



# SUGAR

## THE SUGAR NEWS

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### Sustainable Urban Goods Logistics Achieved by Regional and Local Policies

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#### Introduction

##### The activities in SUGAR

By Regione Emilia-Romagna and ITL

Since 2008, 17 partners from 10 countries are working for providing a common background on a relevant issue of the modern cities: to enhance capabilities in terms of infrastructures and design for urban mobility through the efficiency of freight transport systems. SUGAR addressed the problem of inefficient and ineffective management of urban freight distribution, a critical component of the overall urban transport system and a primary source of pollution. SUGAR promoted basic actions for the exchange, discussion and transfer of policy experience, knowledge and good practices through policy and



Fig. 1 - The SUGAR partnership during the final conference

planning levers in the field of urban freight management, between and among Good Practice and Transfer sites. The policy leverages covered included:

- *transport*: access control, circulation, regulation pricing, signage, intelligent communication technologies applied to transport, etc.;
- *environment*: incentives for using clean vehicles and modes, regulations on vehicle typologies and usage in critical environmental zones, etc.,
- *space and territory*: planning and development of distribution areas, loading areas, industrial zones, economic development zones, etc.
- *harmonization*: to create a common and harmonized platform in terms of rules and procedures among different public bodies.

The policy leverages are the necessary ingredients for the SUGAR tailored solution. At policy level, it has been pointed out the need to build a strong cooperation and partnerships among public bodies, logistics and transport operators for more efficient urban freight transport management. SUGAR's approach has been structured along three main strands:

- The refinement of urban freight policies of SUGAR Good Practice Sites through dialogue with other leading administration outside the project partnership. These objectives have been supported through

the mapping of new policy 'innovation' areas in city logistics, thematic training and specific technical round-table discussions. The development of urban freight policies in SUGAR Transfer Sites. These objectives have been supported by the development of good practices analysis thematic training, joint planning for transfer sites, and the development of local transfer action plans.

- The creation of interest, knowledge,

tools and exchange for new administrations from outside the SUGAR partnership through the Enlarged Transfer Programme. This objective was met by providing access to project results,



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participation in training events, and a high level exchange programme for bilateral meetings between administrations.

Based on these, the SUGAR activities has provided results along main pillars: a) Best Practices, b) Transfer of experiences, c) Action Plans.

a) *Best Practices*: SUGAR conceptual model covers all the policy leverages and defines key performance indicators for characterizing good practices in an objective manner (level of impact with regards to transport operations, environmental protection, energy saving, technical achievements and political consensus). A template for data collection has been developed and has been adopted as cornerstone for all SUGAR activities. *Good practices analysis*: A transversal analysis of all good practices and innovation areas has been carried out. To ensure an extensive coverage, good practices experiences have been gathered from within the SUGAR consortium as well as from outside the partnership. This analysis served to define primary transfer policy areas, to create the SUGAR transfer tools, and to identify the winners of the SUGAR good practice award.

b) *Transfer of experiences*: Based on the result of the good practice analysis, the following transfer tools has been developed:

- 6 GPRT (*Good practice round tables*): dedicated technical sessions on the policy themes. With the participation of external experts, their main aim was to discuss how to improve city logistics policies;
- 4 TtT (*Train the Trainer sessions*): dedicated sessions for developing new skills of all SUGAR partner administrations;
- 4 JPE (*Joint Planning Exercise-workshops*): the SUGAR transfer sites prepared and presented their local objectives, challenges and opportunities with regards to city logistics topics. The SUGAR good practice representatives collaborated by identifying main problems and providing advice on how to solve them;
- An ETP (*Enlarged Transfer Programme*): Administrations outside the SUGAR partnership have been invited to participate in the project activities.

### Action Plans

All SUGAR sites have developed action plans through SWOT analyses, definition of local visions and by conducting strategic development workshops (for developing action plans within the individual site, as well as to broaden the SUGAR initiatives within their countries). The workshops have been based upon train-the-trainer and good practice experiences and covered discussions on the state of the art and on how policies can be improved.

### The Final Conference

In December, the final Conference of SUGAR the main results of the SUGAR project have been presented and a publication focused on the Best Practices analysis has been distributed. It is a fundamental tool for the involvement of the community of experts in the emerging field of city logistics.

We are aware that this is just the first step of a complex political strategy in which all the partners of SUGAR are willing to involve all the local actors and stakeholders in a coordinated and harmonized platform for linking the local needs with the business objectives of the national and transnational operators. SUGAR foresees a successful future for city logistics initiative.

