

EDITORIAL

TURBLOG AT A GLANCE

Urban freight is indispensable for the cities' economy but at the same time significantly affects the attractiveness and the quality of urban life. Accelerating the take up of sustainable urban mobility plans covering freight and passenger transport in urban and periurban areas is a key issue that must be present in all initiatives addressing urban freight.

This project acts as a **coordination platform**, gathering worldwide experiences to **select good practices, develop case studies and recommend solutions on urban logistics**.

The TURBLOG project aims at **extending existing knowledge on urban logistics to other countries** and thus effectively contribute to the transfer of knowledge between Europe and Latin America (LA), with a particular focus on Brazil and Peru.

THE CONSORTIUM

Coordinator:

 **TIS**.PT – Consultores em Transportes, Inovação e Sistemas. Portugal. www.tis.pt

Partners:

 **INOVAMAI**S - Innovation Consulting. Portugal. www.inovamais.pt



NEA - Transport Research and Training. Netherlands. <http://english.nea.nl/>



UNIVLeeds - Institute for Transport Studies. United Kingdom. www.its.leeds.ac.uk/



BHTRANS – Empresa de Transportes e Trânsito de Belo Horizonte. Brazil. www.bhtrans.pbh.gov.br/



PTL-UNI - Plataforma Logística de Transporte, Logística y Movilidad Urbana. Peru. www.uni.edu.pe/



TIS.BR - Consultores em Transportes, Inovação e Sistemas. Brazil. www.tisbr.com

Issue Nr. 3 - May 2011



In This Issue:

EDITORIAL: TURBLOG at a glance.....	2
PROJECT UPDATE: Regional Report Spotlight	3
Regional Report from Europe	3
Regional Report from Brazil.....	6
Regional Report from Asia.....	8
Regional Report from Spanish Latin America.....	11
Regional Report from rest of the world	13



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



PROJECT UPDATE – Regional Report Spotlight

Regional Report from Europe

The EU Regional Report describes developments in urban freight planning and practical interventions across the EU (and in other non-EU European countries). Unlike the situation for the rest of the world, an extremely large amount of information on urban freight measures and data collection techniques is already easily available in the EU, for example from specialised internet sites such as those provided by BESTUFS. Rather than trying to “reinvent the wheel”, the report mainly attempts to make a “secondary” compilation of this information, providing extracts from reports that are already describing the state-of-the-art.

Freight transport systems in urban areas create a variety of negative economic, environmental and social impacts and these include:

- Economic impacts;
- Environmental impacts;
- Social impacts.



La Petite Reine

Furthermore, “goods vehicle operators and drivers face a range of difficulties when carrying out freight operations in urban areas”. These include:

- Traffic flow/congestion;
- Transport policy-related problems including, for example, vehicle access restrictions based on time and/or size/weight of vehicle and bus lanes;
- Parking and loading/unloading problems;
- Customer/receiver-related problems.



Packstation

These problems can be considered as common, existing everywhere in the world. However, **there are also specific problems associated with the EU as a transnational community.** Some of the more interesting measures adopted in Europe are presented below.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



New concepts for the Distribution of Goods measures - Barcelona, Spain

The multi-use lane implementation in Barcelona extends the total length of lanes and converts on-street parking spaces into unloading spaces during the prescribed hours. During the peak hours, the lane is used as a priority bus lane. The web-based information service “Active Guide” gives bus priority regulations as a variable message sign. The Municipality observed improved circulation speeds following the multi-use lane installation, and continues to extend this type of measure along primary roads. With an investment return of 3 years, *Mercadona’s* night-time delivery scheme is now a validated approach for more flexible delivery to larger outlets. Barcelona Municipality is looking to extend this initiative to a wider number of locations and operators.

Examples of last mile solutions

La Petite Reine (Paris, Bordeaux, Rouen, Dijon France). Tricycles with electrical assistance have been used to provide last-mile delivery services for carriers (DHL, Chronopost, etc.), distribution and retailers.

The four central *arrondissements* of Paris were initially served by *La Petite Reine* in the experiment. This has since been extended to the whole of the city. Three types of delivery service have been tested by *La Petit Reine*:

- Ad hoc deliveries from businesses to customers’ homes;
- Driver and tricycle dedicated to a business for deliveries to customers;
- Consolidation and final delivery of goods entering Paris.

Products targeted by *la Petite Reine* during the experiment have included: food products, flowers, non-food products (including parcels), equipment and parts.

