping they ask for when returning to their car;
- Recycling packaging;
- Delivering fresh vegetables and fruit, fish from outside wholesale markets;
- Providing goods transport inside towns between trades (ex dry cleaner and restaurants, flower shop and individuals).

### **2.2.2 Objectives**

ELCIDIS activities were a first test for introducing such new services in the scope of controlled goods distribution. However, although it was successful, this was constrained by the nature of vehicles and the area covered by ELCIDIS.

The objective is to extend this type of service towards other domains and involve new partners in their development.

### **2.2.3 Achievements**

The main achievement is the establishment of a partnership with two supermarkets, that agreed with the purpose to extend the Delivering goods services at the La Rochelle P+R. This agreement allowed the development and creation of a study, finalised to define the management of the Delivering goods services.

Figure 1: prise de commande manuelle

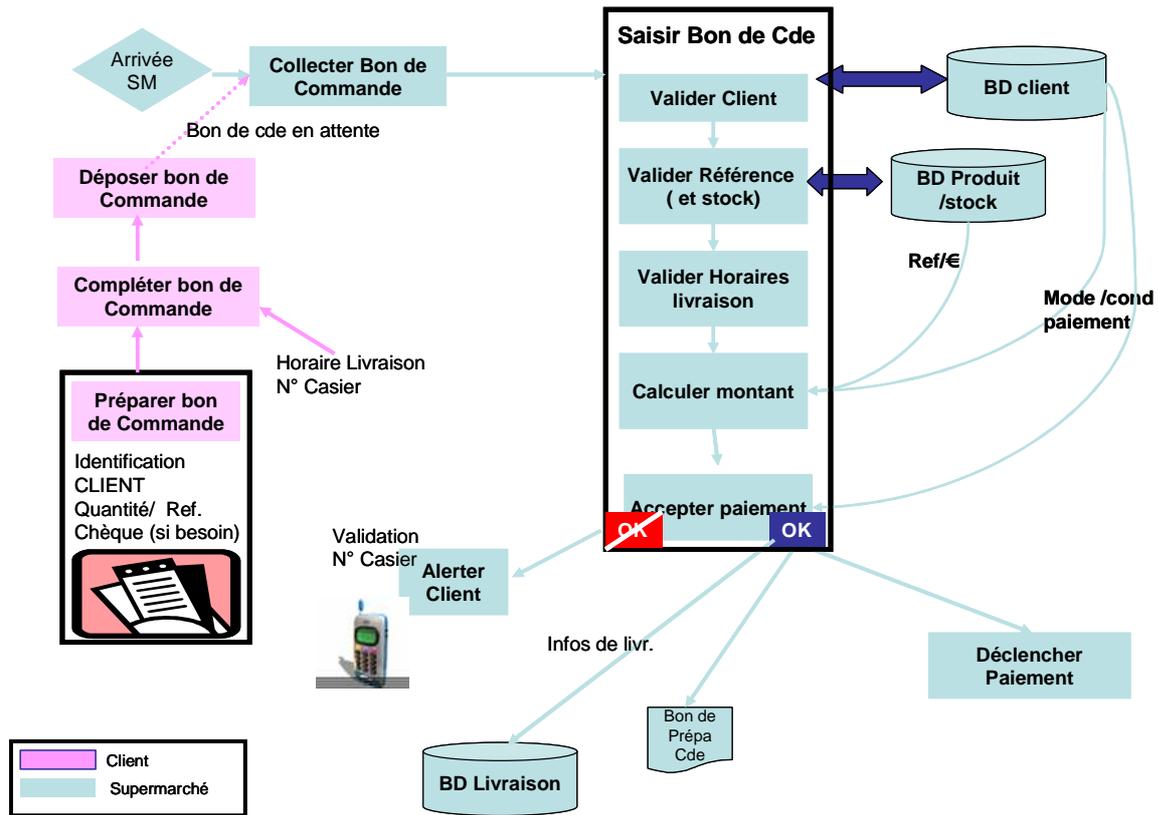


Figure 2: prise de commande informatisée

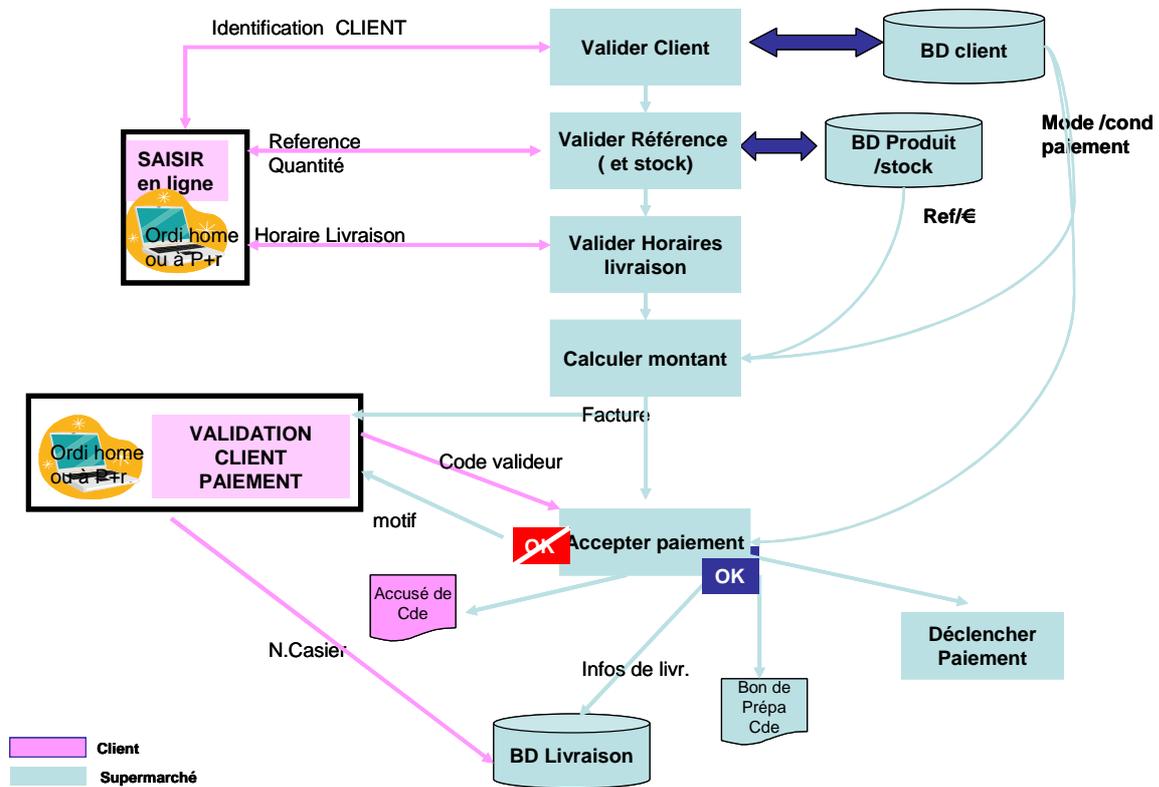


Figure 3: livraison

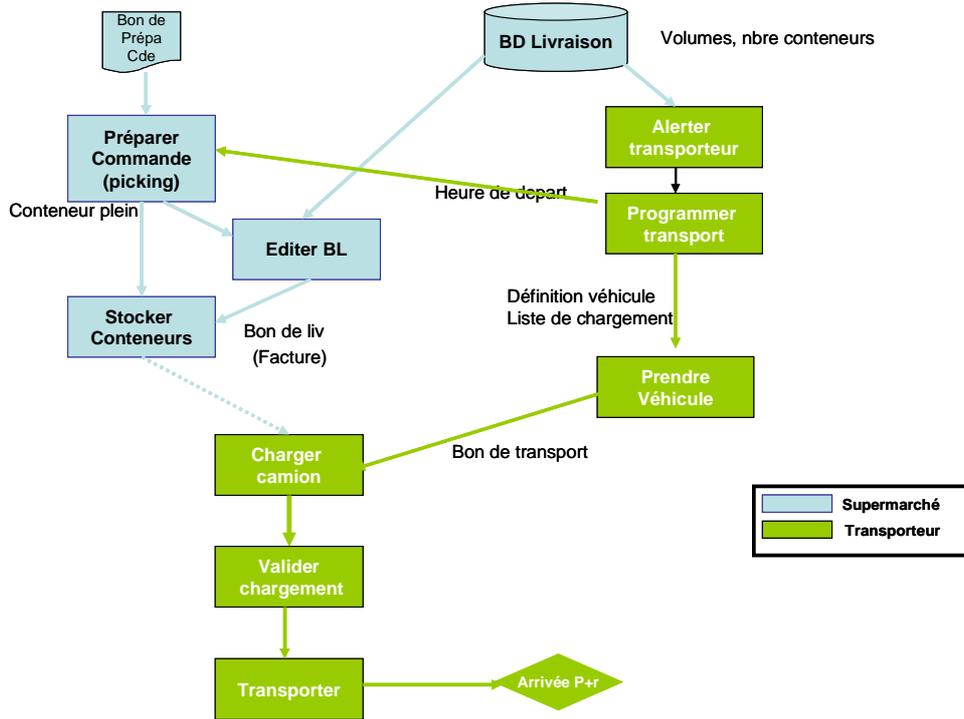
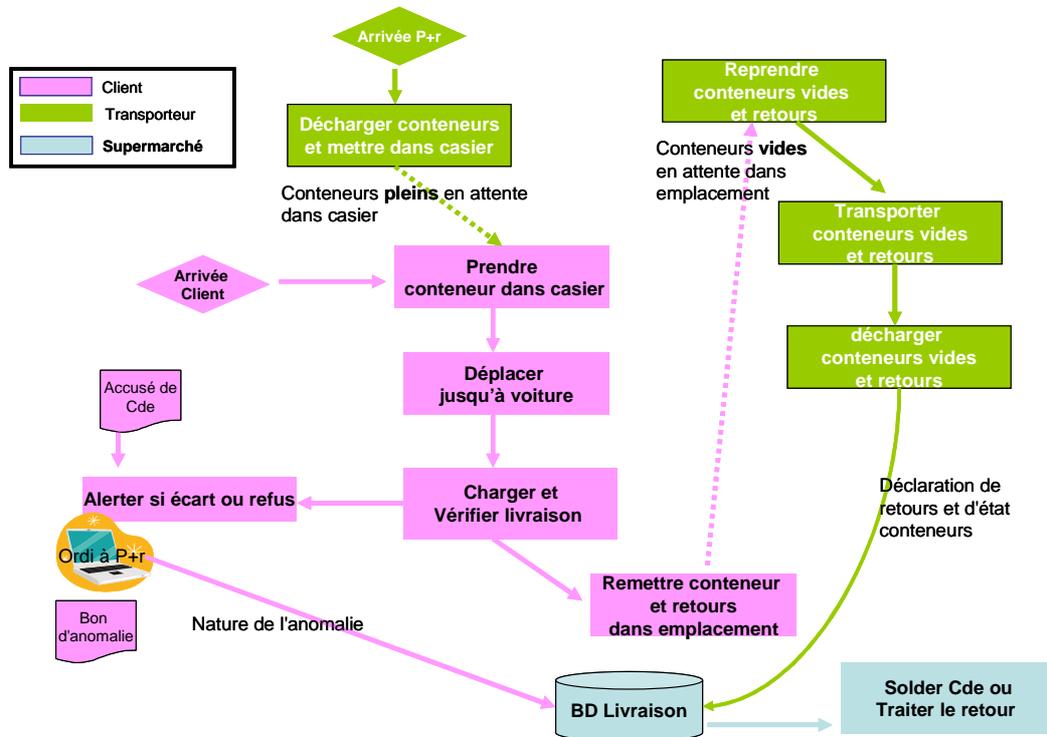


Figure 4: reception



## 2.2.4 Implementation and operation actions

The main actions concerned the organisation, the meetings between the stakeholders and the set up of specific processes linked to these services. All these activities required a lot of discussions, negotiations with the managers of the shops and supermarkets or their representatives and promotion towards customers.

The three main realisations are:

- *Extension of home deliveries from the supermarkets*; contacts were made between ELCIDIS and several supermarkets located near the City Centre. The principle is to avoid customers to carrying their purchases and to deliver directly to their home. Two supermarkets agreed on the process, which was new compared to a previous implementation. The process of delivery in residence is generally the following:
  1. The customer asks a special coupon at the entrance of the supermarket for home deliveries;
  2. They choose products in a store (fills in a caddy) ; all products are accepted except frozen , and bottled water packs are limited (or extra charge);
  3. The customer pays for the purchases and the price of the home delivery which depends on the total amount, and determines the hours to be delivered;
  4. The store contacts Elcidis which comes to take products chosen by the customer;
  5. Elcidis delivers the customer to his residence;
  6. Elcidis invoices the store.
  