## Project meeting in Palma de Mallorca

### Description of the event

By Raúl Medina and Carles Petit, Cinesi Transport Consultancy

The second meeting of 2011 was organized in the city of Palma (September). The event was split, as usual, in three thematic areas: Site Visit, Good Practice Round Table, and Project Meeting.

The event started with a welcome speech by Mr. Gabriel Vallejo, head of the City Council's Mobility Department. After this, a synthetic presentation on the logistics' situation of the host city was presented, explaining the areas and issues to be analysed during the site visit. Immediately after this short introduction, attendees had the opportunity to check the real situation of the city through a 2-hours site visit in the inner urban area. This was on several issues:

- Areas of restricted circulation.
- Video monitoring of access control technologies.
- Traffic restrictions depending on vehicles' weight.
- Pedestrian zones.
- Cycling streets.
- Parking regulations.
- Delivery zones and its characteristics.
- Public bicycle scheme.
- Pneumatic waste collection system.

The second part of the day dealt with the Good Practice Round Table, which focused on the topic "City Logistics and Land Use", especially in experienced cities of Europe.

Mr. Bernard Salzenstein (Mairie de Paris) initiated the session, presenting the current situation of freight policies in the City of Paris. He stressed the efforts dedicated to achieve a more efficient



Fig. 2 - Site visit. One of the news "cycling-streets" in Palma

movement of goods (in and out flows) and more environmental-friendly deliveries within urban boundaries. He explained the role of the "Charter of Good Practices" signed in 2006, being currently reviewed, where the component "land use" is considered as essential. Finally, Mr. Salzenstein highlighted the paths to follow in the short and medium term (as, for example, improvement of control regulations or conduct further night deliveries' tests).

Secondly, Mr. Andrea Campagna (Rome University) gave an overview on some existing models and micro-simulation methods for supporting city logistics. These methods can be used for the analysis of the interactions between goods, passenger transport and land use. He stressed the importance of data collection (socio-economic data,

traffic counts, questionnaires) and the definition of environmental impact assessment indicators. He pointed out the need to include freight in public agendas and the cooperation with different stakeholders. Moreover, he considers crucial to adopt a business-oriented approach, converting proposals into business opportunities for enterprises.

Lastly, Mr. Thomas Zunder (Newcastle University) explained the existing figures for transport and logistics planning and management in the UK. He mentioned the role of Local Transportation Plans (LTPs) and Freight Quality Partnerships (FQPs), focusing on the county of Tyne and Wear. In particular, the LTP is a strategic document that addresses the management, development and monitoring of the transport system, together with the involvement of local stakeholders. In addition, freight management has also been introduced to these LTP by covering: freight route mapping, signage, lorry parking, freight consolidation, freight on rail, truck information points, etc. On the other hand, the FQP aims to mitigate the negative impact of freight to the area, by reducing emissions and promoting sustainable forms of transport. Mr. Zunder talked also about the involvement of the county in the Civitas Catalyst initiative, and also about the EU funded project "Smart Fusion 2012", which deals with the design of smart urban freight solutions.

After all presentations, the event concluded with a summary of all good practices presented and a very fruitful debate between speakers and attendees.

## Spotlight on SUGAR cities

### Transfer site I

#### Vratsa, Bulgaria

Thanks to their participation in the project "SUGAR Sustainable Urban Goods Logistics Achieved by Regional and Local Policies ", the municipality of Vratsa has developed a SWOT analysis of the transport on the basis of which the Municipality created a Strategy for the development of the urban logistics in Vratsa, which outlined four strategic priorities of transport for the period up to 2020: efficient maintenance, modernization and development of transport infrastructure; integration of the municipal transport system in the national and international; reduce the negative impact of transport on the environment and climate change and sustainable development of the public mass transport.

The main problems, which are scheduled for resolution in our municipality are related to:

- Development of economically sustainable and environmentally friendly public transport;
- Increasing the area of pedestrian zones in built-up areas;
- Improving access to basic infrastructure and the stops of public transport and for people with disabilities;
- Improving public urban transport in relation to the environment by establishing new trolleybus and bus lines, and thus to meet the European requirements for the reduction of harmful emissions from the burned gases.
- Reduction and control of transit traffic of heavy goods vehicles.