Packstation (Germany - many cities) is an alternative solution for home deliveries. Locker boxes have been installed in public spaces (e.g. main station, market place, etc.), but also at parking places of big companies.

The measure’s objective is avoiding unnecessary trips of DHL-delivery vehicles and gives the customers free choice of picking the parcels up. By September 2007, 900 *Packstations* had been installed across Germany.

At the beginning there was a substantial need to attract a significant number of customers to sign up to the system. 2,400 *Packstations* have been installed until 2009: they have been accepted very well by the customers and in general the number of stations is continuously increasing.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Environmentally-friendly vehicles - *Cargohopper* - Utrecht, Netherlands

On the 22th of April 2009 *Cargohopper* was officially introduced by the Dutch Minister of Environment Mrs. Jacqueline Cramer. *Cargohopper* is a vehicle that is able to tow 3 metric tonnes in a linear line by means of a 48 Volt 28 hp electric engine. Its max speed is 20 kilometers per hour but that is more than enough as it is only driving in the inner city of Utrecht and does not make more mileage than 60 kilometers max daily. The three trailers are steered on both axles which gives it a great maneuverability.

Driving on green power, *Cargohopper* is designed for the delivery of packages (not for pallets) and is able to do the work of 5 to 8 regular (European sized) vans such as Mercedes-Benz Sprinter and so on. It can do that because *Cargohopper* is a more than a nice looking little train, it is a complete logistic system. The three containers you see are in fact separate boxes that can be put on and off the undercarriages by means of a forklift. 8 of those boxes fit on a European sized trailer of 13.60 meters. The boxes are preloaded outside the city in the *Cargohoppers* Distribution Centre and towed to the boarder of the inner city by means of a regular truck. There we have a transshipment point where the boxes are put on the *Cargohopper* and rolled into the pedestrian zone: from there the deliveries to the shops start. This is very effective, and *Cargohopper* never leaves its 'natural habitat', moreover the reloading is done within 10 minutes. So it is almost always ready to roll.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Regional Report from Brazil

In 2000 the **freight transport** sector in **Brazil** represented 4.4% of the GDP, generating 1.2 million direct jobs. A statistical bulletin of the *National Transport Confederation (CNT, 2009)* registered that the road network has 1,634,071 km, the total fleet are 1,939,276 trucks and the rail network has 29,817 km with a total fleet of 87,150 wagons. With a total of 794,903 Million TKU, the freight transport is done on road (61.1%), rail (20.7%), water (13.6%), duct (4.2%) and air (0.4%). Recent research of urban logistics concludes that there is an excess of heavy vehicles in the cities and that the regulation is inadequate or insufficient for urban freight logistics. Public officials have shown a clear concern to the conflict between the users of the transport system and operations of urban freight logistics, since the city is not prepared to accommodate such activities. In the Brazilian Regional Report of TURBLOG_WW, the focus on urban logistics was in the **14 cities** with more than one million inhabitants and other state capitals, identifying the measures commonly adopted for **loading and unloading**: definition of specific sites for the operation of loading and unloading; regulation time for loading and unloading of vehicles; restricting vehicle access for loading and size conditioning.



Loading and unloading

On-street loading bays *All medium and big cities*

The main role of local government on urban logistics has been the definition of local operation of loading and unloading on the streets and private enterprise.

Enforcing access and loading regulations

São Paulo, Belo Horizonte, Rio de Janeiro, Curitiba, Salvador, Cuiabá, Campo Grande and Brasília.

Since 2005, some Brazilian cities began to implement restrictive measures, with different rules, hours and places but with the same purpose: to improve the general traffic conditions.

Urban consolidation centres *Several cities*

There are private distribution centres in the most important cities in Brazil and 72 warehouses for the wholesale marketing and distribution of horticultural products and other food products.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Requirement of loading and unloading parking spaces and docks inside companies with large traffic movements

Belo Horizonte
São Paulo
Curitiba

In order to take the loading and unloading operations inside the building, the Traffic Generating Centre should create areas, places and docks for loading and unloading operations on their terrain, apart from having an area to manoeuvre and access the docks.

Business arrangements	Technology
Brazil has a strong culture of community participation, intensified in recent decades, with the successfully <i>Participatory Budget</i> , where the people decide the priorities for investment. For the logistics sector, only the experience of Belo Horizonte is detailed, but it is also registered in Cuiaba.	Several examples of intelligent transport systems and technological solutions are being implemented by some companies in the Brazilian private sector. It has also been testing fuel and vehicles alternatives such as: ethanol, natural gas, biodiesel, electricity; and electric trucks, truck powered by CNG (<i>Compressed Natural Gas</i>).