- *Delivering goods at P+R*: this is another version of the previous case; it is meant for subscribers of the P+R and could be extended to other places in La Rochelle where there are other type of "subscribers" (ex pleasure harbour). *This has been studied but is not yet working (should be by the end of the project)*. In this process customers make an order to a supermarket from an on line catalogue, and pay either with credit card or with a cheque note joined to the order. This order is left to a specific place (for instance entrance of P+R) and collected at regular times. Once the order is validated, goods are placed in a specific basket and transferred to the P+R. There the basket is put in a locked box and the code is given to the customer by electronic message.
  
- *B2B services*; this is another version of transporting goods between professionals. It is dedicated to service activities and may consist in transporting goods or materials at periodic times (like napkins from restaurants to dry cleaners) or flowers from the shop to homes

## 2.3 DEVELOPMENT OF PARTNERSHIP

### 2.3.1 Context

Distribution of parcels and pallets is not the only flow of urban freight. A lot of other goods are transported in a city and sometimes these activities are not at all optimised.

### 2.3.2 Objectives

The measure objectives are to encourage the involvement of logistics stakeholders in the optimisation of the supply chains.

### 2.3.3 Achievements

The main achievements are the increase of awareness among stakeholders and the first changes in their behaviour regarding their flows.

The activity of creating and managing tools for **provide a wide range of management guidelines and techniques to optimize freight transport efficiency** involves the implementation and the updating of a **web portal** to increase of awareness among stakeholders. Furthermore, such portals will be a link with the partners who have adhered to the project so as to share the experiences and the methodologies set up by activity implementation.

Fig. 5: site map

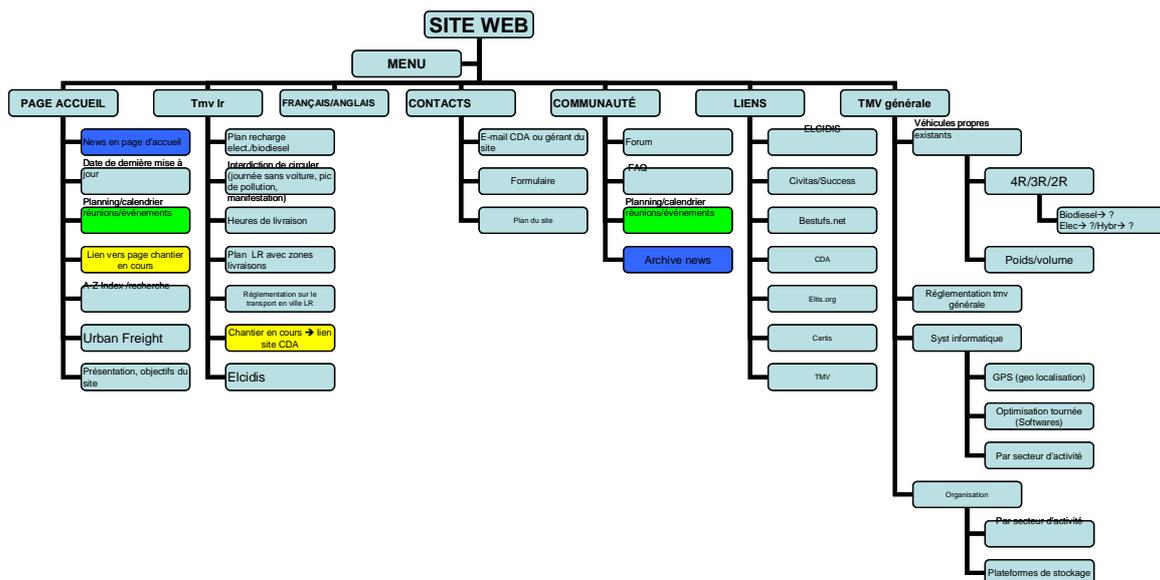


Fig 6: screenshots on the La Rochelle city logistics web site



### 2.3.4 Implementation and operation actions

Concerning the behavioural changes, actions will be conducted following two axis:

- To make professionals more sensitive to best practices implemented in other cities,
- To support the most motivated stakeholders to undertake actions based on these best practices, and adapted to the local context.

Several meetings have been conducted with identified target groups in partnership with trade unions (CAPEB for building trades, bakers, restaurant owners, small businesses representatives). This approach, supported by a questionnaire to be addressed to the various target groups, aims at providing them with concrete answers to their first questions and then at defining some potential improvements.