Created Action plan in the field of urban logistics in Vratsa specify the clear priorities for action by 2015. It will contribute to the implementation of the Mission of transport in the city: *Transport in Vratsa will contribute to the economic and social development of the municipality, as an efficient (with benefits), effective (with minimum costs) and sustainable (with minimum external influences) transport; to promote balanced regional development taking into account the cross road situation in the region and its transit potential and contribute to the integration of cities in national and European structures.*

### Transfer site II

#### Celje, Slovenia

European cities wish – with innovative policies and measures – reduce the negative impacts of freight traffic on the life and functioning in the city. Municipality of Celje is no exception in this effort. In frames of the SUGAR project partnership, with joint planning, training, transfer of good practices and other



activities, municipality of Celje is deepening and expanding knowledge and experience that were acquired through various existing measures. The project also encourages sustainable policies that will favorably effect the freight distribution in urban core.

Municipality of Celje joined the SUGAR project with a purpose of finding comprehensive approach to finding solutions and long-term planning of transport policies and measures.

Decisions, taken at the planning of urban transport, impact on society as a whole and develop environmental, economic and social future of the city.

The number and variety of proposals on how to improve the urban logistics, is growing constantly, so it is difficult to maintain an overview of current



Fig. 3 - Good Practice Round Table held in Palma

developments in urban logistics. Even more difficult is to choose the appropriate and, above all, plausible measures. To tackle this problem and as a guide to development, vision and strategy of urban mobility has been adopted: By 2030, Celje will develop effective system of urban logistics and sustainable transport system that will ensure safe, efficient and effective mobility of people and goods.

In addition to vision and strategy, good practices were analyzed and SWOT analysis has been conducted, also field studies and numerous other studies were made. The benefits that the project brings for the Municipality of Celje (in addition to managing logistics in the old city center) are cooperation with many experts, getting references to participate in the future European partnerships and investment in the development of own knowledge.

## Transfer site III

### Crete, Greece

The participation of Decentralised Administration of Crete (DAC) in SUGAR project aims to support the policy making procedures in relation to urban freight transport and city logistics management to the Municipalities of its territory. DAC in collaboration with the regional stakeholders has developed a vision for further improvements on the regional urban freight transport and city logistics system. The development is based on the experiences collected by the SUGAR project with adaptations to the Cretan Regional reality (in order to be applicable), the Business Plans developed by the Municipalities of Heraklion and Chania for the period 2011-2014 and the Regional Operational Programme of Crete. The following constitutes the pillars of development:

- Deep and accurate knowledge of the mobility needs of the Region including freight, to facilitate integrated policy actions and justified introduction of measures.
- Rationalisation of regional and urban flows with the creation of Regional / Urban Consolidation Centre providing third party logistics to the enterprises of the Region.
- Modernisation of the Traffic Control Centres of the Municipalities, moving from static to dynamic management of the network.
- Exploitation of the leading IT technologies for better enforcement of the measures applied.
- Use of clean vehicles (starting from Public Vehicles) and providing corresponding privileges to the operators.
- Create long lasting relationship with the Private Sector and active consultation processes for policy making.

## Urban Logistics experts' opinions

### Mr. Gabriel Vallejo, Head of Mobility Department (Palma de Mallorca City Council)

By Raúl Medina, Cinesi Transport Consultancy

**Dear Gabriel, thanks for attending this interview. First, we would like to know a bit more about you, your background and current role.**

I hold a degree in Law and more than twenty year's professional experience. At the present time, I am in charge of the City Council's Mobility Department, as well as Manager Director of the Local Urban Transports Company.

**From the logistics point of view, the City of Palma has recently witnessed the implementation of specific measures, such as camera access controls or the enlargement of time windows for delivery bays. What are the expected benefits of these measures?**

Implemented measures clearly aim to improve traffic fluency and accesses to certain areas of the city, as well as increase flexibility when carrying out loading and unloading operations. Many are the expected benefits, and we have already noticed improvements. In particular, we observe a reduction in car indiscipline, which results in higher comfort for transport operators (quicker deliveries), shopkeepers and citizens (safer and peaceful streets).

**The City Council, as participant in the SUGAR consortium, has enjoyed the opportunity to visit many cities and learn from other good practices and experiences. According to the local context, what are the most interesting good practices for your city?**

To be honest, there are many good practices that we consider very positive and interesting. If I had to select the most suitable for Palma, I would mention those related to freight deliveries using less pollutant vehicles. In addition, we consider also really useful the method explained in Paris, consisting in the evaluation of the number of needed delivery bays depending on the urban/social/economical characteristics of the area. Finally, the City of Palma really likes the idea of implementing small urban consolidation centres, although their feasibility seems to be a barrier to overcome when planning to create one.