In Brazil, we can only identify a policy package in the city of São Paulo. The largest city of Brazil is the one that has implemented the largest restrictions on movement and operation of cargo vehicles. In the boxes, we can see a selection of the major policies in Brazilian cities.

Policy Package in São Paulo

- Restricted routes and areas to the transit of trucks;
- Rotation of trucks circulation: the rotation system determines that the trucks will have to observe the same system in place for cars (each day of the week with the final board forbidden);
- Vehicles: Urban Vehicle Load - VUC and Motorcycle freight regulation;
- Brown Zone and Blue Truck Zone: loading and unloading areas with possible rotation;
- Night Delivery Stimulus.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Regional Report from Asia

The regional report on Asia presents a broad overview of urban freight transport policies and practices in selected countries. These countries vary in level of economic development and progress in adopting urban freight transport policies and measures. For instance, transition countries such as Cambodia, Laos and Vietnam focus mainly on restructuring and rehabilitation of the road infrastructure. There is little evidence of other urban freight policies in these countries. These measures were observed in developing countries such as China, Thailand, Indonesia,



Vehicle model of the *Personal Rapid Transit* system.



Road charging systems dating back

Malaysia and the Philippines and compared with the mentioned transition countries. Even more information is available on the developed countries of Asia, particularly in Japan, Singapore and South-Korea. However, most of the information collected in Asia is based on *simulation and modelling studies* or *experimental studies* rather than real policy practices.

This is largely because *urban freight* transport policies, practices and related research are in its infancy in some Asian countries compared to countries in for example Europe. Greater priority is given to freight transport in general and at the urban level to public transportation.

Policy packages

Policy packages involving more than one set of measures with a long-term objective were not a common practice in Asia. In general, most measures were aimed at solving a single problem. There is limited evidence found, except the Dogtan Eco demonstrator city in China and Masdar City in Abu Dhabi which is currently in its first phase of construction. The main goal of the Masdar City is to become a carbon neutral, zero-waste to landfill, car-free city powered entirely by alternative energy sources. The city wants to develop a logistics centre at the edge of the city and will use a Freight Rapid Transit System to distribute goods to residents, stores and hotels via energy-efficient means.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Types of measures found in Asia

Interventions for loading and unloading

Examples come from cities such as Bangkok and Delhi; both cities have time restrictions on goods vehicles and night delivery systems.

Business arrangements

The most commonly occurring theme that brings together actors in private partnerships or public-private partnerships is **Cooperative Delivery Systems**. This was especially the case in Japan with the *Joint Distribution System* in Fukuoka and the experimental cases of Cooperative Parcel Pick up system in Tokyo. In the 'unregulated sector' little evidence was found, except in Indonesia with limited information on motorcycles in the informal sector.

Urban transport and land use planning-related measures

Many measures were found to have a direct spatial linkage. These involve, for instance, establishment of consolidation centres and truck terminals in countries such as Japan and South-Korea. Measures on vehicle weight and size regulations were observed in South-Korea, India and the Philippines. Measures related to road charging systems dating back to the early 1980s could best be examined in Singapore and Hong Kong. Finally, measures such as "environmental zones" were found, prohibiting old vehicles operating in different cities in India and in Vietnam or that are directed to combating urban air pollution as described in the Country Synthesis Reports on the Urban Air Quality Management of China, Hong Kong, India and Indonesia.

Technological measures

Measures promoting eco-friendly vehicles are commonly used in Japan (such as the electric vans in Osaka), Singapore and South-Korea. A developing country such as China also has measures promoting eco-friendly vehicles. Examples are the *Green Truck Programme* in the Guangzhou area; lower purchase tax imposed on cleaner vehicles and grants for eco-friendly commercial vehicles.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
 GRANT AGREEMENT n°: SCS8-GA-2009-234061
 FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems

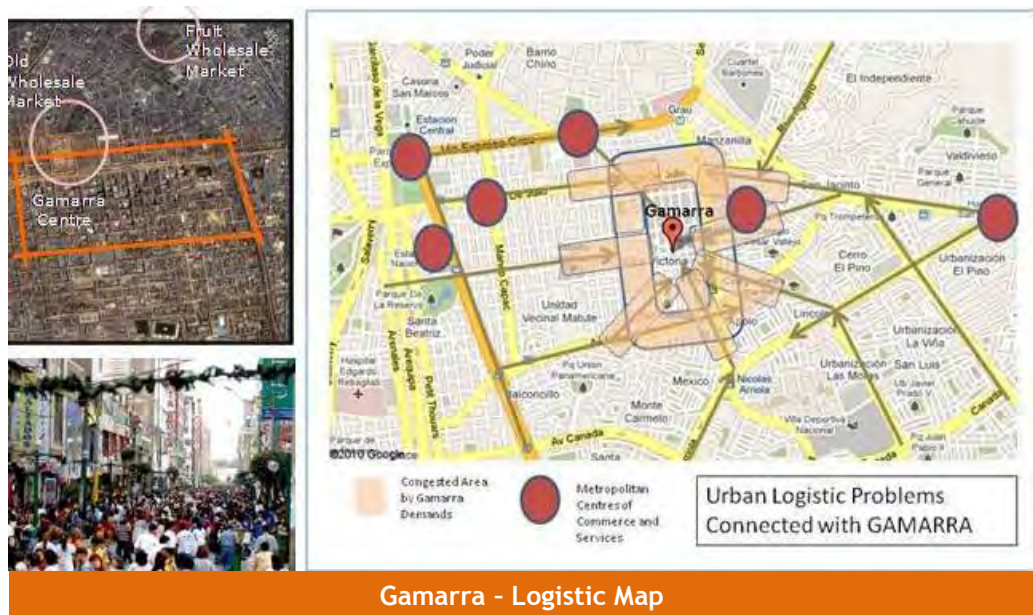


Regional Report from Spanish Latin America- Peru

The growth of Urban Logistics in Latin American cities depends on the activities of several factors, especially in the socio-economic, commercial and productive. Most of these are related to urban logistics. Of course the complexity of the Latin American cities and the relevance of the informal sector in these cities is an essential factor to take into account in this context. Latin American countries and cities that have been considered in this report are Mexico City (Mexico), Santiago (Chile), Bogota (Colombia) and Lima-Callao in Peru. For each case, the following issues have been taken into account: location, public policy and tools-applied technology.

Considering specific comparative differences, urban logistics measures have been developed to use “Plans for Sustainable Urban Mobility” or similar integrated policies. Some of the most important emerging concepts are:

- Goods distribution and collection can be integrated into comprehensive urban transport planning and land use as well as the use of network;
- Lorry Routes and Use of Networks;
- Urban freight information and maps;
- Urban consolidation centres of platforms;
- Normative of vehicle weight and size regulations;
- Last Mile (Last Km) Solutions.



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
 GRANT AGREEMENT n°: SCS8-GA-2009-234061
 FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Measures in Latin American countries

1. The reduction of inventories by hierarchical distribution systems;
2. The development of innovative processing of orders;
3. *Batch Order Processing* and limitation to the spray delivery e-commerce;
4. Development of reverse logistics, including recycling;
5. Emerging information technologies;
6. Technological innovation in vehicles;
7. Outsourcing operations for logistics operators with fleets;
8. Preference for localization of carriers in logistics centres.

**Bogotá
Colombia**



**Metropolitan Area
of Mexico City**

Logistics and transportation were identified as an important cornerstone of support within the National System of Competitiveness. A specific focus on the Competitiveness and Productivity in national policies with urban planning has been done on Bogotá.

This project has a 20,000 square meter distribution centre. The investment will take place gradually over the next 8 to 10 years, attract and generate 60% of the trips, with highest concentration of trucks over two axles.

Abertis Logistics Park Santiago, Chile



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



**Urban Logistics in Commercial complex
Gamarra-
La Victoria, Lima
Peru**

There is an *Urban Logistic Process* for a high density commercial area in the city, with (60 ha), and more than 1,400 stores and factories, using streets and unified system. A process with manual chargers, supplied from the exterior is provided using municipal regulations. Services are provided without environmental impact, during the night, from 8 pm to 10 am.

The company's idea is "to bring medicines and special services to the regions of most necessity in the Mexican Republic and to provide health, well-being, communication and accessible prices to the majority of homes." The low-income population may also face long waiting times of several weeks or longer for doctor visits due to Mexico's overburdened healthcare system.

**Mi Farmacita Nacional
Mexican Cities**

Gamarra- La Victoria, Lima

Example of Lima - Informal solutions in Urban Logistic Consolidated Process . Case Centre of Gamarra:

Gamarra is the most important Concentration of commercial-production of Peru based on micro-enterprises, and one of the largest complex in Latin-America. It occupies 60 hectares, with 60,000 workers in 10,000 micro, 17 000 shops in 144 galleries. The activities are based on the informal sector, which is being formalized. Year sales are estimated in more than 800 million dollars and it is said that the price of store galleries can float* to between USA \$3 000 to 14,000 by m2. A survey by the University of Lima concludes that 74% of buyers in Lima have preferred to buy clothes in Gamarra. Is estimated at days of Commercial Campaign concurs more than 250,000 visitors per day. The streets is n, where majority Via regulated as pedestrian.