In order to support these actions, an information system has been designed. It is a web site dedicated to professionals, regularly updated thanks to benchmarking activities. It will notably consist of:

- Information on clean vehicles that can be used by small businesses for the transportation and the delivery of goods,
- Description of best practices,
- A forum of discussion,
- Links towards other web sites that can be of interest in this field.

## **2.4 DEVELOPMENT OF A METHODOLOGY**

### **2.4.1 Context**

While UFT organisation is considered by all as requiring a global approach, a systemic methodology in order to optimise the whole flows as well as their integration in transport strategy at a city level, it appears that trials are quite often set up independently in each city, that possible consequences are not all foreseen; then the adverse affects do appear to have a negative impact on the confidence in those demonstrations and their ability to reduce UFT problems like congestion or pollution.

Among all factors which penalise UFT, location of delivery bays is one of the basic recurrent problems. Few cities have a real control on the development of these zones and of their usage. New technologies can help the supervision of the usage but one of the remaining problems is the evolution and adaptation of the sizes and places of these delivery bays. So it was decided in the project to develop the part of decision aid tool which concentrates on this problem.

### **2.4.2 Objectives**

The main objective is to develop a methodology allowing local authorities of urban transport to optimise the share of the whole transport system between passengers and freight. The tools to assist decision-making in this domain are therefore to be adapted to the reality of the decision-maker, who wants to get an estimate of the consequences of the implementation of a combination of simultaneous actions. With these tools, they will consider the consequences of their decisions with regards to the two types of transport demand on the general modal split and flows, on the environment (emission of greenhouse gases and pollutants, etc.), on the economy and the overall performance of the urban freight transport system in the city. It is then question to integrate new concepts goods distribution in the city to the tools.

As mentioned before, the objective of the project focused on delivery bays

### **2.4.3 Achievements**

The main results are

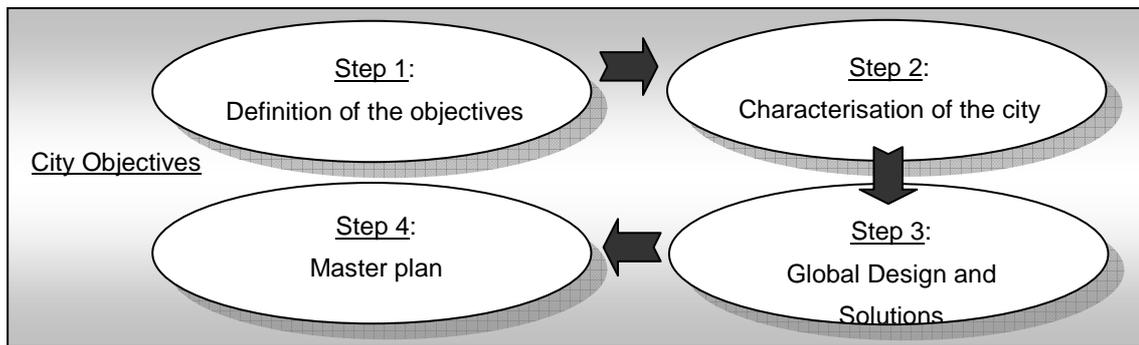
- Development of a decision aid prototype for optimising the location of delivery bays
- Elaboration of a global approach for urban freight transport in medium sized cities

## 2.4.4 Implementation

### 2.4.4.1 Methodology

In order to facilitate future implementations in urban Freight, the process of setting up the experimentations in La Rochelle but also in other cities have been analysed; this led to the formalisation of the different steps which must be followed in order to achieve successful implementations in urban goods transportation.

This might be summarised by the following diagram:



#### **Objectives definition**

This step is divided into three phases:

- the definition of the target groups,
- identification of their requirements and preferences
- definition of the objectives

#### **Characterisation of the city**

This step aims to identify the main characteristics of the City regarding urban freight and to dimension the potential effectiveness actions. The specification of the city is based on three criteria which identify various zones in the city:

- the distribution of the logistic points which are the geographical places where a delivery or a collection of goods can be made
- the distribution of the points facilitating the transit of goods (logistics facilities)
- the variability of points which is the variation of the numbers of points in each zone

#### **Global design and Solutions**

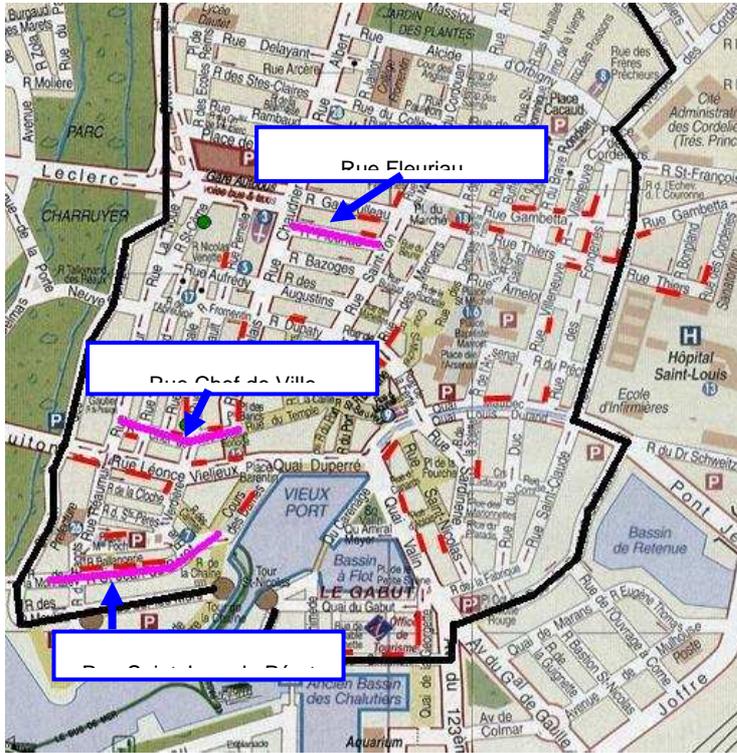
This step is divided in two phases:

- The global design whose objective is to ensure coherence between the future actions;
- The detailed definition of the solutions which lead to a first estimate of planning and cost.

## Master Plan

This last step finalises all the sub projects (corresponding to one or more of the above solutions) which are to be launched, the relations between them, the resources required etc.

### 2.4.4.2 Optimisation of delivery bays



Based on the commercial and industrial activities of the zone, and surveys made directly with stakeholders, this simulation tool :

- dimensions the good flows in the area according to the frequency of goods movements
- analyses the provision of existing delivery bays to the flows
- estimates the probabilities for having illegal delivery stops
- proposes the location and size of delivery bays

## 2.4.5 Conclusions

Key conclusions from the package of freight measures implemented in La Rochelle, proposed and proved the validity of an integrated and innovative approach to the urban logistics, based on the cooperation among the different actors involved in the logistics chain and on the adoption of innovative frame distribution schemes in urban areas and historic centres.

The service models defined by Success Project in La Rochelle are based on the concept of an Urban Distribution Centre (UDC) as a pivotal element of an overall and efficient rationalization and coordination system (environmental and economical) of freight collection/delivery. Elcidis logistics base represents the main infrastructure around which all the urban freight distribution should be organised.

In the definition of the adopted operational schemes and of the running services, the following elements were taken into account:

- The Elcidis “system” is made up of the logistic base, the IT technological platform, the fleet of eco-vehicles with zero emissions and the organizational infrastructure, which all together, plan, work and monitor the different services (basic logistics services and innovative additional logistics services) in the reference area.
- The main ELCIDIS activity is the organisation of the freight urban distribution to (and collect from) the final users (shops, offices, private citizens, etc) located in the historical centre of La Rochelle, This Elcidis reference area is however to be expanded in the future, according to the mobility policies which will be further adopted.

Besides the basic logistics services (“last mile” management), ELCIDIS is able to provide additional logistics services of which some are particularly innovative.

Thus, the Elcidis urban logistics services can be divided in two main categories:

- Basic city logistics services;
- Additional added-value logistics services;

Primary services have a priority in achieving a full and complete efficiency because of their “important dimensions” and “urgency”. Other additional services with a high innovative content represent future implementations equally important for the development of a new and more sustainable urban logistic model.

## **3 PRESTON**

### **3.1 FREIGHT ROUTEING AND SIGNING**

#### **3.1.1 City Context**

The movement of goods into, out of and around Preston is essential to ensure the continued prosperity and vitality of the City. Preston's economic well-being is dependent to a significant degree on the ease with which goods and services can be transported locally, to meet the needs of industry, businesses and local consumers. Business and industry efficiency can be adversely affected when deliveries are delayed due to congestion and this, in turn, can have significant impacts on the local environment.