In overall, the most important thing for us is to have had the great opportunity to participate in such training events and learn from experts in the field of urban logistics. Now, we have a broader vision and knowledge on the kind of possible solutions to adopt in our city, taking into consideration always the opinion of all involved local stakeholders.

**One of the main objectives of SUGAR is the elaboration of a Local Action Plan, which will be a strategic document for local authorities when planning and managing city logistics. Could you please mention the key areas contained in this plan?**

Effectively, one of the final objectives is the elaboration of a Local Action Plan, which is based on not only pure technical aspects, but also on the identified weaknesses and opportunities by all involved agents: transport operators, businesses and society. Because of this, a local workshop was organised in the frame of the project, aiming at knowing the real needs of all of them and discussing potential solutions. As a result, three key areas for improvement have been identified:

- Improvement of planning and management of delivery bays, as well as data collection methods.
- Definition of regulations to optimise the use of these delivery bays, and reduce car indiscipline.
- Implementation of an "incentive/penalty" system for motivating a modal shift towards less polluting deliveries in the last urban mile.

However, it is important to stress that the first strategic line has been already put into practice, through the elaboration of field and online questionnaires among shopkeepers and transport operators (please see [www.sugarpalma.com](http://www.sugarpalma.com)).

**To conclude, what is your global opinion about the SUGAR project? Could the city consider itself satisfied with its participation in this initiative?**

The City Council is very satisfied with its participation in SUGAR. It not only allowed us to gain expertise and learn planning and management tools to be applied in city logistics, but also it has brought the opportunity to gather all local stakeholders (operators, shopkeepers, authorities, consultants, citizens) involved in the freight sector. We can consider SUGAR a “spark” that has activated a long process, which aims to create awareness, review existing policies and propose policy improvements. Thus, thanks to SUGAR, and for the very first time, a “logistics roundtable” has been created and will monitor and evaluate all actions to be introduced or improved for enhancing city logistics.

**Mr. Daniele Vigo, Head of Mobility Department (University of Bologna)**

*By Giuseppe Luppino, Institute for Transport and Logistics Foundation*

In 2003 the Emilia-Romagna Region has been coordinator of the Cityports project (INTERREG IIB), in which it developed a big



survey on City Logistics phenomenon for all Emilia-Romagna towns. The result of the survey was an enormous quantity of data about the

demand generation (through interviews at shops), the demand attraction (with interviews at logistic operators) and flows/operations (interviews to vehicles). Data were quite homogeneous and a model has been developed proposing a general methodological framework for the design and the evaluation of City Logistics Actions. Prof. Vigo has been speaker during the GPRT in Brussels (May 2011), the presentation is available on the SUGAR website and this is the interview carried out by ITL on the

Dear Daniele, please describe your background and your present job.

I am Professor of Operations Research at the Department of Electrical Energy and Information Engineering of the University of Bologna where i started my career more than 20 years ago. I work on logistics optimization modeling with special emphasis on vehicle routing and loading and network design. Recently , I founded VeRoLog (the EURO Working Group on Vehicle Routing and Logistics Optimization) that collects more than 600 researchers and practitioners worldwide.

**What is the experience in the modeling urban transport flows?**

Besides my activity on the design of new and efficient algorithms for the

solution of operational-level optimization problems in freight distribution, I made some interesting experiences in the overall analysis of freight distribution at a regional and urban level that led to the development of the CityGoods model, with my colleague Guido Gentile of the University of Roma. This work was conducted within several project performed in collaboration with the Region of Emilia-Romagna and ITL, such as CityPorts, Merope among the others.

**What are the needs of the Public Administrations in terms of quantitative awareness of the urban transport systems?**

The elaboration and monitoring of plans for the management of freight distribution in modern cities requires solid methodological support for deriving quantitative demand and flow estimates, able to capture the complexity of the different supply chains. Simple and reliable tools for modeling freight demand are a constant need for PAs and the efficacy of these approaches is heavily dependent on the amount of data they require to be set up and calibrated (census data, traffic flows, O/D surveys...). The CityGoods model developed with the Regione Emilia-Romagna is a successful attempt in this direction: it provides estimates of demand distribution and traffic flows by requiring simple census data and is calibrated on extensive surveys performed in the region.

**Which are the chances on transferability of the Citygoods experience?**

CityGoods can be easily transferred to other urban areas due to the relative light data requirements (basic street network and publicly available census data) and the possibility of using already existing calibrations obtained for various cities of Emilia-Romagna. The experience performed in other countries as France with Freturb show that the availability of simple and effective models for the analysis of freight movements in town is generally very welcome by planners at the Pas.

**SUGAR**

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