INNOVATIVE ASPECTS

The informal economy has been the most important processes in urban development in Most Latin American cities. Innovation as solutions:

1. Logistic services are providing by 4 400 manual porters socially organized.
2. They have handcarts with enough capacity as proper mean to solve connections between large tracks with small stores and factories.
3. The innovative aspects are: (1) Social agreement municipality-enterprises and community. (2) Regulations with hours for loading and unloading. (3) Use of pedestrian streets.

Adopted solutions does-not requires costly logistic infrastructure. Mobility is based on human energy.

There use parking places situated on streets. Use commonly for trucks suppliers as well taxis providing services to clients by pedestrian circulation.

THE MEASURE

1. Municipality covers: pedestrian streets and the download process of mass loading and unloading in specific parking lots, from 20 hours of the night to 10 hours of the morning, giving the truck parking permit on the streets of supply in the Edge of Centre.
2. Self management of services based on demands of stores and factories and the clients. Logistic services supply to stores and buyers to move the merchandise purchased in stores.

IMPLEMENTATION STATUS

This process is self-implemented, Charters acts with agreement of association of traders and operates with municipal license. Municipality provides public safety and public services. Traders and small enterprises as well clients use the logistics services of charters. During the peak hours, the visitor and clients arrive to 250,000 persons-days and arrive by public transport: buses and taxis. The Center is functioning properly.



Mi farmacita Nacional - Mexico



Regional Report from the rest of the world

The “rest of the world” report describes the developments in urban freight policies, planning and initiatives (urban freight transport and related logistics measures) in non-European countries, such as **Australia, New Zealand, Canada, United States and African countries.**

Unlike Europe, that has several European projects like Civitas, Eltis and BESTUFS providing case studies of urban freight measures all over European countries, in non-European countries the information is disperse, not always easily available and sometimes rather scarce.

In general, the countries covered have shown two different stages of development in what urban freight transport and related logistics measures are concerned. African countries are still developing and with the exception of South Africa, the rest of the countries have a weak economy and there is not much information about policies or specific measures applied.

Australia, New Zealand, Canada and USA have been developing policies towards freight transport and logistics, and it can be also observed examples of urban freight solutions in research and in a few policy documents.



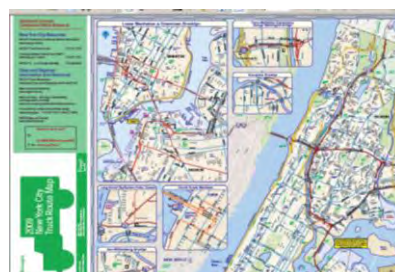
Conakry market in Guinea

New York City has truck routes on maps and on GIS tools, for example New York City has information illustrated on an interactive map containing information on truck route signage, weight limits and dimensions, overweight/over-dimension permitting and truck related violations as well as City, regional and state truck-related resources.

**Truck route maps:
New York City, USA and
Vancouver, Canada**



Auckland Freight
Strategy



New York Logistic Map



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems



Urban Consolidation centres and last mile solutions in Africa

In Africa there is also the concept of urban consolidation centre, for example, in the city of Bobo-Dioulasso (Burkina Faso), the Central market is the main redistribution centre for food and manufactured goods, with 15 multipurpose markets and 8 specialised markets.

The use of non-motorised vehicles as alternative transport modes is also a trend in African countries (e.g. Cairo).

Alternative transport



Urban Consolidation centre
Bobo Dioulasso market



One of the first highly integrated householder e-logistics operations in Australia was an operation between the national Postal Authority and a major retailer, Coles-Myer. "Coles-on-Line" is a web-based home delivery grocery business. Orders are relayed from the web and picked and packed from a single fulfilment distribution centre now ran by the transport operator. These orders are delivered by 20 specialised temperature-controlled vehicles in each city.

Web-based home delivery grocery business e-logistics (Australia)



TURBLOG_WW

Transferability of urban logistics concepts and practice from a worldwide perspective
GRANT AGREEMENT n°: SCS8-GA-2009-234061
FP7-TRANSPORT SST 2008.3.1.4 Urban Delivery Systems