While freight transport is vital to the local economy, it needs to be recognised that it can also have a negative impact on the local environment and local amenity. Effective management of freight movements is therefore vital to help meet the commercial needs of businesses and to minimise the negative impacts on the local environment.

Effective routing of goods vehicles supported by high quality signage and mapping, aims to ensure that freight traffic, particularly through traffic, travels on the most appropriate local roads, avoiding city centre congestion and sensitive residential areas. Effective routing on the most appropriate roads should also help to ensure that vehicles are more likely to have more predictable journey times, travelling at more constant speeds therefore providing economic and environmental benefits.

The technical work within Preston has focused on:

- Establishing a Freight Quality Partnership, comprising key stakeholders to find local solutions to local problems
- Developing a Preston Freight Strategy to outline the role of freight transport within the city and to indicate key areas requiring improvements in the efficiency, economy, safety and sustainability of freight movement
- Developing a Freight Forum (online) to allow information exchange on local freight issues
- Undertaking a signage review along selected preferred HGV routes, with recommendations for signage improvements to better inform HGV drivers
- Developing a Preston Freight map, designed to act in parallel to the improved signage to better inform HGV drivers and to ensure that vehicles remain on the most appropriate routes

The fundamental purpose of these measures within Preston is to help improve the efficiency, economy, safety and sustainability of freight movement within the local area, removing through traffic

from the city centre (particularly vehicles originating from the West and South West of the City, travelling towards Longridge in the North East).

The situation before the related CIVITAS measures were developed included:

- Limited engagement between local authorities and the freight industry to identify and discuss local freight issues and develop local solutions
- No overarching freight strategy in existence for the City to outline the important role of freight transport to City vitality and the issues affecting and resulting from it
- Conflicts between goods vehicles and pedestrians/cyclists/other traffic, particularly in city centre
- Unpredictable journey times, particularly for HGV traffic travelling through the City centre
- Negative environmental and operational efficiency impacts caused by drivers unfamiliar with the city getting lost, partially due to lack of appropriate advisory signage for HGVs
- Instances of HGVs using unsuitable routes in residential areas

### **3.1.2 City Objectives**

The primary objectives of the City of Preston in developing these freight measures (including the development of the FQP, the Freight Strategy, the Forum and the signage and mapping work) are to:

- Underpin Preston's position as a regional centre for industry and retail, through facilitating enhancements to local urban freight movement, to meet the needs of local businesses
- Develop a better understanding of freight movements around and through the City and the sub-Region
- Develop effective partnership working to achieve more sustainable distribution and reduce the environmental impacts of freight transport
- Better manage freight movements within the local area by providing HGV drivers with better quality information about which routes are most appropriate, efficient and safe to use

The development and implementation of the package of freight measures for Preston can lead to benefits in a number of key areas:

- Economic Competitiveness

Improving the movement of goods within and around the City can help Preston remain economically competitive within the Region and support its drive to become the North West's 'third city'.

- Environmental Improvements

The movement of freight around the City by HGVs contributes to air and noise pollution. Well routed HGVs with well managed drivers could, in turn, lead to reduced congestion, providing environmental benefits in terms of reduced vehicle emissions and improved local air quality.

- Road Safety

A reduction in HGVs within the City centre and on local residential streets, would have a positive effect on road safety and help improve local amenity and the local environment. These objectives can potentially be achieved through effective vehicle routing, supported by high quality signage and mapping.

The main objective was to develop and implement a strategic plan for city logistics, based on the experience of La Rochelle and other best practice

*Innovative aspects:*

- Learning from the experience of a leader in the field
- Adopting a holistic and inclusive strategy-based approach to development and implementation of local freight measures
- Comprehensive engagement and partnership working with a diverse range of key stakeholders
- Development of effective tools, designed to lead to both practical improvements on the ground and to act as promotion and dissemination material in their own right, raising awareness of the work

### **3.1.3 Achievements**

*CIVITAS has directly contributed to tangible results at the local City level:*

- Freight Quality Partnership established and 'live'
- Engagement with local stakeholders, including the freight industry in and around the City
- Development of a forward strategy for freight in the City, outlining key areas for review and improvement
- Preferred freight routes defined and mapped
- Recommendations on improved signage to help reroute vehicles away from congestion and the City centre
- Better information for HGV operators and drivers
- Improved operational efficiency through more predictable travelling time on preferred routes
- Reduced environmental impact through vehicles using preferred routes and avoiding sensitive residential areas
- Improved amenity within the City centre for other road users and pedestrians with removal of HGV through traffic

### 3.1.4 Implementation and operation actions

The work consisted of:

- establishing and managing, on an ongoing basis, a local Preston Freight Quality Partnership, designed to bring together a full range of diverse stakeholders from both public and private sectors to identify and discuss local freight issues and to find solutions to local problems
- to develop and partially implement a Preston Freight Strategy, which outlines the important role of freight in servicing the local economy and ensuring the City's ongoing vitality, while identifying areas for improvement in operational and environmental performance
- to develop an online Freight Forum, to provide public information exchange on local freight issues
- to review and improve local signage for HGVs, effectively routing HGV through traffic away from the City centre onto other appropriate routes
- development and dissemination of a supporting Preston Freight map, designed to provide high quality information to HGV drivers on preferred access routes to key delivery and collection points within the City and appropriate through routes to onward destinations
- Preston Freight map development

#### 3.1.4.1 Freight Quality Partnership



##### **Procurement**

No procurement process was necessary for the set-up and management of the FQP. The work involved project partners sharing responsibility for contacting key stakeholders in and around the City and inviting them to participate in the group, the aim of which is to find local solutions to local freight issues.

##### **Technical**

The set-up and management of the FQP was undertaken using a phased approach, with deployment increasing progressively as potential members were contacted, the group met for the first time and the planned programme of work was developed and agreed.

##### **Partnership:**

Prior to set-up of the FQP, key stakeholders at both the local and national levels were identified and contacted with an invitation to participate in the group. This initial FQP recruitment was undertaken by project partners, through existing networks of personal contacts and commercial business listings.

Feedback on key local issues was obtained from inaugural FQP members, helping to inform the process to be used to deliver the agreed measures. The wider FQP membership group receives all agendas, meeting minutes and supplementary information requiring review or for information. Additional local businesses have been contacted during the baseline survey process, providing the opportunity to further the work (and benefits of membership) of the FQP.

**Promotion:**

Direct telephone and email contact was used initially to promote the formation of the FQP and to recruit inaugural members. A logo has been designed to brand the FQP and a supporting press release will be produced and circulated to key trade press titles once the Preston Freight map is complete, helping to promote the work of the FQP to a wider audience. The map itself will act as a key promotion and dissemination tool for the FQP, carrying its own logo and the logos of the key partners and CIVITAS, with a planned national circulation through a range of appropriate dissemination channels.

**Training:**

No training activity was deemed specifically relevant to the set-up and ongoing management of the FQP.

**Operation:**

The FQP has been successfully established and is currently 'live'. It meets on a quarterly basis (with ongoing email contact, as necessary, between meetings) to review progress with the agreed measures and to make decisions on future actions and activities. TTR acts as the FQP Secretariat, producing agendas and minutes for the meetings and corresponding directly with its members. There is a challenge in maintaining interest levels among members and in encouraging regular meeting attendance. The FQP is effective in identifying local issues and in suggesting potential solutions, although progressing activities can take time, due to the need for collective FQP approval.

### **3.1.4.2 Freight Strategy Development**

**Procurement**

No procurement was required for the development of the Preston Freight Strategy as it was led by a project partner, TTR.

**Technical**

A staged approach was used for the development of the Freight Strategy, with an initial version being drafted and then circulated to FQP members for review and comment. A revised version of the draft Strategy is to be produced and then recirculated to FQP members for further review and comment. A final version of the Strategy is then to be developed and circulated for final FQP member approval. Once approved, it is expected that the Strategy will be designed and published.

**Partnership:**

Adhering to the process outlined above, the development and final approval of the Strategy will involve extensive partnership working and consultation with a wide range of stakeholders, through the Freight Quality Partnership membership. Copies of the draft Strategies are circulated to all FQP members to ensure each has an adequate opportunity to review and comment and to contribute to its further development. The final approved and designed Strategy will be expected to incorporate logos of the various participating FQP members, helping to provide visible support and endorsement for its development.

**Promotion:**

Once completed and approved, it is expected that the Strategy will be designed and published in printed format. Copies of the published Strategy will then be distributed to FQP members for onward dissemination to their contacts. An electronic version of the Strategy will be uploaded onto the Freight Forum webpage established to raise the profile of the work of the FQP. A press release will be drafted and issued to key trade titles to announce publication of the Strategy.

**Training**

No training activity was deemed specifically relevant to the development of the Freight Strategy.

**Operation:**

The initial draft of the Preston Freight Strategy was produced in February 2008 and circulated to FQP members for comment. Broad approval was received and a revised draft is currently being produced, due for circulation to FQP members mid-September 2008. It is expected that this revised draft will be discussed at the next FQP meeting, planned for the beginning of October 2008. Thereafter, a final version will be produced for FQP member approval and sign-off. This approved version is then expected to be designed and printed. As with any activity overseen by a committee, there is a challenge in ensuring that all members have had the opportunity to review Strategy drafts and are in a position to comment at the appropriate time. The Strategy will require collective approval of all FQP members and therefore must acknowledge the potentially diverse needs of the broad membership of the FQP. The FQP Secretariat ensures that adequate time is provided to members for review and comment on all draft documents. Once completed, it is expected that the Preston Freight Strategy will be considered a component element of the wider Lancashire Freight Strategy, developed by Lancashire County Council.

### 3.1.4.3 Freight Forum



#### **Procurement**

No procurement was required for the Freight Forum as it was led by a project partner, Lancashire County Council.

#### **Technical**

The development of the Freight Forum is due to be carried out using a phased approach. This will involve allocating space on the parent website initially to be populated with FQP related text, images and supporting documents. The text for the website will be drafted by a project partner, TTR and FQP deliverables, including the Preston Freight map and the Freight Strategy document will be uploaded and made available, once approved by the FQP membership. The Freight Forum site will be reviewed and revised regularly to ensure that the information available on it is as up-to-date as possible. This site will become the key reference point for FQP activity and will be designed to attract interest from new potential members and will provide appropriate FQP contact details.

#### **Partnership:**

The development of the Freight Forum website will be led by Lancashire County Council, with support from other project partners, including TTR. TTR will draft the text for the Forum webpage. It is expected that other FQP partners will also support the Forum site by providing their logos for inclusion on the webpage and by providing links to and from their own sites to help direct interested visitors to the Forum page to find out more information. The Forum webpage will heavily promote the Preston FQP, highlighting its work and deliverables and explaining how new interested parties can become

involved. The overall aim of the Forum webpage will be to try to establish and cultivate closer working partnerships with local stakeholders.

**Promotion:**

Once the Forum webpage is developed, approved and goes live, it will be promoted through press release to key trade press titles. It is expected that FQP partners will include links to and from the site on their own websites to direct potentially interested parties to the Forum page to find out more information. The Forum webpage address will be included on the published versions of the Preston Freight map and Preston Freight Strategy, to attract visitors and new potential participants. The Forum site is, in itself, a key promotion tool for the FQP, helping to highlight the work undertaken by the group.

**Training:**

No training activity was deemed specifically relevant for the development of the Freight Forum.

**Operation:**

The Freight Forum webpage is being developed during Summer 2008, with appropriate text being drafted and images sourced to help outline the work of the FQP. It is expected that the Forum webpage will go live in Autumn 2008 and will be populated with FQP supporting documents and deliverables, including the Preston Freight map and the Preston Freight Strategy. It is expected that, over time, as additional materials and outputs are produced by the FQP, these will be added to the Forum webpage. There is a challenge in ensuring that the material on the Forum webpage remains up-to-date and relevant and adequately informs visitors of the work of the FQP and inspires them to get in touch and become involved. Attempts will be made to make the webpage as interesting and engaging as possible, aiming to stimulate interest among potential participants and wider stakeholders.

#### **3.1.4.4 Signage Review and Improvements**

**Procurement**

No procurement process was necessary for the signage review work, although eventual signage upgrades will require commissioning of design, production and installation services. This will be led by Lancashire County Council Highways.

**Technical**

The signage work has been undertaken using a phased approach. The initial work involved a basic freight signage review carried out across the City, using TTR project partner staff to review signage for HGVs to and from key locations. It was then agreed that more detailed review work should focus on two preferred routes for HGVs travelling from the West and South West of the City to the Industrial Estates at Longridge, to the North East of the City. The availability and quality of signage for freight traffic along these preferred routes was reviewed by TTR staff and a report was produced, complete with images, to illustrate existing signage and to recommend improvements to help ensure HGVs adhere to the preferred routes, avoiding both the City centre and residential areas. The report

contained an annex outlining specific locations where signage improvements could be made and details of the recommended improvements. This report was submitted to Lancashire County Council Highways for further action. Follow-up work is now underway, involving LCC Highways staff visiting the recommended improvement sites to develop detailed design schedules for new or improved signage. Once these schedules have been completed, sign design and production can be commissioned, followed, in due course, by sign installation.

**Partnership:**

The work has involved two project partners, LCC and TTR, working closely together to carry out the signage review work and to make recommendations on improvements to signage at specific locations relating to the preferred routes for HGVs travelling from the West and South West to Longridge. Updates on the signage review process were provided at each FQP meeting, ensuring partners were made aware of progress and were given the opportunity to comment and advise. The signage review and improvement work is complementary to the development and dissemination of the Preston Freight Map, with the aim of the dual measures to help ensure drivers adhere to the most appropriate access and through routes.

**Promotion:**

The signage review work was promoted internally, within the FQP, to ensure that all members were made aware of progress. The review work and subsequent signage improvements will also be reported, in due course, in the press release which will be produced to profile the wider work of the FQP. The signage review work will also be described on the Forum webpage, which will be used to promote all FQP activity.

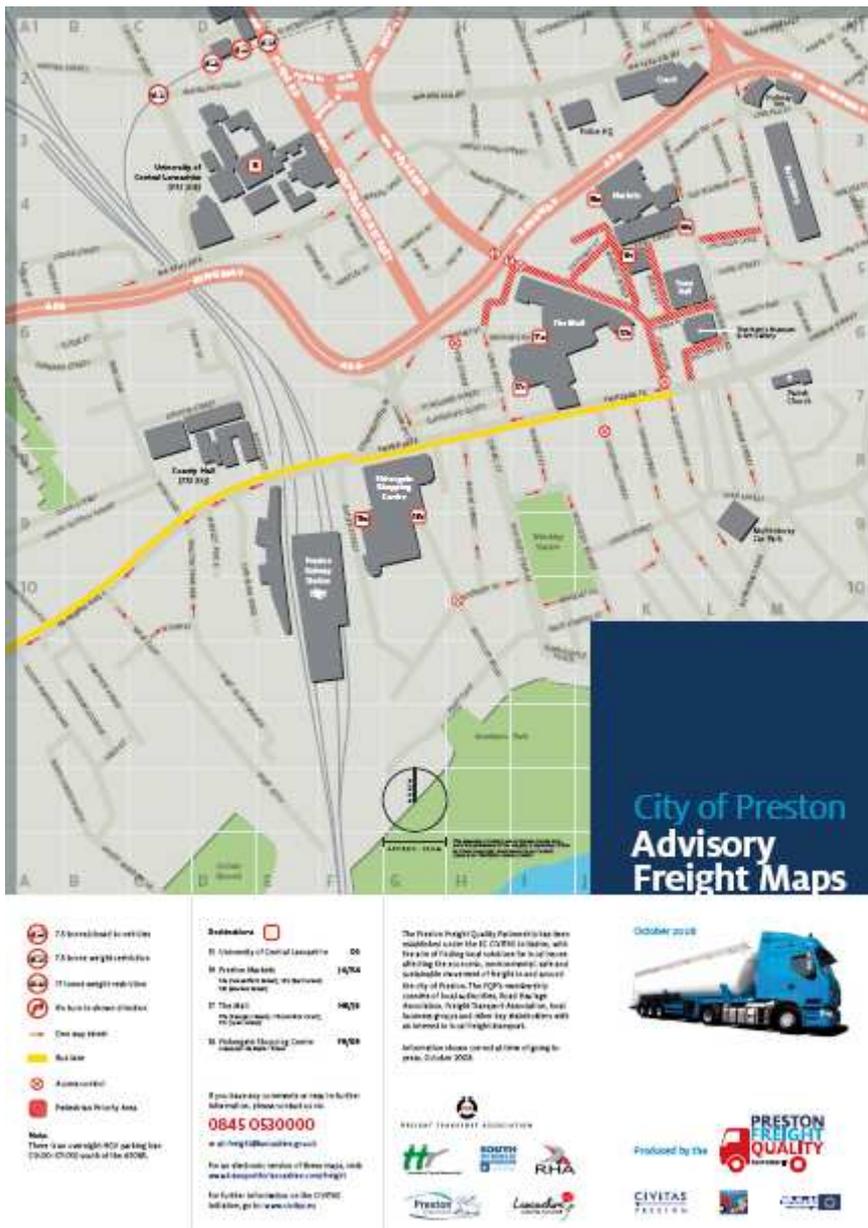
**Training:**

No training activity was deemed specifically relevant for the development of the signage review and improvement activities.

**Operation:**

The signage review work commenced in Autumn 2007, with the final report being submitted to LCC Highways in Spring 2008. Detailed design schedule development has commenced and is expected to be completed during Summer/Autumn 2008 with sign development and installation being commissioned thereafter. There is a risk that the time taken to develop and install the signs could extend beyond the existing project timescales due to the complexity of the work and the procurement process. This will be better understood once the design schedule work has been completed. The signage improvements along the two preferred HGV routes are complementary to the development, production and dissemination of the Preston Freight map, designed to provide high quality information to HGV drivers, including highlighting the preferred HGV routes.

### 3.1.4.5 Preston Freight Map Development



#### Procurement

A specialist cartographer/designer was commissioned to develop the designed version of the Preston Freight map. It was decided to use external design support after initial basic mapping was produced internally within LCC to outline locations of physical and environmental restrictions. This information then had to be transferred into schematic format to increase ease of use and specialist design input was required for this task. The designer was commissioned on direct contract to LCC.

#### Technical

A phased approach was used for the development of the Preston Freight map. Initial basic mapping was provided by the GIS team in LCC. This basic mapping outlined the locations of physical and environmental restrictions but did not provide additional information, such as key landmarks and preferred routing, which would be invaluable for HGV drivers. The basic information was then provided to a commissioned specialist cartographer/designer, who was given a brief to design a schematic map for HGV drivers, with one side covering the wider Preston area and the reverse focusing on the City

centre. The brief for the designer was to create an easy-to-use map for HGV drivers with key landmarks and reference points included and a clear outline of the preferred HGV routes for vehicles from the West and South West travelling to industrial estates at Longridge. Initial and revised versions of the maps were produced in Spring 2008 and circulated to FQP members for review and comment. A further revised version of the map was approved, subject to minor amendments, at the FQP meeting in June 2008. This approved version is now awaiting some further minor details to be added and then will go to print. Hard copies will be produced for distribution via various channels. The electronic version of the map will be posted on the Freight Forum webpage and will be available to download.

### **Partnership**

The development of the Preston Freight map has required extensive cooperation and partnership working between FQP members and stakeholders. Agreement of the appearance and content of the map was undertaken by FQP members and each was given the opportunity to review and comment. Close partnership working was required between LCC, TTR and the external designer to ensure that initial and revised drafts incorporated the required amendments and were making progress in line with expectations. The key freight trade associations were involved in detailed review of the maps to ensure relevance and suitability for their members. Key contacts in the LCC Highways Dept and at Preston City Council were also involved in the review process to ensure detailed local knowledge was well used.

### **Promotion**

The final printed version of the map will be heavily promoted. Hard copies will be produced and distributed to FQP members (including the trade associations, local Chamber of Trade etc) for onward dissemination to their contacts. Hard copies will also be provided to local businesses for onward dissemination to their suppliers and carriers. An electronic version will be available to download from the Forum webpage. A press release will be produced and circulated to the trade press to announce production of the map. The map is, itself, a key promotion tool to publicise the FQP and its work. It will carry the Preston FQP logo (first designed specifically for this purpose) and will also carry contact details for the FQP (including Forum web address) to allow interested recipients to make contact and become involved in the work of the FQP.

### **Training**

No specific training was deemed relevant for the development of the Preston Freight map.

### **Operation**

The Preston Freight map has been under development since Autumn 2007, with initial designed schematic versions made available for FQP member review since Spring 2008. The map is now at the final stage of development, with a further revised version having been produced following approval at the June 2008 FQP meeting. This version is now awaiting minor additional information before being printed. Once printed, hard copies will be distributed via a variety of channels and an electronic version will be posted on the Forum webpage. In producing a detailed deliverable, such as the Preston Freight map, which requires approval from multiple FQP members, there is always a risk that timescales may slip and approvals may be delayed, until partners have had sufficient time to review and comment. As a specialist subcontractor has been used for this work, in addition to proactive

management of the review process by FQP members, it was also vitally important to keep the designer informed of necessary alterations and to push for timely issue of revised versions. It is expected that the final approved version of the Preston Freight map will be published in Autumn 2008.

### **3.1.5 Conclusions**

Key conclusions from the package of freight measures in Preston are:

- Practical 'on the ground' improvements (such as mapping and signage improvements) are welcomed by a wide range of stakeholders and can lead to tangible benefits
- Production of practical deliverables, such as the Preston Freight map, can help to form effective working partnerships
- Time must be allowed for review and comment by diverse stakeholders and for further amendment and approval
- Production of practical tools, such as the Preston freight map, provides effective opportunities for promotion and dissemination, raising awareness of the FQP and its work
- An overall Strategy is necessary to pull together the various component activities and to provide a clear direction for measure implementation work
- The Freight Quality Partnership approach can be a highly effective way of pulling together key stakeholders to identify and discuss local freight matters and to find local solutions to local issues
- A structured programme of work, with tangible outputs, is essential to ensure continued interest and engagement from stakeholders.

## **4 PLOIESTI**

### **4.1 FREIGHT PARTNERSHIP, PLANNING, ROUTEING, SIGNING**

#### **4.2 City Context**

A City's daily activity, no matter the field of endeavour, requires a high mobility level in the urban area. City's road network, characterised mainly by narrow streets having concentric radial structure, is developed on the basis of the national, county and communal road network, which crosses it. On this view, the current road network of Ploieşti City is not able to face the high level of traffic, therefore, in certain sectors, frequently occur traffic jams.

At present, at municipality's level, there are neither policies implemented concerning goods transport, nor any sustained concern for investments and for achieving the logistic equipment necessary to provide the goods to the community or those travelling in the city.

Ploieşti City is situated to the junction of some important Romanian road and railway routes, connecting North – South axis (Transilvania, the capital, Danube or Black Sea) and East – West axis (Moldavia and Oltenia - sub Carpathian connection).

The road network of Ploieşti City has a radial-concentric structure and has developed on the basis of the national, county and communal road network, which crosses it.

The entire radial-ring shaped network is situated not only on the city's territory, but also on communes' found in the neighbouring area.

#### **4.3 City Objectives**

The future performance of a region with regard to socio-economic variables is largely determined by the present attractiveness of a region as a location for investments or as a location for living. The regional development potential of a region is – among others – determined by the regional endowment with infrastructure. In contrast to other production factors like 'capital', infrastructure is a rather immobile production factor that cannot be moved quickly to other regions or countries. Hence the degree of regions' endowment with infrastructure can be regarded as one of the key drivers for their long-term socio-economic development. Following types of infrastructure indicators have been taken into account:

- Healthcare infrastructure
- Transport infrastructure
- Research and development
- Educational facilities
- Cultural facilities.

### 4.3.1 Objectives

In the absence of some clear policies of the local authorities, the urban actors interested in public and goods transport do not dispose of a common strategy concerning the operability and implementation of investments in the area of integrated transport.

The present project has as a main goal to develop a strategic plan of logistic at Ploiești City's level to have the following outcomes:

- To restrict the access of heavy vehicles in certain areas and to settle alternative ways for merchandise delivery;
- Proposals for developing some operable terminals for merchandise and to study their position into the Northern and Western part of the city;
- To diminish traffic agglomeration inside the city;
- To optimise the transportation network;
- To correlate all transportation modes.

Measure Objective:

Design the City Logistics Strategic Plan, including:

Restricting the heavy transport and setting up the alternative routes for the delivery of the goods

Creating some discharging crossing stations (North and West terminals)

Reducing the traffic congestion inside the city

Optimising the transport network

All transport modes correlation

INNOVATIVE ASPECTS:

- The co-operative approach of stakeholders
- The public-private partnership.
  
- Ploiești City's road network has a radial-concentric structure and has developed on the basis of the national, county and communal road network, which crosses it. Due to its current configuration, characterised by its lack of continuity into the central area, the traffic is really difficult. This occurs because of the lack of continuity when crossing the city from East to West, the road network being mainly made up of narrow streets crossing common points which do not facilitate the arrangement of some crossings where a diversion could be achieved fluently and which also do not provide visibility. Because of this, the setting of some lines for goods transport, together with a judicious program for this type of transport shall have as direct result reduce the time when covering the due distance and, also, the decrease of NoX's.

### 4.3.2 Achievements

The main results of the actions which were conducted are

- Creation of a zone in the West area of Ploiesti for business to business services (Ploiesti Industrial Park, with a fast and constantly increasing evolution, with a good connection to the existing road network and the future highway) and another one in the North area for the distribution of goods for population (with hypermarket).
- Starting from the Traffic study for Ploiesti, it has been established the freight transport chart, taking into account only interior and access traffic. The most important connections regarding traffic volume are located in peri-urban areas and areas on the exterior ring-road of Ploiesti City where located industrial zones and storage zones are.
- 62 units involved in activities of goods production, constructions, storage, transport and big commercial malls has been questioned regarding streets to allow access circulation for freight vehicles with a weight more than 7, 5, for now and in the future. There has been analysed the damage level of the streets with important traffic of goods suppliers, bearable capacity and functioning period.

As the consequence of the Strategic plan, the following projects have been proposed by the Municipality during the common meetings of November 2007:

- Underpass Marasesti, year 2008/2011
- Overpass Depoului between Rudului Street and Mimiui area, year 2010/2012
- Overpass Rafov between Lupeni Street and Rafov Street, year 2010/2012
- Two new links parallel with Dambu river from Gageni Street to Strandului Street, year 2012/2013
- Closing of Inner Ring- stage I: link between Vestului road- Depoului Street, year 2013/2015
- Closing of Inner Ring- stage II: widening of Depoului Street and link between Depoului Street to Mircea cel Batran Street, year 2015/2017
- Closing of Inner Ring- stage III: link between Mircea cel Batran Street and Cornatel Street, year 2017/2019
- Closing of Inner Ring- stage IV: widening of Cornatel Street, year 2019/2021
- Widening to four lanes of national road 1B, year 2009/2011
- Widening of Gageni Street and county road 102, year 2009/2010
- Interchange between national road 1B and Gageni Street, year 2010/2012
- Widening to four lanes of West Ploiesti by pass, year 2015/2017
- Underpass at junction Tache Ionescu Independentei avenue, year 2017/2020

### **4.3.3 Implementation and operation actions**

In order to design the City Logistics Strategic Scheme, several action were conducted including the planning of actions (priorities, costs and time aspects) in which freight routes and Freight signing was defined.

#### **Procurement**

A tender procedure was the first action; the aim was for the selection of a subcontractor, conditions of contract and services delivery contract for the strategic scheme design, delivery term. The tender procedure started in February 2006 with the auction for selection of subcontractor.

- Proposal of a Regulation for the transport routes
- Design of a Northbound area dedicated to distribution of merchandises for population
- Design of a Westbound area, dedicated to services for B2B
- Consulting the transporters and the businessmen in order to establish the technical solution

### **Technical**

The main technical action was a Feasibility Study from which technical solutions were issued: definition of freight routes and definition of Freight signing and financial assessment:

The first step was a Freight Forum conducted as a Search Corporation; it was coordinated by both City Hall and Council of Businessmen, to encourage best practice and produced in February 2007.

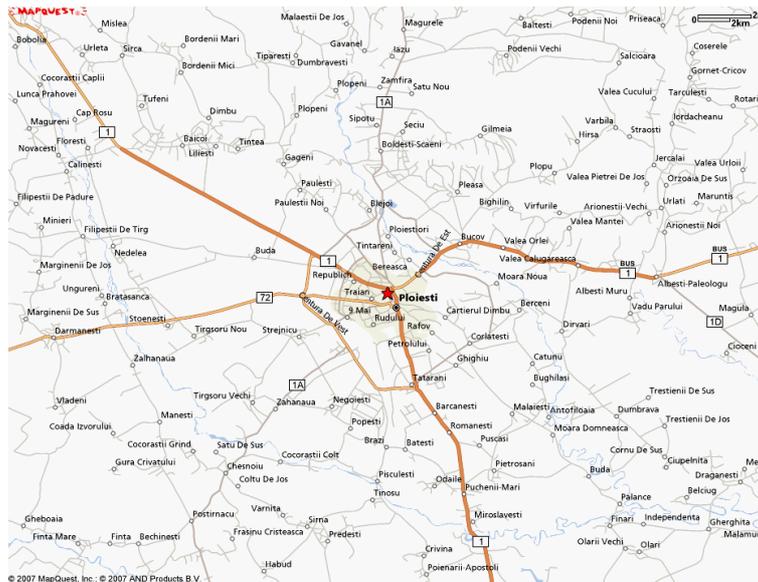
In order to evaluate the requisite for the goods transport in each area and to emphasise the goods traffic generators, as the connections generated by them, it has been settled a certain type of questionnaire to be handed to the representatives of the institutions involved in the goods output activities, ware-houses and transporters operating and garaging on Ploiești City's territory.

There has also consideration given to other sources of information (internet, list of transporters' representatives who attended, at City Hall's headquarters, the meeting introducing CIVITAS project for arranging the central area of the city).

Even if little information is received, it might be considered as representative at Ploiești City's level, because the companies providing this information are important for the category of activity they belong to, therefore, the streets mentioned in their usual lines frame are also found in lines frame dedicated to commodities transportation to be proposed to the end of the present study.

The project methodology aims at covering this interaction between transport infrastructure development and spatial planning in a very broad sense covering wide areas such as economic development, social integration, employment creation, etc. along the studied corridors.

In order to simulate the current flows of commodities vehicles, it has been used a traffic pattern, which has the matrix Origin-Destination, on categories of vehicles, taken over from the Traffic Study, achieved for Ploiești City in the period 2004-2005, updated on the basis of some prognosis coefficients.



Based on this, the following conclusions were drawn:

- Car flows have higher values on the main North-South axis, average on access roads and low for the rest.
- Flows for freight transport have high values only on the west ring-road, between DN 72 and DN 1, continuing with DN1 to Brasov through Valenii de Munte. Average values are high on the west ring-rod between DN 1A and DN 72 and low for the rest.
- Flows for goods and public transport have only low values.
- Negative aspects of an increased urban goods transport are easy recognisable in Ploiesti: traffic congestion, phonic pollution, increased level of NoX's, accidents.

For designing required projects for the freight routes, these have been taken into consideration:

The next stage was for short-term projects with minimum effort (establishing goods routes, signing routes for goods in the central area, maps of goods routes on City Hall website)

The next stage was for long-term projects which require major investments (connection of the interior streets network which will collect freight traffic with the exterior network and closing of a traffic ring; achieving freight transport in town with small vehicles - the discharge pathways are to be established; achieving of some passages, fitting out and upgrading of access ways, fitting out crossings etc).

### Freight routes – perspectives

These proposals will be debated and approved by the Traffic Commission and Urban Planning Commission and will represent the projects and investments list:

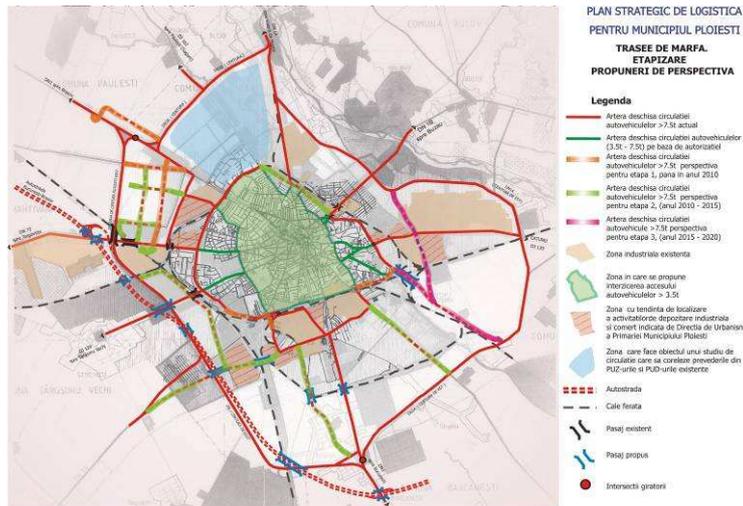


Figura nr.13

### Signing of the freight routes

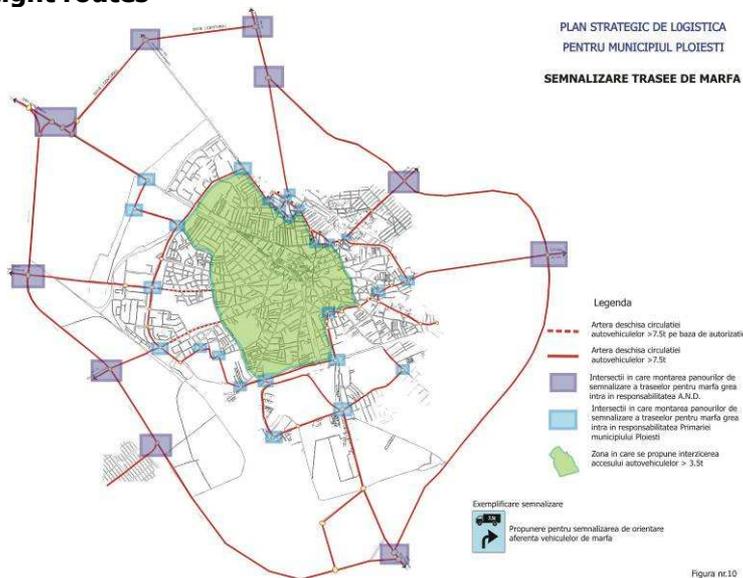


Figura nr.10

### Partnership

As mentioned previously, several meetings with stakeholders were held during the elaboration of this Strategic Plan.

- For evaluating the requisite for trade transport in each area and for emphasising trade transport generators, as the connections generated by them, it has been set, with Ploiești City Hall's support, a meeting with the institutions involved in goods supply activities, ware-houses and transporters operating and garaging on Ploiești territory. All these received questionnaires, on the basis of which, to be identified data about the trade vehicles park had in possession (categories of vehicles, number, kms run, etc.), as their usual routes.

Supported by the City Hall, in September, 2006, a meeting was organised, at R.A.T.P.'s headquarters, with the representatives of the above mentioned institutions. Formal data missing, the list set used the info from Ploiești City's General Urban Plan being in force, respective the paragraph 2.2.1. Industrial, warehousing and construction activities, where are presented the main institutions of the kind.

### **Promotion activities**

These activities were conducted through local TV channels, radio stations, newspapers, public conferences, interviews

Implementation tasks undertaken during the project will concern the creation of a Northbound area dedicated to distribution of merchandises for population and the creation of a Westbound area, dedicated to services for B2B.

### **4.3.4 Conclusions**

- Considering the value of the traffic size, the technical status of road network, respective to the residual lifespan of road structures is going to be proposed a set of rules concerning the exploitation conditions of road network, access restrictions for heavy vehicles, admitted level for public transport on tires and types of vehicles on tires recommended.
- When establishing the transport lines for goods distribution, is going to be taken into consideration the provisions concerning the appearance in the area of some roads with superior features (e.g. highways) and some junctions with the current road network of Ploiești City.

## 5 GENERAL CONCLUSIONS

### 5.1.1 Specificities of medium size cities

Freight transport in such cities depends, like in larger ones, on the topology, the organization of the city, the urban structure and the Local Authority's strategies.

Many of the logistics problems are common to both types of cities, so some knowledge transfer or adaptation of best practices can be considered, but the dimensions (spatial, social, economic, normative, ) generate specific conditions for goods transportation in medium-sized cities.

Most of these cities are built around an historical city centre; commercial and/or industrial zones have grown up in the surrounding areas, but the city centre is quite often rich with several types of shops as well as craftsmen and small industries. Moreover, the trend in many of them is to motivate various types of professional to move back into the city in order to increase urban vitality.

Among the specificities of medium-sized cities which are of some importance, their global surface and the human size of relationships in such cities are the most relevant as well as the investment capacity. Smaller sizes lead to shorter distances and goods carried out quickly. That facilitates the transit from one zone of the city to another. So the organization of deliveries is easier as well for the choice of vehicles as for the planning of the trips. In the same way, other goods flows are facilitated and short. This makes it more difficult to look for improvements and to convince stakeholders to modify their behaviour which they may have optimised from their own point of view.

However, even if in absolute terms the time wasted in congestion is less, in these cities it still feels significant, and the ratio between trip duration and time wasted is more or less the same as in larger cities; so the impacts are subjectively as important as in larger cities.

The smaller size allows also a better control of goods flows. Since gateways are few, it is easier to supervise city centre access. In medium-sized cities citizens are often closer to their neighbourhood, more active in city life, closer to the local authorities and politicians than in larger ones. Consequently, the impacts (positive or negative) of the improvements are quickly analyzed and the decisions of adjustment can be made with an active participation of the concerned people.

But the sensitivity to normative or regulatory actions is also increased; if, for example, the access of goods in the city centres is more difficult then quickly shops will migrate to the outskirts and craftsmen will not accept to work in the city centre or at very high costs.

The last aspect concerns the financial investment capacity of these cities. The critical mass of the improvements is more difficult to reach, particularly if they are considered separately. To justify goods transport changes often requires the adoption of a global view of the whole transport operations in the cities. For instance in La Rochelle, freight platform, vans and car sharing and other mobility services are operated by the same company and at a global level, profitability is guaranteed.

### **5.1.2 Lessons learnt**

The experience of SUCCESS projects in Urban Freight just confirm the main conclusions issued by other projects in that domain: it is clear that there is “no absolute best practice; it often depends on the framework conditions which can make the transferability of results difficult” (Cityfreight project).

However, among all the recommendations that can be proposed, four points clearly appeared to be mostly relevant for small- and medium-sized cities (SMSC):

- Political involvement
- Target groups
- Methodology
- Modelling

If one of them fails, the project will also fail.

### **5.1.3 Political Involvement**

This is obviously the starting point. However, it is not only the decision to launch projects in that domain but a real implication in the progress of implementation. This is most important in medium-sized cities where politicians and local authorities are close to the citizens and where party conflicts may be forgotten in such matters.

It begins with the integration of freight organisation in land use planning; once the main principles are defined, public authorities must determine clearly the objectives to be reached, the general framework (identification of main relevant stakeholders, actors), and the role that they will take in the implementation. This may include high quality problem analysis, data collection, benefits assessment, networking among stakeholders, facilitating exchange of information, and even financial support.

### **5.1.4 Target groups**

Once objectives and framework are fixed, and since the methodology will require a global approach and stakeholder participation, it is compulsory to identify target groups which will facilitate the design and implementation of solutions. These are built according to the type of goods flows or/and activity sector.

Of course, they will provide state of the art analysis requirements, but their main role lies in other activities:

- To establish consensus because solutions will rarely be the best for each individual target group
- To help to find appropriate detailed solutions
- To facilitate their implementation among citizens they represent

Target groups mechanism is quite efficient in SMSC since members of different target groups often know each other, work together and are more eager to reach a global compromise.

### **5.1.5 Methodology**

Of course, the global approach of urban freight is easier in small and medium cities to larger ones, and the same for the integration in a global organisation of transport in the city. This must consider the flows of parcels and pallets as well as the tradesmen, waste logistics or any other goods.

Sometimes problems are separated which lead to unsatisfactory solutions. However, this advantage can be turned into an inconvenience due to the proximity of each stakeholder, from the citizen to the mayor.

So it is necessary to have a strong and rigorous classical project management and methodology, which set up milestones and objectives in order to measure the progress of the project and identify the barriers.

When several solutions have to be implemented, corresponding to various target groups, the main question is about the advantage and risks of simultaneous sub projects.

Three other items must be considered:

- In the case of SMSC, it is necessary to take into account the inter city flows which influence largely internal flows.
- The city life generates quick, significant evolution in the goods flows; so monitoring must take place and solutions must be designed to accept evolutions.
- Cost of solutions, investments and operation must be proportionally lower than in larger cities since the critical mass level cannot be reached in many cases; this also leads to simple and efficient solutions, easier to set up but often longer to design.

### **5.1.6 Modelling**

The design and the adaptation of organisational and technical solutions must be based on a reliable representation of the reality, although this has to be built according to the local context and the objectives of local authorities.

Several techniques are available, mixing statistics and dynamic analysis, hierarchical or network organisation of components (stakeholders, resources,), or else internal / intercity flows, but they are all based on a capital aspect: the reliability and accuracy of data.

Irrespective of the efficiency of the model, to be of any help it must be constructed from realistic information. Even if the collection of data is long and expensive, it is compulsory to have relevant data to dimension the alternative solutions, to simulate their costs, their impacts and to validate the changes. This model must also be the source of the adequate indicators which will measure the progress and the benefits of the implementation of the solutions.

### **5.1.7 Conclusions**

Basic causes and visible impacts of urban freight are quite similar in small- and medium-sized cities compared to larger ones.

But problems are set differently regarding the specificities of these cities in which these various facets (space, people, politics,) can be handled all at once more easily.

Solutions and improvements are based on the same principles as those deployed in larger cities; however, their extent, implementation modes as well as their costs have to be adapted.

Small- and medium-sized cities appear in many cases most fit for innovation, regarding their constraints or specificities but also because they are more reactive and flexible; so they are more likely to initiate break through experimentations.

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